

Appendix G2

Report: *2012 Core Receiving Environment Monitoring Program*

FINAL

Core Receiving Environment Monitoring Program 2012

Meadowbank Mine

Prepared for:

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- Gary Mann (Azimuth) – Gary was responsible for overall management of this project. He also provided oversight and logistical support for the field crew, collaborated on approach development and implementation of the trends assessment, and authored and reviewed the CREMP report.
- Maggie McConnell (Azimuth) – Maggie was responsible for overall coordination of the CREMP. She organized and led the CREMP field monitoring program in 2012 and assisted in data collation.
- Laura Bekar (Azimuth) – Laura was responsible for coordinating and collaborating in data collation, analysis, interpretation and reporting.
- Randy Baker (Azimuth) – Randy collaborated on approach development and implementation of the trends assessment, and reviewed the CREMP report.
- Brian Pyper (Azimuth Associate) – Brian prepared the graphs used to conduct the trends assessment.
- Morgan Finley (Azimuth) – Morgan was responsible for on-site logistics for and participation in the 2012 field monitoring program.



PROFESSIONAL LIABILITY STATEMENT

This report has been prepared by Azimuth Consulting Group Partnership (Azimuth; managing partner Azimuth Consulting Group Inc.), for the use of Agnico-Eagle Mines Ltd. (AEM), who has been party to the development of the scope of work for this project and understands its limitations. The extent to which previous investigations were relied on is detailed in the report.

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ACRONYMS

AEM – Agnico Eagle Mines Ltd.
AEMP – Aquatic Effects Monitoring Program
ANOVA – Analysis of Variance
AWPAR – All Weather Private Access Road
BACI – Before/After Control/Impact
BACIP – Before/After Control/Impact Paired
BAER – Baseline Aquatic Ecosystem Report
BAP – Baker Lake – Akilahaarjuk Point
BBD – Baker Lake – barge dock
BES – Baker Lake – east shore
BPJ – Baker Lake – proposed jetty
CCME – Canadian Council of Ministers of the Environment
COC – Chain of Custody
CREMP – Core Receiving Environment Monitoring Program
CRM – Certified Reference Material
DFO – Department of Fisheries and Oceans
DOC – Dissolved Organic Carbon
DQO – Data Quality Objective
EAS – Effects Assessment Strategy
EEM – Environmental Effects Monitoring
EIA – Environmental Impact Assessment
FF – Far Field
GPS – Global Positioning System
HEPH – Heavy Extractable Petroleum Hydrocarbons
INUG – Inuggugayualik Lake
ISQG – Interim Sediment Quality Guidelines
LEPH – Light Extractable Petroleum Hydrocarbons



MDL – Method detection limit
MF – Mid-Field
MMER – Metal Mining Effluent Regulations
NF – Near Field
NWB – Nunavut Water Board
PAG – Potentially Acid Generating
PAHs – Polycyclic Aromatic Hydrocarbons
PDL – Pipedream Lake
PEL – Probable Effect Level
QA/QC – Quality Assurance / Quality Control
REF - Reference
RPD – Relative percent difference
SOP – Standard Operating Procedure
SQG – Sediment Quality Guidelines
SP – Second Portage Lake
TE – Tehek Lake
TEFF – Tehek Lake Farfield
TIA – Tailings Impoundment Area
TKN – Total Kjeldahl Nitrogen
TOC – Total Organic Carbon
TSS – Total Suspended Solids
TPE, TPN, TPS – Third Portage Lake – East, North, and South Basins
UTM – Universal Transverse Mercator
WAL – Wally Lake



EXECUTIVE SUMMARY

The CREMP focuses on identifying changes in limnological parameters, water and sediment chemistry, or changes to primary (phytoplankton) and secondary aquatic producers (benthic community structure) that may be associated with major mine development activities. CREMP reporting changed substantially in 2011, with an emphasis on assessing temporal/spatial trends in the data. This process was further revised in 2012 to include quantitative decision criteria (i.e., early warning “triggers” and action “thresholds”) to facilitate immediate and objective decision-making as well as facilitate annual integration into the Aquatic Ecosystem Monitoring Program (AEMP) for environmental management and decision making.

Meadowbank Study Lakes¹

CREMP monitoring started in 2006. Key mine development activities that could result in changes to the aquatic receiving environment include: East Dike construction (2008), Bay-Goose Dike construction (2009-10), dewatering of both impoundments (2009-11), effluent discharge (2012) and general site-related mining activities that mostly generate dust (e.g., rock crushing, blasting, ore and waste hauling; 2008 to present). Key findings for 2012 are summarized in **Table ES-1**:

- *Water Chemistry* – There were some apparent mine-related changes in 2012 identified at one or more near-field (NF) areas. Conductivity (SP only), sulphate (TPN, TPS, TPE, TE) and TDS (SP only) were elevated above their respective trigger values with statistically significant changes at one or more NF areas relative to baseline/reference conditions. These triggers were set at the 95% percentile of baseline data using an approach that evaluates a statistically significant trend as compared to baseline data, and were not derived from effects-based thresholds (e.g., CCME water quality criteria). The absolute concentrations for sulphate were 3 to 4 mg/L. To put this in context, BC’s present aquatic life water quality guideline is currently 100 mg/L and sulphate concentrations in Baker Lake often naturally exceed 10 mg/L. As a result none of the 2012 concentrations or measures would suggest risks to aquatic life. Updating of triggers/thresholds is recommended along with continued trend monitoring in 2013.
- *Sediment Chemistry* – A full sediment coring program was conducted in 2012. Zinc at SP was the only metal with statistically-significant temporal changes exceeding the site-specific triggers. While the cause may be related to dike construction in 2008, follow-up studies suggest that the metals are not bioavailable and not toxic. No action is needed.
- *Phytoplankton Community* – statistically significant increases in total biomass (TPN and TPE) and taxa richness (TPN) were seen in 2012 relative to baseline/reference conditions.

¹ Notes: SP = Second Portage Lake; TPN = Third Portage North; TPS = Third Portage South; TPE = Third Portage East; TE = Tehek Lake



At this time, it is unclear as to whether this increased productivity is mine-related or due to natural variability; the trend should be followed closely for 2013.

Baker Lake

CREMP monitoring started in 2008. Key mine-related activities include barge/shipping traffic and general land-based activities associated with the tank farm area. One 200-L spill occurred on August 9, 2012 during fuel transfer. No other spills of fuels, hydrocarbons or any other materials have occurred in the vicinity of the barge dock and jetty. Despite the spill, no changes in the aquatic receiving environment were observed that were attributable to AEM's activities in Baker Lake. No follow-up management actions are required for 2013.

Additional Recommendations for 2013

CREMP reporting will be streamlined in 2013 to facilitate review of the annual reports.



Table ES-1. Summary of key findings from the 2012 CREMP, Meadowbank Mine.

Variable Type & Variable	Magnitude ¹	Spatial Scale ²	Causation ³	Reversibility ⁴	Uncertainty ⁵	Comments
Exposure - Limnology						
Oxygen	○	n/a	n/a	n/a	?	
Temperature	○	n/a	n/a	n/a	?	
Conductivity	○	n/a	n/a	n/a	?	
Exposure - Water Chemistry						
Conventionals	●	Large	High	High	?	Sulphate (TPN,TPS,TPE,TE), conductivity (SP) and TDS (SP); concentrations suggest low potential for adverse effects.
Nutrients	○	n/a	n/a	n/a	?	TOC "elevated" but threshold needs revision
Total Metals	○	n/a	n/a	n/a	?	Strontium "elevated" but threshold needs revision
Dissolved Metals	○	n/a	n/a	n/a	?	Strontium "elevated" but threshold needs revision
Total Suspended Solids	○	n/a	n/a	n/a	?	
Exposure - Sediment Chemistry						
Physical	○	n/a	n/a	n/a	?	
Total Metals	●	Moderate	Moderate	Moderate	??	Elevated zinc at SP; not bioavailable & not toxic.
Organics	○	n/a	n/a	n/a	?	
Effects - Phytoplankton						
Chlorophyll-a	○	n/a	n/a	n/a	?	
Total Biomass	●	Large	Low-Mod	High	???	>50% higher at TPN/TPE (possible lake effect)
Species Richness	●	Mod-Large	Low-Mod	High	???	>20% higher at TPN (possible lake effect)
Effects - Benthic Invertebrates						
Total Abundance	○	n/a	n/a	n/a	?	
Total Richness	○	n/a	n/a	n/a	?	
Effects - Zooplankton						
Total Abundance	○	n/a	n/a	n/a	??	High variability
Total Biomass	○	n/a	n/a	n/a	??	

NOTES:

¹ Magnitude Ratings (narrative in brackets used in the absence of specific triggers/thresholds):

- no exceedances of triggers or thresholds (or no apparent changes from baseline of concern)
- early warning trigger exceeded (or change from baseline warranting concern)
- threshold exceeded (or change from baseline exceeding magnitude of concern)

² Spatial Scale Ratings:

- n/a – no magnitude of effect, therefore not evaluated
- Small – localized scale
- Moderate – sub-basin to basin scale
- Large – basin to whole lake scale

³ Causation Ratings:

- n/a – no magnitude of effect, therefore not evaluated
- Low – no evidence for a mine-related source
- Moderate – some likelihood of a mine-related source
- High – the source of the problem is very likely to be mine-related

⁴ Reversibility Ratings:

- n/a – no magnitude of effect, therefore not evaluated
- Low – largely irreversible (e.g., decades +)
- Moderate – slowly reversible (e.g., years to decades)
- High – rapidly reversible (e.g., months to years)

⁵ Uncertainty Ratings:

- ? – low uncertainty
- ?? – moderate uncertainty
- ??? – high uncertainty

1. INTRODUCTION

1.1. Background

Agnico-Eagle Mines (AEM) Ltd.'s Meadowbank Mine is situated approximately 75 km north of the hamlet of Baker Lake, Nunavut. The Aquatic Effects Management Program (AEMP, 2005) was developed to address issues identified during the Environmental Impact Assessment (EIA) process that could potentially impact the aquatic receiving environments surrounding the development. Building from earlier baseline monitoring (BAER, 2005), the 2005 AEMP described the general monitoring strategy designed to detect impacts to the aquatic environment. This strategy relied on two primary components (discussed further in **Section 1.3**): the core monitoring program and targeted studies. Monitoring following the 2005 AEMP strategy has been implemented as follows:

- 2006 and 2007 – The core monitoring program was implemented over two complete cycles (Azimuth, 2008a, 2008b) prior to construction of the mine (i.e., baseline conditions).
- 2008 – 2012 – Mine construction started in 2008, with dike construction activities occurring directly in the receiving environment. Core receiving environment monitoring (Azimuth, 2009c, 2010a, 2011b, 2012a, this report) was complemented by

“AEMP” Terminology

The term “AEMP” was first used in the 2005 report *Aquatic Effects Management Program*, which described the rationale, framework, strategy, methods, and scope of receiving environment monitoring for the Meadowbank Mine. Receiving environment monitoring conducted in 2006 and 2007 use this term in the annual report titles.

The Nunavut Water Board A License, issued in 2008, defines “AEMP” as the “Aquatic Effects Monitoring Program”; annual receiving environment monitoring reports since 2008 reflect this subtle change.

AEM has a number of monitoring programs (e.g., effluent monitoring, ground water monitoring, air quality monitoring) relevant to tracking potential changes to the aquatic receiving environment surrounding the Meadowbank Mine. One of the requirements of the Nunavut Water Board (NWB) A License was to revise the AEMP to consider the results of all these programs; a restructured AEMP was submitted in December 2012 (Azimuth, 2012c). Previously, the term “AEMP” was essentially synonymous with receiving environment monitoring. However, given the AEMP's broadened scope, more specific terminology is needed to minimize confusion. To that end, we use the following terms in this report:

CREMP – refers to the “core receiving environment monitoring program”; this is synonymous with “core monitoring program”. While this term was first used for the 2009 annual report, it is meant to encompass the entire core receiving environment monitoring program since 2006.

2005 AEMP – refers to the original AEMP, which is essentially the plan for the CREMP; this plan is currently under revision.

AEMP – is used generically when not referring to either of the first two definitions.



targeted studies directed towards effects of dike construction (Azimuth, 2009a, 2010b; AEM, 2011) and associated effects related to the effects of total suspended solids (TSS) on water quality and benthic community in affected waterbodies (Azimuth, 2009b, 2010c, 2011a, 2012b).

AEM, in consultation with regulators, completed two ongoing initiatives in 2012:

- The restructured *Aquatic Effects Management Program (AEMP)* (Azimuth, 2012c), now serves as an overarching ‘umbrella’ strategy that conceptually provides an opportunity to integrate results of individual, but related, monitoring programs in accordance with the NWB Type A water license requirements. In 2012, AEM completed the AEMP synthesis document which systematically evaluated the results of individual monitoring programs, developed a site specific conceptual model to evaluate stressors, transport medias and receptors of concern (see **Section 2.8** for more details), and integrated the results of numerous monitoring programs into a management response framework.
- The *Core Receiving Environment Monitoring Program (CREMP): Design Document 2012* (Azimuth, 2012d). This document reviewed all historic monitoring CREMP data, presented the trigger/threshold derivation process, determined trigger/threshold values for individual parameters and established the experimental design to optimize the program. The resulting triggers/thresholds and experimental design changes have been integrated into this 2012 CREMP report.

This CREMP monitoring report documents the methods and results of aquatic receiving environment monitoring activities undertaken during 2012. Like the 2011 CREMP report (Azimuth 2012a), this report integrates accumulated results since 2006 to facilitate the identification of changes in limnological or water chemistry parameters, sediment chemistry, phytoplankton biomass and benthic community structure associated with mine-related activities at Meadowbank Mine or in Baker Lake.

1.2. Environmental Setting

Understanding the environmental setting of the project lakes is integral to understanding the design of the CREMP. The Meadowbank project lakes are situated in the barren-ground central Arctic region of Nunavut within an area of continuous permafrost. These are headwater ultra-oligotrophic/oligotrophic (nutrient poor and unproductive) lakes, situated on the watershed boundary that separates two main drainages – the Arctic and Hudson Bay drainages. Only a few hundred meters to the north of Second and Third Portage lakes is the divide between water that flows north to the Arctic Ocean (via the Meadowbank and Back River system) or to Chesterfield Inlet and Hudson Bay (via the Quoich River system).



The landscape consists of rolling hills and relief with low-growing vegetative cover and poor soil development. Numerous lakes are interspersed among boulder fields, eskers and bedrock outcrops, with indistinct and complex drainages. The main lakes in the Meadowbank project area include: Third Portage Lake (TP), Second Portage Lake (SP), Tehek Lake (TE), and the Vault Lake system – Vault, Wally (WAL) and Drilltrail lakes. As is common of headwater lakes, all of the project lakes have small drainage areas relative to the surface area of the lakes themselves. Local inflow from surrounding terrain is the predominant influence on water movement within the system. Small channels connect the project area lakes, although there is little flow between lakes except during freshet and possibly none during winter months. Movement by fish between lakes is also rare, as populations remain quite isolated from one another. The ice-free season on these lakes is short, with ice break-up in late-June to mid-July and ice-up beginning in late September or early October. Maximum ice thickness is at least 2 m by March/April.

Overall, the Meadowbank project lakes support healthy communities of plankton, benthos and fish that are typical of oligotrophic Arctic lakes (BAER, 2005). Biological productivity of the lakes is limited by nutrient availability, cold water and a short growing season.

1.3. Core Monitoring Program (CREMP) Objectives

Under the 2005 AEMP framework, the core monitoring program (CREMP; the focus of this annual monitoring report) consists of a general strategy to monitor water and sediment quality, phytoplankton, periphyton and benthic invertebrates. The core program is tailored based on our understanding of mine construction, operation and infrastructure (e.g., dikes, effluents, stream crossings, roads, etc.) and has been developed to detect mine-related effects at temporal and spatial scales that are ecologically relevant. The core program initially focused solely on the project lakes, but was expanded to include Baker Lake in 2008 to ensure that monitoring was also in place to track project-related activities in that area, following intensification of barge traffic and shipping traffic. In 2009, as dike construction, mineral exploration and mine operations continued to expand, two additional reference areas were added; one far-field reference well downstream of the maximum extent of observed water quality effects within Tehek Lake (Tehek Farfield: TEFF) and another remote external reference in Pipedream Lake (PDL). Also in 2011, a second reference location was added in Baker Lake for some key parameters.

Starting in 2009, limnological and water quality sampling was expanded, to be conducted on a monthly basis throughout the year where ice conditions permitted. Consequently, sampling was also undertaken in May, November, December (2009) and January–April (2010) in addition to the routine July, August and September sampling (requirements of the Type A water license).

Following from the recommendation in the 2008 CREMP (Azimuth, 2009c) to cease periphyton sampling, these organisms were not collected in 2009 and are no longer part of the CREMP. In 2010, zooplankton sampling was added to the CREMP monitoring strategy which included sampling at all Meadowbank areas during August of the open-water season. Zooplankton sampling intensity was increased in 2011 for statistical robustness. However, results from 2010 and 2011 indicated that metrics derived from zooplankton sampling were highly variable and was not considered an effective tool for assessing mine related impact on a temporal or spatial scale. Consequently, zooplankton sampling was not conducted the 2012 CREMP monitoring strategy.

The study design is based on a before-after-control-impact (BACI) approach (see text box), but has also incorporated the concept of gradients in exposure. To this end, the 2012 program consisted of 13 sampling areas (see **Figures 1.3-1 to 1.3-3**), each categorized into one of the four² main types of areas described below:

CREMP Sampling Area Categorization

Tracking spatial and temporal differences related to mining activities relied on categorizing areas using two factors:

- *Type* –, this concept (as described in **Section 1.3.1**) relates to an area's spatial proximity to the planned mine development, whether built or not; categories include near-field, mid-field, far-field, and reference (see text for more details).

- *Status* – this concept (as described in **Section 1.4.2**) is temporal and has two levels: control (not exposed to mine-related activity) or impact (exposed to mine-related activity). The term “impact” is taken from the BACI statistical study design approach and does not mean that an actual impact has taken place; rather, it designates a time period when potential mine-related impacts may occur for an area.

For example, the status of baseline (i.e., pre-construction) monitoring conducted at all areas, regardless of category, would be “control”. This status would change to “impact” once construction activities started that had the potential to affect an area (e.g., SP changed from control to impact status in August 2008 with the onset of construction for the East Dike; TE followed suit based on actual exposure to TSS from that event). WAL (a near-field lake) is still “control” status because that phase of mine construction has not yet been initiated.

Together, area categorization by type and status provide a logical framework to facilitate the identification of real mining-related changes (as opposed to natural regional changes due to climate or other factors) to the aquatic receiving environment (described in **Section 1.5**).

² Note that three main area types were initially envisioned in the 2005 AEMP: NF, FF and Ref. However, area designations were modified during the CREMP design review (Azimuth, 2012d) to more accurately reflect the realities of potential exposure to mine-related activities following dike construction; a mid-field (MF) category was added that includes Tehek Lake (TE) and Third Portage Lake South (TPS).

-
- *Near-field (NF) areas* – Areas are situated in close proximity to the development (planned or constructed), in particular near dikes, dewatering discharge, and proposed effluent sources (**Figures 1.3-1 to 1.3-3**). These areas provide the first line of early-warning for introductions of stressors into the receiving environment. In the Meadowbank study lakes, these areas include: Third Portage Lake North (TPN), Third Portage Lake East (TPE), Second Portage (SP), and Wally Lake (WAL; note that the planned mining activity has not started in proximity to this area). For Baker Lake, there are two NF areas, one targeting the hamlet’s barge landing area (Baker Barge Dock [BBD]) and the other AEM’s fuel storage facility (Baker Proposed Jetty [BPJ]).
 - *Mid-field (MF) area* – This area designation was added in 2011 to be consistent with the area categorizations used in the CREMP design review (Azimuth, 2012d) and includes Tehek Lake (TE) and Third Portage Lake South (TPS). TE is adjacent to the inlet from Second Portage Lake (**Figure 1.3-1**) and was exposed to elevated TSS during construction of the East Dike in 2008, prompting the addition of a new far-field area (Tehek Farfield) in 2009. Consequently, MF designation is more accurate for TE. TPS was initially envisioned as an internal reference area in the 2005 AEMP. However, given the possibility for exposure to a large-scale event, it is more appropriately considered a MF area. This change in categorization does not necessarily prevent the use of TPS data to make inferences regarding regional conditions (i.e., as long as its status is “control” [see text box above and **Section 1.4.2**] it remains relevant as an internal reference area), but it does mean that such use would need to be cognizant as discussed in **Section 1.5**.
 - *Far-field (FF) area* – The intent of this area is to monitor water and sediment quality downstream of project infrastructure to provide insights into the spatial extent of any effects observed at the near-field areas. The Tehek Farfield (TEFF) area is a key location that will ultimately determine whether or not contaminants are detectable downstream of the entire mine development. Lake waters from Second and Third Portage Lakes and the Vault Lakes (Vault, Wally, Drilltrail) meet at the southern end of Second Portage Lake and discharge via a single channel into Tehek Lake (**Figure 1.3-1**). Monitoring the water and sediment quality and the health of the benthic invertebrate community in the basin adjoining the discharge point from Second Portage Lake will help determine if any effects identified at SP are extending into TE and beyond into TEFF.
 - *Reference (Ref) areas* – By definition, reference areas are sufficiently removed from the mine that they are presumed to be unaffected by any infrastructure (roads, dikes, runways) and point sources (aerial and aquatic) associated with mine development. Inuggugayualik Lake (INUG) and Pipedream Lake (PDL) are

external reference areas chosen for the purposes of making comparisons with the project lakes (EVS, 1999; BAER, 2005). Monitoring of reference areas is important in order to distinguish between possible mine-related changes in water quality or ecological parameters and natural changes, unrelated to the mine. The reference areas are situated about 16 km west at INUG and 12 km northwest at PDL of the mine site (**Figures 1.3-1 and 1.3-2**). They are both headwater lakes and flow north into the Arctic Ocean. Despite the different drainage basin, both these lakes satisfy the requirements of an external reference lake from a physical/chemical perspective because they are at similar in latitude, have similar geology, relief and climate, do not have any significant inflows and has generally similar limnological features, water chemistry and aquatic biological community structure to the project lakes (BAER, 2005). Pipedream Lake, added to the CREMP in 2009, was originally investigated as a candidate reference area in 1998 (EVS, 1999) from a fisheries perspective. For Baker Lake, an internal reference area is located several kilometers to the east of the hamlet along the north shore of the lake (Baker Akilahaarjuk Point [BAP]) and a second reference area was added in 2011 based on a recommendation from additional analysis and interpretation of the historical Baker Lake data, which is located on the same shoreline, east of BPJ and west of BAP (Baker East Shore [BES]; see **Figure 1.3-3**).

Thus, the core monitoring program is intended to detect changes and help define the extent (both spatially and temporally) of any adverse effects. Information on the status of each site (i.e., control or impact designation as per the text box) is provided in **Section 1.4.2**.

No targeted studies were conducted in the aquatic environment in 2012.

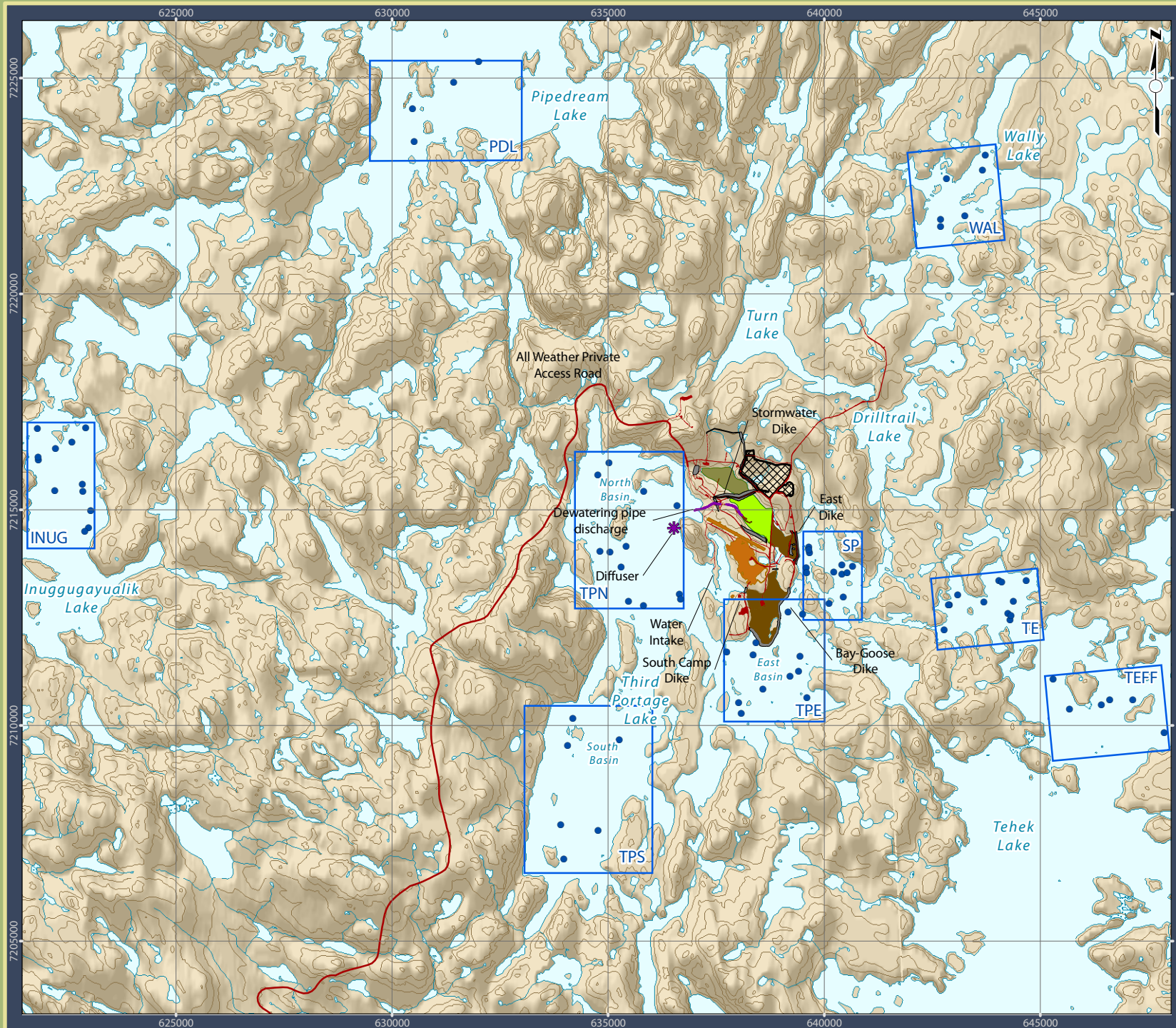
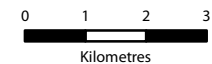


Figure 1.3-1: Water Quality Monitoring Areas and Sampling Stations - 2012

- Legend**
- Water Sampling Point
 - Water Sampling Area
 - All Weather Access Road
- Mine Features**
- * Diffuser
 - Dewatering Pipe Discharge
 - Facilities
 - Road
 - Dike
 - ▨ Waste Dump
 - Dewatered Lake
 - Portage Attenuation Facility
 - Tailings Storage Facility



Projection: UTM Zone 14 NAD83

Data Sources:
 Natural Resources Canada, GeoBase®
 National Topographic Database
 Agnico-Eagle Mines Limited.
 Azimuth Consulting Group Inc.

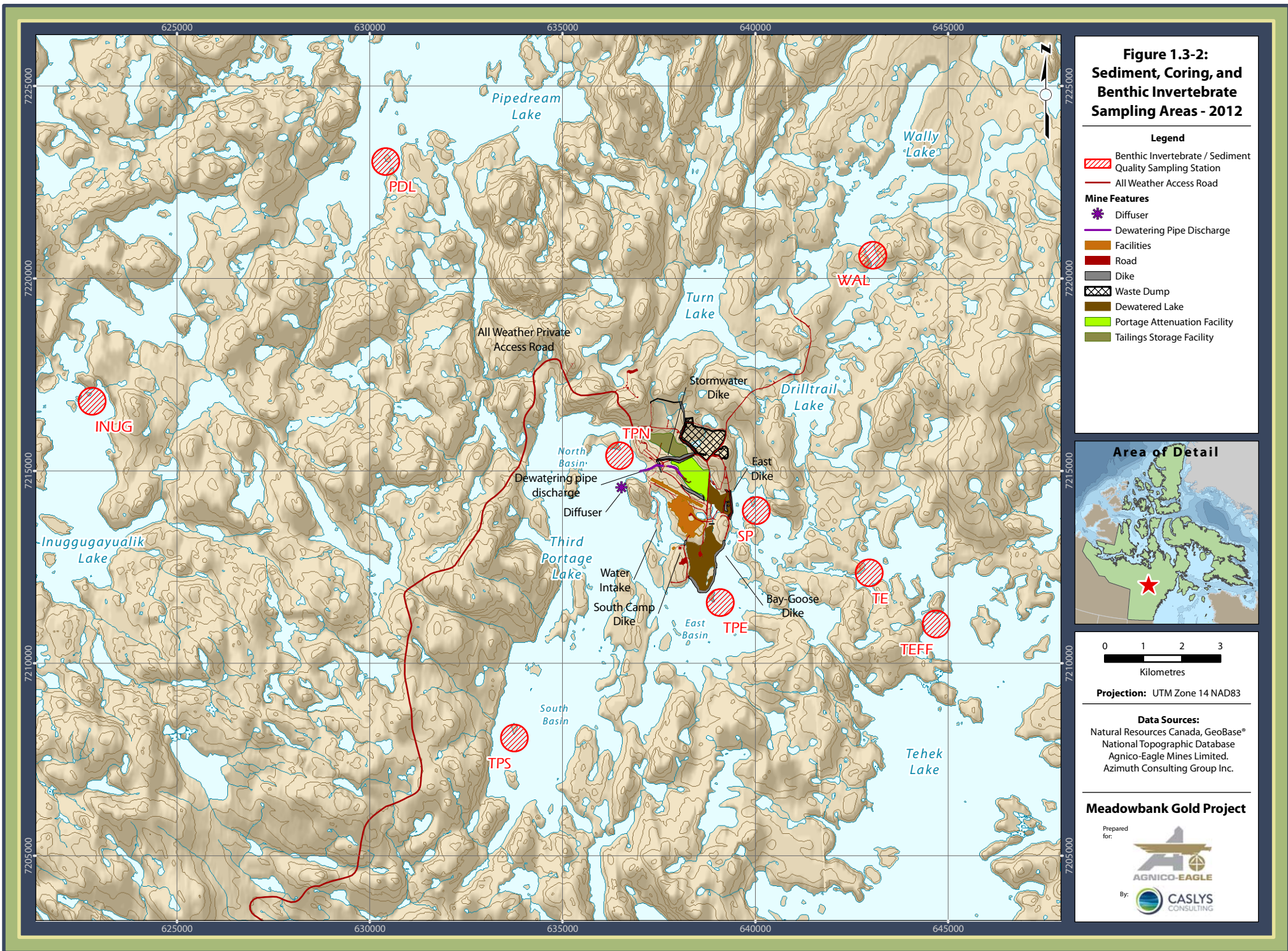
Meadowbank Gold Project

Prepared for:



By:

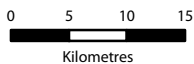






Legend

- Deep Limnology Sampling Points
- Water Sampling Point
- Baker Lake Core/Benthic Invertebrate/
Sediment Quality Sampling Station
- All Weather Access Road



Projection: UTM Zone 14 NAD83

Data Sources:

Natural Resources Canada, GeoBase®
National Topographic Database
Agnico-Eagle Mines Limited.
Azimuth Consulting Group Inc.

Figure 1.3-3: Baker Lake Water, Sediment, Coring, and Benthic Invertebrate Sampling Area and Limnology Profile Locations - 2012

Meadowbank Gold Project

Prepared for:



By:



1.4. Meadowbank Mine Development and Operation

1.4.1. Historical and Current Activities

The construction phase of the Meadowbank Mine officially started in June 2008, upon receipt of the NWB A Water License (2AM-MEA0815) for the project. The Fisheries and Oceans Canada (DFO) *Fisheries Act* Authorization (NU-03-0191) for the project was issued on July 30, 2008, thus allowing the start of in-water construction activities. Key mine-related activities by year are described below (information provided by AEM).

2008

Major in-water construction activities for 2008 included the East Dike (located in Second Portage Lake) and the Western Channel Dike (located between Third Portage Lake and Second Portage Lake); the closest CREMP sampling area to these activities was the Second Portage Lake area (SP). Other site-related activities included rock crushing, road building, pit blasting, ground preparation, and infrastructure construction.

2009

Dewatering of the northwest arm of Second Portage Lake began in March 2009 after completion of the East Dike. Dewatering discharges (i.e., impounded lake water with TSS) were directed primarily into the north basin of Third Portage Lake (TPN; discharging much of the time since March 2009), but also into Second Portage Lake (March to July and Oct to Dec, 2009). Water was pumped over dikes directly to near shore surface waters of the receiving environment via an open pipe with no diffuser.

In-water construction activities for 2009 occurred in the east basin of Third Portage Lake (TPE). Construction of the northern half of the Bay-Goose Dike, connecting the north shore to Goose Island, was initiated on July 27, 2009. The closest CREMP sampling area to the dike construction activities was the Third Portage Lake East area (TPE). Dike construction introduced suspended solids directly into the water column with the dike material, as well as disturbing fine grain sediments on the lake bottom. Introduced and disturbed bottom sediments were not contained within the turbidity curtains and elevated levels were presented into the receiving environment.

Most of the site preparation and road infrastructure was completed in 2009. North Portage Pit was the primary focus of blasting and mine operations.

2010

During the winter of 2009–2010, the southern half of the Bay-Goose Dike, connecting the south end of Goose Island to the mainland west of the island, began with installation of a narrow causeway that was constructed through the ice (intended to help contain



sediment during open-water dike construction). Construction of the remainder of the Bay-Goose Dike, on the inside of the causeway, continued through the 2010 open-water season. Dike construction monitoring was conducted by AEM throughout the construction period (i.e., through winter and open water). Despite advanced preventative methods in containment of TSS (two layers of turbidity curtains and water pumping near in-water construction), during open-water dike construction, suspended solids were introduced into TPE during a high wind event and migrated into SP.

Pit development in 2010 was focused on the North Portage and South Portage pits. The mine was officially opened on February 27, 2010, marking the start of the operations period; commercial production of gold was achieved in March 2010. Contact water from these operations was collected in sumps and directed to the tailings impoundment area and was not discharged to the receiving environment.

Dewatering of SP directly into the north basin of TP via a discharge pipe continued in 2010, targeting residual water in the deep central basin of the northwest arm impoundment (formerly of Second Portage Lake). This was undertaken to allow eventual construction of the Central Dike (scheduled for 2011), that is required prior to extending the North Portage Pit further south. The dewatering 'effluent' was subject to *Metal Mining Effluent Regulations* (MMER) requirements (e.g., weekly effluent quality monitoring and periodic receiving environment monitoring) from the start of 2010; this was conducted by AEM's onsite environmental staff. Another MMER requirement was the design of an Environmental Effects Monitoring (EEM) study for the discharge (Azimuth, 2010f).

2011

Commercial production of gold continued throughout 2011 with pit development focused on parts of North Portage and in South Portage Pits. As in 2010, tailings were pumped directly to the Tailings Impoundment Area (TIA), waste rock was delivered to the portage waste rock storage facility and all contact water naturally drained or was pumped into either the tailings reclaim water or storm water management pond; the water was recycled from these areas as mill process water, with no direct discharges to the aquatic receiving environment. The following activities were completed within the mine footprint: the junction between Saddle dam 2 and Stormwater Dike, Saddle dam 2 and a coffered dam was constructed in 2011 at the foot of what will be the central dike. The coffered dam provided additional water storage capacity in 2012 until the central dike construction was completed. No ancillary construction outside of the mine footprint was completed in 2011.

Dewatering of SP and the cut-off wall for the Bay-Goose Dike was completed by mid-July 2011. Pumping systems and infrastructure for dewatering Bay-Goose Basin were constructed in the second quarter and dewatering began in early August and continued



intermittently until November 2011. Approximately 85% of the impounded water (~2.7 million m³ water) was removed and discharged into Third Portage Lake North (TPN) via surface discharge pipes located about 100 m offshore. Because this dewatering water is subject to License A limits for suspended sediments and turbidity and required some treatment to ensure acceptably concentrations of TSS. Dewatering effluent was also routinely monitored by AEM for chemistry and toxicity as per MMER requirements. In addition, the targeted EEM study of potential receiving environment effects from the dewatering effluent discharge into TPN was implemented in 2011 and reported in 2012 (Azimuth, 2012e).

2012

Commercial gold production continued throughout 2012 with no interruptions. Discharge to the north basin of Third Portage Lake (TPN) changed in 2012 from dewatering discharge in 2011, to effluent discharge (dewatering water from Bay-Goose, contact water from pit operations, east dike seepage and run-off effluent) via a diffuser. Dewatering activity in Bay-Goose basin as well as accumulated freshet drainage water required AEM to release effluent from the attenuation pond into TPN in May and June 2012 through the dewatering discharge pipe. In April and May 2012, pipes and associated pumps were installed in preparation for discharge through a diffuser as per the Type A license. Anchored pipe with a diffuser was extended onto the ice approximately 100m from shore and allowed to sink to a depth of approximately 15m during the June and July ice thaw. In July and August, water collection from the pit and site contact water was transferred to the attenuation area and discharged through the diffuser as needed in August and thereafter. Monthly effluent volume discharged in 2012 began in May and ranged from a maximum of 660,905 m³ (June) to 127,390 m³ (November) with no effluent release in October and December.

The North cell water diversion which diverts non-contact water from an area north of the tailings and waste rock area, through a series of ditches to NP2 and dogleg ponds was completed in August 2012. Although it is unlikely that any impacts would be evident in 2012 in SP, freshet flows within SP watershed in 2013 will be altered to divert non-contact water toward SP. Water levels in this chain of lakes will be monitored in the future.

The Vault access road was completed at the end of quarter three, 2012, and the mine stripping and preparation was underway for the Vault Pit and Vault Dike (geotechnical drilling) in quarter four, 2012. This may introduce additional dust deposition from traffic north of SP along the Vault road. Given the predominant winds and the fact that all the work has been completed near Vault Pit on land, no impacts are likely to be seen at the WAL station in 2013. Vault Dike construction is scheduled for February 2013 (through ice) and dewatering is scheduled thereafter.



1.4.2. Overview of Aquatic Receiving Environment Status

This section provides a brief description, from a temporal and spatial perspective, of key activities with the greatest potential for affecting the aquatic receiving environment. The information presented comes primarily from targeted studies (i.e., dike construction monitoring and MMER effluent monitoring) intended to monitor those mining-related activities at a higher spatial and/or temporal resolution than the CREMP. **Table 1.4-1** summarizes the state of various receiving environments basins or lakes over time. The focus is on TSS, which can be considered as a good surrogate for exposure in general. Thus, the resulting spatial-temporal matrix provides some context for interpreting the CREMP results, which are intended for making broader scale (temporal and spatial) inferences regarding potential effects. Key mining activities and their general effects on water quality are described below:

- *East Dike Construction* – Construction of the East Dike started in Second Portage Lake in late July 2008. As described in detail elsewhere (Azimuth, 2009a, 2009b), suspended sediment was generated as a result of direct introduction of fine materials from the pit area used to generate dike construction material and from re-suspension of silt/clay in the lake caused by end-dumping of rock. Eventually, much of the new and re-suspended sediments escaped from the turbidity-barrier enclosed work zone. The potential impact of construction-related sediment releases to the aquatic environment was the focus of the four-year EAS study (Azimuth, 2009b, 2010c, 2011a, 2012b). *Bay-Goose Dike Construction* – Construction of this dike in the east basin of Third Portage Lake started in 2009 (northern section) and continued in 2010 (southern section). Rock placement and sediment control methods were modified in 2009 based on lessons learned from the East Dike experience (e.g., use of double silt curtains, more judicious selection of rock, re-alignment of the dike to travel over shallower water with less potential for sediment disturbance). Despite these changes, a sedimentation event nevertheless occurred in late August/early September 2009, when storm winds broke apart the turbidity barrier containment system. The TSS event was primarily restricted to TPE and to a minor extent into SP and TE (**Table 1.4-1**; Azimuth, 2010b). In further efforts to reduce Bay-Goose Dike construction sedimentation in 2010, a narrow causeway was constructed to serve as a protective barrier to TSS, and water was pumped from the impoundment into the central basin. Both of these mitigative efforts have increased TSS associated with them. The potential impact of construction-related sediment releases to the aquatic environment was the focus of the four-year EAS study (Azimuth, 2009b, 2010c, 2011a, 2012b).

Dewatering – The Portage Attenuation Pond (formerly the central basin of the northwest arm of Second Portage Lake) primarily contains residual natural lake

water (i.e., from the East Dike and Bay-Goose Dike impoundments). Localized drainage that has not contacted potentially acid generating (PAG) material is also directed to the attenuation pond. Starting December 31st, 2009, the dewatering discharge was defined as an ‘effluent’ and hence became subject to the requirements of MMER. In addition to effluent characterization (volume, chemistry and toxicity), MMER requires comprehensive receiving environment monitoring. The main contaminant of interest in this effluent is total suspended solids (TSS), which has only been detected in the TPN receiving environment in three of 20 CREMP monitoring events (at low concentrations close to 2 mg/L) since dewatering started. MMER receiving environment monitoring yielded similar results with non-detectable (<1 mg/L) TSS concentrations during all four 2010 monitoring events at TPN, and a single detected (2 mg/L) TSS concentration in 2011. These data indicate that dewatering appears to have had little impact on TPN water quality (**Table 1.4-1**).

- *Effluent Discharge* – Discharge of residual water from the TPE Bay-Goose impoundment, as well as contact water, was completed in May and June 2012. Starting in July and August 2012, effluent was discharged into the north basin of Third Portage Lake (TPN) via a diffuser (**Figure 1.3-1**). Full details regarding the chemistry of effluent (according to MMER protocols), concentrations, volume and loading is presented within the MMER report for 2012 (AEM, 2013). As specified by regulations and submitted to the Environment Canada database, monthly acute lethality testing (rainbow trout and *Daphnia magna*) and quarterly non-lethal toxicity testing was conducted on effluent during those months when discharge was occurring. With the exception of 10% mortality of *Daphnia* during a single month, no other acute toxicity of 100% effluent was noted. No other exceedances were noted.
- *General Site-Related Activities* – The temporal and spatial extent of potential changes to the aquatic receiving environment related to the previous activities were easily defined due to the nature of the activities, whereby there is a direct link between the activity and the receiving environment. The near-field CREMP areas (i.e., TPN, TPE, and SP) were determined to provide insights into other potential impacts of mining activities that primarily involve generation of dust that is prone to wide dispersal because of the dry conditions and frequent high winds at site. These include rock crushing, road building, pit blasting, ore and waste hauling, ground preparation, vehicle (truck and aircraft) traffic, infrastructure construction and others. TPE and SP, given their locations downwind from the site, have the greatest potential to be impacted from dust generated by these other mining activities. With the completion of dike construction (i.e., a potential confounding factor at SP and TPE) in late 2010,

2011 and 2012 results at these stations provide insights into whether these other activities are affecting water quality.

- *Barge Traffic (Baker Lake)* – Given the lack of road/rail options for transportation of the equipment and materials needed to construct and operate the Meadowbank Mine, it is no surprise that barge traffic to Baker Lake has increased substantially in recent years (**Figure 1.4-1**). Traffic increased steadily between 2008 and 2010, but has been stable since then. Barge traffic has the potential to affect the aquatic environment in a variety of ways, including: propeller wash, ballast water, fuel (or other contaminants) leaks/spills, and anti-fouling paint residues. On August 9th, 2012, 200 L of diesel fuel was spilled during a fuel transfer; containment/clean-up efforts were apparently successful, with subsequent spill-related monitoring detecting no traces of hydrocarbons in water. CREMP sediment sampling later in August also found no detectable concentrations of hydrocarbons or PAHs (see **Section 3.4.2** for results and discussion).

As discussed in the text box in **Section 1.3.1**, the onset of construction activities in proximity to a CREMP monitoring area formally ends the baseline phase and changes the status of that area from “control” to “impact” (not necessarily meaning that there is an impact or effect [i.e., either positive or negative]; only that there is the potential for mining-related changes that may occur at that area after that time). Status changes are also important for any statistical analyses, as they dictate how data are grouped when assessing potential trends (see **Section 1.5**).

Note that the end of the baseline phase is specific to each area. For example, TPE would have still be in the baseline phase in August 2008 (it is up gradient of Second Portage Lake), but not in August 2009 due to dike construction activities. The lack of baseline monitoring at the Baker Lake areas means that the status of areas does not change over time (i.e., near-field areas are “impact” and reference areas are “control”). The status of all CREMP areas since monitoring started is provided in **Table 1.4-2**.

Table 1.4-1 Status of key receiving environments related to TSS from 2008 - 2012.

2008					2009					2010				
	July	Aug	Sept	Oct - Dec	Jan - Jun	July	Aug	Sept	Oct - Dec	Jan - Jun	July	Aug	Sept	Oct - Dec
Third Portage Lake														
North Basin (TPN)	Background	Background	Background	Presumed background	Dewatering - no apparent TSS increase	Dewatering stopped; background	TSS > 2 mg/L	TSS ~2 mg/L	Background	Dewatering; TSS ~2 mg/L in April only	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; presumed background
South Basin (TPS)	Background	Background	Background	Presumed background	Presumed background	Background	TSS ~2 mg/L	TSS ~1.5 mg/L	Background	Background; TSS ~1.5 mg/L in April only	TSS ~1 mg/L	Background	Background	Presumed background
East Basin (TPE)	Background	Background	Background	Presumed background	Background	BG Dike construction starts; background	TSS concentrations gradually increase, but mostly at depth (>2 mg/L)	Strong winds mix TSS throughout water column and basin; TSS source finished (~5 mg/L)	TSS drops over time; still above HVH trigger by end of October (~2 mg/L)	TSS increases again during causeway construction (~1-1.5 mg/L)	TSS ~1-2 mg/L	TSS ~4 mg/L	TSS >1 mg/L	Presumed settlement under ice
Second Portage Lake														
Main Basin (SP)	Background	ED construction starts; TSS rises dramatically in third week (>10 mg/L)	TSS drops over time; meets targets by end of month (~4 mg/L)	Presumed settlement under ice	TSS drops initially, then dewatering starts in March	Background	Some TSS input from BG dike construction, but low concentrations (1 mg/L)	TSS increases slightly, but limited spatially (~1-1.5 mg/L)	TSS drops over time (~1 mg/L)	TSS generally < 1 mg/L; 2 mg/L in Apr/May	Background	Background	TSS ~1 mg/L	Presumed settlement under ice
NW Arm	Background	TSS rises in parallel to main basin, but lower concentrations than main basin	TSS reduced, but rises again during WC Dike construction	TSS drops	TSS drops initially, then increases due to dewatering	TSS elevated due to dewatering activities; dewatering stops in early July	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated
Drilltrail Arm	Background	Background	Background	Background	Background	Background	Background	Background	Background	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background
Tehek Lake														
Near-field Basin (TE)	Background	TSS rises during third week	TSS drops over time; meets targets by end of month (~3 mg/L)	Presumed settlement under ice	Background	Background	Very slight increase in TSS	TSS slightly above background (~1.5-2 mg/L)	Background; TSS ~3 mg/L in December only	TSS ~1 mg/L	TSS ~2 mg/L	Background	TSS ~3 mg/L	Presumed settlement under ice
Far-field Basin (TEFF)	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background	Background	Background	Background	Presumed background	Presumed background	Background	Background	Background	Presumed background

Notes:
Shaded months indicate ice cover on lakes.
Acronyms: ED = East Dike; BG = Bay-Goose Dike; TSS = total suspended solids; DCM = dike construction monitoring.
CREMP sampling areas shown in (), where applicable
Background = TSS < Detection Limit.
Presumed Background = TSS not measured, but no reason to suspect TSS would be > Detection Limit
2009 - 2012 TSS DL = 1 mg/L, 2008 TSS DL = 3 mg/L

Table 1.4-1 Status of key receiving environments related to TSS from 2008 - 2012.

	2011					2012				
	Jan - Jun	July	Aug	Sept	Oct - Dec	Jan - Jun	July	Aug	Sept	Oct - Dec
Third Portage Lake										
North Basin (TPN)	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; background	Dewatering; background
South Basin (TPS)	Presumed background	Background	Background	Background	Presumed background	Presumed background	Background	Background	Background	Presumed background
East Basin (TPE)	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
Second Portage Lake										
Main Basin (SP)	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
NW Arm	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated
Drilltrail Arm	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background	Presumed background
Tehek Lake										
Near-field Basin (TE)	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
Far-field Basin (TEFF)	Presumed background	Background	Background	Background	Presumed background	Presumed background	Background	Background	Background	Presumed background

Notes:
Shaded months indicate ice cover on lakes.
Acronyms: ED = East Dike; BG = Bay-Goose Dike; TSS = total suspended solids; DCM = dike construction monitoring.
CREMP sampling areas shown in (), where applicable
Background = TSS < Detection Limit.
Presumed Background = TSS not measured, but no reason to suspect TSS would be > Detection Limit
2009 - 2012 TSS DL = 1 mg/L, 2008 TSS DL = 3 mg/L

Table 1.4-2. Status of all CREMP sampling areas since the beginning of monitoring.

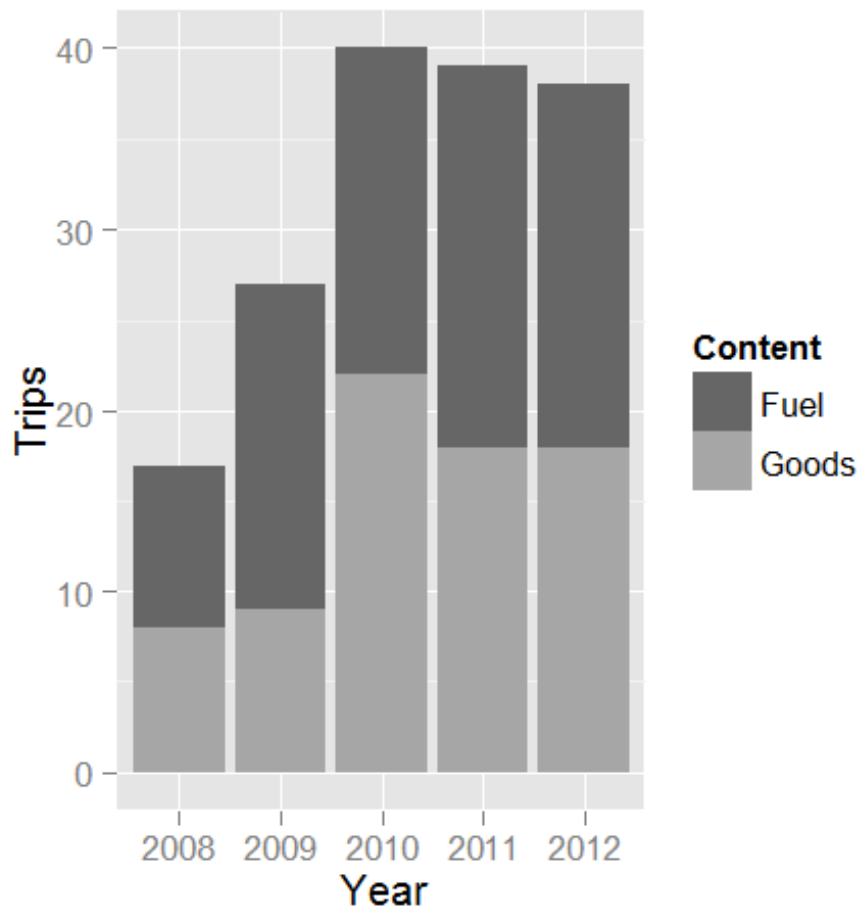
	Meadowbank Sampling Areas									Baker Lake Areas			
	REF	REF	NF	NF	NF	NF	MF	MF	FF	REF	REF	NF	NF
Year	INUG	PDL	TPN	SP	TPE	WAL	TPS	TE	TEFF	BAP	BES	BBD	BPJ
2006	C		C	C	C	C	C	C					
2007	C		C	C	C	C	C	C					
2008	C		C	I (Aug)	C	C	C	I (Aug)		C		I	I
2009	C	C	I (Mar)	I	I (Aug)	C	C	I	C	C		I	I
2010	C	C	I	I	I	C	C	I	C	C		I	I
2011	C	C	I	I	I	C	C	I	C	C	C	I	I
2012	C	C	I	I	I	C	C	I	C	C	C	I	I

Notes:

Area designations: C = Control; I = Impact; REF = reference; NF = near-field; MF = mid-field; FF = far-field; Blank denotes that the area was not part of the monitoring program that year.



Figure 1.4-1. Barge traffic (number of trips/year) arriving in Baker Lake from Chesterfield Inlet since 2008.



1.5. Approach

CREMP reporting changed substantially starting in 2011 with a stronger focus on assessing potential temporal and spatial trends in the data related to mining activity. To this end, greater emphasis is placed on identifying changes to support the AEMP and ultimately the environmental management process, rather than on providing a detailed description of the 2012 results in isolation. Building on last year's changes to the CREMP data evaluation process, this CREMP report applies numerical decision criteria (i.e., triggers and thresholds) to assess the magnitude of change in CREMP monitoring variables.

The 2012 AEMP (Azimuth, 2012c) described a two-tiered approach for decision criteria at Meadowbank based on 'trigger' and 'threshold' level concentrations (**Figure 1.5-1**). Trigger values are typically lower or less conservative than threshold values. These are defined as:

- *Triggers* are early warning criteria that may lead to action. Exceedance of a trigger value does not necessarily imply that an adverse effect may be expected. The triggers may be based on absolute numbers (e.g., an increase half-way from baseline to an identified effects threshold) or statistical criteria (e.g., statistically significant trend that predicts exceedances of a threshold within 3 years).
- *Thresholds* are legal requirements, regulatory guidelines (e.g., CCME), or other discrete benchmarks, below which unacceptable adverse effects are not expected and above which adverse effects may occur. If effects-based thresholds do not exist or are not warranted for a particular variable, then early warning triggers will be developed *without* thresholds. In such cases, if triggers are exceeded then the implications of such exceedances can only be understood through the integration of results from other AEMP monitoring programs, or, if important information gaps still exist, through focused studies (e.g., risk assessment).

Thus, comparison of the data to trigger values is the initial analytical focus; only if trigger values were exceeded, is data then compared to the applicable thresholds.

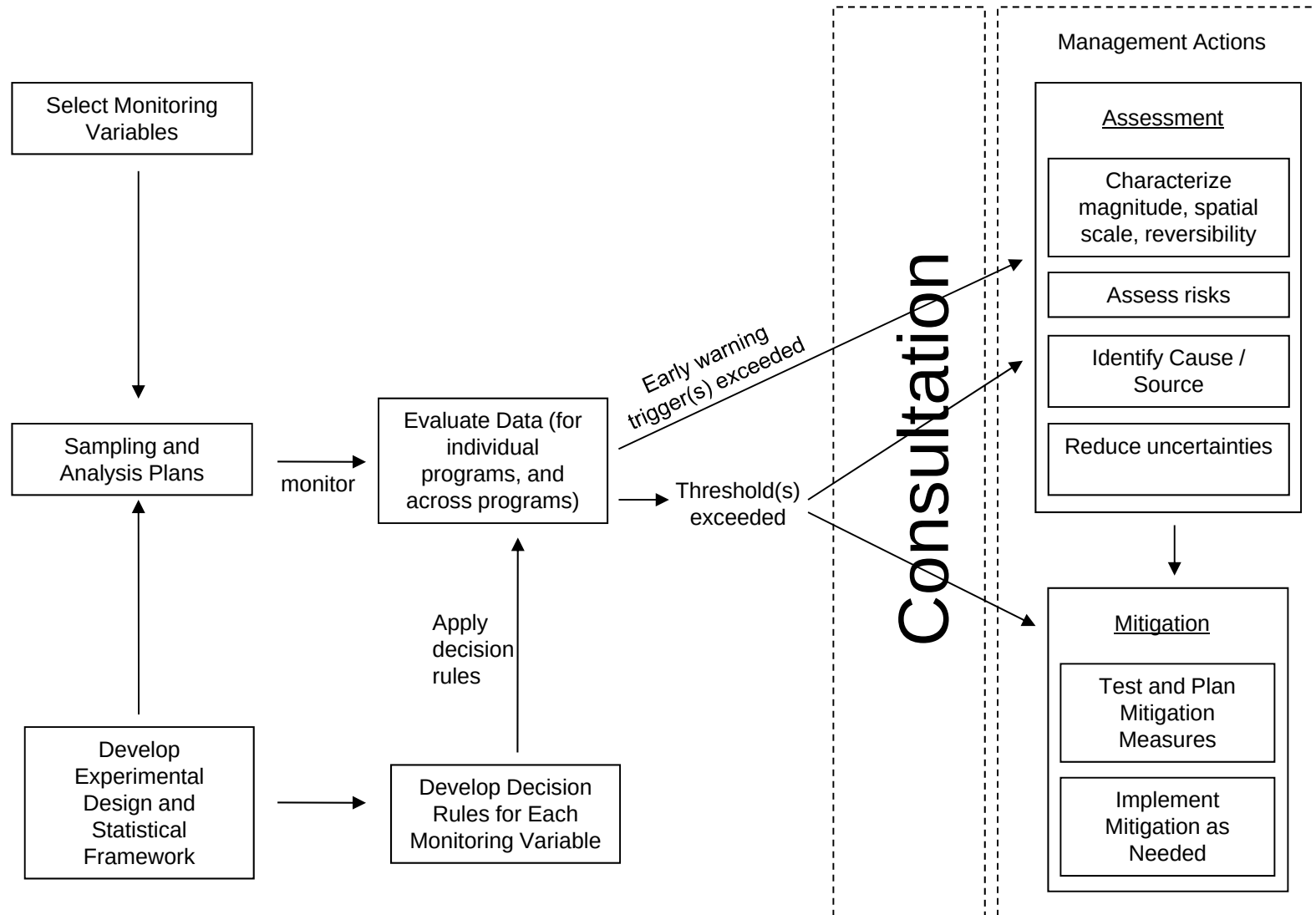
Details regarding the derivation of trigger and threshold values for the CREMP are presented in the *Core Receiving Environment Monitoring Program (CREMP): Design Document 2012* (Azimuth, 2012d). The application of trigger/threshold values complements the spatial-temporal trends assessment initiated in the 2011 CREMP (Azimuth, 2012a), which used trend plots (each showing monitoring results since 2006) to identify patterns of change consistent with one or more of the mining activities described in **Section 1.4.**

The general rationale for conducting the trend assessment followed these principles:



-
1. *Establish Expected Conditions* – Control data (i.e., combination of baseline (i.e., pre-mining) data from impact areas and data from remote reference or control areas; see **Table 1.4-2**) were examined to set expectations for a parameter (e.g., water or sediment metal concentration, etc.) in the absence of mining activity. Baseline data were used to infer relative spatial differences (e.g., between a NF and Ref area) and reference data were used to infer regional temporal changes (e.g., the regional decrease in benthic community abundance between 2009 and 2010).
 2. *Compare Patterns of Change* – With expected conditions in mind, impact data (i.e., data collected at NF and MF areas after the onset of mining-related activity in proximity to an area; see **Table 1.4-2**) were assessed visually for spatial-temporal patterns (e.g., short-term [in any year] spikes [rapid rises that return to baseline] or longer-term trends [gradual or rapid increases that persist]) matching mining activity (e.g., rise in TSS concentrations at SP in August 2008). Where observed, the spatial and temporal extent and magnitude of the changes were characterized (i.e., do they extend to MF or FF areas, and if so, at what magnitude/duration?).
 3. *Provide Context for Magnitude of Change* – As discussed above, site-specific triggers and thresholds were used to provide some context for observed changes to CREMP monitoring parameters. In addition, where applicable and available, results of target studies (e.g., TSS EAS studies) were used to help interpret changes in biological parameters and endpoints.
 4. *Identify Parameters for Management* – Identify parameters requiring management action on one of two levels: continued trend monitoring in 2013 (i.e., to follow low magnitude or weak trends), or active follow-up with more detailed quantitative assessment in 2013 (i.e., a targeted study to address a potential concern). This process will emphasize issues or concerns present in the 2012 results; changes occurring in previous years (e.g., dike construction sedimentation events) have already been identified for follow-up target studies to help understand their ecological significance.

Figure 1.5-1. Management Response Plan for the Meadowbank Mine AEMP.



2. METHODS

2.1. Overview

Open-water field sampling in 2012 was conducted during three time periods; spring (July 20–29), summer (August 17–27), and fall (September 12–21). Azimuth staff collected all August data including water, sediment and benthos, while AEM staff were responsible for collections at all other times. The water monitoring program was expanded in 2009, to include through-ice sampling during winter months. Samples were collected in April (15–19), May (8–11) and November/December (29–5). Limnology profiles were collected monthly (February – May, July – September, and December). In order to better characterize the study lakes, the spatial extent of sampling was expanded in 2009 to include the entire basin from each study lake (**Figure 1.3-1**). Individual sampling areas (for water quality and phytoplankton) were selected at random³ each month from within their respective lake basin.

General limnology was collected in all four seasons, while water and phytoplankton samples were collected in three seasons. Deep limnology profiles (Baker Lake), sediment, sediment cores, and benthic invertebrate sampling was conducted in summer only (August).

Global Positioning System (GPS) Universal Transverse Mercator (UTM) coordinates (in NAD 83) for all monitoring components at the sampling areas are shown in **Table 2.1-1**.

³ Target locations for sampling were randomly pre-determined by bounding the sample areas and using a random number generator to select coordinates within those bounds. Coordinates were then recorded in MapSource and in the hand-held GPS units (NAD 83) before going out into the field.

Table 2.1-1. CREMP sampling location coordinates (GPS, UTM, NAD83), Meadowbank study lakes and Baker Lake, 2012.

Lake	Area-Replicate ID ¹	Area Type ²	Water & Phytoplankton (monthly)			Benthos & Sediment Grabs (August)					Sediment Cores (August)				Baker Lake Deep Limnology Profiles (August)							
			Date	Easting	Northing	Area-Replicate	Sample Type ³	Depth (m)	Easting	Northing	Area-Replicate	Depth (m)	Easting	Northing	Area-Replicate	Depth (m)	Easting	Northing				
Third Portage	TPE-46	NF	April	14W 639167	7212638	TPE-1	B & C	9	14W 639087	7211514	TPE-1	9.0	14W 639087	7211514								
	TPE-47		April	14W 638356	7211632	TPE-2	B & C	8.2	14W 639096	7211536	TPE-3	8.4	14W 639131	7211767								
	TPE-48		May	14W 639442	7211605	TPE-3	B & C	7.3	14W 639114	7211563	TPE-5	9.0	14W 639160	7211723								
	TPE-49		May	14W 638078	7210285	TPE-4	B & C	7.8	14W 639133	7211590	TPE-7	6.8	14W 639153	7211689								
	TPE - 50		July	14W 638421	7211914	TPE-5	B & C	9.2	14W 639156	7211688	TPE-9	8.0	14W 639132	7211588								
	TPE - 51		July	14W 638583	7210844																	
	TPE-52		August	14W 639205	7211153																	
	TPE-53		August	14W 638019	7210529																	
	TPE - 54		September	14W 639599	7210648																	
	TPE - 55		September	14W 639505	7212588																	
	TPE-56		November	14W 637740	7211705																	
	TPE-57		November	14W 639411	7211254																	
	TPN-46	NF	April	14W 636596	7215096	TPN-1	B & C	7.1	14W 636614	7215560	TPN-1	7.1	14W 636614	7215560								
	TPN-47		April	14W 635045	7214023	TPN-2	B & C	7.7	14W 636606	7215425	TPN-3	7.7	14W 636606	7215425								
	TPN-48		May	14W 636651	7213042	TPN-3	B & C	9	14W 636509	7215441	TPN-5	9.0	14W 636509	7215441								
	TPN-49		May	14W 634762	7215803	TPN-4	B & C	8.4	14W 636376	7215530	TPN-7	8.4	14W 636376	7215530								
	TPN - 50		July	14W 635418	7214152	TPN-5	B & C	8.2	14W 636423	7215510	TPN-9	8.2	14W 636423	7215510								
	TPN - 51		July	14W 636680	7212937																	
	TPN-52		August	14W 635302	7213676																	
	TPN-53		August	14W 635024	7216087																	
	TPN-54		September	14W 635469	7212887																	
	TPN-55		September	14W 634808	7214030																	
	TPN-56		November	14W 635825	7215435																	
	TPN-57		November	14W 635819	7212776																	
	TPS-33	MF	July	14W 634059	7209537	TPS-1	B & C	7.9	14W 633600	7208162	TPS-1	7.9	14W 633600	7208162								
	TPS-34		July	14W 633973	7206910	TPS-2	B & C	8	14W 633616	7208127	TPS-3	8.0	14W 633616	7208127								
	TPS-35		August	14W 634767	7207569	TPS-3	B & C	9.1	14W 633626	7208074	TPS-5	9.1	14W 633626	7208074								
	TPS-36		August	14W 633900	7207695	TPS-4	B & C	8.3	14W 633652	7208048	TPS-7	8.3	14W 633652	7208048								
	TPS-37		September	14W 634179	7210169	TPS-5	B & C	7.5	14W 633704	7208005	TPS-9	7.5	14W 633704	7208005								
	TPS-38		September	14W 635252	7209677																	
Second Portage	SP-46	NF	April	14W 639662	7213997	SP-1	B & C	8.4	14W 639991	7214070	SP-1	8.4	14W 639991	7214070								
	SP-47		April	14W 640224	7213560	SP-2	B & C	8.9	14W 639969	7214042	SP-3	8.9	14W 639969	7214042								
	SP-48		May	14W 639647	7214142	SP-3	B & C	7.6	14W 640030	7214116	SP-5	7.6	14W 640030	7214116								
	SP-49		May	14W 639581	7213665	SP-4	B & C	8.8	14W 640068	7214151	SP-7	8.8	14W 640068	7214151								
	SP-50		July	14W 639647	7214068	SP-5	B & C	7.7	14W 640071	7214180	SP-9	7.7	14W 640071	7214180								
	SP-51		July	14W 640111	7212823																	
	SP-52		August	14W 640412	7213511																	
	SP-53		August	14W 640411	7213725																	
	SP-54		September	14W 639596	7213548																	
	SP-55		September	14W 640530	7213549																	
	SP-56		November	14W 640444	7212979																	
	SP-57		November	14W 640655	7213697																	
	TE-46	MF	April	15W 360123	7212651	TE-1	B & C	7.9	15W 359996	7212197	TE-1	9.2	15W 359922	7212118								
	TE-47		April	15W 361613	7212603	TE-2	B & C	9.4	15W 360022	7212223	TE-3	7.9	15W 359996	7212197								
	TE-48		May	15W 359952	7212083	TE-3	B & C	6.5	15W 360046	7212238	TE-5	9.4	15W 360022	7212223								
	TE-49		May	15W 361493	7212179	TE-4	B & C	7.4	15W 360056	7212257	TE-7	6.5	15W 360046	7212238								
	TE-50		July	15W 361461	7212334	TE-5	B & C	7.1	15W 360108	7212256	TE-9	7.4	15W 360056	7212257								
	TE-51		July	15W 361320	7213110																	
	TE-52		August	15W 361525	7212268																	
	TE-53		August	15W 360343	7212872																	
	TE - 54		September	15W 360105	7212654																	
	TE - 55		September	15W 360928	7212641																	
	TE-56		December	15W 361953	7213047																	
	TE-57		December	15W 361388	7213064																	
	TEFF-21	FF	July	15W 362660	7209990	TEFF-1	B & C	9.5	15W 361898	7210702	TEFF-1	9.5	15W 361898	7210702								
	TEFF-22		July	15W 363462	7210008	TEFF-2	B & C	8.8	15W 361849	7210697	TEFF-3	8.8	15W 361849	7210697								
	TEFF-23		August	15W 363618	7210120	TEFF-3	B & C	8.9	15W 361755	7210664	TEFF-5	8.9	15W 361755	7210664								
	TEFF-24		August	15W 364799	7209242	TEFF-4	B & C	7.6	15W 361497	7210698	TEFF-7	7.6	15W 361497	7210698								
	TEFF - 25		September	15W 364149	7210058	TEFF-5	B & C	7.2	15W 361670	7210646	TEFF-9	7.2	15W 361670	7210646								
	TEFF - 26		September	15W 362356	7210710																	
Innugugayualik	INUG-34	Ref	April	14W 623025	7214990	INUG-1	B & C	6.6	14W 622734	7216874	INUG-1	6.6	14W 622734	7216874								
	INUG-35		April	14W 622590	7216563	INUG-2	B & C	8	14W 622729	7216836	INUG-3	8.0	14W 622729	7216836								
	INUG-36		May	14W 621790	7216878	INUG-3	B & C	8.5	14W 622732	7216789	INUG-5	8.5	14W 622732	7216789								
	INUG-37		May	14W 622908	7216900	INUG-4	B & C	8.9	14W 622712	7216770	INUG-7	8.9	14W 622712	7216770								
	INUG-38		July	14W 622980	7214579	INUG-5	B & C	6.8	14W 622809	7216843	INUG-9	6.8	14W 622809	7216843								
	INUG-39		July	14W 621811	7216159																	
	INUG-40		August	14W 622210	7216411																	
	INUG-41		August	14W 621809	7216214																	
	INUG-42		September	14W 622835	7215591																	
	INUG-43		September	14W 622193	7215440																	
	INUG-44		December	14W 622847	7215432																	
	INUG-45		December	14W 622890	7214502																	
	Wally	WAL-21	NF	July	15W 361844	7222618	WAL-1	B & C	8.3	15W 360915	7220490	WAL-1	8.3	15W 360915	7220490							
	WAL-22	July		15W 360754	7221396	WAL-2	B & C	8.6	15W 360903	7220475	WAL-3	8.6	15W 360903	7220475								
	WAL-23	August		15W 360772	7221563	WAL-3	B & C	8.2	15W 360968	7220385	WAL-5	8.2	15W 360968	7220385								
WAL-24	August	15W 361946		7222944	WAL-4	B & C	7.5	15W 360938	7220412	WAL-7	7.5	15W 360938	7220412									
WAL - 25	September	15W 361339		7221603	WAL-5	B & C	8	15W 360916	7220440	WAL-9	8.0	15W 360916	7220440									
WAL - 26	September	15W 360998		7222498																		
Pipedream	PDL-23	Ref	August	14W 630469	7224297	PDL-1	B & C	7.1	14W 630640	7223144	PDL-1	7.1	14W 630640	7223144								
	PDL-24		August	14W 631426	7224912	PDL-2	B & C	6.8	14W 630662	7223080	PDL-3	6.8	14W 630662	7223080								
	PDL-25		September	14W 630511	7223527	PDL-3	B & C	8.1	14W 630685	7223023	PDL-5	8.1	14W 630685	7223023								
	PDL-26		September	14W 632005	7225389	PDL-4	B & C	8.7	14W 630699	7222955	PDL-7	8.7	14W 630699	7222955								
						PDL-5	B & C	8.1	14W 630692	7222923	PDL-9	8.1	14W 630692	7222923								
Baker	BBD-21	NF	July	14W 644052	7135348	BBD-1	B & C	9.2	14W 644693	7135248	BBD-1	9.2	14W 644693	7135248	BBD-1	17.5	14 W 0644597	7134019				
	BBD-22		July	14W 644487	7135135	BBD-2	B & C	9	14W 644639	7135267	BBD-3	9	14W 644639	7135267								
	BBD-23		August	14W 644583	7135086	BBD-3	B & C	9.4	14W 644506	7135300	BBD-5	9.4	14W 644506	7135300								
	BBD-24		August	14W 644430	7135220	BBD-4	B & C	9.3	14W 644460	7135316	BBD-7	9.3	14W 644460	7135316								
	BBD-25		September	14W 644070	7135292	BBD-5	B & C	9.5	14W 644418	7135325	BBD-9	9.5	14W 644418	7135325								
	BBD-26		September	14W 644637	7135334																	
	BPI-21	NF	July	15W 357029	7134023	BPI-1	B & C	9.5	15W 357023	7134220	BPI-1	9.5	15W 357023	7134220	BPI-1	36.0	15 W 0357121	7133454				
	BPI-22		July	15W 357087	7134075	BPI-2	B & C	8	15W 357082	7134203	BPI-3	8.5	15W 357082	7134203								
	BPI-23		August	15W 357312	7134013	BPI-3	B & C	9	15W 357122	7134194	BPI-5	9	15W 357122	7134194								
	BPI-24		August	15W 356679	7134146	BPI-4	B & C	9.3	15W 357167	7134146	BPI-7	9.3	15W 357167	7134146								
	BPI-25		September	15W 357216	7134133	BPI-5	B & C	8.9	15W 357232	7134104	BPI-9	8.9	15W 357232	7134104								
	BPI-26		September	15W 357029	7134066																	
			Ref				BES-1	B & C	8.0	15W 361266	7132381	BES-1	8	15W 361266	7132381	BES-1	40.0	15 W 0361587	7131103			
						BES-2	B & C	8.4	15W 361296	7132361	BES-3	8.4	15W 361296	7132361								
						BES-3	B & C	9.3	15W 361367	7132317	BES-5	9.3	15W 361367	7132317								
						BES-4	B & C	8.5	15W 361434	7132295	BES-7	8.5	15W 361434	7132295								
						BES-5	B & C	8.8	15W 361462	7132276	BES-9	8.8	15W 361462	7132276								
			Ref	July	15W 363391	7131102	BAP-1	B & C	7	15W 363975	7131227	BAP-1	7	15W 363975	7131227							
		BAP-22		July	15W 363713	7130962	BAP-2	B & C	8.4	15W 364002	7131193	BAP-3	8.4	15W 364002	7131193							
		BAP-23		August	15W 363492	7131035	BAP-3	B & C	9	15W 364058	7131149	BAP-5	9	15W 364058	7131149							
		BAP-24		August	15W 363915	7131053	BAP-4	B & C	9.1	15W 364122	7131130	BAP-7	9.1	15W 364122	7131130							
		BAP-25		September	15W 363620	7130984																

2.2. Limnology

2.2.1. General Limnology

Vertical temperature ($^{\circ}\text{C}$), dissolved oxygen (mg/L), conductivity ($\mu\text{S/cm}$), and pH depth profiles were acquired from each meter (up to 20 m) using the YSI Professional Plus meter. Profiles were acquired coinciding with water chemistry sampling from each area at each sampling event in both Meadowbank lakes and Baker Lake. Additional limnology profiles were collected from TP (TPN, TPE, TPS) and SP during February and March (no water chemistry collected).

2.2.2. Baker Lake Deep Limnology

In 2012, an in-depth limnology study was conducted at Baker Lake during August to explore the possibility of stratified layers of higher salinity or conductivity to better characterize past fluctuations in the recordings of these parameters. Transects were run perpendicular to the shore and out from each of the Baker Lake stations. Deep limnology locations are shown in **Figure 1.3-3** and UTM coordinates are presented in **Table 2.1-1**. Vertical temperature ($^{\circ}\text{C}$), dissolved oxygen (mg/L), conductivity ($\mu\text{S/cm}$), pH, total dissolved solids, and salinity depth profiles were acquired every 2-5 meters (approximately) to the entire depth of the sampling location using the YSI Professional Plus meter.

2.3. Water Chemistry

Water samples were collected monthly from all sampling areas from July to September and at a subset of areas in April, May, and December through-ice. In all cases, water was collected from approximately 3 m depth by pumping lake water through a flexible (food-grade silicone) tube, attached to a diaphragm pump connected to a 12 volt battery.

Water samples were analyzed for conventional parameters (hardness, conductivity, pH, turbidity, and total dissolved and suspended solids), anions (alkalinity, bromide, chloride, fluoride, silicate and sulphate), nutrients (ammonia, nitrate, nitrite, total Kjeldahl nitrogen, ortho-phosphate and total phosphorus), organic parameters (chlorophyll-a, dissolved and total organic carbon) and total and dissolved metals.

Where filtered samples were required for dissolved constituents (metals, DOC), a 45- μm inline filter was connected to the end of the outflow tube and bottles were filled directly using filtered water. The procedures for collecting the water samples are outlined in detail in the Standard Operating Procedure (SOP) for Water and Phytoplankton Sampling (**Appendix A**). Water quality sampling locations are illustrated in **Figure 1.3-1**

(Meadowbank lakes) and **Figure 1.3-3** (Baker Lake); UTM coordinates for each sample are presented in **Table 2.1-1**.

ALS Environmental (Winnipeg, MB) provided all of the sampling containers, Super-Q or Milli-Q water and appropriate preservatives, and performed all analyses. All samples were kept on ice following collection and during transport to the laboratory, and stored in a refrigerator prior to shipping. A completed chain-of-custody (COC) form accompanied the samples during transport. Laboratory data reports along with COC are provided in **Appendix J**.

Water chemistry concentrations were tabulated and compared against each other, as well as trigger and threshold values (see **Section 2.8** for further discussion). This is the first year chemistry is being screened against trigger and threshold values, although where available, threshold values are equal to the federal Canadian Council of Ministers of the Environment (CCME, 2007) water quality guidelines for the protection of aquatic life, which are the values used to screen CREMP data in previous years. For further information on trigger and threshold values see **Section 2.8**.

2.4. Sediment Grab and Coring Chemistry

Sediment quality sampling has been conducted for two purposes under the CREMP: (1) characterization of sediment quality (physical and chemical parameters) within the biologically active zone using grab samples to support the assessment of benthic invertebrate community results, and (2) characterization of sediment chemistry (chemical parameters) in the top 1-cm using core samples to support the identification of potential mine-related changes to this medium. The former is conducted every year synoptically with collection of the benthic invertebrate samples. The latter was conducted in 2008 (all CREMP areas just prior to the start of the construction phase at Meadowbank to characterize baseline conditions, Azimuth 2009c), 2009 (follow-up at four areas to assess potential changes in sediment chemistry associated with construction of the East Dike, Azimuth 2010c), and 2012. Coring is projected to occur in 2014 and every three years thereafter, to coincide with the EEM program, as outlined in the CREMP design review (Azimuth, 2012d).

2.4.1. Sediment Grabs

Consistent with previous years, sediment was collected only in August, using proven sample collection and handling techniques (Environment Canada, 1984). The procedures for collecting the sediment samples are outlined in detail in the SOP for Benthos and Sediment Sampling (**Appendix B**). Sediment (top 3–5 cm) was collected from all areas using a Petite Ponar grab (sampling area of 0.023 m²). Two grab samples (occasionally 3 when grab samples were not full) were composited from each area to reduce the influence

of within-area spatial heterogeneity⁴. A composite sample was collected at each sampling area. This was achieved by adding one level spoon full of the homogenized material that was used for the sediment chemistry to a clean bowl for each replicate station. Five replicates provided sufficient material for the composite. Sediment chemistry grabs were collected after benthic invertebrate sampling to avoid possible disturbance of biota. Sediment chemistry sampling areas are shown in **Figure 1.3-2** (Meadowbank lakes) and **Figure 1.3-3** (Baker Lake); UTM coordinates for each sample are presented in **Table 2.1-1**.

Only those grab samples that met the following acceptability criteria were retained for analysis: did not contain large foreign objects; adequate penetration depth (i.e., 10–15 cm); not overfilled (sediment surface not touching the top of sampler); did not leak (there was overlying water present and no visible leaks); and was undisturbed (sediment surface was relatively flat). Grabs that did not satisfy these conditions were discarded.

Sampling jars were placed in a cooler with ice packs and transported to ALS Environmental (Vancouver, BC) for analysis. A completed chain-of-custody form accompanied the samples during transport. Sediment samples were analyzed for pH, total organic carbon, moisture content, particle size (% gravel, sand, silt and clay), mineral oil and grease, light & heavy extractable petroleum hydrocarbons (LEPHs and HEPHs), polycyclic aromatic hydrocarbons (PAHs), and total metals concentrations. Laboratory data reports and COC are provided in **Appendix J**.

In previous years, CREMP sediment data was compared against CCME Interim Sediment Quality Guidelines (ISQG) and Probable Effects Level (PEL) concentrations. This report is the first to screen CREMP sediment metals concentrations against trigger and threshold values (see **Section 2.8** for further discussion). Where available, threshold values are equal to the CCME ISQGs which are conservative values that represent the concentration below which adverse effects are unexpected. For further information on trigger and threshold values see **Section 2.8**.

2.4.2. Sediment Cores

Sediment cores were collected at all CREMP monitoring stations in August 2012. While 10 independent cores were collected from each station, only five independent cores, plus one duplicate, were analysed as acceptable statistical strength was achieved at this number. Cores were collected to characterize the spatial variability of surface sediments (i.e., top 1-cm only) at each CREMP monitoring station. The coring program was

⁴ Within-area spatial variability was directly assessed in the targeted sediment coring study which is reported in the 2009 EAS (Azimuth, 2010c).

designed to explore an area within a radius of 250 meters that surrounds the current benthic/sediment sampling locations. Sediment coring locations are shown in **Figure 1.3-2** (Meadowbank) and **Figure 1.3-3** (Baker Lake); UTM coordinates for each sample are presented in **Table 2.1-1**. The sites for coring were also restricted to the depth range of 6.5-9.5 meters which complements the other benthic/sediment work. With these two factors dictating where sediment cores could be collected, the suitable area within the 250 meters was surprisingly limited. Using past experience of the potential difficulties in collecting sediment material, coring attempts were usually focused at the sites of benthic invertebrate replicates. Coring was conducted first (i.e., before benthos) at each site because the corer has the smallest footprint on the lake bottom and because the cores are most sensitive to impact in the sediment.

The primary collection method of surface sediment cores was a hand-operated corer (barrel diameter of 7 cm) as outlined in the Sediment Coring SOP provided in **Appendix C**. The corer was an excellent tool for carefully collecting sediment in many locations, however, for certain substrates (coarse or hardpack lake bottom) the corer did not function as desired (core falls out or corer does not penetrate the sediment). Where the corer would not work (mostly in Baker Lake) the Petit Ponar was deployed to collect a grab which would carefully be examined to make sure the surface layer was intact and undisturbed. A small clear plastic ring from the corer (used to slide off the top layer of the cores) would be pushed into the grab sediment. Carefully, using a flat spatula to slide under the ring, the top layer of the sediment would be lifted off. This would be transferred onto another spatula to make sure only had the top ~1 cm was included and then transferred into the sample containers. Each tool was washed between reps and gloves were worn. When a site was chosen for a replicate sample the area was carefully explored using the sonar prior to sampling to ensure correct sampling conditions. Strong winds can affect boat anchoring and movement, with a routine swing arc of 3-6 meters while anchored. We chose to use this aspect of sampling to our advantage and take two cores from each benthos rep location before moving and re-anchoring the boat. This gave us an average distance of 5 m between cores in sets of two. That is cores 1 and 2 were 5 meters apart and cores 3 and 4 were also 5 meters apart. Each pair was a minimum of 20 meters apart.

Only those core samples that met the following acceptability criteria were retained for analysis: corer was deployed and remained perpendicular to the bottom; corer did not hit hard, impenetrable substrate; and the core sediment sample was undisturbed (did not mix or fall out of bottom while being pulled to the surface). Cores that did not satisfy these conditions were discarded. Each tool was washed between reps and gloves were worn.



Once collected, these sediments were stored, transported, and analyzed for total metals, pH and total organic carbon. Results were tabulated in a similar manner to the bulk grab sediment samples (see **Section 2.3.1**).

2.5. Phytoplankton

Phytoplankton are microscopic, unicellular plant species that are suspended in the water column and, as primary producers, comprise the base of the food web. There are six major groups of phytoplankton present in lakes: cyanophytes (blue green algae), chlorophytes (green algae), chrysophytes (golden-brown algae), diatoms, cryptophytes and dinoflagellates. Seasonal production of phytoplankton can vary widely depending upon water temperature, nutrient concentration, time of year, water clarity and amount of sunlight and predation by zooplankton. Estimates of phytoplankton biomass (mg/m^3) are useful as gross indicators of lake productivity to determine if there have been potential changes due to nutrient additions as a result of blasting (i.e., addition of nitrogen and ammonia from ammonium nitrate).

Unfiltered water was collected monthly from all sampling areas from July to September and at a subset of areas in April, May and December through-ice (alongside water chemistry sampling). Water was collected in small (50 mL) vials, from 3 m depth, and preserved with Lugol's solution. The procedures for collecting the phytoplankton samples are outlined in detail in the SOP for Water and Phytoplankton Sampling (**Appendix A**). Phytoplankton samples were collected at water sampling locations; the latter are illustrated in **Figure 1.3-1** (Meadowbank lakes) and **Figure 1.3-3** (Baker Lake); UTM coordinates for each sample are presented in **Table 2.1-1**.

Preserved samples were transported to Winnipeg, MB for taxonomic identification and analysis by Plankton R Us Inc. Unfortunately a number of the December samples were lost/smashed in shipping so only two December samples were analysed. For the analysis, 10-mL aliquots of preserved sample were gravity settled for 24 hours. Counts were performed on an inverted microscope at magnifications of 125X, 400X, and 1200X with phase contrast illumination. Cell counts were performed using the $\ddot{\text{U}}$ termohl technique as modified by Nauwerck (1963). Cell counts were converted to wet weight biomass (mg/m^3) by estimating cell volume. Estimates of cell volume for each species were obtained by measurements of up to 50 cells of an individual species and applying the geometric formula best fitted to the shape of the cell (Vollenweider, 1968; Rott, 1981). A specific gravity of 1 was assumed for cellular mass. All biomass (mg/m^3) and density (cells/L) estimates are summed by major taxa, per area.

Simpson's diversity index was calculated for each area to quantify phytoplankton species diversity among areas and sampling events (Washington, 1984). Simpson's diversity (D) is calculated as follows:

$$D = 1 - \sum \frac{n_i(n_i - 1)}{N(N - 1)}$$

where: N is the total number of organisms/replicate; n_i is the total number of organisms of the i th taxa/replicate. The number of species occurring per sample was calculated to measure the species richness among replicates, areas and sampling events.

2.6. Benthic Invertebrates

Benthic invertebrates are small animals that live in or on bottom sediments. The most commonly encountered organisms include the aquatic larval stages (i.e., resembling worms) of insects, especially chironomids (i.e., midge larvae). Other common organisms are oligochaete worms, small bivalve clams and amphipods (i.e., crustaceans). Benthic invertebrates are typically an important food source for juvenile fish of all species (i.e., lake trout, Arctic char and round whitefish); they may also be important for adult fish (e.g., round whitefish).

Benthic invertebrates were collected from each sampling area in August 2012, using a Petite Ponar grab (0.023 m²) and a 500-µm sieve at the same time and locations as sediment chemistry samples. Five replicate samples were collected per area. Two independent grabs⁵ per replicate were composited to form a single sample to reduce sampling variation within areas and to increase the surface area sampled. Depths ranged from 6.5 to 9.5 m. Sampling locations are illustrated in **Figure 1.3-2** (Meadowbank lakes) and **Figure 1.3-3** (Baker Lake); UTM coordinates for each sample are presented in **Table 2.1-1**.

Only those grab samples that met the following acceptability criteria outlined in **Section 2.3** (sediment chemistry methods) were retained for analysis. Grabs that did not satisfy these conditions were discarded. Typically, the entire grab is sieved, not just the upper few cm. The procedures for collecting the benthic invertebrate samples are outlined in detail in the SOP for Benthos and Sediment Sampling (**Appendix B**).

Benthos samples were preserved in the field with a 10% buffered formalin solution and sent to Zaranko Environmental Assessment Services (ZEAS) (Nobleton, ON) for taxonomic identification and analysis. Upon arrival at ZEAS, samples were immediately logged and inspected to ensure adequate preservation to a minimum level of 10% buffered

⁵ Based on analyses conducted for the EEM Cycle 1 Study Design document (for more detail see Azimuth, 2010f), we feel that the benefits of relying on compositing two subsamples for each replicate area to reflect the benthic community outweigh the disadvantages of changing methods and making historical data less comparable.

formalin and checked for correct labeling. Benthos samples were sorted at a magnification of between 7 and 10 times with the use of a stereomicroscope. To expedite sorting prior to processing, all samples were stained with a protein dye that is absorbed by aquatic organisms but not by organic material, such as detritus and algae.

Prior to sorting, samples were washed free of formalin in a 500-µm sieve. Benthos were enumerated and sorted into major taxonomic groups, (i.e., order and family), placed in glass bottles and re-preserved in 80% ethanol for more detailed taxonomic analysis by senior staff. Each bottle was labeled internally with the survey name, date, area and replicate number.

Abundance of organisms/m² was determined from the total number of organisms enumerated (see **Section 3.6**). Nematodes and ostracods were not reported, nor were they included in abundance and richness calculations because they are too small to be reliably retained on a 500-µm sieve.

The following endpoints were used for assessing benthic community structure, based on sensitivity, objectivity, ease of interpretation and cost-effectiveness:

- Taxa richness (i.e., corresponds to the number of taxa per sample and provides a measure of diversity).
- Total abundance (i.e., number of organisms per m²).
- Abundance and richness of all major taxa (e.g., insects, molluscs, worms).
- Simpson's Diversity index (D), calculated as follows:

$$D = 1 - \sum \frac{n_i(n_i - 1)}{N(N - 1)}$$

2.7. Quality Assurance / Quality Control

The objective of quality assurance and quality control (QA/QC) is to assure that the chemical and biological data collected are representative of the material or populations being sampled, are of known quality, have sufficient laboratory precision to be highly repeatable, are properly documented, and are scientifically defensible. Data quality was assured throughout the collection and analysis of samples using specified standardized procedures, by the employment of laboratories that have been certified for all applicable methods, and by staffing the program with experienced technicians.

Laboratory QA/QC – Data Quality Objectives (DQOs) are numerically definable measures of analytical precision and completeness. Analytical precision is a measurement of the variability associated with duplicate analyses of the same sample in the laboratory. The laboratory duplicate is a new aliquot from the sample bottle/jar and is analyzed from



the start in the same manner as the original aliquot taken from the bottle/jar. Also, Certified Reference Materials (CRM) are always included as part of routine laboratory QA/QC.

Field QA/QC: Water Sampling – Field QA/QC standards during water sampling were maintained for every sample. The standard QA/QC procedures included thoroughly flushing the flexible tubing and pump to prevent cross-contamination between areas and thoroughly rinsing the sample containers with site water prior to sample collection. Field QA procedures include collection and/or analysis of the following:

- Field Duplicate Samples – An independent collection of water samples at the same time and location as the original, as a measure of consistency in sampling methodology and heterogeneity of chemical parameters at discrete locations. The number of field duplicates taken is approximately 10% of original samples.
- Travel Blank – Laboratory supplied bottles of distilled water that are transported to site, carried back and forth into the field and returned to the laboratory, unopened, to test for inadvertent contamination during the transport and field sampling process.
- Equipment Blank – At the beginning or end of a field sampling episode, after routine rinsing of the pump and tubing, distilled water is run through the equipment and placed in sampling bottles for analysis of a wide suite of parameters (e.g., metals, nutrients, and conventionals). This blank tests for possible cross-contamination of samples from the water sampling equipment.

Results from both the equipment and travel blanks are examined for detectable concentrations of any of the parameters measured; no parameter in either blank should exceed laboratory MDLs.

Quality assurance results of the laboratory and field duplicates were assessed by measuring the relative percent difference (RPD) between original and duplicate measurements as measure of precision by the laboratory and the magnitude of variability between original and field duplicate samples respectively. The equation used to calculate a RPD is:

$$RPD = \frac{(A - B)}{((A + B)/2)} \times 100$$

where: A = analytical result; B = duplicate result.

The DQOs for this project were:

- Laboratory Duplicate = 25% RPD for concentrations that exceed 10x the method detection limit (MDL).
- Field Duplicate = 50% RPD for concentrations that exceed 10 x MDL.



RPD values may be either positive or negative, and ideally should provide a mix of the two, clustered around zero. Consistently positive or negative values may indicate a bias. Large variations in RPD values are often observed between duplicate samples when the concentrations of analytes are very low and approaching the detection limit. The reason for this is apparent if one considers duplicate samples with concentrations of an analyte of 0.0005 and 0.0007 mg/L. In absolute terms, the concentration difference between the two is only 0.0002 mg/L, a very tiny amount; however, the RPD value is 33.3%. This may sometimes lead to a belief that the level of precision is less than it actually is. RPDs are not calculated for cases where one of the samples (i.e., either A or B above) is below detection and the other is not.

Field QA/QC: Sediment and Sediment Core Sampling – Field QA/QC standards during sediment sampling consisted of the following:

- Taking care between sampling areas, by rinsing and cleaning the sampling gear for sediment grabs (Petite Ponar grab, stainless steel compositing bowls and spoons) and sediment cores (corer and spatula) using site water and phosphate-free cleaning detergent, avoided the possibility of cross-contamination.
- Metals analysis of an ashless filter (QA/QC Filter) that was swiped over the pre-cleaned bowl at four sampling areas to assess the cleaning procedures. The significance of any metal detected on this filter was evaluated by comparing this amount to the measured concentrations in the sediment samples. Where comparisons were required, the concentration of metals originating from any equipment was estimated by dividing the amount detected on the filter (weight) by: the surface area of 2 Petite Ponar grabs (assuming a thickness of 3 cm was collected from each), that was multiplied by the density of sediment (assumed to be 2 g/cm³).
- Eight (sediment grab) and 13 (sediment core) field duplicate samples were collected in the immediate vicinity of original samples from randomly selected locations as a test of consistency in field methodology and to characterize heterogeneity of sediment chemistry within discrete areas. The DQO for field duplicate samples is based on an RPD of 50% for concentrations that are >10 x MDL.

Field and Laboratory QA/QC: Biota Sampling – Standard procedures were used to collect biota samples. All sampling gear was thoroughly rinsed between sampling areas to ensure that there was no inadvertent introduction (i.e., cross-contamination) of biota from one area to another.

Field duplicates were collected for phytoplankton during each sampling event (i.e., monthly) in coordination with water sample duplicates and were taken in order to assess



sampling variability and sample homogeneity. A RPD of 50% for density and biomass concentrations is considered acceptable.

As a measure of laboratory QA/QC on the enumeration method replicate counts were performed on 10% of the samples. Replicate samples were chosen at random and processed at different times from the original analysis to reduce biases. The laboratory replicate is a new aliquot (10 ml) from the sample jar and is counted from the start in the same manner as the original aliquot (10 ml) taken from the jar.

Field replicates (5 per area) were collected for benthos to determine natural variability and heterogeneity. Replicates were collected at least 20 m apart from one another, within the defined sampling areas.

ZEAS incorporates the following set of QA/QC procedures in all benthic projects undertaken by the company to ensure the generation of high quality and reliable data:

- Samples were logged upon arrival, inspected, and enumerated;
- Samples were checked for proper preservation;
- Samples were stained to facilitate sorting;
- Taxonomic identifications were based on the most updated and widely used keys;
- 10% of the samples were re-sorted, and re-counted, targeting >90% recovery;
- Precision and accuracy estimates were calculated;
- A voucher collection was compiled;
- Sorted sediments and debris were re-preserved in 10% formalin and are retained for up to three months. For samples subject to subsampling, sorted and unsorted fractions were re-preserved separately.

Completeness – Completeness for this study is defined as the percentage of valid analytical results. Results that were made uncertain due to missed hold times, improper calibration, contamination of analytical blanks, or poor calibration verification results were deemed invalid. Completeness = 95% valid data obtained.

2.8. Data Evaluation Criteria

The specific methods used to apply triggers/thresholds in the evaluation of CREMP monitoring parameters varied by variable group; details are presented in the following sections. As discussed in **Section 1.5**, the evaluation process focused on comparisons to early warning triggers; only when triggers were exceeded were monitoring results compared to thresholds. Consequently, methods for applying numerical decision criteria focus on triggers only, but apply equally to threshold values.



It is important to note that trigger values (and threshold values) may be exceeded for reasons unrelated to mining activity. For example, trigger values for parameters derived in the absence of effects-based thresholds (or where such thresholds were already exceeded prior to mine development) were set at the 95th percentile of the background data; we would expect 5% of values to exceed triggers naturally, in the absence of any mine-related changes. Thus, to avoid making false positive errors (i.e., characterizing a change or difference as mine-related when it is not), when triggers were exceeded we compared the observed pattern of change to our expectations of a mine-related effect (e.g., we would generally expect to see a gradient with NF>MF>FF); where a pattern was absent (e.g., an increase only seen at a FF area), the observed change was inferred as unrelated to mining activity. Thus, it is important to realize that trigger exceedances do not necessarily mean that mine-related changes have occurred. Rather, they highlight cases that should be looked at more closely to determine the most plausible explanation of the observed change to avoid making mistakes.

2.8.1. Water Chemistry

As discussed in the *Core Receiving Environment Monitoring Program (CREMP): Design Document 2012* (Azimuth, 2012d), while monthly mean values were compared to trigger values to identify short-term, episodic exceedances in water chemistry parameters, formal application of the trigger for decision-making purposes was to the yearly mean for each sampling area (i.e., area means calculated from two to three through-ice monitoring events and three to four open water monitoring events; termed “2012 mean”).

The hierarchical process for water chemistry variables was as follows (implemented separately for Meadowbank Project Lakes and Baker Lake, for which triggers were independently derived [Azimuth, 2012d]):

1. *Computation of Yearly Means* – monthly means calculated first for each parameter, then yearly means on an area-specific (i.e., lake or basin-specific) basis. Note that values < MDL were conservatively set equal to the MDL.
2. *Comparisons of Yearly Means to Triggers* – yearly means for each sampling area were compared to the triggers to identify all cases for which the mean equaled or exceeded the trigger.
3. *Statistical Testing of Yearly Means Exceeding Triggers* – cases where the yearly means exceeded the triggers were formally tested using statistical analyses; this process was conducted different for Meadowbank Project Lakes and Baker Lake:

Meadowbank Project Lakes

- Before-After-Control-Impact statistical framework with multiple paired “before” and “after” period events (BACIP) was applied (see Azimuth, 2012d for details).



-
- INUG was used as the reference (“control”) area; the other areas were tested as exposure (“impact”) areas. PDL nor TEFF could be utilized as controls for BACIP as no data exists 2006 – 2008 for these areas. Instead, these areas are used to compare reference and exposure area data patterns.
 - True “pre-impact” data (i.e., when both INUG and the test area had “control” (“C”) status; see **Table 1.4-2**) were used for the “before” data; the 2012 data (only events when both INUG and the test area were sampled) were used as the “after” data.
 - All data were log-transformed (natural logs). Thus, the exponent of the BACI interaction term coefficient provides the proportional change in 2012 relative to the “before” period.
 - One-tailed tests of the null hypothesis (i.e., that test areas experienced no relative change) were conducted; the alternative hypothesis was a relative increase in a parameter at the test area.

Baker Lake (where different from above)

- Baker Lake areas were designated as “control” or “impact” when sampling started in 2008 (i.e., there was no detailed baseline sampling was conducted for Baker Lake; see **Table 1.4-2**), so there are no true “pre-impact” “before” data. While a spatial “CI” design could be used to test for differences between reference “control” and exposure “impact” areas, the design does not allow for distinguishing natural differences between areas from development-related changes. Rather, since no development-related changes had been identified to date, all years of data up to and including 2011 were considered “before” and the 2012 data as “after” period data (i.e., allowing the more robust BACIP analysis). Thus, while the trend plots were used to assess temporal trends at the “impact” areas since monitoring started, the BACIP analyses specifically looked at changes in 2012 at the two “impact” areas relative to previous years.
- The Akilahaarjuk Point (BAP) area was used as the reference “control” area.

2.8.2. Sediment Chemistry

As discussed in the *Core Receiving Environment Monitoring Program (CREMP): Design Document 2012* (Azimuth, 2012d), the sediment core samples were used to screen against trigger values. Methods, which did not vary between the Meadowbank Project Lakes and Baker Lake, were as follows:

-
1. *Computation of Yearly Means* – the 2012 sediment coring data were used to calculate means for each parameter at each sampling area. Note that values < MDL were conservatively set equal to the MDL.
 2. *Comparisons of Yearly Means to Triggers* – yearly means for core samples from each sampling area were compared to the triggers to identify all cases for which the mean equaled or exceeded the trigger.
 3. *Statistical Testing of Yearly Means Exceeding Triggers* – cases where the yearly means exceeded the triggers were formally tested using statistical analyses. Unlike water chemistry, as sediment concentrations are not expected to vary annually due to climatic changes, a “before” – “after” (BA) analysis was used to test for temporal differences at each exposure “impact” area. Sediment is inherently much more variable than water however, and greater natural variability is to be expected.

2.8.3. Phytoplankton

As discussed in the *Core Receiving Environment Monitoring Program (CREMP): Design Document 2012* (Azimuth, 2012d), triggers and thresholds were set to relative changes (decreases of 20% and 50%, respectively) in total biomass and species richness at test areas using the BACIP framework (i.e., paired monthly sampling events at “control” [INUG or BAP] and “impact” [i.e., NF or MF areas] areas over two periods [“before” and “after”], with “months” as the unit for temporal replication). The evaluation procedure was analogous to that used for water chemistry, except that area means for 2012 were not directly comparable to triggers (i.e., since the triggers/thresholds are based on the relative change over time in a parameter rather than on a finite value), so the process started with the BACIP testing. Two-tailed tests of the null hypothesis (i.e., that test areas experienced no relative change up or down) were conducted.

2.8.4. Benthic Invertebrates

Similar to phytoplankton, triggers and thresholds were set to relative changes (decreases of 20% and 50%, respectively) in total biomass and species richness at test areas using the BACI framework. As discussed in the *Core Receiving Environment Monitoring Program (CREMP): Design Document 2012* (Azimuth, 2012d), statistical power increased with consideration of more “after” period years (Note: benthic invertebrates are sampled yearly in August). Consequently, BACI analyses (analogous to phytoplankton, except that unit of temporal replication was “years” instead of “months”) were conducted on three “after” data period lengths: one year (2012 only), two years (2011-2012) and three years (2010-2012).

3. RESULTS AND DISCUSSION

Following the review of QA/QC results (**Section 3.1**), the remainder of this section presents results and discussion for each study component. The latter sections (**Sections 3.2 through 3.7**), are subdivided by study area (i.e., Meadowbank study lakes and Baker Lake), have been structured in a consistent manner with the general rationale used for the trend assessment, and include:

- *General Observations* – This provides a synopsis of expected conditions in the absence of mining-related activities (i.e., based on baseline and reference data [i.e., “control” status data; see textbox in **Section 1.3.1** and text in **Section 1.4.2**]).
- *Temporal and Spatial Trend Interpretation* – This (1) describes the types of changes that could be expected in relation to mining activity, specific to the parameters in question; (2) identifies trends in parameters that are associated with mining-related activities; (3) provides context for the magnitude of observed changes relative to trigger and threshold value; and (4) identifies parameters requiring management action on two levels: a) continued trend monitoring in 2013 (i.e., to follow low magnitude or weak trends), or b) active follow-up with more detailed quantitative assessment in 2013 (i.e., a targeted study to address a potential concern).

3.1. QA/QC

QA/QC procedures consisted of a combination of careful field collection and sample handling, the collection of field duplicate samples and the analysis of laboratory replicates and standard reference materials. Results of the QA/QC analyses are presented in **Tables 3.1-1 to 3.1-5** for water chemistry, sediment grab chemistry, sediment core chemistry, phytoplankton and benthos, respectively.

ALS Environmental is an analytical laboratory accredited by the Canadian Association of Environmental Analytical Laboratories. This accreditation ensures that laboratories achieve and demonstrate the highest levels of technical and management excellence for their services. Laboratory QA/QC procedures performed on the water and sediment samples met all of the laboratory’s internal data quality objectives for accuracy, precision and completeness.

3.1.1. Water Chemistry

For water samples during each of the six events (that consisted of 10–24 samples), one to three field duplicates, one or two laboratory duplicates, one or two equipment blanks and one travel blank (not for every event) were analyzed for all water parameters. The September sampling event did not have a field duplicate, an oversight on the sampler’s

part. As a result, a total of nine field duplicates, 13 laboratory duplicates, nine equipment blanks, and three travel blanks were each analyzed for 24 conventional parameters as well as 39 total and 39 dissolved metals. Although there were some exceedances of the established DQOs, these exceedances represent much less than 1% of the total for QA samples and parameters measured. When comparing results for a large number of parameters, many of which are near detection limits, simple odds dictate that a few parameters will exceed DQOs due to laboratory error (i.e., a false positive). There was no pattern in the nature of the exceedances that indicates a bias of specific parameters one way or another. The results of the RPD analysis for all these parameters are presented in **Table 3.1-1** and discussed below:

- **Field Duplicates** – Overall, these samples showed a high level of consistency with the original samples. There were only 11 cases (out of >1000 cases) where the RPD exceeded 50%, seven of which were from the December sample⁶. Of these 11 cases, only two had original and duplicate values greater than 10 x MDL (i.e., conductivity and calcium in December).
- **Laboratory Duplicates** – These samples, conducted randomly as part of the laboratory's internal QA/QC program, showed a high degree of consistency and precision. All laboratory duplicate samples and parameters were below the 25% RPD. Consequently, DQOs were met in all samples.
- **Equipment Blanks** – In 2012 there were multiple detectable parameters in equipment blank samples, most being < 10 x MDL. The exception to this was the two September equipment blank samples which had multiple detectable parameters > 10 x MDL. One possible explanation for these hits is contamination via the water used for flushing the equipment, which has been an issue historically at the site.⁷ In 2012 water for flushing equipment was supplied by ALS. For each sampling event until mid-summer (exact month unknown) 10 L of Super-Q water

⁶ The December field duplicate had a number of parameters that had RPDs exceeding 50%. Of the seven RPD exceedances, only two had values > 10 x MDL (i.e., conductivity and calcium). Differences in conductivity and total dissolved solids between the original and the duplicate indicate that these water samples are not similar, despite being collected from the same location during the same event. We believe that these differences are due to incorrect sample labeling and not due to natural variation in the water. Never-the-less, caution should be used when interpreting the December water chemistry results.

⁷ In 2010, we acquired onsite (Meadowbank lab) distilled water in order to increase the amount of flushing to 2 minutes. Low but detectable concentrations of a variety of parameters were measured in this distilled water, consequently contaminating the blanks from the sampling equipment. In 2011, we ordered a large supply of laboratory-prepared de-ionized water to avoid this problem. The shipment arrived in time for July sampling onwards, but onsite distilled water was used for May equipment blanks and results for this month were considered compromised and not usable to assess cross contamination during sample collection.

was supplied, which is of higher quality than de-ionized water. After mid-summer 10 L of Milli-Q water was supplied by ALS, which is even more pure than Super-Q water. Therefore it is unlikely that water contamination is a plausible explanation for the multiple detectable parameters in the equipment blanks in September. The more likely explanation is that the contamination source is from equipment that was not properly flushed. The remaining blank samples show some detectable parameters but all except two values are below 10 x MDL. The two readings > 10 x MDL were both for reactive silicate. The laboratory suggested that these high reading could be due to temporarily holding the sample in glass. However, we have not been able to confirm if this occurred in the field. It is unlikely since, due to the remote field location, glass is not commonly used.

- Travel Blanks – There were five cases of exceedances but all were below 10 x MDL.
- Overall – The frequency of DQO exceedances represent a small fraction of the total number of samples and parameters that were measured for QA/QC purposes (i.e., <1%). While there was a pattern of exceedance in a single field duplicate and two equipment blanks, which cannot be definitively explained, there were no apparent patterns in exceedances of parameters suggesting that there was no trend towards higher or lower results in replicate samples. As such, the measured concentrations are considered usable but some are flagged to be interpreted with caution as a result of exceedances of multiple parameters in a duplication sample as well as detectable concentrations in equipment blanks.

3.1.1.1. Detection Limits and Laboratory Analysis Bias

There were three instances of the method detection limit (MDL) systematically being greater than the trigger value in water chemistry results. The parameters affected were total phosphorus, ortho-phosphate and dissolved iron. For total phosphorus and ortho-phosphate, the elevated MDL was not anticipated because the 2012 quote issued to Azimuth from ALS Winnipeg was subsequently amended with a different MDL for phosphorus. While this amendment was issued to Azimuth, the increase in MDL for these parameters was not highlighted amongst the other ~100 parameters with unchanged MDLs. ALS has since apologized for this oversight in communication (letter provided in **Appendix D**). For dissolved iron, in previous years the quoted MDL had been 0.1 mg/L. However, in previous years the actual MDL reported in the data reports was 0.01 mg/L. This occurred because when the data had been analysed in previous years, there had been a separate quote for dissolved iron, offering a lower MDL of 0.01 mg/L. However, in 2012 this quote was not carried forward, an oversight on ALS's part. Azimuth assumed that the MDL quoted for dissolve iron (of 0.1 mg/L) was the same as previous years, of

0.01 mg/L, an oversight on Azimuth's part. Both sides have acknowledged their fault, and steps have been taken to ensure this issue does not occur again.

To this end, Azimuth and ALS Winnipeg have together reviewed the 2012 water chemistry dataset, for both the results and MDLs, and come up with a number of areas that need clarification so that these issues do not arise in future years. Some additional areas of concern that were identified are as follows:

- For some parameters (DOC, TOC, phosphorus, and alkalinities) 2011 and 2012 results trend as higher values than that of results from 2010 and earlier. This coincides with a switch between laboratory facilities (Vancouver to Winnipeg) for most parameters. ALS has reviewed their last two rounds of proficiency test (PT) samples for both Vancouver and Winnipeg and found no biases, however as the sample results were at concentration levels much higher than the Meadowbank samples, the PT results do not give meaningful information. Similarly, ALS laboratory control tests are also at a higher concentration level than the Meadowbank samples. Both Vancouver and Winnipeg labs routinely analyze method blanks and low level controls and monitor them to ensure that they are within laboratory data quality objectives. These objectives are less than MDL for the method blank and 60-140% recovery for the low concentration standard. Based on these limits, it is not possible to determine if one lab has a bias over another.
- Total and dissolved chromium and total selenium have MDLs that were equal to the trigger. Ideally MDLs would be an order of magnitude less than the trigger. ALS has since confirmed that lower MDLs are possible for many parameters, though not always an order of magnitude less, but some analyses may need to be switched back to Vancouver to achieve lower DLs for select parameters.
- Some water chemistry parameters had MDLs in the data reports that were lower than those listed in the quote. These parameters were conductivity, alkalinities (bicarbonate, carbonate, hydroxide, and total) and reactive silicate. This is because there are two different ranges for these parameters; one for the low range and one for the high range. It is ALS's policy to quote the high range, and then based on the results, run the low range if acceptable. Azimuth has requested that the quotes be revised to include a comment that lists the low range values.
- Differences in dissolved MDL versus total MDL were noted in eight metals parameters. ALS has since explained that due to extra preparation required for the total metals analysis, such as acid digestion, uncertainty is increased, and therefore so is the total metals MDL. The remaining metals parameters had the same MDLs for dissolved and total analysis.

This process is not yet complete, but will be in place in time for the 2013 sampling season at Meadowbank.

3.1.2. Sediment Grab and Core Chemistry

Sediment QA/QC results are presented in **Table 3.1-2** (grabs) and **Table 3.1-3** (cores) and discussed below:

- Field Duplicates – Overall, the eight sediment grab field duplicate samples showed a high level of consistency with the original samples. There were only three cases, two for % sand and one for TOC, where the RPD exceeded 50% (i.e., field dup-1, -2, and -3). For the % sand RPD exceedances, in both cases the original sample had less sand content than the duplicate. This difference demonstrates the heterogeneous nature of sediment grab particles within a spatially small area. For the TOC RPD exceedance, the original sample had less TOC than the duplicate.
- Of the 13 sediment core field duplicates, eight of them had RPD values exceeding 50%, though of these only six samples had RPDs exceeding 50% and $> 10 \times$ MDL. Parameters that exceeded 50% RPD, and $> 10 \times$ MDL were total arsenic (x 4), total iron (x 2), total manganese (x 4), total mercury, total molybdenum, and total nickel. These results demonstrate that the sediment core samples collected in a spatially small sampling area have a chemically heterogeneous nature.
- Laboratory Duplicates – The RPD value slightly exceeded the DQO of 25% in one sediment grab lab duplicate sample (26.1%) for antimony and two sediment core lab duplicate samples for thallium (-33.1%) and uranium (35.1%), though only the uranium result was also $> 10 \times$ MDL. This result confirms that sediments were, for the most part, well homogenized in the field prior to placement in jars.
- Filter Swipes – filter swipes were conducted on sediment grabs equipment only and were analyzed for total metals in units of $\mu\text{g}/\text{filter}$. While the majority of parameters tested were below the MDL, a few metals were detected, however, most of these elements are commonly found in water (e.g., calcium, magnesium). In addition, the incremental influence of the measured amounts was estimated to be less than 0.1% of actual measured sediment concentrations in all cases. Consequently, the potential for meaningful cross-contamination is considered negligible and DQOs were considered to be fully met.

3.1.3. Phytoplankton

For phytoplankton, during each event between one and three field duplicates and laboratory duplicates were analyzed for density and biomass (total and for each major



phytoplankton group). Similar to water chemistry, the results for phytoplankton QA/QC had a number of exceedances of the established DQOs. However, where density or biomass of a particular phytoplankton group is very small (i.e., about 1% of total), small differences in that metric between the original and the duplicate can cause very large differences in the RPD. Thus, we evaluate the quality of these data based on *total* density and *total* biomass both for field and laboratory duplicates.

For both field and laboratory duplicates RPDs for *total* density and *total* biomass consistently met the DQOs (i.e., < 50% for field, < 25% for laboratory).

Results of the RPD analysis for all these parameters are presented in **Table 3.1-4** and are discussed below:

- Field Duplicates – RPDs for *total* density and *total* biomass consistently met the DQOs (i.e., < 50%). RPD values were also always much less than 50% for number of species and Simpson's diversity. Within-taxa variability of the field duplicates was high.
- Laboratory Duplicates – Duplicate re-counts were conducted on 10% of the samples analyzed. RPDs for *total* density and *total* biomass consistently met the DQOs (i.e., < 25%). Similar to field duplicates, laboratory duplicates showed high within-taxa variability.
- Overall – Taken on a taxa basis, the results illustrate the inherently large difference in composition because of the relatively small number of plankters enumerated relative to the very large number of plankters present in the sample. However, total density and biomass did not differ in one direction or another for laboratory duplicates. As part of the CREMP design (Azimuth, 2012d), it was recommended that 10 phytoplankton samples be collected per area, but 5 of these 10 archived and only analysed if the results of the first 5 samples did not meet statistical power requirements. In 2012, only 5 replicate samples per area were analysed, as the power was sufficient from the samples.

3.1.4. Benthic Invertebrates

Laboratory replicate counts were performed on 10% of all benthic samples. Replicate samples were chosen at random and processed at different times from the original analysis to reduce bias. Of the re-sorted samples, 3/86 (3.5%), 1/41 (2.4%), 7/108 (6.5%), 3/68 (4%), 1/47 (2.1%), 4/164 (2%), and 4/49 (8%) of organisms were missed (**Table 3.1-5**), with an overall omission rate of about 4.2%. These results suggest that the vast majority of animals observed in benthic samples by the taxonomist were recovered. A reference collection of benthic taxa has been compiled.



3.1.5. Completeness

Overall, >99% completeness was achieved in terms of field and sample QA planned for this monitoring study:

- Care taken in the field to ensure consistency of sample collection and methodology
- Thorough cleaning of equipment to avoid cross-contamination between every area
- Equipment flushes and travel blank samples collected for every sampling event, with the exception of September where no equipment blank was collected.
- Field duplicate samples collected for at least every 10 samples collected
- Laboratory duplicates performed on 10% of samples received by the laboratory and reported for each dataset
- All of the prescribed areas were visited and all replicates were collected
- No sampling areas were missed due to weather or mechanical/field equipment difficulties.
- All through-ice areas were visited except in months with dangerous ice conditions (June and October)
- No sampling analysis parameters were missed; care was taken when completing COCs and all COCs were correctly interpreted by the laboratories
- Dissolved metals parameters were all below detection in the August WAL-23 water sample. This was considered an erroneous result, the reasons for which are not known for sure but ALS suggested that it is possible that the analyst failed to pour the sample into the machine before running. Usually when this happens (it is a rare event) the analyst notices that the entire run has non-detect values and re-runs, this time remembering to use the sample. Whether or not this might have been the scenario for sample WAL-23, is unknown. Regardless, the results are considered to be spurious and have been removed from the water chemistry table and discussion.
- A number of phytoplankton samples were lost in December. The cooler that arrived at the laboratory containing what remained of the December samples also had broken glass. It is likely that the cooler sat in freezing conditions somewhere between the mine site and the laboratory, in which the majority of the glass containers holding the December phytoplankton samples froze, breaking the glass, releasing and evaporating/sublimating the water.
- A benthic invertebrate sample (BPJ-2) was removed from analysis as the sample was suspected as compromised on account of having no benthic invertebrates in the sample.



Table 3.1.1. QA/QC data for water parameters, Meadowbank study lakes and Baker Lake, 2012.

	MDLs	Innugugayualik Lake			Second Portage Lake			Second Portage Lake			Third Portage Lake			Baker Lake			Tehek Lake		
		INUG-34	April Dup-1	RPD	SP-49	May Dup-1	RPD	SP-51	Jul. Dup-1	RPD	TPE-51	Jul. Dup-2	RPD	BBD-21	Jul. Dup-3	RPD	TE-52	Aug. Dup-1	RPD
		15-Apr-12	15-Apr-12	(%)	10-May-12	10-May-12	(%)	20-Jun-12	20-Jun-12	(%)	21-Jul-12	21-Jul-12	(%)	27-Jul-12	27-Jul-12	(%)	18-Aug-12	18-Aug-12	(%)
CONVENTIONAL PARAMETERS																			
Physical Tests																			
Conductivity (µS/cm)	0.40	21.00	21.00	0	32.00	32.00	0	29.00	28.00	3.5	23.00	23.00	0	27.00	29.00	-7.1	22.00	22.00	0
Hardness (mg/L)	0.30	6.90	7.31	-5.8	11.90	11.90	0	11.50	11.70	-1.7	8.10	8.60	-6.0	10.70	10.50	1.9	8.03	7.69	4.3
pH	0.10	7.10	7.09	0.1	7.13	7.17	-0.6	7.27	7.27	0.0	7.14	7.14	0	7.19	7.20	-0.1	7.16	7.11	0.7
Total Suspended Solids (mg/L)	2.00	<2.0	<2.0		<1.0	<1.0		<1.0	<1.0		<1.0	<1.0		<1.0	<1.0		<1.0	<1.0	
Total Dissolved Solids (mg/L)	5.00	12.00	12.00	0	26.00	26.00	0	18.00	18.00	0	16.00	14.00	13.3	16.00	20.00		12.00	15.00	
Turbidity (NTU)	0.10	0.13	0.14	-7.4	0.26	0.24	8.0	0.54	0.52	3.8	0.34	0.39		0.31	0.37		0.44	0.46	-4.4
Anions & Nutrients (mg/L)																			
Alkalinity - Bicarbonate	2.00	9.50	9.50	0	13.70	13.50	1.5	12.80	12.70	0.8	9.70	9.60	1.0	12.90	12.90	0	9.50	9.50	0
Alkalinity - Carbonate	0.60	<0.60	<0.60		<0.60	<0.60		<1.2	<1.2		<1.2	<1.2		<1.2	<1.2		<1.2	<1.2	
Alkalinity - Hydroxide	0.40	<0.34	<0.34		<0.34	<0.34		<0.68	<0.68		<0.68	<0.68		<0.68	<0.68		<0.68	<0.68	
Alkalinity - Total	1.00	7.80	7.80	0	11.20	11.00	1.8	10.50	10.40	1.0	7.90	7.80	1.3	10.60	10.60	0	7.80	7.80	0
Ammonia (as N)	0.05	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010	
Bromide	0.10	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10	
Chloride	0.20	0.85	0.83	2.4	0.65	0.67	-3.0	0.53	0.53	0	0.53	0.53	0	1.41	1.90		0.53	0.55	-3.7
Fluoride	0.02	0.07	0.07	1.4	0.07	0.07	-3.0	0.05	0.05	-3.8	0.06	0.06	1.7	0.05	0.05	8.0	0.06	0.06	-1.8
Nitrate (as N)	0.005	<0.0050	<0.0050		0.02	0.02		<0.0050	<0.0050		0.02	0.02	1.0	0.02	0.01	17.4	<0.0050	<0.0050	
Nitrite (as N)	0.001	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010	
Total Kjeldahl Nitrogen	0.20	0.13	0.12	6.3	0.10	0.09	10.6	0.09	0.10	-5.4	0.07	0.08	-8.0	0.20	0.17	15.0	0.09	0.08	12.3
Total Phosphate (as P)	0.01	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010	
Silicate (as SiO ₂)	0.005	0.48	0.47	2.1	0.39	0.42	-7.6	0.42	0.42	0.2	0.20	0.04	131.1	0.51	0.51	0	0.28	0.25	11.2
Sulphate (SO ₄)	0.50	1.15	1.13	1.8	3.32	3.38	-1.8	2.72	2.71	0.4	2.59	2.59	0	0.61	0.66	-7.9	2.16	2.17	-0.5
ORGANIC / INORGANIC CARBON																			
Dissolved Organic Carbon (mg/L)	1.00	2.20	2.30	-4.4	2.90	2.40	18.9	2.70	2.20	20.4	2.30	2.30	0	3.90	4.80		1.90	1.70	11.1
Total Organic Carbon (mg/L)	1.00	2.30	2.40	-4.3	3.10	2.40	25.5	2.90	2.40	18.9	2.50	2.50	0	3.90	4.90		1.80	1.70	5.7
PLANT PIGMENTS																			
Chlorophyll a	0.10	0.11	<0.10		0.13	0.13	0	0.41	0.42	-2.4	0.32	0.63	-65.3	1.35	1.32	2.2	0.28	0.36	-25.0
Phaeophytin a	0.10	<0.10	<0.10		0.12	<0.10		0.16	0.21	-27.0	0.14	0.17	-19.4	0.28	0.26	7.4	<0.10	<0.10	
TOTAL METALS (mg/L)																			
Aluminum	0.0050	0.01	0.01	-20.1	<0.0050	0.01		0.02	0.01	15.5	0.01	0.01	-3.1	0.02	0.02	0	0.01	0.01	-7.4
Antimony	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020	
Arsenic	0.00020	<0.00020	<0.00020		0.00	0.00	-40.0	0.00	0.00	3.6	0.00	0.00	-2.2	<0.00020	<0.00020		<0.00020	<0.00020	
Barium	0.00020	0.00	0.00	5.4	0.00	0.00	-10.5	0.00	0.00	0.4	0.00	0.00	-7.9	0.02	0.02	3.7	0.00	0.00	-1.5
Beryllium	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020	
Bismuth	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020	
Boron	0.010	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010	
Cadmium	0.000010	<0.000010	0.00		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010	
Calcium	0.10	1.51	1.43	5.4	3.19	3.21	-0.6	2.96	3.04	-2.7	1.98	2.12	-6.8	2.55	2.53	0.8	1.83	1.87	-2.2
Cesium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010	
Chromium	0.0010	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010	
Cobalt	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020	
Copper	0.00020	0.0005	0.0005	-3.8	0.0007	0.0008	-16.0	0.0009	0.0009	-5.7	0.0006	0.0006	-9.8	0.0005	0.0005	-2.0	0.0004	0.0005	-11.0
Iron ¹	0.10	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10	
Lead	0.000090	<0.000090	<0.000090		<0.000090	<0.000090		<0.000090	<0.000090		<0.000090	<0.000090		<0.000090	<0.000090		<0.000090	<0.000090	
Lithium	0.0020	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020	
Magnesium	0.010	0.92	0.89	3.5	1.05	1.03	1.9	1.00	1.01	-1.1	0.76	0.81	-6.1	1.18	1.19	-0.8	0.67	0.69	-2.8
Manganese	0.00030	0.0007	0.0007	0	0.0009	0.0010	-8.8	0.0034	0.0035	-2.3	0.0030	0.0032	-6.5	0.0042	0.0042	-0.5	0.0016	0.0017	-4.3
Mercury	0.000050	<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010	
Molybdenum	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020	
Nickel	0.0020	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020	
Phosphorus	0.20	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10	
Potassium	0.020	0.50	0.47	6.5	0.53	0.54	-1.1	0.44	0.45	-2.3	0.44	0.47	-6.4	0.41	0.41	-0.5	0.37	0.38	-4.0
Rubidium	0.00020	0.00	0.00	3.2	0.00	0.00	-6.7	0.00	0.00	2.9	0.00	0.00	-6.0	0.00	0.00	1.3	0.00	0.00	0
Selenium	0.0010	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010	
Silicon	0.050	0.31	0.29	9.4	0.31	0.28	7.8	0.32	0.33	-2.8	0.17	0.16	6.1	0.32	0.31	4.1	0.21	0.22	-3.3
Silver	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010	
Sodium	0.030	0.75	0.71	5.2	0.81	0.79	2.9	0.63	0.62	1.9	0.70	0.76	-7.1	0.73	0.98	-28.4	0.53	0.55	-2.6
Strontium	0.00010	0.01	0.01	4.1	0.02	0.01	9.2	0.01	0.01	-0.8	0.01	0.01	-5.7	0.02	0.02	0.6	0.01	0.01	-1.5
Tellurium	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020	
Thallium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010	
Thorium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010	
Tin	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	0.00		<0.00020	<0.00020		<0.00020	<0.00020	
Titanium	0.00020	<0.00020	<0.00020		<0.00020	0.00		<0.00050	0.00		<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050	
Tungsten	0.0010	<0.0010	<0.0010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010	
Uranium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010	
Vanadium	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020	
Zinc	0.0050	<0.0020	<0.0020		<0.0020														

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate))/2 x 100.

Shaded RPDs exceed 25% (lab duplicates) or 50% (field duplicates), and > 10 x MDL.

Bolded RPDs exceed 50% (field duplicates) or 25% (laboratory duplicates), but < 10 x MDL.

Bolded travel and equipment blanks exceed laboratory method detection limits, but $\leq 10 \times$ MDL.

RRDs have not been ca

¹ The detection limit for iron (dissolved and total) for November and December samples is 0.01 mg/L.

Table 3.1.1. QA/QC data for water parameters, Meadowbank study lakes and Baker Lake, 2012.

	MDLs	Second Portage Lake			Baker Lake			Third Portage Lake			Various Lakes			Various Lakes			Various Lakes		
		SP-53	Aug. Dup-2	RPD	BBD-23	Aug. Dup-3	RPD	TPN-57	Dec. Dup-1	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD
		20-Aug-12	20-Aug-12	(%)	25-Aug-12	25-Aug-12	(%)	05-Dec-12	05-Dec-12	(%)	April	Duplicate	(%)	April	Duplicate	(%)	May	Duplicate	(%)
CONVENTIONAL PARAMETERS																			
Physical Tests																			
Conductivity (µS/cm)	0.40	28.00	28.00	0	28.00	28.00	0	28.00	12.30	77.9	-	-	-	-	-	-	1.2	1.2	0
Hardness (mg/L)	0.30	36535.00	10.80		11.20	10.90	2.7	9.00	15.20		-	-	-	-	-	-	-	-	
pH	0.10	7.20	7.27	-1.0	7.10	7.08	0.3	6.99	6.89	1.4	-	-	-	-	-	-	-	-	
Total Suspended Solids (mg/L)	2.00	<1.0	<1.0		<1.0	<1.0		<1.0	<1.0		-	-	-	-	-	-	-	-	
Total Dissolved Solids (mg/L)	5.00	15.00	15.00	0	16.00	17.00	-6.1	20.00	<5.0		-	-	-	-	-	-	-	-	
Turbidity (NTU)	0.10	0.40	0.37	7.8	0.42	0.32	27.0	0.20	0.18	10.5	0.14	0.14	0	0.24	0.28	-15.4	0.13	0.12	8.0
Anions & Nutrients (mg/L)																			
Alkalinity - Bicarbonate	2.00	12.80	12.80	0	12.80	12.90	-0.8	9.10	10.20		11.7	11.8	-0.9	11.8	12	-1.7	11.5	11.5	0
Alkalinity - Carbonate	0.60	<0.60	<0.60		<0.60	<0.60		<0.60	<0.60		<0.60	<0.60		<0.60	<0.60		<0.60	<0.60	
Alkalinity - Hydroxide	0.40	<0.34	<0.34		<0.34	<0.34		<0.34	<0.34		<0.34	<0.34		<0.34	<0.34		<0.34	<0.34	
Alkalinity - Total	1.00	10.50	10.50	0	10.50	10.60	-0.9	7.50	8.40		9.6	9.6	0	9.7	9.9	-2.0	9.4	9.4	0
Ammonia (as N)	0.05	<0.010	<0.010		<0.010	<0.010		0.05	<0.010		-	-	-	-	-	-	-	-	
Bromide	0.10	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		-	-	-	-	-	-	-	-	
Chloride	0.20	0.56	0.60	-6.9	1.44	1.53	-6.1	0.63	0.37	52.0	-	-	-	-	-	-	-	-	
Fluoride	0.02	0.06	0.06	-1.7	0.04	0.04	-4.8	0.06	0.05	16.5	-	-	-	-	-	-	-	-	
Nitrate (as N)	0.005	<0.0050	<0.0050		0.0089	0.0118	-28.0	0.05	0.03	52.2	-	-	-	-	-	-	-	-	
Nitrite (as N)	0.001	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		-	-	-	-	-	-	-	-	
Total Kjeldahl Nitrogen	0.20	0.09	<0.050		0.16	0.16	1.3	0.10	0.11	-2.8	-	-	-	-	-	-	-	-	
Total Phosphate (as P)	0.01	<0.010	<0.010		<0.010	<0.010		<0.0020	<0.0020		<0.010	<0.010		-	-		<0.010	<0.010	
Silicate (as SiO ₂)	0.005	0.44	0.29	40.0	0.41	0.41	-1.2	0.11	0.05	67.5	0.139	0.132	5.2	-	-	-	0.0157	0.0158	-0.6
Sulphate (SO ₄)	0.50	2.99	2.94	1.7	0.62	0.61	1.6	3.94	2.40	48.6	-	-	-	-	-	-	-	-	
ORGANIC / INORGANIC CARBON																			
Dissolved Organic Carbon (mg/L)	1.00	2.00	1.80	10.5	4.10	4.10	0	1.90	2.00	-5.1	-	-	-	-	-	-	-	-	
Total Organic Carbon (mg/L)	1.00	2.00	1.90	5.1	4.10	4.10	0	2.00	2.00	0	-	-	-	-	-	-	5.3	5.4	-1.9
PLANT PIGMENTS																			
Chlorophyll a	0.10	0.27	0.34	-23.0	0.99	0.51	64.0	0.22	<0.10		-	-	-	-	-	-	-	-	
Phaeophytin a	0.10	0.14	0.14	0	0.63	0.27	80.0	0.22	0.53	-82.7	-	-	-	-	-	-	-	-	
TOTAL METALS (mg/L)																			
Aluminum	0.0050	0.01	0.01	0	0.01	0.01	-2.5	0.01	0.01	-17.5	-	-	-	-	-	-	-	-	
Antimony	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Arsenic	0.00020	0.00	0.00	-6.7	<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Barium	0.00020	0.00	0.0044 *		0.02	0.02	3.8	0.00	0.00	-45.9	-	-	-	-	-	-	-	-	
Beryllium	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Bismuth	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Boron	0.010	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		-	-	-	-	-	-	-	-	
Cadmium	0.000010	<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	0.00		-	-	-	-	-	-	-	-	
Calcium	0.10	2.59	2.39	8.0	2.58	2.47	4.4	2.19	3.71	-51.5	-	-	-	-	-	-	-	-	
Cesium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		-	-	-	-	-	-	-	-	
Chromium	0.0010	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		-	-	-	-	-	-	-	-	
Cobalt	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Copper	0.00020	0.0007	0.0007	1.5	0.0003	0.0004	-24.7	<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Iron ¹	0.10	<0.10	<0.10		<0.10	<0.10		<0.010	<0.010		-	-	-	-	-	-	-	-	
Lead	0.000090	<0.000090	<0.000090		<0.000090	<0.000090		<0.000090	<0.000090		-	-	-	-	-	-	-	-	
Lithium	0.0020	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		-	-	-	-	-	-	-	-	
Magnesium	0.010	0.74	0.92 *		1.16	1.16	0	0.86	1.43	-49.7	-	-	-	-	-	-	-	-	
Manganese	0.00030	0.0027	0.0026	1.9	0.0025	0.0026	-3.1	0.0025	0.0042	-50.7	-	-	-	-	-	-	-	-	
Mercury	0.000050	<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		-	-	-	-	-	
Molybdenum	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		0.00	0.00	-43.1	-	-	-	-	-	-	-	-	
Nickel	0.0020	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		-	-	-	-	-	-	-	-	
Phosphorus	0.20	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		-	-	-	-	-	-	-	-	
Potassium	0.020	0.38	0.37	3.2	0.41	0.39	4.7	0.51	0.79	-42.8	-	-	-	-	-	-	-	-	
Rubidium	0.00020	0.00	0.00	-2.9	0.00	0.00	2.7	0.00	0.00	-46.8	-	-	-	-	-	-	-	-	
Selenium	0.0010	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		-	-	-	-	-	-	-	-	
Silicon	0.050	0.22	0.23	-4.0	0.27	0.26	2.3	0.16	0.20	-23.4	-	-	-	-	-	-	-	-	
Silver	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		-	-	-	-	-	-	-	-	
Sodium	0.030	0.49	0.50	-2.8	0.77	0.75	2.6	1.07	1.72	-46.6	-	-	-	-	-	-	-	-	
Strontium	0.00010	0.01	0.01	-1.4	0.02	0.02	2.8	0.01	0.02	-46.3	-	-	-	-	-	-	-	-	
Tellurium	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Thallium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		-	-	-	-	-	-	-	-	
Thorium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		-	-	-	-	-	-	-	-	
Tin	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Titanium	0.00020	<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050		-	-	-	-	-	-	-	-	
Tungsten	0.0010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		-	-	-	-	-	-	-	-	
Uranium	0.00010	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		-	-	-	-	-	-	-	-	
Vanadium	0.00020	<0.00020	<0.00020		<0.00020	<0.00020		<0.00020	<0.00020		-	-	-	-	-	-	-	-	
Zinc	0.0050	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		-	-	-	-	-	-	-	-	
Zirconium	0.00040	<0.00040	<0.00040		<0.00040	<0.00040		0.00	<0.00040		-	-	-	-	-	-	-	-	
DISSOLVED METALS (mg/L)																			
Aluminum	0.0020	0.01	0.01	13.13															

Table 3.1.1. QA/QC data for water parameters, Meadowbank study lakes and Baker Lake, 2012.

	MDLs	Various Lakes			Various Lakes			Various Lakes			Various Lakes			Various Lakes			Various Lakes			Various Lakes		
		Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD
		May	Duplicate	(%)	July	Duplicate	(%)	July	Duplicate	(%)	August	Duplicate	(%)	01-Jul-02	Duplicate	(%)	August	Duplicate	(%)	August	Duplicate	(%)
CONVENTIONAL PARAMETERS																						
Physical Tests																						
Conductivity (µS/cm)	0.40	-	-	-	-	-	-	31	31	0	12	12	0	10.5	10.5	0	28	28	0	11.7	11.7	0
Hardness (mg/L)	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pH	0.10	-	-	-	-	-	-	7.19	7.2	-0.1	-	-	-	-	-	-	-	-	-	-	-	
Total Suspended Solids (mg/L)	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Dissolved Solids (mg/L)	5.00	-	-	-	-	-	-	-	-	-	14	13	7.4	15	14	6.9	-	-	-	-	-	
Turbidity (NTU)	0.10	-	-	-	-	-	-	-	-	-	-	-	-	0.42	0.42	0	-	-	-	-	-	
Anions & Nutrients (mg/L)																						
Alkalinity - Bicarbonate	2.00	11.7	11.8	-0.9	12.8	12.8	0	<24	<24	-	-	-	-	-	-	-	12.8	12.7	0.8	7.7	7.8	-1.3
Alkalinity - Carbonate	0.60	<0.60	<0.60		<1.2	<0.60		<12	<12	-	-	-	-	-	-	-	<0.60	<0.60		<0.60	<0.60	
Alkalinity - Hydroxide	0.40	<0.34	<0.34		<0.68	<0.34		<6.8	<6.8	-	-	-	-	-	-	-	<0.34	<0.34		<0.34	<0.34	
Alkalinity - Total	1.00	9.6	9.6	0	10.5	10.5	0	<20	<20	-	-	-	-	-	-	-	10.5	10.4	1.0	6.3	6.4	-1.6
Ammonia (as N)	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromide	0.10	-	-	-	<0.10	<0.10		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chloride	0.20	-	-	-	0.53	0.53	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fluoride	0.02	-	-	-	0.052	0.053	-1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrate (as N)	0.005	-	-	-	<0.0050	<0.0050		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrite (as N)	0.001	-	-	-	<0.0010	<0.0010		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Kjeldahl Nitrogen	0.20	-	-	-	-	-	-	0.1	0.12	-18.2	<0.050	<0.050		-	-	-	-	-	-	0.101	0.106	-4.8
Total Phosphate (as P)	0.01	-	-	-	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		-	-	
Silicate (as SiO ₂)	0.005	-	-	-	0.141	0.144	-2.1	0.184	0.183	0.5	0.505	0.498	1.4	0.443	0.445	-0.5	12.7	12.4	2.4	0.243	0.249	-2.4
Sulphate (SO ₄)	0.50	-	-	-	2.72	2.72	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ORGANIC / INORGANIC CARBON																						
Dissolved Organic Carbon (mg/L)	1.00	-	-	-	-	-	-	3.8	3.8	0	-	-	-	-	-	-	3.9	3.9	0	-	-	-
Total Organic Carbon (mg/L)	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	2.8	0
PLANT PIGMENTS																						
Chlorophyll a	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phaeophytin a	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL METALS (mg/L)																						
Aluminum	0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Antimony	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arsenic	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Barium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Beryllium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bismuth	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Boron	0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cadmium	0.000010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Calcium	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cesium	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chromium	0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cobalt	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Copper	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron ³	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lead	0.000090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lithium	0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Magnesium	0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Manganese	0.00030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mercury	0.000050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Molybdenum	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nickel	0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phosphorus	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rubidium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Selenium	0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Silicon	0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Silver	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sodium	0.030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Strontium	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tellurium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Thallium	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Thorium	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tin	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Titanium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tungsten	0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uranium	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Vanadium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Zinc	0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Zirconium	0.00040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DISSOLVED METALS (mg/L)																						
Aluminum	0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Antimony	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arsenic	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Barium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Beryllium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bismuth	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Boron	0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cadmium	0.000010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Calcium	0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cesium	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chromium	0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cobalt	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Copper	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron ³	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lead	0.000090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lithium	0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Magnesium	0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Manganese	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mercury	0.000010	-	-	-	-	-	-	-	-	-	<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		-	-	
Molybdenum	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nickel	0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phosphorus	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rubidium	0.00020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Selenium	0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Silicon	0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Silver	0.00010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sodium	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Strontium	0.00010	-	-	-	-	-	-	-	-	-</												

Notes:
RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.
Shaded RPDs exceed 25% (lab duplicates) or 50% (field duplicates), and > 10 x MDL.
Bolded RPDs exceed 50% (field duplicates) or 25% (laboratory duplicates), but < 10 x MDL.
Bolded travel and equipment blanks exceed laboratory method detection limits, but < 10 x MDL.
RPDs have not been calculated for cases where one of the samples is below detection and the other is not and in cases where both are below detection. RPD has been left blank
"-": no measurement
¹ The detection limit for iron (dissolved and total) for November and December samples is 0.01 mg/L).

Table 3.1.1. QA/QC data for water parameters, Meadowbank study lakes and Baker Lake, 2012.

		Various Lakes			Various Lakes			Various Lakes			Travel Blanks			Equipment Blanks ¹									
		Original September	Laboratory Duplicate	RPD (%)	Original September	Laboratory Duplicate	RPD (%)	Original December	Laboratory Duplicate	RPD (%)	July-1 7/28/2012	Aug-1 8/18/2012	Aug-2 8/26/2012	APR-EB1 4/21/2012	MAY-EB-1 5/12/2012	JULY-EB1 7/25/2012	JULY EB2 7/30/2012	AUG-EB-1 8/20/2012	AUG-EB-2 8/26/2012	SEP-EB-1 9/18/2012	SEP-EB-2 9/18/2012	DEC-EB-1 12/5/2012	
MDLs																							
CONVENTIONAL PARAMETERS																							
Physical Tests																							
Conductivity (µS/cm)	0.40	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1.0	1.40	1.20	<1.0	<1.0	<1.0	<1.0	21.00	1.20	<1.0	
Hardness (mg/L)	0.30	-	-	-	-	-	-	-	-	-	<0.20	<0.20	<0.20	0.31	<0.20	<0.20	<0.20	<0.20	<0.20	8.65	11.40	<0.30	
pH	0.10	-	-	-	-	-	-	-	-	-	6.03	6.03	5.86	6.24	6.29	6.02	6.01	5.86	5.68	7.12	5.81	5.77	
Total Suspended Solids (mg/L)	2.00	-	-	-	-	-	-	-	-	-	<1.0	-	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Total Dissolved Solids (mg/L)	5.00	-	-	-	-	-	-	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.00	17.00	5.00	<5.0	
Turbidity (NTU)	0.10	-	-	-	-	-	-	-	-	-	<0.10	<0.10	0.22	0.14	0.10	<0.10	0.14	<0.10	0.19	0.79	0.24	<0.10	
Anions & Nutrients (mg/L)																							
Alkalinity - Bicarbonate	2.00	13	13	0	12.5	12.5	0	10.1	10.3	-2.0	<2.4	2.30	2.20	3.40	2.60	2.50	2.60	2.40	2.30	10.60	2.20	2.20	
Alkalinity - Carbonate	0.60	<0.60	<0.60		<0.60	<0.60		<0.60	<0.60		<1.2	<1.2	<0.60	<0.60	<0.60	<1.2	<1.2	<0.60	<0.60	<0.60	<0.60	<0.60	
Alkalinity - Hydroxide	0.40	<0.34	<0.34		<0.34	<0.34		<0.34	<0.34		<0.68	<0.68	<0.34	<0.34	<0.34	<0.68	<0.68	<0.34	<0.34	<0.34	<0.34	<0.34	
Alkalinity - Total	1.00	10.7	10.7	0	10.3	10.3	0	8.3	8.5	-2.4	<2.0	1.90	1.80	2.80	2.10	2.00	2.10	2.00	1.90	8.70	1.30	1.80	
Ammonia (as N)	0.05	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	
Bromide	0.10	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Chloride	0.20	-	-	-	-	-	-	-	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Fluoride	0.02	-	-	-	-	-	-	-	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Nitrate (as N)	0.005	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Nitrite (as N)	0.001	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Total Kjeldahl Nitrogen	0.20	0.107	0.124	-14.7	0.085	0.086	-1.2	0.104	0.105	-1.0	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.09	<0.050	0.06	0.06	0.07	
Total Phosphate (as P)	0.01	<0.010	<0.010		-	-		<0.0020	<0.0020		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	
Silicate (as SiO ₂)	0.005	0.33	0.346	-4.7	-	-	-	0.0517	0.0536	-3.6	<0.0050	<0.0050	<0.0050	0.01	0.02	0.04	0.08	<0.0050	12.70	0.19	0.35	<0.0050	
Sulphate (SO ₄)	0.50	-	-	-	-	-	-	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
ORGANIC / INORGANIC CARBON																							
Dissolved Organic Carbon (mg/L)	1.00	-	-	-	-	-	-	2	2	0	<1.0	<1.0	<1.0	<1.0	1.00	1.40	<1.0	<1.0	<1.0	1.80	1.90	<1.0	
Total Organic Carbon (mg/L)	1.00	4.1	4.3	-4.8	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	1.30	1.30	1.20	<1.0	<1.0	2.70	2.70	<1.0	
PLANT PIGMENTS																							
Chlorophyll a	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30	0.40	-	
Phaeophytin a	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	0.16	-	
TOTAL METALS (mg/L)																							
Aluminum	0.0050	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01	<0.0050	
Antimony	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Arsenic	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00	<0.00020	
Barium	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00	<0.00020	
Beryllium	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Bismuth	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Boron	0.010	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.24	<0.010	<0.010	
Cadmium	0.000010	-	-	-	-	-	-	-	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Calcium	0.10	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	3.18	<0.10	
Cesium	0.00010	-	-	-	-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Chromium	0.0010	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cobalt	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Copper	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0004	0.0007	<0.00020	
Iron ¹	0.10	-	-	-	-	-	-	<0.010	<0.010	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Lead	0.000090	-	-	-	-	-	-	-	-	-	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	0.00	<0.000090	<0.000090	
Lithium	0.0020	-	-	-	-	-	-	-	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.020	
Magnesium	0.010	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.00	<0.010	
Manganese	0.00030	-	-	-	-	-	-	-	-	-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00	0.00	<0.00030	
Mercury	0.000050	<0.000010	<0.000010		-	-		<0.000010	<0.000010		<0.000010	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Molybdenum	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Nickel	0.0020	-	-	-	-	-	-	-	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Phosphorus	0.20	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Potassium	0.020	-	-	-	-	-	-	-	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.49	<0.020	
Rubidium	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00	<0.00020	
Selenium	0.0010	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Silicon	0.050	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	0.07	<0.050	<0.050	<0.050	<0.050	<0.050	3.51	0.25	0.08	
Silver	0.00010	-	-	-	-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Sodium	0.030	-	-	-	-	-	-	-	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.71	<0.030	
Strontium	0.00010	-	-	-	-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	0.00	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.01	0.00	
Tellurium	0.00020	-	-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium	0.00010	-	-	-	-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001					

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded BPDs exceed 25% (lab duplicates) or 50% (field duplicates), and $\geq 10 \times$ MDL.

Bolded RPDs exceed 50% (field duplicates) or 25% (laboratory duplicates), but < 10 x MDL.

Bolded travel and equipment blanks exceed laboratory method detection limits, but < 10 x MDL.

RPDs have not been calculated for cases where one of the samples is below detection and the other is not and in cases where both are below detection, RPD has been left blank

"-" = no measurement

¹ The detection limit for iron (dissolved and total) for November and December samples is 0.01 mg/L.

Table 3.1-2. QA/QC data for sediment grab parameters, Meadowbank study lakes and Baker Lake, August 2012.

Analytes	MDLs	Wally Lake			Tehok Lake					Innugugayualik Lake			Second Portage Lake			Pipe Dream Lake			Baker Lake						
		WAL-1 17-Aug-12	Field Dup-1 17-Aug-12	RPD (%)	TE-1 19-Aug-12	Field Dup-2 19-Aug-12	RPD (%)	TEFF-1 18-Aug-12	Field Dup-3 18-Aug-12	RPD (%)	INUG-1 21-Aug-12	Field Dup-4 21-Aug-12	RPD (%)	SP-1 20-Aug-12	Field Dup-5 20-Aug-12	RPD (%)	PDL-2 22-Aug-12	Field Dup-6 22-Aug-12	RPD (%)	BAP-3 24-Aug-12	Field Dup-7 24-Aug-12	RPD (%)	BBD-1 23-Aug-12	Field Dup-8 23-Aug-12	RPD (%)
CONVENTIONAL PARAMETERS																									
Physical & Organic Parameters																									
Moisture (%)	0.25	92.5	91.6	1.0	71.0	69.5	2.1	85.6	84.6	1.2	81.0	80.2	1.0	81.8	83.4	-1.94	73.8	73.5	0.4	40.1	40.2	-0.2	37.0	36.8	0.5
pH	0.10	6.50	6.32	2.8	6.06	6.03	0.5	6.54	6.59	-0.8	6.14	6.06	1.3	6.15	6.21	-0.97	6.07	5.96	1.8	6.40	6.28	1.9	6.37	6.38	-0.2
Total Organic Carbon (% dw)	0.10	11.8	11.7	0.9	1.46	3.61	-84.8	3.62	3.64	-0.6	2.91	2.97	-2.0	3.97	4.03	-1.50	2.16	2.25	-4.1	0.50	0.49	2.0	0.45	0.47	-4.3
Particle Size																									
% Gravel (>2mm)	0.10	<0.10	<0.10		0.55	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10	
% Sand (2.00mm - 0.063mm)	0.10	1.08	1.82	-51.0	48.6	48.9	-0.6	1.42	2.41	-51.7	11.9	11.8	0.8	1.69	1.89	-11.2	7.40	8.47	-13.5	61.3	61.1	0.3	46.7	46.2	1.1
% Silt (0.063mm - 4µm)	0.10	91.3	92.6	-1.4	44.1	46.9	-6.2	76.0	84.0	-10.0	64.8	75.3	-15.0	75.2	82.1	-8.8	75.2	75.2	0	34.6	35.4	-2.3	47.7	50.1	-4.9
% Clay (<4µm)	0.10	7.60	5.59	30.5	6.80	4.19	47.5	22.6	13.6	49.7	23.3	12.9	57.5	23.1	16.0	36.3	17.4	16.3	6.5	4.14	3.54	15.6	5.62	3.80	38.6
AGGREGATE ORGANICS (mg/kg)																									
Mineral Oil and Grease	500-1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL METALS (mg/kg dw)																									
Aluminum	50	15200	16900	-10.6	13100	14100	-7.4	19900	19900	0.0	19700	20400	-3.5	22200	24300	-9.03	20700	21200	-2.4	6160	4460	32.0	5780	6050	-4.6
Antimony	0.10	0.35	0.40	-13.3	0.10	<0.10		0.16	0.17	-6.1	0.11	0.12	-8.7	0.23	0.24	-4.26	0.26	0.25	3.9	0.13	0.13	0	<0.10	<0.10	
Arsenic	0.050	31.7	32.4	-2.2	6.72	7.80	-14.9	14.8	14.9	-0.7	6.01	5.58	7.4	33.9	36.4	-7.11	38.9	39.9	-2.5	13.2	8.60	42.2	16.6	17.7	-6.4
Barium	0.50	89.9	94.7	-5.2	65.0	69.1	-6.1	155	169	-8.6	106	110	-3.7	111	119	-6.96	94.7	89.9	5.2	325	232	33.4	83.8	86.4	-3.1
Beryllium	0.20	1.23	1.30	-5.5	1.14	1.31	-13.9	1.49	1.65	-10.2	1.19	1.23	-3.3	1.71	1.92	-11.57	0.96	1.10	-13.6	0.36	0.34	5.7	0.27	0.28	-3.6
Bismuth	0.20	1.57	1.54	1.9	1.19	1.31	-9.6	1.66	1.67	-0.6	1.11	1.05	5.6	2.10	2.19	-4.20	1.01	1.05	-3.9	<0.20	1.26		<0.20	<0.20	
Cadmium	0.050	0.380	0.408	-7.1	0.106	0.121	-13.2	0.391	0.433	-10.2	0.109	0.102	6.6	0.215	0.254	-16.63	0.381	0.283	29.5	<0.050	<0.050		<0.050	<0.050	
Calcium	50	3990	4080	-2.2	1600	1680	-4.9	1540	1490	3.3	1900	1900	0	2210	2220	-0.45	1830	1870	-2.2	2250	2060	8.8	2160	2040	5.7
Chromium	0.50	48.2	50.2	-4.1	33.7	35.8	-6.0	46.1	47.6	-3.2	102	102	0	75.4	79.8	-5.67	140	141	-0.7	17.3	12.9	29.1	14.3	14.9	-4.1
Cobalt	0.10	8.01	8.44	-5.2	6.20	6.37	-2.7	14.3	15.1	-5.4	9.12	9.13	-0.1	13.9	15.0	-7.61	21.8	21.5	1.4	4.87	3.52	32.2	4.50	4.82	-6.9
Copper	0.50	117	123	-5.0	32.0	34.9	-8.7	52.0	54.3	-4.3	38.6	38.6	0	65.2	69.6	-6.53	55.6	54.3	2.4	6.43	4.88	27.4	6.87	7.07	-2.9
Iron	50	27400	28700	-4.6	22900	25000	-8.8	80500	81800	-1.6	24900	24700	0.8	69800	75300	-7.58	42500	43600	-2.6	16300	11800	32.0	15200	15500	-2.0
Lead	0.50	28.1	29.0	-3.2	12.9	14.2	-9.6	17.2	18.2	-5.6	11.4	11.5	-0.9	19.2	21.1	-9.43	14.6	15.5	-6.0	5.80	5.39	7.3	6.05	6.55	-7.9
Lithium	1.0	26.1	28.7	-9.5	28.2	30.0	-6.2	38.2	40.6	-6.1	26.8	27.3	-1.8	37.3	41.6	-10.90	28.3	30.9	-8.8	9.6	8.2	15.7	7.7	7.9	-2.6
Magnesium	20	6470	6610	-2.1	5770	5570	3.5	6660	6720	-0.9	9200	8980	2.4	8550	9150	-6.78	10800	11100	-2.7	3640	2550	35.2	3350	3620	-7.7
Manganese	1.0	341	347	-1.7	382	395	-3.3	6340	6980	-9.6	339	333	1.8	1740	1860	-6.67	2390	1990	18.3	286	202	34.4	373	386	-3.4
Mercury	0.0050	0.0677	0.0721	-6.3	0.0141	0.0182	-25.4	0.0185	0.0216	-15.5	0.0159	0.0162	-1.9	0.0255	0.0281	-9.70	0.0107	0.0115	-7.2	0.0079	0.0073	7.9	0.0061	0.0066	-7.9
Molybdenum	0.50	6.53	7.21	-9.9	1.62	1.85	-13.3	9.57	10.2	-6.4	1.60	1.59	0.6	7.56	8.38	-10.29	3.74	4.06	-8.2	0.73	0.68	7.1	0.62	0.72	-14.9
Nickel	0.50	47.0	50.0	-6.2	24.4	26.1	-6.7	60.2	65.4	-8.3	68.5	67.9	0.9	58.3	62.2	-6.47	119	110	7.9	11.0	8.07	30.7	8.52	9.22	-7.9
Phosphorus	50	769	773	-0.5	642	607	5.6	891	880	1.2	752	677	10.5	602	547	9.57	416	411	1.2	786	558	33.9	837	840	-0.4
Potassium	100	2720	2950	-8.1	2560	2640	-3.1	3940	3760	4.7	3050	3240	-6.0	4040	4140	-2.44	2820	2840	-0.7	1420	990	35.7	990	960	3.1
Selenium	0.20	0.73	0.80	-9.2	0.31	0.35	-12.1	0.89	0.89	0	0.39	0.38	2.6	0.70	0.81	-14.57	0.29	0.26	10.9	<0.20	<0.20		<0.20	<0.20	
Silver	0.10	0.53	0.55	-3.7	<0.10	<0.10		0.12	0.13	-8.0	0.12	0.11	8.7	0.14	0.15	-6.90	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10	
Sodium	100	150	190	-23.5	110	120	-8.7	180	170	5.7	140	190	-30.3	170	180	-5.71	<100	<100		110	<100		<100	<100	
Strontium	0.50	24.4	26.3	-7.5	12.3	12.8	-4.0	16.0	15.8	1.3	20.9	22.7	-8.3	18.4	19.4	-5.29	20.1	21.0	-4.4	43.7	38.5	12.7	34.1	31.9	6.7
Thallium	0.050	0.250	0.263	-5.1	0.207	0.220	-6.1	0.436	0.446	-2.3	0.172	0.180	-4.5	0.317	0.340	-7.00	0.253	0.233	8.2	0.065	0.058	11.4	<0.050	<0.050	
Tin	2.0	<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0	
Titanium	1.0	427	478	-11.3	620	639	-3.0	725	703	3.1	540	598	-10.2	757	774	-2.22	545	536	1.7	348	237	37.9	327	279	15.8
Uranium	0.050	12.6	13.1	-3.9	11.2	12.7	-12.6	19.6	21.2	-7.8	14.1	14.3	-1.4	16.8	18.6	-10.17	9.96	10.6	-6.2	1.68	1.50	11.3	1.20	1.29	-7.2
Vanadium	0.20	24.3	25.8	-6.0	22.7	23.5	-3.5	31.2	31.4	-0.6	33.1	34.0	-2.7	36.3	38.5	-5.88	37.4	37.9	-1.3	22.1	15.7	33.9	15.9	16.3	-2.5
Zinc	1.0	109	109	0	66.5	68.6	-3.1	104	107	-2.8	79.4	77.6	2.3	110	116	-5.31	88.1	84.5	4.2	26.4	18.8	33.6	26.0	26.7	-2.7

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate))/2 × 100.

Shaded RPDs exceed 25% (lab duplicates) or 50% (field duplicates), and > 10 × MDL.

Bolded filter swipes exceed laboratory method detection limits, but < 10 × MDL.

Each of the 'Field Dup' samples are homogenization duplicates - the original and duplicate samples were split from the same homogenized bowl of sediment.

RPDs have not been calculated for cases where one of the samples is below detection and the other is not and in cases where both are below detection. RPD has been left blank

Table 3.1-2. QA/QC data for sediment grab parameters, Meadowbank study lakes and Baker Lake, August 2012.

Analytes	MDLs	Various Lakes			Various Lakes			Various Lakes			Various Lakes			Swipe-1	Swipe-2	Swipe-3	Swipe-4	Swipe-5	Swipe-6	Swipe-7	Swipe-8
		Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD	Original	Laboratory	RPD	FILTER	FILTER	FILTER	FILTER	FILTER	FILTER	FILTER	FILTER
		August	Duplicate	(%)	August	Duplicate	(%)	August	Duplicate	(%)	August	Duplicate	(%)	17-Aug-12	19-Aug-12	18-Aug-12	21-Aug-12	20-Aug-12	22-Aug-12	24-Aug-12	23-Aug-12
CONVENTIONAL PARAMETERS																					
Physical & Organic Parameters																					
Moisture (%)	0.25	91.6	92.3	-0.8	71.00	70.60	0.6	83.80	83.80	0	77.80	77.60	0.3	-	-	-	-	-	-	-	-
pH	0.10	6.23	6.27	-0.6	6.15	6.18	-0.5	6.58	6.66	-1.2	6.38	6.39	-0.2	-	-	-	-	-	-	-	-
Total Organic Carbon (% dw)	0.10	8.61	8.54	0.8	2.89	2.90	-0.3	0.48	0.50	-4.1	4.03	4.04	-0.2	-	-	-	-	-	-	-	-
Particle Size																					
% Gravel (>2mm)	0.10	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		4.19	4.19	0	-	-	-	-	-	-	-	-
% Sand (2.00mm - 0.063mm)	0.10	6.09	6.16	-1.1	5.6	6.73	-18.3	66.1	66.2	-0.2	43.5	43.6	-0.2	-	-	-	-	-	-	-	-
% Silt (0.063mm - 4µm)	0.10	68.3	69.7	-2.0	76.8	74.8	2.6	29.3	28.9	1.4	32.8	32.3	1.5	-	-	-	-	-	-	-	-
% Clay (<4µm)	0.10	25.6	24.1	6.0	17.6	18.4	-4.4	4.62	4.93	-6.5	19.5	19.9	-2.0	-	-	-	-	-	-	-	-
AGGREGATE ORGANICS (mg/kg)																					
Mineral Oil and Grease	500-1950	<800	<800		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL METALS (mg/kg dw)																					
														MDLs (ug)		TOTAL METALS (ug)					
Aluminum	50	18600	18400	1.1	22200	23600	-6.1	4110	4160	-1.2	6050	5920	2.2	20	34	21	<20	<20	<20	<20	<20
Antimony	0.10	0.17	0.16	6.1	0.23	0.25	-8.3	0.13	0.1	26.1	<0.10	<0.10		20	<20	<20	<20	<20	<20	<20	
Arsenic	0.050	17	16.4	3.6	33.9	34.6	-2.0	8.53	8.43	1.2	17.7	18.8	-6.0	20	<20	<20	<20	<20	<20	<20	
Barium	0.50	99.9	95.7	4.3	111	115	-3.5	334	344	-2.9	86.4	83.4	3.5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Beryllium	0.20	1.65	1.56	5.6	1.71	1.84	-7.3	0.31	0.27	13.8	0.28	0.26	7.4	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Bismuth	0.20	1.92	1.82	5.3	2.1	2.21	-5.1	<0.20	<0.20		<0.20	<0.20		20	<20	<20	<20	<20	<20	<20	
Cadmium	0.050	0.227	0.211	7.3	0.215	0.234	-8.5	<0.050	<0.050		<0.050	<0.050		1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Calcium	50	1700	1700	0	2210	2270	-2.7	2010	1950	3.0	2040	1970	3.5	5.0	<80	26.9	34.6	19.5	38.3	18.9	
Chromium	0.50	49.3	46.6	5.6	75.4	76.9	-2.0	12.5	14.5	-14.8	14.9	14.3	4.1	2.0	4.3	5.7	6.9	5.2	7.1	7.7	
Cobalt	0.10	10.8	10.3	4.7	13.9	14.3	-2.8	3.27	3.35	-2.4	4.82	4.84	-0.4	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Copper	0.50	51.7	48.7	6.0	65.2	66.2	-1.5	3.43	3.61	-5.1	7.07	6.91	2.3	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Iron	50	57300	54600	4.8	69800	72000	-3.1	12000	12400	-3.3	15500	16000	-3.2	3.0	58.3	<35	<40	<30	<35	<40	
Lead	0.50	18.7	17.7	5.5	19.2	20.4	-6.1	3.91	3.76	3.9	6.55	6.19	5.7	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Lithium	1.0	37.2	35.2	5.5	37.3	40.3	-7.7	6.2	6.6	-6.2	7.9	7.7	2.6	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Magnesium	20	7150	6730	6.1	8550	8790	-2.8	2530	2610	-3.1	3620	3550	2.0	10	<25	<10	<15	<10	<10	<15	
Manganese	1.0	2020	1930	4.6	1740	1760	-1.1	251	248	1.2	386	387	-0.3	0.50	3.45	0.79	3.90	0.90	0.86	1.21	
Mercury	0.0050	0.0222	0.0216	2.7	0.0255	0.0255	0	<0.0050	<0.0050		0.0066	0.0067	-1.5	0.010	-	-	-	-	-	-	
Molybdenum	0.50	7.24	6.97	3.8	7.56	8.02	-5.9	0.57	0.56	1.8	0.72	0.67	7.2	3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Nickel	0.50	39.1	37	5.5	58.3	58.9	-1.0	7.49	8.01	-6.7	9.22	9.32	-1.1	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Phosphorus	50	535	514	4.0	602	578	4.1	672	637	5.3	840	799	5.0	30	<30	<30	<30	<30	<30	<30	
Potassium	100	3590	3500	2.5	4040	4190	-3.6	930	980	-5.2	960	930	3.2	200	<200	<200	<200	<200	<200	<200	
Selenium	0.20	0.67	0.61	9.4	0.7	0.73	-4.2	<0.20	<0.20		<0.20	<0.20		20	<20	<20	<20	<20	<20	<20	
Silver	0.10	0.13	0.12	8.0	0.14	0.15	-6.9	<0.10	<0.10		<0.10	<0.10		1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Sodium	100	140	140	0	170	170	0	<100	<100		110	<100		200	<200	<200	<200	<200	<200	<200	
Strontium	0.50	15.1	14.9	1.3	18.4	19.5	-5.8	37.2	37.7	-1.3	31.9	30	6.1	0.50	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	
Thallium	0.050	0.326	0.316	3.1	0.317	0.345	-8.5	0.056	<0.050		<0.050	<0.050		20	<20	<20	<20	<20	<20	<20	
Tin	2.0	<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Titanium	1.0	716	732	-2.2	757	782	-3.2	253	270	-6.5	279	273	2.2	1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	
Uranium	0.050	17.8	16.8	5.8	16.8	17.9	-6.3	1.1	0.982	11.3	1.29	1.39	-7.5	-	-	-	-	-	-	-	
Vanadium	0.20	31.4	29.7	5.6	36.3	37.3	-2.7	16.4	16.9	-3.0	16.3	16.6	-1.8	3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Zinc	1.0	98.4	92.1	6.6	110	113	-2.7	17	17.4	-2.3	26.7	26.9	-0.7	0.50	<2.0	<1.0	<1.5	<0.50	<1.0	<0.50	

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 25% (lab duplicates) or 50% (field duplicates), and > 10 x MDL.

Bolded filter swipes exceed laboratory method detection limits, but < 10 x MDL.

Each of the 'Field Dup' samples are homogenization duplicates - the original and duplicate samples were split from the same homogenized bowl of sediment.

NA = RPDs have not been calculated for cases where one of the samples is below detection and the other is not and in cases where both are below detection.

Table 3.1-3. QA/QC data for sediment core parameters, August 2012.

Analytes	Third Portage Lake - East Basin				Second Portage Lake			Tehek Lake			Inuggugayualik Lake			Wally Lake			Tehek Lake Far Field			Pipedream Lake			Third Portage South		
	TPE-SC-3	DUP	RPD		SP-SC-1	SP-SC-DUP	RPD	TE-SC-5	TE-SC-DUP	RPD	INUG-SC-1	DUP	RPD	WAL-SC-9	DUP	RPD	TEFF-SC-7	DUP	RPD	PDL-SC-1	DUP	RPD	TPS-SC-1	DUP	RPD
	MDLs	26-AUG-12	26-AUG-12	(%)	20-AUG-12	20-AUG-12	(%)	19-AUG-12	19-AUG-12	(%)	21-AUG-12	21-AUG-12	(%)	17-AUG-12	17-AUG-12	(%)	18-AUG-12	18-AUG-12	(%)	22-AUG-12	22-AUG-12	(%)	27-AUG-12	27-AUG-12	(%)
CONVENTIONAL PARAMETERS																									
Physical & Organic Parameters																									
pH	0.1	5.76	5.87	-1.9	6.21	6.06	2.4	5.50	5.60	-1.8	5.65	5.83	-3.1	6.48	6.22	4.1	5.74	6.05	-5.26	6.20	6.30	-1.6	5.85	5.89	-0.7
Total Organic Carbon (% dw)	0.1	3.25	3.18	2.2	3.70	3.79	-2.4	2.23	2.93	-27.1	3.64	3.48	4.5	9.05	9.91	-9.1	3.08	3.10	-0.65	2.61	2.02	25.5	3.79	4.22	-10.7
TOTAL METALS (mg/kg dw)																									
Aluminum (Al)	50	25600	22900	11.1	24200	25500	-5.2	20200	16400	20.8	20700	20600	0.5	21500	20600	4.3	15200	15800	-3.9	20200	22300	-9.9	20500	20400	0.5
Antimony (Sb)	0.10	0.22	0.21	4.7	0.26	0.25	3.9	0.14	0.18	-25.0	0.14	0.15	-6.9	0.43	0.45	-4.5	0.16	0.12	28.6	0.30	0.26	14.3	0.20	0.20	0
Arsenic (As)	0.050	21.6	20.2	6.7	28.6	26.3	8.4	10.5	39.1	-115.3	8.32	5.86	34.7	42.5	59.2	-32.8	20.3	5.61	113.4	30.0	63.0	-71.0	24.8	30.6	-20.9
Barium (Ba)	0.50	126	113	10.9	125	121	3.3	108	90.6	17.5	117	108	8.0	125	116	7.5	81.6	98.8	-19.1	80.6	106	-27.2	94.0	94.3	-0.3
Beryllium (Be)	0.20	1.96	1.73	12.5	1.96	2.16	-9.7	1.64	1.48	10.3	1.36	1.35	0.7	1.67	1.66	0.6	1.26	1.39	-9.8	0.96	1.18	-20.6	1.23	1.24	-0.8
Bismuth (Bi)	0.20	2.72	2.51	8.0	2.44	2.40	1.7	1.95	1.72	12.5	1.16	1.12	3.5	2.20	2.16	1.8	1.33	1.29	3.1	0.93	1.07	-14.0	1.52	1.57	-3.2
Cadmium (Cd)	0.050	0.139	0.126	9.8	0.265	0.228	15.0	0.148	0.130	12.9	0.147	0.125	16.2	0.518	0.449	14.3	0.152	0.190	-22.2	0.125	0.577	-128.8	0.153	0.221	-36.4
Calcium (Ca)	50	1910	1850	3.2	2090	2330	-10.9	1780	1730	2.8	2040	2030	0.5	4000	4120	-3.0	1570	1810	-14.2	1910	1650	14.6	1750	2050	-15.8
Chromium (Cr)	0.50	115	119	-3.4	84.3	78.8	6.7	52.2	44.2	16.6	113	101	11.2	60.8	59.8	1.7	39.9	40.2	-0.7	129	141	-8.9	105	104	1.0
Cobalt (Co)	0.10	18.2	16.7	8.6	17.4	12.9	29.7	12.0	10.4	14.3	10.7	9.02	17.0	9.95	10.1	-1.5	8.52	6.32	29.6	17.0	23.9	-33.7	13.3	14.1	-5.8
Copper (Cu)	0.50	60.8	59.0	3.0	79.5	76.1	4.4	52.0	48.1	7.8	45.3	39.7	13.2	247	267	-7.8	40.9	40.9	0.0	47.1	67.6	-35.7	58.7	59.5	-1.4
Iron (Fe)	50	52100	46500	11.4	59600	50000	17.5	45000	91300	-67.9	29400	25200	15.4	42900	50100	-15.5	67800	22200	101.3	38300	49900	-26.3	35300	37600	-6.3
Lead (Pb)	0.50	22.1	20.8	6.1	21.4	21.9	-2.3	18.6	16.3	13.2	12.6	12.7	-0.8	36.3	36.9	-1.6	15.3	15.1	1.3	14.4	16.4	-13.0	19.0	19.8	-4.1
Lithium (Li)	5.0	53.6	48.4	10.2	44.0	48.3	-9.3	42.3	32.0	27.7	29.2	29.3	-0.3	34.2	30.9	10.1	32.1	36.1	-11.7	27.6	31.4	-12.9	32.6	31.9	2.2
Magnesium (Mg)	20	11200	10900	2.7	9730	9490	2.5	7810	6610	16.6	10100	9560	5.5	7740	7380	4.8	5970	6210	-3.9	10500	10600	-0.9	8630	8490	1.6
Manganese (Mn)	1.0	2170	1800	18.6	2390	856	94.5	1180	1730	-37.8	438	325	29.6	416	476	-13.5	1030	365	95.3	1160	3180	-93.1	629	779	-21.3
Mercury (Hg)	0.0050	0.0182	0.0178	2.2	0.136	0.0628	73.6	0.0403	0.0387	4.1	0.0455	0.0206	75.3	0.0764	0.100	-26.8	0.0337	0.0412	-20.0	0.0104	0.0097	7.0	0.0210	0.0215	-2.4
Molybdenum (Mo)	0.50	4.49	3.72	18.8	5.89	7.08	-18.4	5.75	10.9	-61.9	1.99	1.96	1.5	11.5	12.6	-9.1	7.14	3.18	76.7	2.63	5.29	-67.2	3.43	3.93	-13.6
Nickel (Ni)	0.50	68.4	68.3	0.1	72.7	59.6	19.8	40.0	33.1	18.9	81.8	65.9	21.5	56.3	56.5	-0.4	26.4	32.5	-20.7	84.0	153	-58.2	65.2	67.7	-3.8
Phosphorus (P)	50	420	398	5.4	637	554	13.9	494	952	-63.3	891	723	20.8	684	937	-31.2	891	446	66.6	446	434	2.7	521	547	-4.9
Potassium (K)	100	4870	4380	10.6	4860	4820	0.8	4130	3430	18.5	3560	3100	13.8	3390	3340	1.5	3170	3300	-4.0	2670	2790	-4.4	3350	3300	1.5
Selenium (Se)	0.20	0.44	0.50	-12.8	0.64	0.73	-13.1	0.52	0.74	-34.9	0.48	0.46	4.3	1.01	1.02	-1.0	0.78	0.58	29.4	0.33	0.25	27.6	0.70	0.77	-9.5
Silver (Ag)	0.10	<0.10	<0.10		<0.10	0.19	NA	0.12	0.14	-15.4	0.13	0.15	-14.3	0.68	0.60	12.5	<0.10	0.12	NA	<0.10	<0.10		0.15	0.18	-18.2
Sodium (Na)	100	190	140	30.3	190	200	-5.1	170	160	6.1	160	160	0.0	190	200	-5.1	140	150	-6.9	150	<100		150	130	14.3
Strontium (Sr)	0.50	17.6	15.5	12.7	19.2	20.1	-4.6	16.0	14.7	8.5	23.6	26.0	-9.7	26.7	26.6	0.4	13.6	14.4	-5.7	20.3	18.9	7.1	15.8	16.3	-3.1
Thallium (Tl)	0.050	0.393	0.352	11.0	0.378	0.378	0	0.346	0.284	19.7	0.184	0.194	-5.3	0.324	0.319	1.6	0.263	0.287	-8.7	0.190	0.278	-37.6	0.250	0.259	-3.5
Tin (Sn)	2.0	3.0	3.6	-18.2	3.0	2.7	10.5	2.1	3.2	-41.5	2.1	<2.0		6.8	6.7	1.5	2.2	2.8	-24.0	2.7	<2.0		2.0	2.2	-9.5
Titanium (Ti)	1.0	991	843	16.1	985	913	7.6	913	720	23.6	721	596	19.0	498	503	-1.0	660	706	-6.7	513	557	-8.2	624	619	0.8
Uranium (U)	0.050	19.8	18.0	9.5	20.3	20.1	1.0	18.5	15.3	18.9	15.2	14.9	2.0	17.1	17.0	0.6	15.9	16.5	-3.7	8.51	11.3	-28.2	16.1	16.4	-1.8
Vanadium (V)	0.20	47.2	45.1	4.6	42.5	41.5	2.4	33.5	28.8	15.1	38.2	33.5	13.1	33.2	32.7	1.5	28.0	29.0	-3.5	35.0	39.2	-11.3	36.5	36.1	1.1
Zinc (Zn)	1.0	124	115	7.5	121	121	0	95.2	81.1	16.0	86.7	79.1	9.2	139	150	-7.6	79.3	83.7	-5.4	77.8	98.1	-23.1	92.8	95.2	-2.6

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 25% (lab duplicates) or 50% (field duplicates), and > 10 x MDL.

Bolded RPDs exceed 50% (field duplicates) or 25% (laboratory duplicates), but < 10 x MDL.

RPDs have not been calculated for cases where one of the samples is below detection and the other is not and in cases where both are below detection. RPD has been left blank

Table 3.1-3. QA/QC data for sediment core parameters, August 2012.

Analytes	Third Portage North				Baker Lake												Various Lakes			Various Lakes			Various Lakes		
	TPN-SC-1	DUP	RPD		BBD-SC-1	DUP	RPD	BPJ-SC-3	DUP	RPD	BAP-SC-5	DUP	RPD	BES-SC-5	DUP	RPD	Original	Laboratory Duplicate	RPD	Original	Laboratory Duplicate	RPD	Original	Laboratory Duplicate	RPD
	MDLs	27-AUG-12	27-AUG-12	(%)	23-AUG-12	23-AUG-12	(%)	24-AUG-12	24-AUG-12	(%)	24-AUG-12	24-AUG-12	(%)	25-AUG-12	25-AUG-12	(%)	August	Duplicate	(%)	August	Duplicate	(%)	August	Duplicate	(%)
CONVENTIONAL PARAMETERS																									
Physical & Organic Parameters																									
pH	0.1	6.13	6.11	0.3	6.07	5.80	4.5	6.32	6.27	0.8	5.80	5.56	4.2	6.60	6.56	0.6	6.21	6.35	-2.2	6.36	6.21	2.4	6.6	6.56	0.6
Total Organic Carbon (% dw)	0.1	0.33	0.58	-54.9	0.51	0.49	4.0	0.54	0.50	7.7	0.90	0.85	5.7	0.36	0.33	8.7	4.31	4.33	-0.5	2.39	2.35	1.7	0.77	0.71	8.1
TOTAL METALS (mg/kg dw)																									
Aluminum (Al)	50	14500	13600	6.4	6810	7680	-12.0	9750	7990	19.8	6860	7610	-10.4	5970	6310	-5.5	8430	9000	-6.5	3910	4100	-4.7	5530	5340	3.5
Antimony (Sb)	0.10	0.11	0.12	-8.7	<0.10	0.11		0.14	0.13	7.4	0.13	0.14	-7.4	0.11	0.14	-24.0	0.12	0.14	-15.4	0.11	0.12	-8.7	0.12	0.13	-8.0
Arsenic (As)	0.050	15.6	14.5	7.3	11.1	19.2	-53.5	44.4	61.0	-31.5	8.81	11.2	-23.9	3.71	3.72	-0.3	48.7	56	-13.9	2.51	2.09	18.3	3.54	3.25	8.5
Barium (Ba)	0.50	58.9	56.8	3.6	93.3	98.1	-5.0	131	176	-29.3	283	337	-17.4	88.3	80.2	9.6	137	151	-9.7	257	269	-4.6	83.2	104	-22.2
Beryllium (Be)	0.20	0.67	0.67	0	0.31	0.33	-6.3	0.47	0.37	23.8	0.38	0.40	-5.1	0.33	0.34	-3.0	0.41	0.43	-4.8	0.25	0.26	-3.9	0.29	0.3	-3.4
Bismuth (Bi)	0.20	0.78	0.73	6.6	<0.20	<0.20		0.24	<0.20		<0.20	0.21		<0.20	<0.20		0.2	0.23	-14.0	0.21	<0.20		<0.20	<0.20	
Cadmium (Cd)	0.050	0.062	0.084	-30.1	0.053	0.058	-9.0	0.079	<0.050		0.059	0.054	8.8	<0.050	<0.050		0.054	0.056	-3.6	0.051	<0.050		<0.050	<0.050	
Calcium (Ca)	50	967	833	14.9	2160	2510	-15.0	2590	2620	-1.2	2270	2420	-6.4	1970	2180	-10.1	2460	2630	-6.7	1640	1790	-8.7	2100	1950	7.4
Chromium (Cr)	0.50	80.6	75.3	6.8	15.6	17.8	-13.2	21.9	17.6	21.8	18.4	19.3	-4.8	17.4	18.3	-5.0	19.2	19.7	-2.6	13.8	13.8	0.0	15.7	16.4	-4.4
Cobalt (Co)	0.10	10.3	11.7	-12.7	5.63	5.44	3.4	7.69	8.30	-7.6	5.47	5.74	-4.8	4.71	4.83	-2.5	7.01	7.76	-10.2	2.96	3.05	-3.0	4.34	4.4	-1.4
Copper (Cu)	0.50	26.9	28.1	-4.4	7.80	9.20	-16.5	9.23	7.88	15.8	8.32	8.48	-1.9	5.14	5.29	-2.9	8.64	8.6	0.5	3.53	3.49	1.1	4.78	4.63	3.2
Iron (Fe)	50	28400	27200	4.3	15300	18100	-16.8	24100	31700	-27.2	16100	18200	-12.2	12600	13300	-5.4	26600	28700	-7.6	11000	11400	-3.6	12100	11800	2.5
Lead (Pb)	0.50	10.0	9.29	7.4	7.39	8.43	-13.1	10.6	8.14	26.3	6.11	6.71	-9.4	5.37	5.59	-4.0	8.32	8.82	-5.8	3.74	3.85	-2.9	5.01	4.57	9.2
Lithium (Li)	5.0	30.2	28.3	6.5	9.4	10.8	-13.9	12.5	10.2	20.3	10.5	10.6	-0.9	8.4	8.8	-4.7	11.3	11.4	-0.9	6.2	6.4	-3.2	7.8	7.7	1.3
Magnesium (Mg)	20	7070	6720	5.1	3910	4250	-8.3	5200	4150	22.5	3890	4150	-6.5	3580	3670	-2.5	4550	4670	-2.6	2480	2500	-0.8	3270	3290	-0.6
Manganese (Mn)	1.0	599	835	-32.9	437	358	19.9	942	3440	-114.0	289	381	-27.5	444	473	-6.3	1260	1490	-16.7	129	137	-6.0	354	394	-10.7
Mercury (Hg)	0.0050	<0.0050	<0.0050		0.0071	0.0094	-27.9	0.0144	0.0090	46.2	0.0090	0.0109	-19.1	0.0083	0.0087	-4.7	0.0081	0.0091	-11.6	<0.0050	<0.0050		0.0077	0.0069	11.0
Molybdenum (Mo)	0.50	4.12	4.27	-3.6	0.69	0.79	-13.5	1.28	2.94	-78.7	0.63	0.70	-10.5	0.51	0.53	-3.8	1.25	1.42	-12.7	<0.5	<0.5		<0.5	0.62	
Nickel (Ni)	0.50	48.8	47.3	3.1	10.2	11.3	-10.2	14.3	11.2	24.3	11.5	12.4	-7.5	10.6	10.8	-1.9	12.4	12.7	-2.4	8.26	7.49	9.8	9.65	10.1	-4.6
Phosphorus (P)	50	191	162	16.4	699	941	-29.5	1260	1740	-32.0	797	826	-3.6	629	678	-7.5	1670	1880	-11.8	548	551	-0.5	655	674	-2.9
Potassium (K)	100	2320	2380	-2.6	1120	1280	-13.3	1640	1430	13.7	1580	1770	-11.3	1240	1310	-5.5	1430	1650	-14.3	830	900	-8.1	1180	1140	3.4
Selenium (Se)	0.20	<0.20	<0.20		<0.20	<0.20		<0.20	<0.20		<0.20	<0.20		<0.20	<0.20		<0.20	<0.20		<0.20	<0.20		<0.20	<0.20	
Silver (Ag)	0.10	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10	
Sodium (Na)	100	<100	<100		130	130	0	160	140	13.3	130	150	-14.3	<100	100		150	160	-6.5	<100	<100		<100	<100	
Strontium (Sr)	0.50	11.7	10.3	12.7	35.4	39.0	-9.7	49.0	51.4	-4.8	43.1	47.1	-8.9	35.9	38.2	-6.2	45	48.8	-8.1	34	37	-8.5	35.7	36.5	-2.2
Thallium (Tl)	0.050	0.170	0.184	-7.9	0.054	0.060	-10.5	0.069	0.055	22.6	0.077	0.085	-9.9	0.052	0.053	-1.9	0.058	0.081	-33.1	<0.05	<0.05		<0.05	<0.05	
Tin (Sn)	2.0	<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0	
Titanium (Ti)	1.0	665	593	11.4	316	350	-10.2	369	323	13.3	382	434	-12.7	301	318	-5.5	343	372	-8.1	224	257	-13.7	299	303	-1.3
Uranium (U)	0.050	10.8	10.6	1.9	1.44	1.60	-10.5	1.96	1.65	17.2	1.83	2.00	-8.9	1.27	1.33	-4.6	1.71	1.82	-6.2	1.44	1.01	35.1	1.37	1.13	19.2
Vanadium (V)	0.20	27.9	26.3	5.9	17.5	19.6	-11.3	24.7	21.9	12.0	22.8	24.6	-7.6	18.3	19.6	-6.9	22.8	24.1	-5.5	16.6	17.1	-3.0	18.1	17.6	2.8
Zinc (Zn)	1.0	64.4	63.5	1.4	30.5	33.5	-9.4	42.0	33.2	23.4	30.9	33.0	-6.6	25.4	26.7	-5.0	35.9	37.3	-3.8	17.6	18.3	-3.9	23.2	22.5	3.1

Notes:
RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.
Shaded RPDs exceed 25% (lab duplicates) or 50% (field duplicates), and > 10 x MDL.
Bolded RPDs exceed 50% (field duplicates) or 25% (laboratory duplicates), but < 10 x MDL.
RPDs have not been calculated for cases where one of the samples is below detection and the other is not and in cases where both are below detection. RPD has been left blank

Table 3.1-4. QA/QC data for phytoplankton, Meadowbank study lakes and Baker Lake, 2012.

	Innugugayualik Lake			Second Portage Lake			Second Portage Lake			Third Portage Lake		
	INUG-34-S	April Field	RPD	SP-35-S	May Field	RPD	SP-51-S	July Field	RPD	TPE-51-S	July Field	RPD
	15-Apr-12	Duplicate-1	(%)	10-May-12	Duplicate-1	(%)	20-Jun-12	Duplicate-1	(%)	21-Jul-12	Duplicate-2	(%)
Phytoplankton Density (cells/L)												
Cyanophyte	11238	18330	-48	2700	2300	16	8584	1000	158	11384	12384	-8
Chlorophyte	234536	244974	-4	163216	195230	-18	260224	181000	36	279192	458392	-49
Euglenophyte	0	0		0	0		0	0		0	0	
Chrysophyte	127656	120564	6	315694	368984	-16	2127264	1940680	9	3002328	3367312	-11
Diatom	42852	36060	17	195030	258958	-28	393936	271408	37	255240	262424	-3
Cryptophyte	500	500	0	500	300	50	126544	89024	35	38720	25152	42
Dinoflagellate	200	200	0	1300	800	48	1600	9384	NA	1200	600	67
Total	416982	420628	-1	678440	826572	-20	2918152	2492496	16	3588064	4126264	-14
Phytoplankton Biomass (mg/m³)												
Cyanophyte	0.48	0.67	-32	0.92	0.82	11	1.32	0.24	138	1.8	2.0	-11.5
Chlorophyte	2.52	1.84	31	8.66	7.26	18	11.16	6.45	53	16	19	-20
Euglenophyte	0.00	0.00		0.00	0.00		0.00	0.00		0	0	
Chrysophyte	8	7.6	9	13	18.2	-35	176.5	316	-57	240	235	1.8
Diatom	1.49	1.43	4	5.98	8.95	-40	16.70	14.97	11	15.6	15.1	3.6
Cryptophyte	0.4	0.4	0.0	0.4	0.2	53.4	23.2	21.3	9	5	6.4	-17
Dinoflagellate	2.88	1.5	61	2.78	1.3	74	11.8	17	NA	4.3	4	11
Total	16	13.4	18	31	36.7	-16	241	375.4	-44	282	281.6	0.2
# Species	17	15	12.5	19	20	-5.1	45	39	14	34	32	6.1
Simpsons Diversity	0.66	0.62	6.7	0.80	0.79	0.3	0.81	0.81	0.3	0.58	0.62	-6.39

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 50% (field duplicates) or 25% (lab duplicates).

NA = Not Applicable for rare species.

Table 3.1-4. QA/QC data for phytoplankton, Meadowbank study lakes and Baker Lake, 2012.

	Baker Lake			Tehek Lake			Second Portage Lake			Baker Lake		
	BBD-21-S	July Field	RPD	TE-52-S	Aug. Field	RPD	SP-53-S	Aug. Field	RPD	BBD-23-S	Aug. Field	RPD
	27-Jul-12	Duplicate-3	(%)	18-Aug-12	Duplicate-1	(%)	20-Aug-12	Duplicate-2	(%)	25-Aug-12	Duplicate-3	(%)
Phytoplankton Density (cells/L)												
Cyanophyte	0	200	0	7400	4000	60	1000	800	NA	200	8184	-190
Chlorophyte	253840	174616	37	346032	187984	59	396920	337648	16	618624	404304	42
Euglenophyte	0	0		0	0		0	0		0	0	
Chrysophyte	1607448	1592480	1	2309264	2143632	7	1746112	1997552	-13	1910776	1604048	17
Diatom	265200	207744	24	246256	174416	34	274592	318696	-15	223760	164208	31
Cryptophyte	170832	176032	-3	109760	68056	47	70456	97992	-33	83424	147680	-56
Dinoflagellate	2000	3200	-46	31136	9184	109	10584	8984	16	8984	400	183
Total	2299320	2154272	7	3049848	2587272	16	2499664	2761672	-10	2845768	2328824	20
Phytoplankton Biomass (mg/m³)												
Cyanophyte	0	0	0	1.8	0.98	57	0.23	0	NA	0	0.4	-158
Chlorophyte	12.8	9.8	27	9.2	4.1	76	13.7	10.4	27	21	13	48
Euglenophyte	0.0	0.0		0.0	0.0		0.0	0.0		0	0	
Chrysophyte	113	124	-9	194	147	28	116	142	-21	168	140	18.3
Diatom	164	23	152	15.7	15.6	1	12	14	-15	168	91	59
Cryptophyte	27	35.3	-27	8.9	7.8	13	11	11.7	-7	10.0	14.1	-33.8
Dinoflagellate	14	21	-41	36.7	23.9	42.1	29	23	24	11	3	117
Total	331	212.6	43	266	199.6	29	182	201.6	-10.41	378	261.3	37
# Species	37	41	-10.3	41	42	-2	41	38	7.6	40	38	5
Simpsons Diversity	0.86	0.84	2.4	0.89	0.82	7.21	0.86	0.87	-1.4	0.86	0.87	-0.95

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 50% (field duplicates) or 25% (lab duplicates).

NA = Not Applicable for rare species.

Table 3.1-4. QA/QC data for phytoplankton, Meadowbank study lakes and Baker Lake, 2012.

	Pipedream Lake			Second Portage Lake			Innugayualik Lake			Innugayualik Lake		
	PDL-26-S 18-Sep-12	Sept. Field Duplicate-1	RPD (%)	SP-54-S 18-Sep-12	Sept. Field Duplicate-2	RPD (%)	INUG-34-S 15-Apr-12	Lab Duplicate	RPD (%)	INUG-36-S 9-May-12	Lab Duplicate	RPD (%)
Phytoplankton Density (cells/L)												
Cyanophyte	400	400	0	2400	2600	-8	11238	7692	37	700	1100	-44
Chlorophyte	252440	275592	-9	325080	316696	3	234536	248620	-6	223798	248420	-10
Euglenophyte	0	0		0	0		0	0		0	0	
Chrysophyte	1966232	1619600	19	1216096	1072416	13	127656	120564	6	117018	109926	6
Diatom	336864	320896	5	388352	199768	64	42852	32514	27	64228	60582	6
Cryptophyte	45104	29736	41	23952	17568	31	500	600	-18	10638	10938	-3
Dinoflagellate	7984	29536	-115	15768	8584	59	200	100	67	400	300	0
Total	2609024	2275760	14	1971648	1617632	20	416982	410090	1.7	416782	431266	-3
Phytoplankton Biomass (mg/m³)												
Cyanophyte	0.06	0.06	-5	0.5	0.4	17.1	0.48	0.39	21	0.23	0.36	-43
Chlorophyte	8	8.9	-15	12	9	26	2.52	2.23	12	2.04	2.69	-28
Euglenophyte	0	0.0		0	0		0.00	0.00		0.00	0.00	
Chrysophyte	113	113	0	84	82	2	8.3	8.1	2.4	14.6	16.0	-9
Diatom	18	18	-4.9	27	20	32.6	1.49	1.05	35	4.54	3.91	15
Cryptophyte	5	3	66.4	3.74	3.39	10	0.4	0.4	-15	0.64	0.84	-26.9
Dinoflagellate	7	20	-98.2	13.3	17.1	-25	2.9	0.6	128	1	0	0
Total	151	163.4	-8	140	131.2	7	16	12.8	22.2	23	24.3	-7
# Species	37	40	-7.8	35	33	5.9	17	16	6	18	17	6
Simpsons Diversity	0.84	0.86	-2.6	0.86	0.86	0.36	0.66	0.61	7.89	0.70	0.68	3

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 50% (field duplicates) or 25% (lab duplicates).

NA = Not Applicable for rare species.

Table 3.1-4. QA/QC data for phytoplankton, Meadowbank study lakes and Baker Lake, 2012.

	Innugugayualik Lake			Baker Lake			Tahek Lake		
	INUG-38-S 25-Jul-12	Lab Duplicate	RPD (%)	BAP-22-S 27-Jul-12	Lab Duplicate	RPD (%)	TE-50-S 28-Jul-12	Lab Duplicate	RPD (%)
<u>Phytoplankton Density (cells/L)</u>									
Cyanophyte	8584	9384	-9	1400	2200	-44	30936	3200	0
Chlorophyte	215536	243672	-12	64656	79024	-20	159648	202552	-24
Euglenophyte	0	0		0	0		0	0	
Chrysophyte	2831312	2629360	7.4	658744	666328	-1	2057424	2121880	-3
Diatom	557784	487544	13	52736	56920	-8	256240	265024	-3
Cryptophyte	124728	103376	19	53088	38720	31	70056	84224	-18.4
Dinoflagellate	800	800	0	15768	23152	-38	23952	9184	89
Total	3738744	3474136	7.3	846392	866344	-2	2598256	2686064	-3
<u>Phytoplankton Biomass (mg/m³)</u>									
Cyanophyte	0.9	1.1	-20	0.25	0.41	-47	1	1	0
Chlorophyte	4.9	4.6	8	3.0	1.9	43	5.7	5.3	7.29
Euglenophyte	0.0	0.0		0.0	0.0		0.0	0.0	
Chrysophyte	224	212	5.1	67	71	-6.9	158	161	-2
Diatom	53.2	37.2	35.27	38	37	1	13	14	-5
Cryptophyte	7.2	7.6	-6	9	8	21	11	13	-17.8
Dinoflagellate	6	6	0	20	25	-21	19	11	54.7
Total	296	269.0	9.5	137	143.2	-4.5	207	204.0	1.4
<u># Species</u>	39	40	-2.5	32	35	-9	40	38	5.1
<u>Simpsons Diversity</u>	0.80	0.80	-0.16	0.91	0.92	-1.52	0.75	0.73	2.3

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 50% (field duplicates) or 25% (lab duplicates).

NA = Not Applicable for rare species.

Table 3.1-4. QA/QC data for phytoplankton, Meadowbank study lakes and Baker Lake, 2012.

	Wally Lake			Innugugayualik Lake			Baker Lake		
	WAL-23-S 17-Aug-12	Lab Duplicate	RPD (%)	INUG-40-S 21-Aug-12	Lab Duplicate	RPD (%)	BBD-23-S 25-Aug-12	Lab Duplicate	RPD (%)
<u>Phytoplankton Density (cells/L)</u>									
Cyanophyte	36120	28736	23	5000	3800	27	200	400	-67
Chlorophyte	389936	439824	-12	324080	373768	-14	618624	416872	39
Euglenophyte	0	0		0	0		0	0	
Chrysophyte	1617000	1523808	6	2489664	2274944	9	1910776	1810200	5
Diatom	95792	124728	-26	245872	269024	-9	223760	243928	-9
Cryptophyte	182200	153264	17	22552	36920	-48.3	83424	69056	19
Dinoflagellate	1800	8984	-133	38320	37920	NA	8984	1600	140
Total	2322848	2279344	2	3125488	2996376	4.2	2845768	2542056	11
<u>Phytoplankton Biomass (mg/m³)</u>									
Cyanophyte	1.5	1.28	13	1.2	0.9	30	0.0	0.1	-53
Chlorophyte	8.3	8	-2	9	8	8	21	13	46
Euglenophyte	0.0	0		0	0		0	0	
Chrysophyte	134	141	-5	210	192	8.9	168	158	6.5
Diatom	10	11	-6.6	22	21	5.4	168	193	-14.1
Cryptophyte	25.0	21.1	17	2.4	4	-37	10	10	2.7
Dinoflagellate	16.1	22.7	-34	33	26.88	NA	11	9	29.7
Total	195	205.0	-5.2	278	252.8	9.54	378	382.1	-1.1
<u># Species</u>	40	40	0.0	40	38	5	40	40	0.0
<u>Simpsons Diversity</u>	0.86	0.86	-0.25	0.84	0.85	-1.1	0.86	0.86	-0.41

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 50% (field duplicates) or 25% (lab duplicates).

NA = Not Applicable for rare species.

Table 3.1-4. QA/QC data for phytoplankton, Meadowbank study lakes and Baker Lake, 2012.

	Second Portage Lake			Third Portage Lake			Baker Lake			Second Portage Lake		
	SP-55-S	Lab	RPD	TPS-38-S	Lab	RPD	BPJ-25-S	Lab	RPD	TE-56-S	Lab	RPD
	18-Sep-12	Duplicate	(%)	19-Sep-12	Duplicate	(%)	21-Sep-12	Duplicate	(%)	5-Dec-12	Duplicate	(%)
Phytoplankton Density (cells/L)												
Cyanophyte	1600	9784	-144	20568	29352	-35	7384	14768	-67	2400	3000	-22
Chlorophyte	287960	273592	5	412288	505080	-20.2	683680	546984	22	166032	136896	19
Euglenophyte	0	0		0	0		0	0		0	0	
Chrysophyte	1144456	1130088	1	1330840	1272968	4.4	1344208	1337624	0	1121504	1143056	-2
Diatom	221920	201568	10	291160	269608	8	131056	125472	4	168632	154664	9
Cryptophyte	16568	16168	2	21568	36736	-52	110760	89608	21	37720	37720	0
Dinoflagellate	16168	8384	63	8584	8384	2	17968	10784	50	8784	8984	0
Total	1688672	1639584	3	2085008	2122128	-2	2295056	2125240	7.68	1505072	1484320	1
Phytoplankton Biomass (mg/m³)												
Cyanophyte	0.3	0.6	-78	1.2	1.7	-33.1	0	0	-65.1	0.6	0.7	-24.5
Chlorophyte	9	9	-6	18.6	20.0	-7	16	13	21.8	4	3	35.9
Euglenophyte	0	0		0.0	0.0		0	0		0	0	
Chrysophyte	79	86	-8.8	112	105	6.0	77	78	-2.0	52	54	-4.5
Diatom	23	24	-3	22	22	-1	37	40	-7.71	5.2	4.8	7.1
Cryptophyte	2.6	2.3	13.0	9.5	11.6	-20	8.3	7.5	10	4.6	4.5	2.5
Dinoflagellate	27	15	56	6.2	10.1	-48	18.2	24.4	-29	7	8	0
Total	141	137.4	2	169	170.6	-1	157	163.5	-4.28	74	75.9	-3.0
# Species	34	34	0.0	41	41	0.0	40	41	-2	24	23	4
Simpsons Diversity	0.85	0.86	-0.6	0.88	0.89	-0.77	0.85	0.84	1.13	0.77	0.75	2.0

Notes:

RPD = Relative Percent Difference (%) = ((original - duplicate) / (original + duplicate)/2) x 100.

Shaded RPDs exceed 50% (field duplicates) or 25% (lab duplicates).

NA = Not Applicable for rare species.

Table 3.1-5. Percent recovery of benthic invertebrate samples, Meadowbank study lakes and Baker Lake, August 2012.

Area-Replicate	Number of Organisms Recovered	Number of Organisms in Re-sort	Percent Recovery
SP-4	83	86	96.5%
TE-4	40	41	97.6%
WAL-1	101	108	93.5%
SP-2	65	68	96%
TE-5	46	47	97.9%
TPE-1	160	164	98%
SP-3	45	49	92%
<i>Average % Recovery</i>			95.8%

Notes:

All sixty-five samples were sorted in their entirety.

For sample WAL-1, re-sort was done on the first one quarter.



3.2. Limnology

The Meadowbank project lakes are situated in ultra-oligotrophic headwater lakes of the Quoich River system that flows south, through Tehek Lake into Chesterfield Inlet and eventually, Hudson Bay. There are no significant sources of nutrients or sediment introduced to these lakes, save only local runoff that contribute little to nutrient enrichment or productivity of the system. Consequently, sedimentation rates are typically very low, which partly explains why water clarity is so high (Secchi depth typically 10 m or more) and why nutrient concentrations are so low.

3.2.1. Meadowbank Study Lakes

3.2.1.1. General Observations

The ice-free season on the Meadowbank study lakes is very short. Ice break-up usually occurs during mid- to late-June; ice begins to form again on the lakes beginning in late September or early October, with complete ice cover by late October. Maximum ice thickness is about 2 m and occurs in March/April, increasing the concentration of some ions, such as chloride, in the water near the ice-water interface. This phenomenon is due to cryo-concentration where ice formation excludes certain ions and increasing their concentration in the water column (Wetzel, 1983). Because the lakes are ice covered for most of the year, gas exchange with the atmosphere is limited, although oxygen concentrations usually remain high under the ice because of the low rates of biological activity and decomposition of organic material (processes that consume oxygen from the water). Historically, during winter there is typically a slight negative thermal stratification with near 0°C water near the ice-water interface, increasing to 3° -5 ° at depth. During summer, maximum water temperatures may reach 14 °C with little evidence of thermal stratification, except for brief periods of time and only a 4 – 5°C temperature difference. Winds blow near constantly and at high speeds, maintaining uniform temperature and high oxygen profiles in the water column in all lakes.

3.2.1.2. Temporal and Spatial Trend Interpretation

Mine development has altered some limnological features including surface area, mean and maximum depth and water volume of some lakes as a result of dike construction and lake dewatering. In Second Portage Lake for example, about half of the water volume and the deepest part of the lake was eliminated by the East Dike to create the Tailings Impoundment Area (TIA). Depending on the size of the pre-development lake, reducing the surface and depth of the lake reduces fetch distance, increases turnover rate and reduces the possibility of thermal stratification in the lake as the deepest basin was



eliminated. In addition, maximum water temperature may also be higher in the remaining basin of Second Portage Lake due to shallower overall depth and lower water volume.

Elimination of a small part of the TPE basin as a result of Bay-Goose Dike construction and dewatering likely has not affected this basin, because of its small size and volume and shallow depth, relative to the East Basin and Third Portage Lake overall.

Large, deep basins such as at TPS are typically colder and do not usually reach the same maximum temperatures that are reached by shallow basin lakes (e.g., WAL, INUG). Near-constant turnover of deep basins ‘dilutes’ the warming capacity of these lakes by circulating cold water from deeper depths throughout the water column.

Temperature and Oxygen

Temperature, oxygen and conductivity profiling conducted during each monitoring event can be viewed as analogous to measuring the “vitals” of a human; changes beyond expected conditions signal that something may be out of balance and require follow up.

The 2012 vertical temperature profiles are characteristic of the typical thermal regime of these lakes (**Figures 3.2-1 through 3.2-8**). During winter (February – May, **Figures 3.2-1 to 3.2-4**), while there is still complete ice cover, there is slight negative thermal stratification with water temperatures near 0°C at the ice-water interface, increasing to no more than 3°C at depth. Oxygen concentrations in winter generally decrease slightly with increasing depth. Oxygen concentrations in all basins are greater than 5 mg/L, and usually greater than 10 mg/L even at the lowest depths, despite nearly nine months of ice cover, illustrating the low biological oxygen demand of these systems.

No readings are taken in June due to unsafe ice conditions, but once ice is off in mid-July, all the lakes turn over completely, with uniform temperature and high oxygen concentrations and saturation. With near 24 hours of sunlight, water temperatures warm rapidly to reach maximum temperatures of at least 12 °C by late July and into August. Maximum temperatures are typically 2 -3°C colder in the deeper basins (e.g., TPS) than in the shallower basins. This occurs because of the large volume of cold water residing in deep water cools warmed surface waters when vertically mixed, lowering overall water column temperature. In 2011, maximum water temperatures in July in many basins were notably higher than previous years (up to 16°C). In 2012 temperatures were recorded at a more moderate and historically normal temperature of no greater than 11.5 °C (**Figure 3.2-5**).

Temporary stratification is possible depending on the year and timing of monitoring; after several days of warm and calm weather, some vertical stratification can occur, giving rise to surface water that may be several degrees warmer than deeper water, although this situation is usually ephemeral, lasting no more than few days during calm conditions. No vertical stratification was recorded during summer months in 2012, either because sampling did not occur during a period of calm, windless conditions or that calm

conditions did not persist long enough for stratification to become established. All summer months showed uniformity in water temperature and oxygen concentrations (**Figures 3.2-5 and 3.2-6**).

In September, water temperatures had cooled to below 10 °C but remain un-stratified until freeze-up in mid- to late-October. With vertical mixing, oxygen concentrations are high and fully saturated (**Figure 3.2-7**). While the values jumped around slightly, no vertical stratification was observed. Between late-October and November ice conditions are too thin and unstable to monitor during these months.

In December, once thick ice has formed similar stratification patterns and data value ranges as those observed in early 2012 (February – May). This includes increasing water temperature and decreasing oxygen concentration with lowering depth. Water temperature is at its seasonal low of < 3 °C (**Figure 3.2-8**).

Water temperatures at 3 m depth for all project lakes since 2006 are depicted in **Figure 3.2-11**. Given that these lakes do not typically stratify vertically, the 3 m depth is a good depiction of mean water temperatures at the time of data collection, avoiding water that might be 2°C warmer very close to the surface or deeper than 10 m. Monthly water temperatures in 2012 showed typical temporal / seasonal changes from temperatures near 0°C in late winter (April and May) with classic bell-shaped increases through the summer (July) and declining into the fall (August to September) returning to near 0°C by December. As discussed above, thermal maxima in 2011 were slightly higher than in previous years, a trend that was observed in both control and impact lakes. This was not the case in 2012, with temperatures returning to those seen in 2010 and prior.

Profiles at “control” lakes (INUG, PDL, WAL) had similar patterns to ‘impact’ lakes (TPN, SP, TPE) with no evidence of temperature differences within lakes that might be mine-related, as discussed above, thermal maxima were observed in July for several impact as well as reference lakes. There were consistent inter-lake differences in 2012 as in previous years as water temperatures in large, deep basin lakes (TPS, TPN, TEFF) were 2 – 3°C colder than shallow basin lakes (WAL, SP, INUG). Overall, vertical temperature and oxygen profiles among near-field, mid-field and reference lakes in 2012 were consistent with what has been observed in the past.

Conductivity

Although technically a ‘water chemistry’ parameter (it is also included in **Section 3.3**), conductivity is discussed here as an indicator of change in the water column to facilitate review by the reader. Conductivity measures ionic strength of the water column and in freshwater, oligotrophic systems, with low dissolved solids and ions (Ca, Na, Cl, Mg, etc.) conductivity is typically less than 50 µS/cm. There can be seasonal differences in conductivity within lakes due to ice cover, especially in shallow lakes or basins. Ice formation ‘freezes out’ ions (i.e., cryo-concentration) (Wetzel, 1983), thus increasing ion



content and therefore conductivity beneath an ice cover. In shallow lakes or basins (~ 6 – 8 m), a 2 m thick ice cover may increase conductivity by a significant amount between summer and winter.

At the Meadowbank study lakes, conductivity is usually uniform in concentration from top to bottom at impact and reference lakes. While the overall range in conductivity is similar between ice-on (5 – 35 $\mu\text{S}/\text{cm}$) and ice-off (6 – 28 $\mu\text{S}/\text{cm}$) months, the conductivities in ice-off months are generally lower, consistent with cryo-concentration during progressive ice formation during winter months.

Conductivity profiles under ice (February – May, **Figures 3.2-1 to 3.2-4**) in 2012 were unstratified with reasonably uniform values from just below the ice surface to depth in Second and Third Portage lakes (all basins, TPS, TPE, TPN), with most ranging from 10 – 20 uS/cm . The only exception was an anomalously high value in March from TPN when conductivity was 47 uS/cm just below the ice surface, but 20 uS/cm one meter deeper. This may have been due to cryo-concentration, but more likely an anomalous meter reading at surface. Some evidence of cryo-concentration was evident in December (**Figure 3.2-8**) at most stations, during the period of most active ice formation, near-ice conductivity was consistently higher than at depth.

During the well-mixed open water period conductivity profiles were near-uniform from top to bottom in nearly all cases, with some variability between lakes (**Figures 3.2-5 to 3.2-7**). Conductivity in INUG and TEFF had slightly lower values (15 uS/cm) than PDL and TE (20 uS/cm), Third Portage Lake (22 uS/cm) and SP and WAL (26 – 28 uS/cm). Again, there were minor exceptions with lower conductivity within the upper 1 – 3 m of water at INUG and TE in July, probably associated with ice melt and introduction of low conductivity water at surface. Otherwise, conductivity profiles during under ice and open water conditions followed typical patterns, with minor exceptions, as in previous years.

3.2.2. Baker Lake

Throughout this discussion, the following abbreviations will be used for each lake area/basin: Baker Lake –Barge Dock, –Proposed Jetty (no longer a proposed jetty, but near to the Meadowbank Spudd Barge), –East Shore, –Akilahaarjuk Point (BBD, BPJ, BES, and BAP). In an effort to better characterize the limnology and water quality of Baker Lake, a deep (40 m) limnology survey was conducted for the first time in August 2012, in addition to the usual limnology surveys conducted in July, August and September.

3.2.2.1. General Observations

Baker Lake is a very large lake with much greater wind fetch than Meadowbank lakes and a unique limnology, due partly to its proximity to tidally influenced Chesterfield



Inlet, influence of the Thelon River and deep water that is naturally elevated in dissolved solids. These natural complexities interact, leading to the “competing” influences of less-saline Thelon River water and more-saline Baker Lake water. Timing of sampling relative to freshet on the Thelon River, coupled with shifts in north/south wind speed and direction lead to variable degrees of horizontal and vertical mixing of the water column. When sampling near to the north shore, these factors may combine to confound the detection of a potential changes in water quality related to barge activity, with the “signal” getting lost in the “noise” of natural variability in this dynamic location.

The following parameters are associated with more-saline or higher conductivity water that appears to be present in deep (>12 m) and demonstrates considerable fluctuations within and between years. These include conductivity, hardness, calcium, chloride, magnesium, sodium and TDS. Other parameters also have a high level of natural variability and appear to be correlated with the above parameters in Baker Lake and include ammonia, nitrate, TKN, total phosphorus, sulphate and TOC/DOC. Nearshore areas of the three routine monitoring stations of Baker Lake in 2012 show relatively low concentrations of these parameters across all areas and events. These data suggest that the potential influence of deep, more saline water was low during sampling events.

Nevertheless, Baker Lake remains very nutrient poor, cold, deep and well mixed year round with high oxygen. As discussed above, there is the potential added complexity of one or both of the following two factors depending on time of year: (1) the Thelon River, which enters Baker Lake only a few kilometers to the west of the hamlet and may have a particularly strong input to Baker Lake during spring freshet, and (2) a potential deep ‘reservoir’ of water that is high in conductivity and dissolved salts with an unknown origin. We speculate this may be a residual relict of water that originated from Chesterfield/Hudson Bay trapped in Baker Lake subsequent to isostatic rebound.

The relative importance of these factors on local physical, chemical and biological conditions appears to be influenced primarily by wind (speed and direction) rather than season (low vs. high flow from Thelon). As described below (and in **Section 3.3**), sampling results to date show marked differences in certain parameters (e.g., total dissolved solids and ancillary parameters such as water hardness, alkalinity and some nutrients) associated with hard (e.g., slightly brackish) water. Variability related to these factors potentially confounds the identification of development-related effects on local limnology and water quality. Consequently, we identified a need to better characterize Baker Lake limnology at depth. Therefore, in August 2012, in addition to the limnology data collected at the water stations in Baker Lake, a deep limnology survey was conducted along transects into Baker Lake offshore of Baker Lake water sampling locations (**Figure 1.3-3**). All parameters measured (temperature, conductivity, dissolved oxygen, pH, total dissolved solids and salinity) showed a strong and abrupt stratification from 8 - 12 m depth at stations BBD 1 and 2, and BPJ. For example, conductivity

increased from less than 20 $\mu\text{S}/\text{cm}$ in shallow, near-shore water, to more than 200 $\mu\text{S}/\text{cm}$ between 8 and 12 m depth, depending on location. Conductivity remained uniformly high to the maximum depth sampled (40 m). Some inverse stratification was also seen with temperature at this depth range, decreasing from 10°C to 5 – 6°C at depth. This phenomenon was not observed in 2011, with uniform conductivity ranging from 55 $\mu\text{S}/\text{cm}$ to 86 $\mu\text{S}/\text{cm}$ in September, but less than 30 $\mu\text{S}/\text{cm}$ at all stations in August.

The stratification was seen at shallower depths (2-3 m) at BES and was not as abrupt as the other stratified stations. No stratification was seen at the two Prince River stations. All stations had similar ranges for each parameter, with the exceptions of the Prince River stations which had a narrower range on account of being un-stratified, and the BPJ station which had lower dissolved oxygen and pH than other stations at depth (+30 m) (**Figure 3.2-10**).

3.2.2.2. Temporal and Spatial Trend Interpretation

The major mine-related activity that occurs in this area is seasonal barge traffic, which begins around mid-August and may continue through September. Locally, propeller wash may cause vertical mixing in very discrete areas when there is active traffic. Otherwise (with the exception of spills etc.), there are no other activities with the potential to alter limnological parameters. There has been no influence on shoreline development, volume or any other feature of Baker Lake itself.

At Baker Lake, limnological conditions are similar to the study lakes except that water temperatures are cooler, reaching no more than 11°C in mid-summer, are generally un-stratified because of the large, cold water volume and large fetch of Baker Lake (**Figure 3.2-9, Figure 3.2-11**). However, in 2012 the deep limnology survey revealed reasonably strong thermal stratification at some stations (**Figure 3.2-10**). **Figure 3.2-9** and **Figure 3.2-10** also illustrate how conductivity and other water quality parameters can be affected by wind direction and possibly the influence of the Thelon River outflow or a marine influence from Chesterfield Inlet.

In August 2012 conductivity was lower at the two impact sites (BBD and BPJ) in the shallower versus the deeper depths. This vertical stratification is indicative of freshwater sitting on top of slightly more brackish water that persists at depth. Also in August, the reference station (BAP) had high conductivity (up to 150 $\mu\text{S}/\text{cm}$) throughout the measured profile.

In the deep limnology survey conducted in August only, all parameters measured (temperature, conductivity, dissolved oxygen, pH, total dissolved solids and salinity) showed a strong and abrupt stratification from 8 - 12 m depth at stations BBD 1 and 2, and BPJ as discussed above. In September, conductivity returned to background (<60

µS/cm) but also varied depending on wind direction and possibly from influence of the Thelon River (see **Table 3.3-1**).

Water temperature and dissolved oxygen profiles measured at ‘impact’ and reference area locations in Baker Lake in 2012 (**Figure 3.2-11**) showed similar patterns as in previous years, which is not surprising given that any mine related activities (barge traffic) would not have any effect on lake temperature. With respect to other chemical parameters, the conductivity profiles can be quite variable within seasons and between years at all Baker Lake areas. Differences in conductivity are indicative of other chemical differences in the water column (i.e., hardness, alkalinity, major ions) that are discussed more fully here. There are several reasons for this intra-and inter-annual variability including:

- Wind driven currents that can move Thelon River water near or away from the north shore of Baker Lake.
- Potential influence of brackish water that persists in deeper, offshore areas of Baker Lake but that could be moved to near surface depending on wind-driven seiche events. For example, in 2008, conductivity as high as 500 µS/cm was observed at the reference location with concomitant increases in other parameters (chloride, sulphate, anions, dissolved solids, etc.). This can only be attributed to the influence of deep brackish water.
- Deep brackish water within Baker Lake may move to surface depending on wind direction and speed. This may also influence near-shore conductivity and other chemical parameters, such as during a wind-driven seiche as pointed out above.

Overall, the general pattern of temperature and conductivity in Baker Lake was similar in 2012 as in previous monitoring periods. However, the deep limnology survey confirmed that there is a reservoir of brackish, slightly saline water at depth within Baker Lake that has the potential to influence shallow, near-shore chemistry of Baker Lake, depending on time of year, wind driven currents, influence of Thelon River or other unknown factors.

Figure 3.2-1. Temperature (°C), conductivity (μS/cm) and dissolved oxygen (mg/L) profiles for February, 2012.

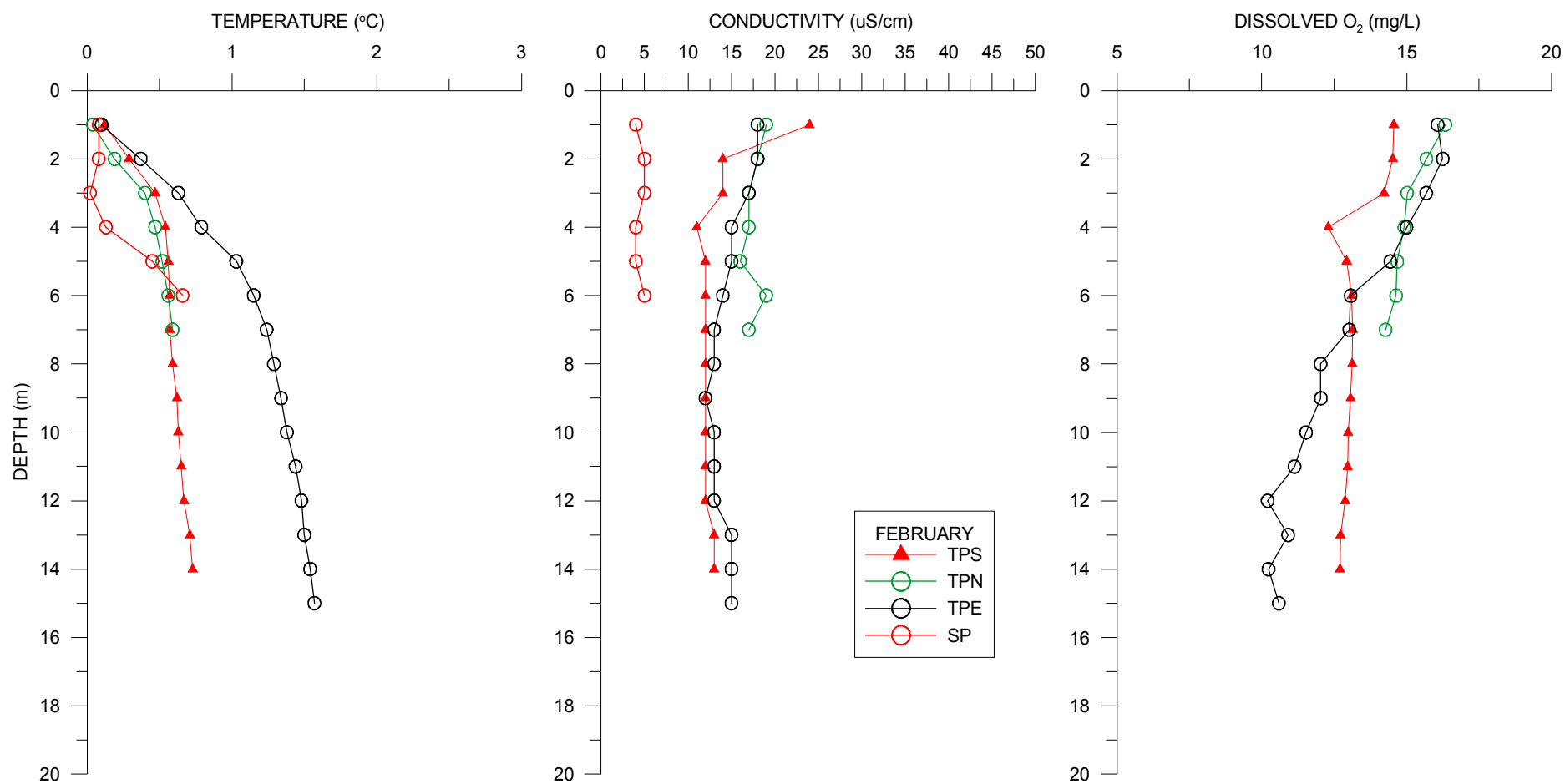


Figure 3.2-2. Temperature ($^{\circ}\text{C}$), conductivity ($\mu\text{S}/\text{cm}$) and dissolved oxygen (mg/L) profiles for March, 2012.

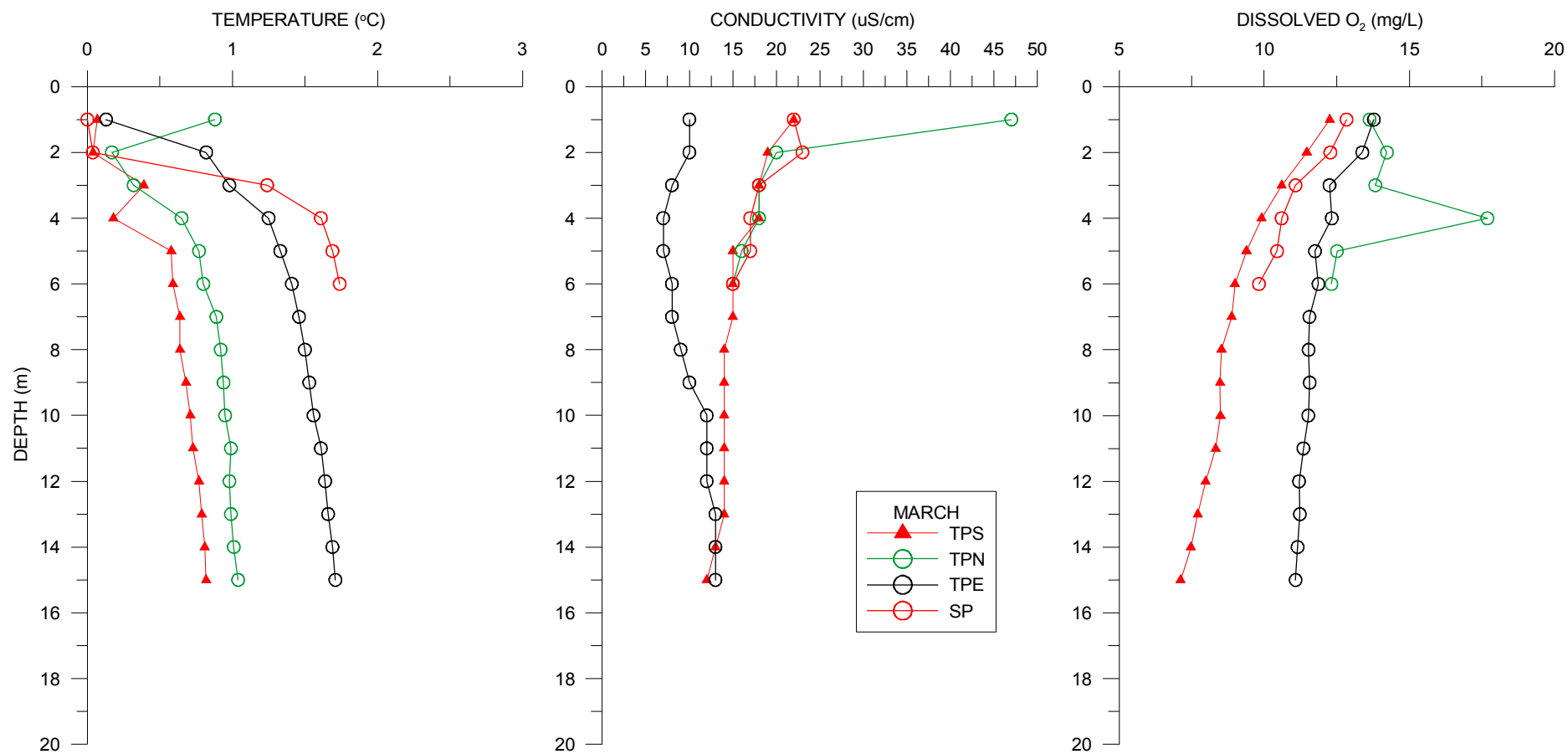


Figure 3.2-3. Temperature ($^{\circ}\text{C}$), conductivity ($\mu\text{S}/\text{cm}$) and dissolved oxygen (mg/L) profiles for April, 2012.

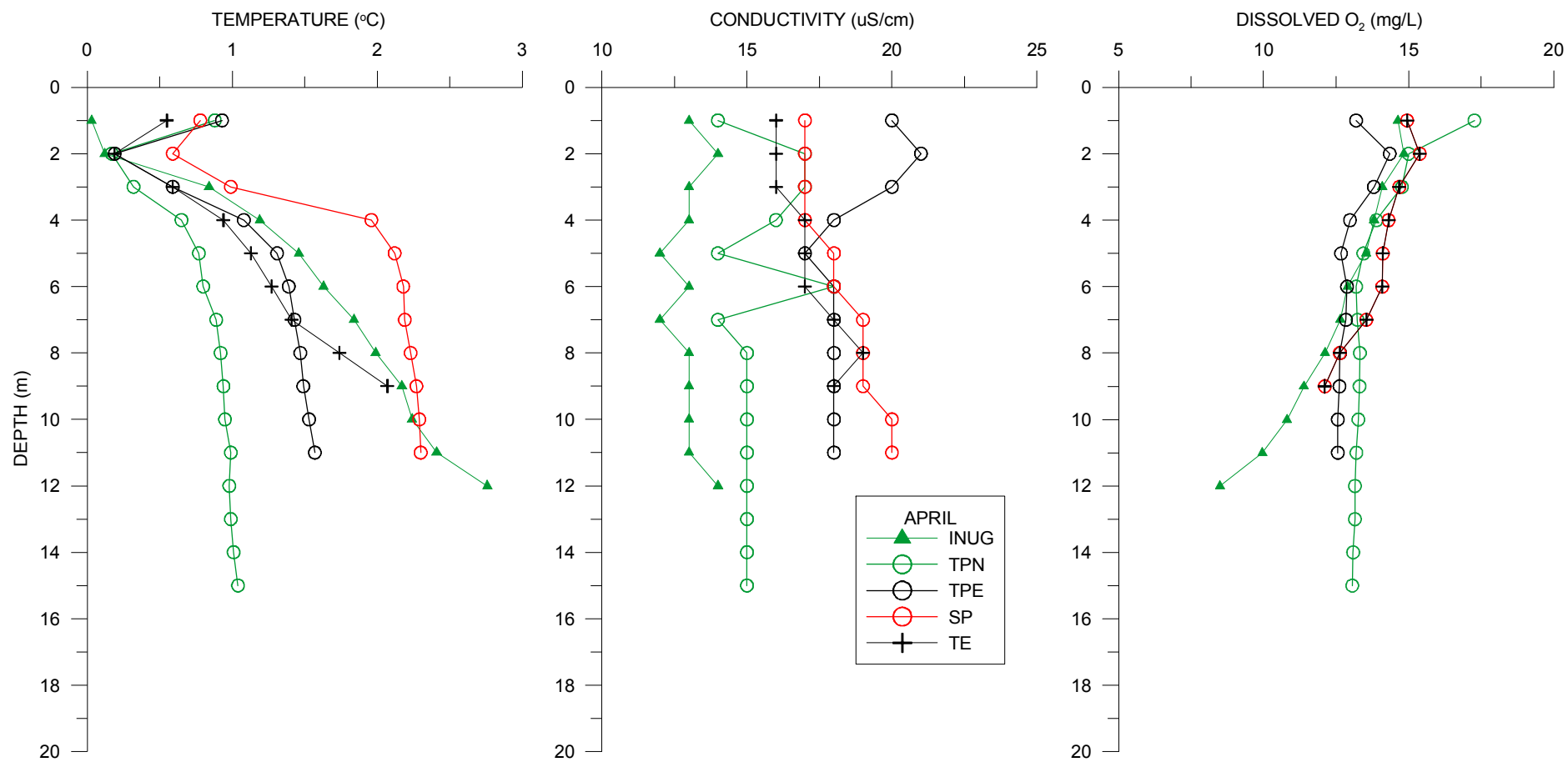


Figure 3.2-4. Temperature (°C), conductivity (μS/cm) and dissolved oxygen (mg/L) profiles for May, 2012.

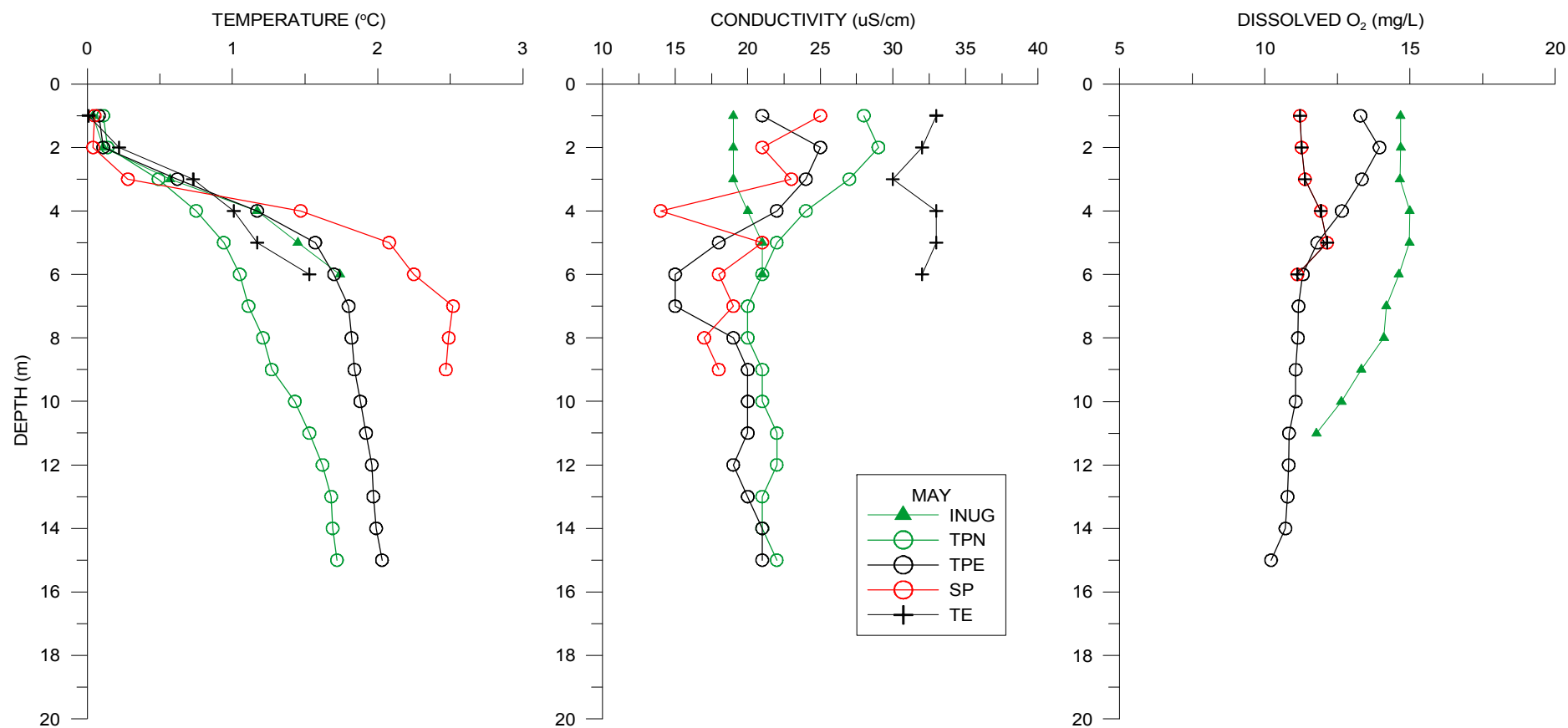


Figure 3.2-5. Temperature ($^{\circ}\text{C}$), conductivity ($\mu\text{S}/\text{cm}$) and dissolved oxygen (mg/L) profiles for July, 2012.

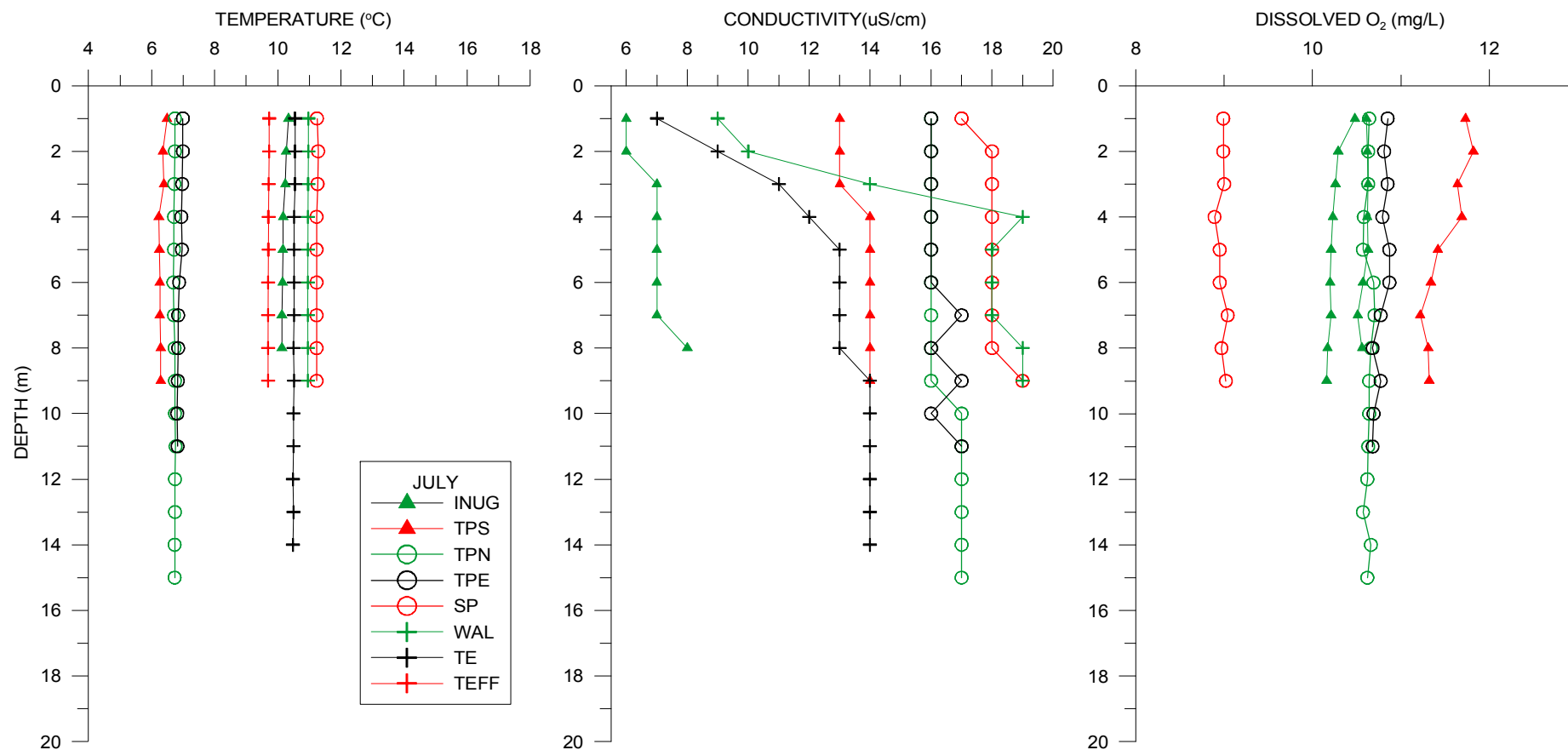


Figure 3.2-6. Temperature (°C), conductivity (µS/cm) and dissolved oxygen (mg/L) profiles for August, 2012.

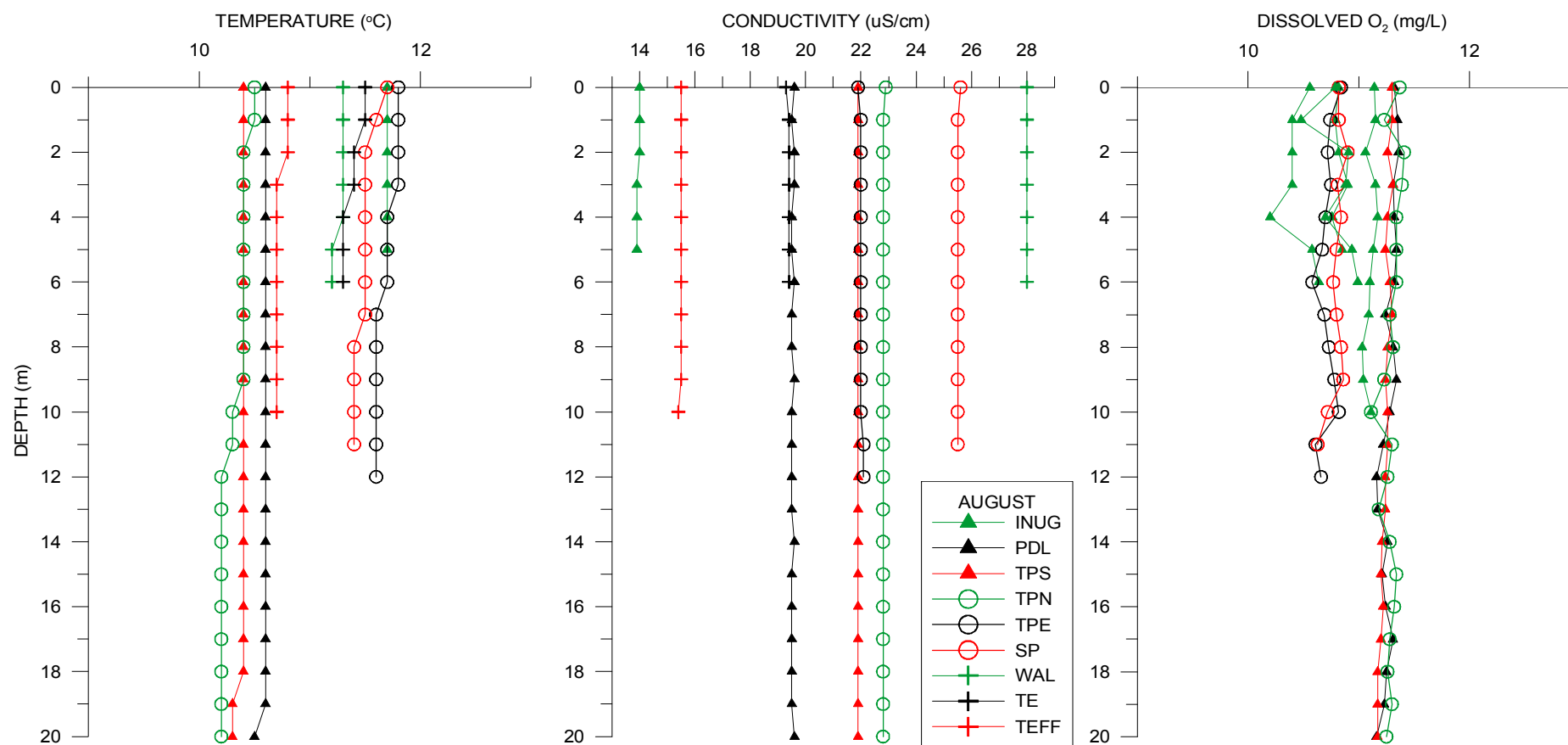


Figure 3.2-7. Temperature (°C), conductivity (μS/cm) and dissolved oxygen (mg/L) profiles for September, 2012.

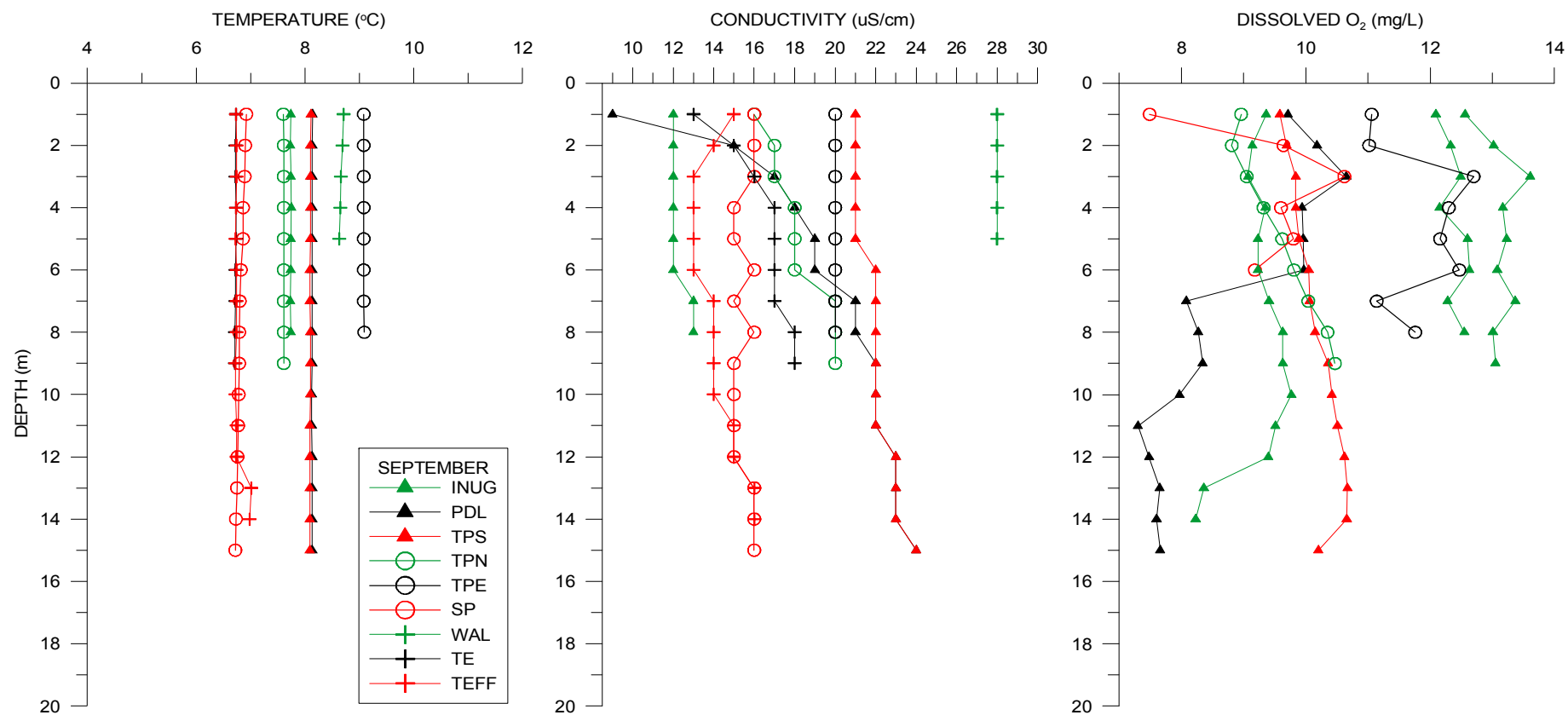


Figure 3.2-8. Temperature ($^{\circ}\text{C}$), conductivity ($\mu\text{S}/\text{cm}$) and dissolved oxygen (mg/L) profiles for December, 2012.

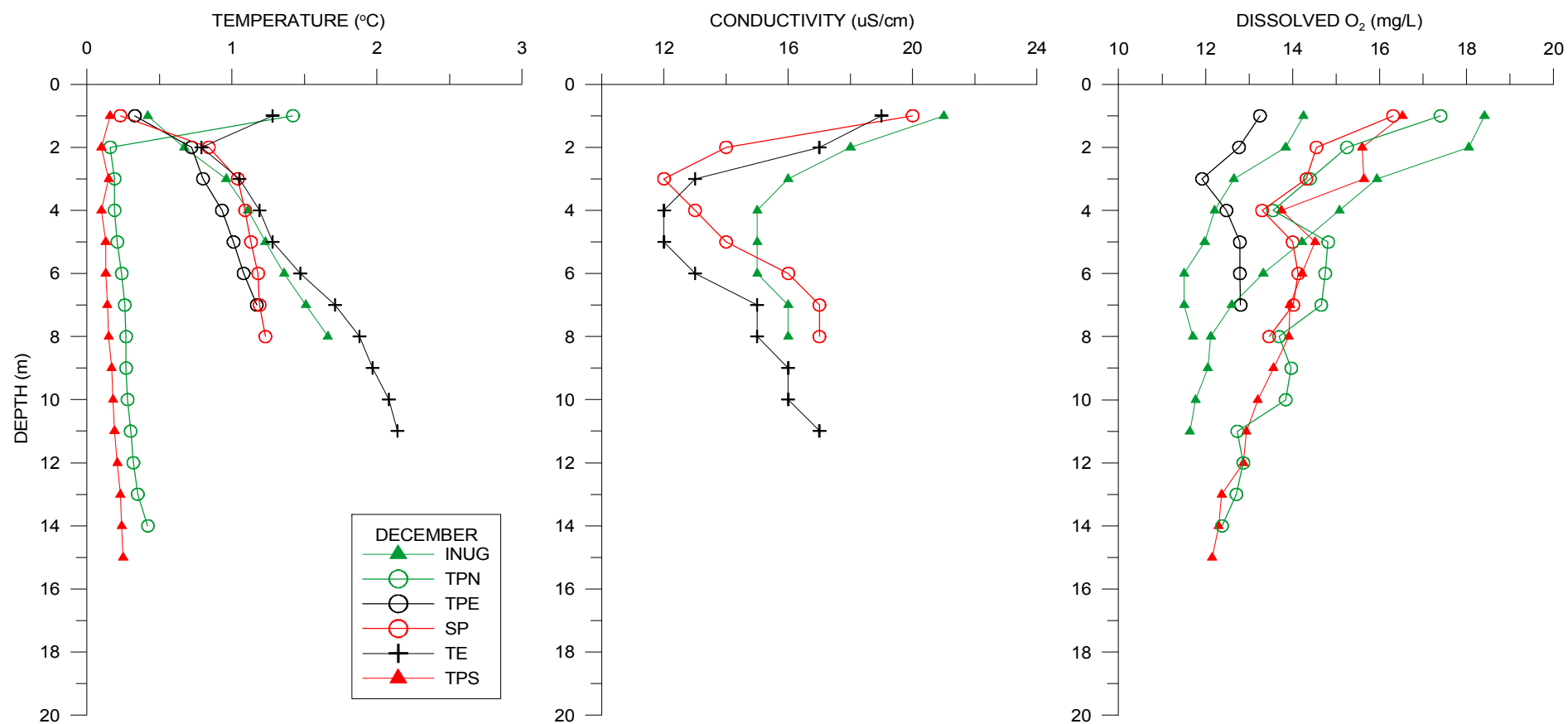


Figure 3.2-9. Temperature (°C) and conductivity (µS/cm) profiles in Baker Lake for July – September, 2012.

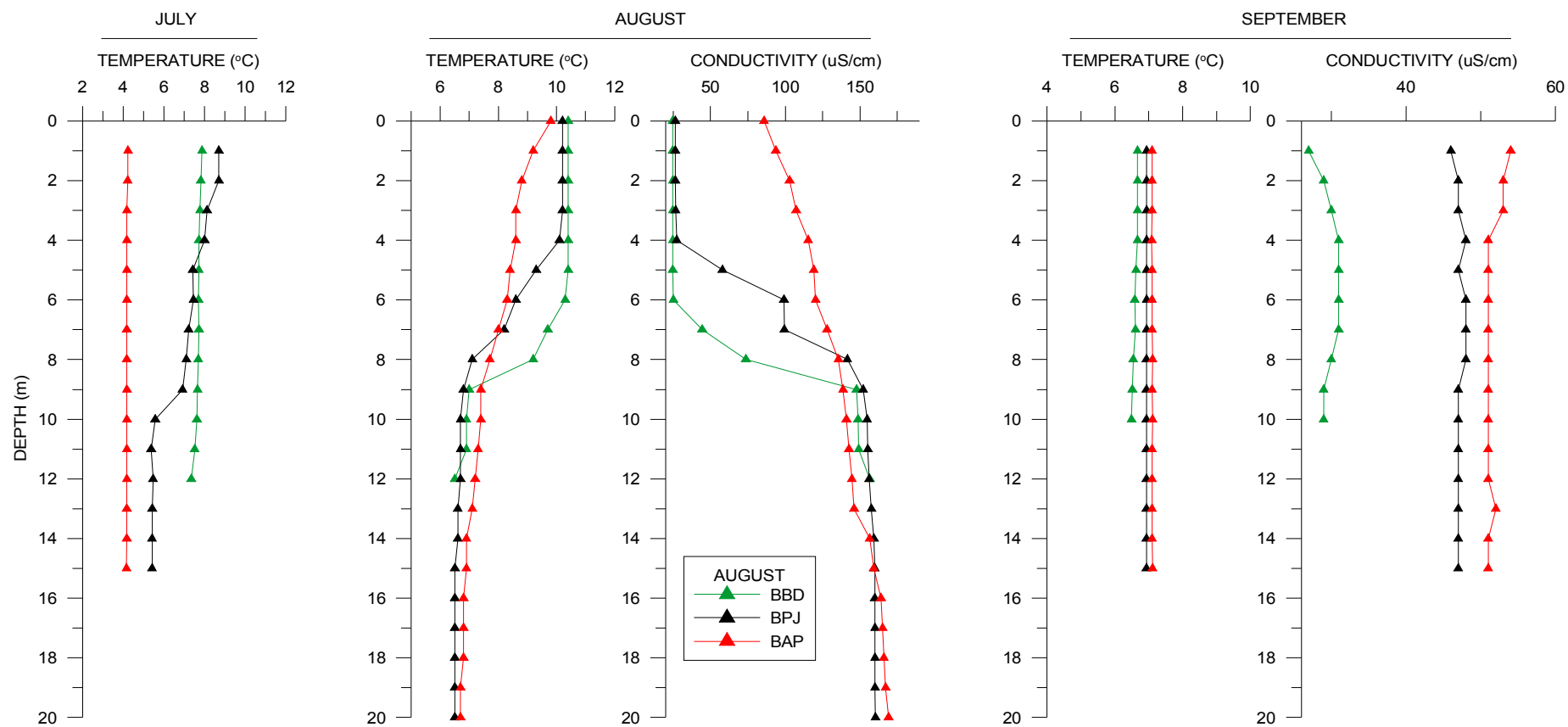


Figure 3.2-10. Temperature (°C), conductivity (μS/cm), dissolved oxygen (mg/L), pH, total dissolved solids (g/L), and salinity (PPT) deep profiles in Baker Lake, August 2012

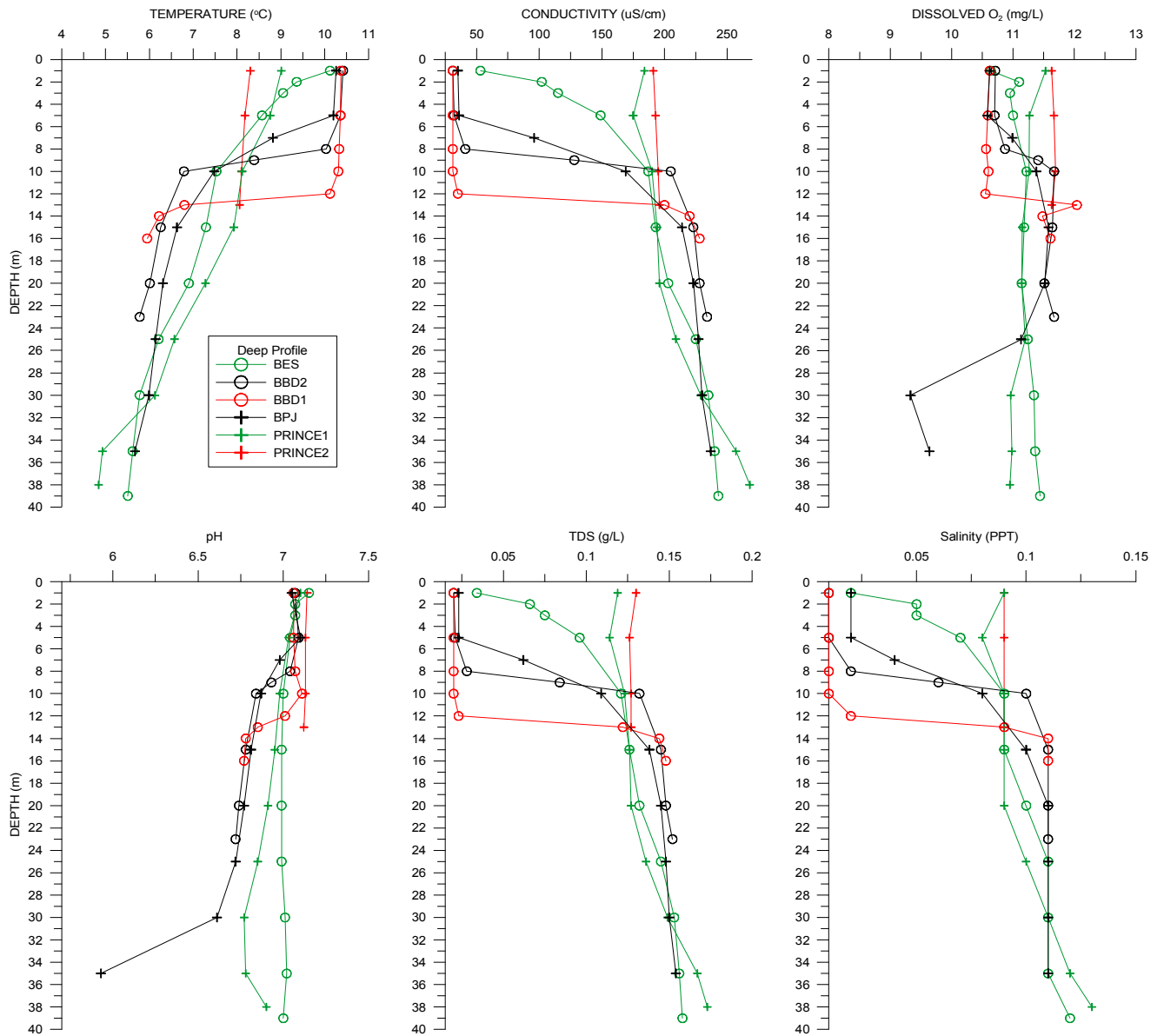
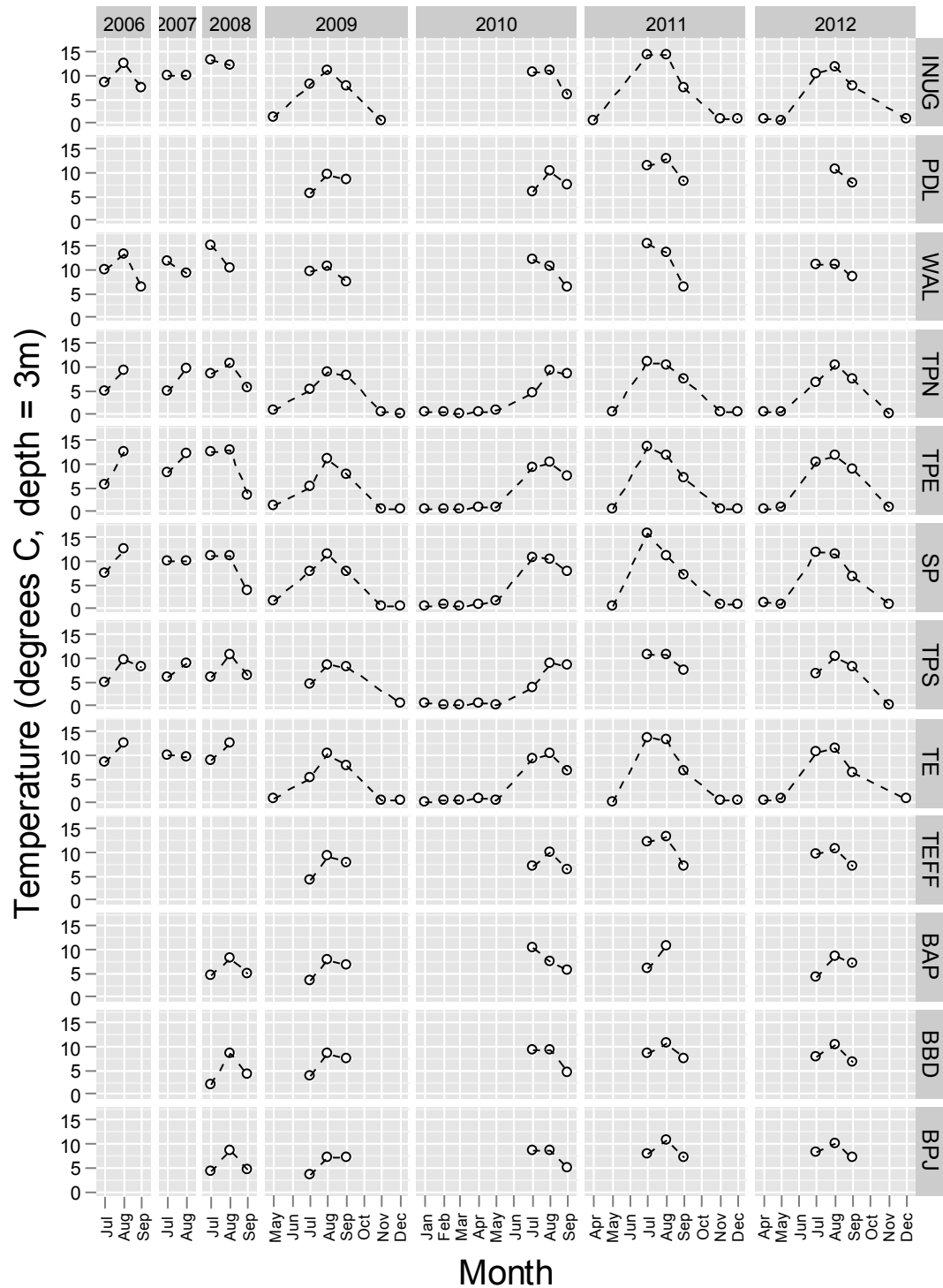


Figure 3.2-11. Mean monthly temperature (°C) at 3 m depth from 2006 – 2012, Meadowbank study lakes and Baker Lake.



3.3. Water Chemistry

The general conditions affecting water quality in this region were described in **Section 3.2**. Key points to recall are:

- The Meadowbank study lakes are generally nutrient-poor, thermally unstratified and well-mixed with uniform temperature and oxygen profiles with no winter anoxia beneath an ice cover.
- The Meadowbank study lakes are headwater lakes, so there are no significant natural sources of nutrients or sediment introduced to these lakes, save only local runoff that contributes little nutrient enrichment, but sustains these aquatic ecosystems. Many chemical parameters in water have been typically below laboratory detection limits (MDLs) since formal baseline monitoring started in 2006⁸.
- Baker Lake is a large lake, very exposed along the north-south axis to wind and wind-generated currents, and tidally influenced. Monitoring stations along the north shore also have the added complexity of a large river (Thelon River) that discharges into Baker Lake at its western end, and possibly a residual deep-water brackish layer, that depending on wind speed and direction, can influence water chemistry parameters (conductivity, salts, dissolved solids). Consequently, there can be pronounced spatial (horizontal and vertical) and temporal variability in certain parameters. Despite this variability, many parameters in the Baker Lake samples were also typically below laboratory MDLs.

3.3.1. Meadowbank Study Lakes

3.3.1.1. *General Observations*

Results for conventional water quality parameters, nutrients and metals for 2012 are presented in **Table 3.3-1**; they are discussed, where relevant from a spatial and temporal trend perspective, in **Section 3.3.1.2**. General observations (i.e., natural patterns across years and locations that are unrelated to mining activities) for major parameter groups are

⁸ While formal baseline water quality monitoring started in 2006, reconnaissance baseline monitoring started in the mid-1990s and served as the foundation for designing the formal monitoring program.

discussed below (based on **Figures 3.3-1 through 3.3-39**; figures are limited to those parameters measured above laboratory MDLs)⁹.

Conventional Parameters

The project lake waters are typically circum-neutral (pH 6.5 to 7.5¹⁰), with low hardness (range 4 to 13 mg/L), conductivity (12.5 to 30 µS/cm), total suspended solids (TSS; <1 mg/L), total dissolved solids (TDS; <10 mg/L, with occasional increases to 30 mg/L), total alkalinity (2.5 to 15 mg/L), and nutrients (nitrate-N was generally <0.005 mg/L; nitrite-N was <0.001; total phosphorous was usually <0.005 mg/L and rarely exceeded 0.01 mg/L; dissolved organic carbon [DOC] was usually <2 mg/L and rarely >4 mg/L; total organic carbon [TOC] was usually <2.5 mg/L and rarely >3.5 mg/L).

Total and Dissolved Metals

Total and dissolved metals concentrations were consistently low or undetectable among the project lakes (**Table 3.3-1**). The only total metals measured above laboratory detection limits (MDLs) in more than 10% of samples (or consistently measured after a recent reduction in DL) were aluminum (<0.05 mg/L), arsenic (<0.0005 mg/L), barium (<0.005 mg/L), copper (<0.001 mg/L), iron (<0.05 mg/L), manganese (<0.005 mg/L), strontium (<0.012 mg/L), and titanium (<0.001 mg/L in 2011 after reduction in DL). Dissolved metals meeting the above detection frequency criteria were aluminum (<0.01 mg/L), arsenic (<0.0005 mg/L), barium (<0.0035 mg/L), copper (<0.001 mg/L), manganese (<0.005 mg/L), and strontium (<0.012 mg/L).

3.3.1.2. Temporal and Spatial Trend Interpretation - General

CREMP monitoring results since 2006 were used to assess temporal and spatial trends related to mining activities (see **Section 1.4** for description of key activities). The general rationale for assessing these trends was discussed in **Section 1.5**; the process was tailored slightly for water chemistry, as described below.

As previously discussed, many water quality parameters had concentrations that were routinely below laboratory MDLs, thus providing little insight into the assessment of

⁹ These observations are based on the results of surface water samples (3m below surface), but should be applicable to the water column in general. As discussed in **Section 3.2**, the Meadowbank study lakes typically lack stratification; these conditions result in a well-mixed water column with consistent physical and chemical characteristics across depth zones. This verified statistically as part of a design review for the CREMP (Azimuth, 2012d).

¹⁰ In August 2007 (i.e., baseline), pH was “elevated” across most areas; this was likely due to laboratory error and is considered an anomaly.

mine-related changes to water quality. To streamline the interpretation process, a conservative three-step screening process was used to identify parameters for inclusion into the formal trend assessment (the results are summarized in **Table 3.3-2**):

1. *Overall Detection Frequency* - Only those water quality parameters that exceeded MDLs in at least 10% of the samples were included in this discussion. Because the project lakes are ultra-oligotrophic, it is normal for many parameters to routinely be below MDLs. In fact just under half (49%) of parameters measured exceeded MDLs at least 10% of the time and are included in this discussion.
2. *Control-Impact Detection Frequency Comparison* – In order to avoid screening out infrequently detected parameters that were detected more often in association with mining activities, the proportion of samples exceeding MDLs between “control” and “impact” samples were compared; the intent of this screen was to identify parameters with < 10% detection frequency (i.e., those screened out above) for which there were detection frequency changes potentially associated with mining activity (i.e., where the proportion of detected values increased by 0.1 or more). No parameters were added back into the trend assessment based on this screen.
3. *Apparent Detection Pattern Matching Mining Activity* – In order to avoid screening out infrequently detected parameters that may be associated with mining activities (see **Section 1.4**), trend plots were used to identify parameters with measured values associated with periods/locations of known mining activities. Where such patterns were observed, these parameters were added back into the trend assessment process. Total chromium, total uranium, and total nickel were added back into the trend assessment process based on this screen.

All parameters not retained for the trend assessment were assumed to have no spatial or temporal trends related to mining activities or to natural variability and were excluded from further consideration (plots for these parameters are included for reference in **Appendix E**).

Trend assessment results related to each of the mining activities discussed in **Section 1.4** are presented below¹¹.

¹¹ Other seasonal trends, unrelated to mining activity, were evident in the trend plots. For example, a pattern of higher chloride (and other parameters such as conductivity, hardness, calcium, magnesium, sulphate and others) concentrations was evident in through-the-ice sampling at INUG, TPN, TPE, SP, and TE in 2009, 2010, 2011 and 2012. This phenomenon was likely due to cryo-concentration, when the water freezes into ice and excludes dissolved ions, such as chloride. Cryo-concentration of chloride has been recorded in other lakes with substantial ice cover, such as Lake Vida in Antarctica (Doran et al, 2004).

Dike Construction

Dike construction activities and associated changes to water quality were the focus of two sets of targeted studies: (1) spatially and temporally intensive monitoring was conducted during construction of the East Dike (Azimuth, 2009a) and Bay-Goose Dike (Azimuth, 2010b; AEM, 2011) and (2) a four-year TSS effects assessment study (EAS) was conducted to follow-up on the ecological implications of the sedimentation events associated with construction of each dike (Azimuth, 2009b, 2010c, 2011a, 2012b). The CREMP data set provides a complementary look at changes from a broader temporal and spatial context than the targeted studies.

In addition to TSS (**Figure 3.3-4**), parameters associated with the East Dike construction (2008) water quality included nitrate, total phosphorus*¹², total aluminum*, total chromium*, total copper*, total iron*, total manganese, total nickel, total titanium, and total uranium. Similarly, during Bay-Goose Dike construction (2009) water quality parameters that generally followed the pattern of increased TSS included total aluminum*, total chromium*, total copper*, total iron*, total manganese, total nickel, total titanium, and total uranium. Nitrate is interesting in that it showed a strong association to dike construction (and dewatering), but has lingered at elevated concentrations for much longer (**Figure 3.3-10**); it is important to note, however, that these concentrations are well below (by more than 50 times lower) the current CCME guideline of 2.9 mg/L (for nitrate-N)¹³.

The parameters marked with “*” above exceeded CCME guidelines during event; however, dissolved metals were low, so total concentrations were generally associated with particulates and considered unlikely to be bioavailable (see EAS reports for more details).

Dewatering

Dike construction resulted in the creation of two impoundments (the northwest arm of Second Portage Lake [bounded by the East Dike] and the northwest portion of the east basin of Third Portage Lake [bounded by the Bay-Goose Dike]) that required dewatering prior to the onset of mining (see **Section 1.4**). Dewatering discharges (i.e., impounded lake water with TSS) were directed primarily into the north basin of Third Portage Lake

¹² Phosphorus limitation is prevalent in Canadian Arctic aquatic systems, where input is generally limited to inputs from precipitation (Medeiros, 2011). The CCME (2007) total phosphorus guidelines are based on categorizing lake productivity (i.e., rather than on direct adverse effects to aquatic life); the guideline of <0.004 mg /L is for an ultra-oligotrophic lake system and 0.004 to 0.01 mg /L.

¹³ The current CCME guideline for nitrate, 2.9 mg N/L was published in 2003. The federal government recently re-evaluated the nitrate guideline using their 2007 species sensitivity distribution approach for guideline derivation; the draft guideline issued for nitrate in 2011 is 3.6 mg N/L

(TPN; discharging much of the time since March 2009), but also briefly into Second Portage Lake (April 14th to July 9th, 2009). The discharge to TPN was subject to Metal Mining Effluent Regulations (MMER) as of December 31, 2009 and an Environmental Effects Monitoring (EEM) study was undertaken to determine the effects of effluent discharge on the TPN receiving environment (Azimuth 2012e. MMER-related studies have included routine effluent characterization (i.e., chemistry and toxicity) and receiving environment characterization (i.e., chemistry and biological [fish and benthic invertebrates] testing); together, these studies are intended to provide a thorough understanding of the potential ecological effects of dewatering effluent discharge to TPN (Azimuth, 2012e. Dewatering discharges to TPN were terminated in June 2012.

As described in **Section 1.4.2**, TSS concentrations in excess of 3 mg/L have never been recorded at TPN and have only rarely been measured above detection limits since dewatering commenced in 2009. Nitrate also showed some changes associated with dewatering, but concentrations were still 50 times less than the CCME guideline of 2.9 mg/L (see related foot note under dike construction). Hardness and conductivity may also have increased relative to baseline concentrations; elevated conductivity was also observed at depth in the profile conducted at TPN in May 2011 and may have been due to an effluent plume¹⁴. Total phosphorus spiked on two occasions (November 2009 and February 2010), but the concentrations were not dissimilar to those seen at the reference area INUG; the upward trend at TPN in 2011 was also similar to that seen in INUG, suggesting a regional trend. No other parameters appeared to show substantial changes in relation to dewatering activities.

Effluent Discharge

As discussed in **Section 1.4.1**, starting in July 2012, effluent was discharged into the north basin of Third Portage Lake (TPN) (**Figure 1.3-1**). Full details regarding the chemistry of effluent (according to MMER protocols), concentrations, volume and loading is presented within the MMER report for 2012 (AEM, 2013). Since that time, while TSS concentrations have been below the laboratory MDL (1 mg/L), other parameters (e.g., conductivity, sulphate, TDS, TOC, and total and dissolved strontium) have remained elevated relative to baseline concentrations. To put these results into context, trends relative to trigger values are explored in greater detail in **Section 3.3.1.3**

¹⁴ The pronounced increase in conductivity observed at depth at TPN in May 2011 suggests that a deep effluent plume may have been present; no direct sampling of the deep plume for chemical characterization was conducted to verify this possibility. There was no further evidence of a deep water plume by July 2011, nor was there any chemical evidence suggesting that such a plume had mixed with surface waters during post-ice turnover.

General Site-Related Activities

As previously discussed, changes in water quality observed in the trend plots are largely attributable to dike construction, dewatering, and/or effluent discharge. While other activities may have introduced contaminants into the receiving environment (e.g., dust from roads or blasting fallout), any related changes were either confounded by the two major activities (i.e., if they occurred concurrently; if so, contributions from these sources have been discussed as part of the other two activities) or minor relative to natural variability. Since 2011, the only major activity occurring at TPN was effluent discharge, providing a good opportunity to look for trends at SP and TPE related to general site-related activities (i.e., in the absence of the direct influence of dike construction, dewatering or mine process effluent discharge). Based on the prevailing winds, both these areas are downwind of the major on-going site-related activities (e.g., crushing, blasting, general dust, road dust).

TSS concentrations have been generally below laboratory MDLs at SP and TPE since 2011 (although the MDLs varied between 1 and 2 mg/L), suggesting no major changes attributable to other site-related activities. Subtle changes potentially related to general mining activities were apparent for nitrate (although well below its trigger value), conductivity, and sulphate. Trends that consistently exceeded trigger values will be assessed in greater detail in **Section 3.3.1.3**.

For several parameters (reactive silica, potassium, sodium, total arsenic, total barium, total strontium, dissolved arsenic, dissolved barium, dissolved copper, dissolved molybdenum, and dissolved strontium) recently reduced MDLs provided a better understanding of concentrations in the receiving environment in 2011 and 2012. However, in the absence of baseline data, it is impossible to determine the likely cause of any observed spatial patterns between control and impact areas based on a single year of data; future patterns of change (e.g., growing differences *versus* no change in the difference) will likely help interpret whether mining activities have changed these parameters.

3.3.1.3. Temporal and Spatial Trend Interpretation - 2012

Water chemistry parameters for which the 2012 means for Meadowbank study lakes exceeded their respective trigger values are presented in **Table 3.3-3**. Parameters not shown in **Table 3.3-3** were either below their respective trigger value or were one of the following cases:

- Wally Lake (WAL) was removed from these analyses. Despite its remaining as “control” in 2012, the 2012 means for a number of parameters exceeded the Meadowbank study lake trigger values, suggesting that the trigger values are not

appropriate for this lake. With the status of WAL changing to “impact” in 2013, new trigger values should be derived for WAL.

- Total phosphorous, ortho-phosphate and dissolved iron were excluded from these analyses. As discussed in **Section 3.1.1.1**, laboratory MDLs for these three parameters were inadvertently high (and higher than their respective triggers) for most of 2012. Results for all events were less than the inflated laboratory MDLs; re-analysis of the November/December 2012 samples showed results consistent with past years (see **Table 3.3-1**, **Figure 3.3-12** and **Appendix E**).
- Total and dissolved chromium and total selenium were excluded from these analyses. While all values in 2012 were less than the MDL at all Meadowbank study lake areas, the MDLs equal the trigger values for each of these parameters. These trigger values (or the MDLs) should be revisited in 2013.
- Total and dissolved strontium at TPN, SP and TE did not have any pre-impact “before” data, so could not be analyzed with the BACIP model. While strontium concentrations were higher than the trigger at each of these areas in 2012, the trigger value was derived using few data. See further discussion below regarding the trigger value.

For each parameter/area combination highlighted in **Table 3.3-3**, formal statistical testing of the observed result was conducted using the BACIP statistical model (see **Section 2.8.1** for more details). In this analysis, the model interaction term (or BACIP effect term) represents the change at the test area relative to baseline after accounting for natural temporal changes (i.e., temporal changes at the reference area); for simplicity, changes are noted “relative to baseline/reference conditions.” Results are provided in **Table 3.3-4**; key results (i.e., those parameter/area combinations where the 2012 results were statistically different) were as follows:

- *TOC – TPS* showed a 41% increase in relative to baseline/reference conditions. While the absolute TOC concentrations at TPS in 2012 were actually less than INUG, this result is driven by the fact that baseline conditions at TPS had very low TOC concentrations relative to the other areas (**Figure 3.3-16**). We recommend that the trigger value be revisited in 2013.
- *Laboratory Conductivity – SP* showed a 35% increase relative to baseline/reference conditions. Given that conductivity is a composite variable that respond positively to increasing concentrations of ionic compounds (e.g., chlorides, sulphates, carbonates, sodium, magnesium, calcium, potassium and metallic ions), this is an indicator of other changes at SP.
- *Sulphate – TPN, TPE, TPS, and TE* showed significant increases (up to 2.5 times higher) relative to baseline/reference conditions. While these changes appear to be

mine-related, the absolute concentrations were generally only 3 to 4 mg/L. While there is no current CCME guideline for sulphate, BC's present aquatic life water quality guideline is currently 100 mg/L with a draft revision pending that may increase it substantially. Also of note, sulphate concentrations in Baker Lake often naturally exceed 10 mg/L. Thus, these changes are not a concern at this time, but the trigger/threshold should be revised in 2013 to reflect the latest science.

- *TDS – SP* showed a 67% increase relative to baseline/reference conditions. Similar to conductivity, TDS is a composite variable based on the combined amount of all inorganic and organic substances contained in a sample. Weber-Scannell and Duffy (2007) reviewed TDS toxicity to aquatic life. While they recommend deriving ion-specific limits for aquatic life (i.e., rather than for TDS), none of the literature studies they compiled showed effects at TDS concentrations less than 250 mg/L and they report mean TDS in the world's rivers of approximately 120 mg/L. Also of note, TDS concentrations in Baker Lake often exceed 100 mg/L naturally, likely due to the influence of the slightly brackish deep water with high conductivity and TDS concentrations that can be pushed to surface by wind-driven seiche events. Thus, these changes (leading to TDS concentrations on the order of 20 to 30 mg/L at SP) are not a concern at this time and the trigger/threshold should be revisited in 2013 to reflect the latest science (e.g., to assess whether a TDS-specific threshold may be warranted in this case).
- *Total and dissolved strontium – TPE* (total and dissolved) and *TPS* showed significant increases (up to 54% higher) relative to baseline/reference conditions. It is important to note that the strontium trigger values were based on few data, and is thus highly uncertain. We recommend revisiting the strontium triggers in 2013; while strontium was not reported in most previous years as part of the metals analyses, the results were produced internally as part of the general metals analyses. Consequently, we will be obtaining the strontium results for most historical monitoring events and recommend revising the trigger in 2013.

Thus, the CREMP is detecting changes in some water quality parameters that appear related to mining activity. However, it is important to point out that none of the above parameters have trigger values that were set in the context of effects-based threshold values (e.g., CCME water quality guidelines). Rather, in the absence of available thresholds, the trigger values for these substances were set at the 95% percentile of baseline data. Consequently, the BACIP model results reported above only indicate that statistically significant changes have been detected. We recommend that additional work be conducted in 2013 to evaluate the development of interim threshold values to help place the magnitude of change into context.

3.3.2. Baker Lake

3.3.2.1. General Observations

Results for conventional water quality parameters, nutrients and metals for 2012 are presented in **Table 3.3-1**; they are discussed, where relevant from a spatial and temporal trend perspective, in **Section 3.3.2.2**. General observations (i.e., natural patterns across years and locations) for major parameter groups are discussed below (based on **Figures 3.3-40 through 3.3-72**; figures are limited to those parameters measured above laboratory MDLs).

A 200-L fuel spill occurred on August 9th, 2012, during fuel transfer. Some diesel fuel entered the shoreline area of Baker Lake; the spill was contained and cleaned up by AEM and the fuel supply company. Follow-up spill-related water sampling showed no exceedance of CCME drinking water criteria of any substance associated with diesel fuel.

Conventional Parameters

Baker Lake waters are typically circum-neutral (pH 6.5 to 7.5), with hardness (generally below 15 mg/L in 2011 but up to 60 mg/L on occasion), conductivity (25 to >200 µS/cm), low total suspended solids (TSS; <3 mg/L), total dissolved solids (TDS; 25 to >200 mg/L), total alkalinity (6 to 10.5 mg/L), and nutrients (nitrate-N was generally <0.05 mg/L; nitrite-N was <0.001; total phosphorous was usually <0.01 mg/L; dissolved organic carbon [DOC] and total organic carbon [TOC] were usually 2.5 to 3.5 mg/L and never >4 mg/L). Occasional increases in some parameters (i.e., conductivity, TDS, alkalinity) are possibly due to upwelling of relict brackish water during specific wind conditions.

Total and Dissolved Metals

Total and dissolved metals concentrations were consistently low in Baker Lake (**Table 3.3-1**) with only some metals consistently greater than laboratory detection limits (MDLs) and include aluminum (<0.05 mg/L), barium (<0.02 mg/L), copper (<0.001 mg/L), iron (<0.05 mg/L), manganese (<0.005 mg/L), strontium (<0.025 mg/L), and titanium (<0.001 mg/L). Dissolved metals exceeding MDLs were aluminum (<0.007 mg/L), barium (<0.019 mg/L), copper (<0.0004 mg/L), manganese (<0.002 mg/L), and strontium (<0.023 mg/L).

3.3.2.2. Temporal and Spatial Trend Interpretation - General

CREMP monitoring results since 2008 were used to assess temporal and spatial trends related to mining activities (see **Section 1.4** for description of key activities). The general



rationale for assessing these trends was discussed in **Section 1.5**; the process was tailored slightly for water chemistry, as described below.

As discussed in **Section 3.3.1.2** for Meadowbank study lakes, most water quality parameters in Baker Lake were routinely below laboratory MDLs. Thus, detection of changes to water quality related to barge activity would be relatively easy to detect, notwithstanding the confounding influence of elevated conductivity, dissolved salts and TDS depending on limnological conditions. Similar to Meadowbank, starting with the parameters listed in **Table 3.3-1**, a conservative two-step screening process was used to identify parameters for inclusion into the formal trend assessment (the results are summarized in **Table 3.3-5** with **Figure** number references for all parameters that were screened in):

1. *Overall Detection Frequency* - Only those water quality parameters that exceeded MDLs in at least 10% of the samples were included in this discussion. Because this lake is ultra-oligotrophic, it is normal for many parameters to routinely be below MDLs. In fact half (47%) of parameters measured exceeded MDLs at least 10% of the time and are included in this discussion.
2. *Control-Impact Detection Frequency Comparison* – In order to avoid screening out infrequently detected parameters that were detected more often in association with barge activities, the proportion of samples exceeding MDLs between “control” and “impact” samples were compared; the intent of this screen was to identify parameters with <5% detection frequency (i.e., those screened out above) for which there were detection frequency changes potentially associated with mining activity (i.e., where the proportion of detected values increased by 0.05 or more). Only total lead was found to have an increased detection frequency in impact samples relative to control samples.

All parameters not retained for the trend assessment were assumed to have no spatial or temporal trends related to barge activities and were excluded from further consideration (plots for these parameters are included for reference in **Appendix E**).

In addition to the trend assessment rationale discussed in **Section 1.5**, comparisons to site-specific triggers and thresholds for the protection of aquatic life (see **Table 3.3-1** for comparisons to monthly results for 2012 data) were used, where available, to provide a context for any observed trends (see **Section 3.3.2.3** for statistical modeling results).

Water samples have been collected from Baker Lake monthly during the open-water season (July, August and September) since 2008. Baker Lake was added to the core program to ensure that monitoring was also in place to track activities in that area related primarily to barge traffic and shipping (see **Figure 1.4-1**). There are two near-field impact areas, one targeting the hamlet’s barge landing area (BBD) and the other AEM’s fuel storage facility (BPJ). The initial (since 2008) reference area (BAP) is several

kilometers to the east of the hamlet along the north shore of the lake. A second reference area (BES) was added in 2011, although water quality parameters were not collected at this area; only sediment and benthos.

As discussed in **Section 3.2**, Baker Lake appears to have a number of natural complexities related to the “competing” influences of less-saline Thelon River water and slightly brackish water in deeper layers of Baker Lake. Timing of sampling relative to freshet on the Thelon River coupled with wind speed and direction has led to variable degrees of horizontal and vertical mixing of the water column, resulting in quite varied vertical profiles of conductivity and some dissolved constituents, primarily salts. This phenomenon may confound our ability to detect a potential changes in water quality related to barge activity, with the “signal” getting lost in the “noise” of natural variability in this dynamic location.

The following parameters are associated with more-brackish water and show similar fluctuations. These parameters tend to have a high level of natural variability, regardless of location in Baker Lake and include conductivity, hardness, calcium, chloride, magnesium, sodium and TDS. Other parameters also have a high level of natural variability, and appear to be correlated with the above parameters in Baker Lake and include ammonia, nitrate, TKN, total phosphorus, sulphate and TOC/DOC. The 2012 results show relatively low concentrations of these parameters across all areas and events, suggesting that the influence of the more-saline Baker Lake water was relatively low.

Despite having over ten total metals screened in, most metals concentrations were generally of a similar concentration spatially and temporally and showed no discernible trends between impact and reference areas. In 2011, total aluminum, iron, strontium, and titanium increased in concentration in August, followed by a drop in September at all areas in Baker Lake, again with no spatial pattern.

Thus, despite the increase in barge traffic seen over the past four years (**Figure 1.4-1**), there were no obvious changes to water quality that could be attributed to that activity. This is not surprising given that any effects to the water column from prop wash would be ephemeral and would clear quickly with no lingering effects to the water column. Consequently, there are no follow-up measures for management in 2013.

3.3.2.3. Temporal and Spatial Trend Interpretation - 2012

Water chemistry parameters for which the 2012 means for Baker Lake areas exceeded their respective trigger values are presented in **Table 3.3-6**. Parameters not shown in **Table 3.3-6** were either below their respective trigger value or were one of the following cases:

-
- Total phosphorous, ortho-phosphate and dissolved iron were excluded from these analyses. As discussed in **Section 3.1.1.1**, laboratory MDLs for these parameters were inadvertently high (and higher than their respective triggers) for most of 2012. Results were below the inflated laboratory MDLs for all events; re-analysis of the November/December 2012 samples showed results consistent with past years (see **Table 3.3-1**, **Figure 3.3-12** and **Appendix E**).
 - Total and dissolved chromium and total selenium were excluded from these analyses. While all values in 2012 were < MDL at all Meadowbank study lake areas, the MDLs equal the trigger values for each of these parameters. These trigger values (or the MDLs) should be revisited in 2013.

For each parameter/area combination highlighted in **Table 3.3-6**, formal statistical testing of the observed result was conducted using the BACIP statistical model (see **Section 2.8.1** for more details). In this analysis, the model interaction term (or BACIP effect term) represents the change at the test area relative to baseline after accounting for natural temporal changes (i.e., temporal changes at the reference area); for simplicity, changes are noted “relative to baseline/reference conditions.” Results are provided in **Table 3.3-7**; key results (i.e., those parameter/area combinations where the 2012 results were statistically different) were as follows:

- *TOC and DOC* – BBD showed increases in both DOC (9%) and TOC (7%) relative to baseline/reference conditions. However, similar to the Meadowbank study lake areas, there appears to be a general increase in TOC and DOC across all Baker Lake areas (**Figure 3.3-54 and 55**), possibly due to a change in analytical laboratories in 2011. We recommend that the trigger values be revisited in 2013.

It is important to point out that none of the above parameters have trigger values that were set in the context of effects-based threshold values (e.g., CCME water quality guidelines). Rather, in the absence of available thresholds, the trigger values for these substances were set at the 95% percentile of baseline data. Consequently, the BACIP model results reported above only indicate that statistically significant changes have been detected. In addition to pursuing the potential laboratory-related differences starting in 2011, we recommend that additional work be conducted in 2013 to revise the trigger values and evaluate the development of interim threshold values (where practical) to help place the magnitude of change into context.

Table 3.3-1. Conventional water chemistry and total and dissolved metals (mg/L), Meadowbank study lakes and Baker Lake, 2012.

Lake & Basin				TPE												Third Portage Lake					
Area-Replicate ID				TPE												TPN					
Depth (m)	CCME (2007)	Trigger		Threshold	TPE-46	TPE-47	TPE-48	TPE-49	TPE - 50	TPE - 51	TPE-52	TPE-53	TPE - 54	TPE - 55	TPE - 56	TPE - 57	TPN-46	TPN-47	TPN-48	TPN-49	TPN - 50
					3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Date	Guideline ¹	Meadowbank	Baker Lake		4/19/2012	4/19/2012	05/08/2012	05/08/2012	7/21/2012	7/21/2012	8/26/2012	8/26/2012	9/14/2012	9/14/2012	11/30/2012	11/30/2012	4/18/2012	4/18/2012	05/08/2012	05/08/2012	7/21/2012
CONVENTIONAL PARAMETERS																					
Physical Tests (mg/L)																					
Conductivity (µS/cm)	NG	27.4	464.9		30.0	32.0	28.0	30.0	24.0	23.0	25.0	24.0	24.0	24.0	26.0	26.0	24.0	27.0	23.0	30.0	25.0
Hardness	NG	12.26	49.49		9.41	10.00	9.38	9.83	8.43	8.05	8.34	7.82	10.00	8.82	10.10	11.40	7.14	8.54	7.10	9.66	8.12
pH	6.5 - 9.0	6.47 - 8	6.84 - 8.09	6.5 - 9	7.11	7.11	7.06	7.06	7.15	7.14	7.10	7.10	7.18	7.20	7.05	7.11	7.03	7.22	7.03	7.08	7.06
Total Suspended Solids	NG	3.0	3.0	5	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	<1.0	<1.0
Total Dissolved Solids	NG	19	246		18	18	22	26	14	16	14	16	16	16	19	17	14	16	18	24	18
Turbidity (NTU)	NG				0.14	0.14	0.17	0.15	0.46	0.34	0.57	0.47	0.51	0.51	0.35	0.30	0.16	0.16	0.15	0.13	0.23
Anions & Nutrients (mg/L)																					
Alkalinity - Bicarbonate	NG	9.42	9.46		9.43	9.59	9.43	9.59	7.87	7.95	8.11	8.03	8.36	8.36	7.70	8.28	6.97	7.62	6.80	8.52	6.97
Alkalinity - Carbonate	NG	4.0	4.0		<0.60	<0.60	<0.60	<0.60	<1.2	<1.2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
Alkalinity - Hydroxide	NG				<0.34	<0.34	<0.34	<0.34	<0.68	<0.68	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Alkalinity - Total	NG	9.42	9.46		9.40	9.60	9.40	9.60	7.90	7.90	8.10	8.00	8.40	8.40	7.70	8.30	7.00	7.60	6.80	8.50	7.00
Ammonia (as N) ²	2.61 - 8.24	0.07	0.07	0.126	0.05	0.02	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.01	0.03	0.01	0.01	<0.010
Bromide	NG				<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	NG	0.79	119.7		0.67	0.71	0.66	0.71	0.54	0.53	0.52	0.54	0.53	0.53	0.55	0.56	0.58	0.68	0.59	0.79	0.60
Fluoride	NG				0.08	0.09	0.07	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.06	0.07	0.06
Nitrate and Nitrite as N					0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	<0.0051	<0.0051	0.02	0.01	0.03	0.03	0.03	0.04	0.04
Nitrate (as N)	2.9	1.45	1.46	2.9	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	<0.0050	<0.0050	0.02	0.01	0.03	0.03	0.03	0.04	0.04
Nitrite (as N)	0.060	0.031	0.031	0.06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	NG	0.18	0.19		0.12	0.10	0.10	0.10	0.08	0.07	0.09	0.09	0.10	0.11	0.07	0.10	0.10	0.11	0.10	0.10	0.09
Ortho Phosphate (as P)	NG	0.002	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Phosphate (as P)	0.0040	0.0047	0.0061	0.004	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.010	<0.010	<0.010	<0.010	<0.010
Silicate (as SiO ₂)	NG	2.0	2.0		0.19	0.21	0.17	0.24	0.14	0.20	0.10	0.14	0.07	0.06	0.09	0.10	0.14	0.15	0.15	0.19	0.14
Sulphate (SO ₄)	NG	2.61	17.3		3.36	3.52	3.25	3.52	2.73	2.59	2.70	2.79	2.80	2.79	3.19	3.10	3.26	3.73	3.25	4.33	3.86
ORGANIC / INORGANIC CARBON (mg/L)																					
Dissolved Organic Carbon	NG	2.31	3.42		1.70	1.80	2.50	2.60	1.80	2.30	2.10	2.10	2.20	2.30	2.10	2.00	1.50	1.60	2.10	2.50	1.80
Total Organic Carbon	NG	2.51	3.17		1.70	1.80	2.60	2.60	1.80	2.50	2.30	2.20	2.40	2.20	3.20	2.20	1.50	1.60	2.40	2.50	2.10
PLANT PIGMENTS (µg/L)																					
Chlorophyll-a	NG				0.20	0.18	<0.10	0.31	0.59	0.32	0.37	0.30	0.37	0.74	<0.10	<0.10	0.29	0.35	0.24	0.24	0.38
Phaeophytin-a	NG				0.14	<0.10	<0.10	0.14	0.17	0.14	0.13	<0.10	0.14	0.27	0.78	0.77	0.16	0.14	0.13	0.13	0.15
TOTAL METALS (mg/L)																					
Aluminum ³	0.100 - 0.100	0.053	0.053	0.1	0.0054	0.0051	0.0060	<0.0050	0.0115	0.0096	0.0125	0.0134	0.0056	0.0054	0.0087	0.0105	<0.0050	0.0062	<0.0050	<0.0050	0.0075
Antimony	NG	0.001	0.001		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic	0.0050	0.0028	0.0028	0.005	0.0007	0.0005	0.0007	0.0005	0.0005	0.0004	0.0007	0.0006	0.0006	0.0006	0.0004	0.0006	<0.00020	0.0002	0.0005	0.0004	<0.00020
Barium	NG	0.04	0.04		0.0035	0.0035	0.0037	0.0039	0.0029	0.0027	0.0027	0.0028	0.0026	0.0025	0.0030	0.0033	0.0027	0.0034	0.0031	0.0040	0.0030
Beryllium	NG	0.002	0.002		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron ⁴	NG	0.65	0.65	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium ⁵	2.5E-06 - 9.0E-06	0.0000585	0.0000585	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Calcium	NG	3.346	5.2455		2.61	2.46	2.61	2.61	2.05	1.98	2.11	2.09	3.31	2.32	2.48	2.77	1.80	2.26	1.82	2.34	1.93
Cesium	NG				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium ⁴	0.0010	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper ⁵	0.002 - 0.002	0.0015	0.0015	0.002	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0007	0.0010	0.0006	0.0005	<0.00020	<0.00020	0.0004	0.0036	0.0005	0.0007	0.0006
Iron	0.3	0.165	0.165	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.01	<0.10	<0.10	<0.10	<0.10	<0.10
Lead ⁵	0.001 - 0.001	0.00075	0.00075	0.001	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	0.00012	<0.000090	<0.000090	<0.000090	<0.000090	0.00012	<0.000090	0.00040	<0.000090	<0.000090	<0.000090
Lithium	NG	0.001	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002		

Table 3.3-1. Conventional water chemistry and total and dissolved metals (mg/L), Meadowbank study lakes and Baker Lake, 2012.

Lake & Basin				TPN								TPS								Second Portage Lake			
Area-Replicate ID	CCME (2007)	Trigger	Threshold	TPN- 51	TPN-52	TPN-53	TPN-54	TPN-55	TPN-56	TPN-57	TPS-33	TPS-34	TPS-35	TPS-36	TPS-37	TPS-38	SP-46	SP-47	SP-48	SP-49			
Depth (m)				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3			
Date	Guideline ¹	Meadowbank	Baker Lake	7/21/2012	8/26/2012	8/26/2012	9/18/2012	9/18/2012	11/30/2012	11/30/2012	7/25/2012	7/25/2012	8/27/2012	8/27/2012	9/18/2012	9/18/2012	4/19/2012	4/19/2012	05/10/2012	05/10/2012			
CONVENTIONAL PARAMETERS																							
Physical Tests (mg/L)																							
Conductivity (µS/cm)	NG	27.4	464.9	25.0	25.0	25.0	25.0	25.0	27.0	28.0	24.0	24.0	24.0	24.0	24.0	24.0	33.0	33.0	34.0	32.0			
Hardness	NG	12.26	49.49	7.97	7.90	7.70	8.11	8.32	9.76	9.00	7.16	7.14	7.44	7.60	8.11	7.92	11.50	11.60	12.70	11.90			
pH	6.5 - 9.0	6.47- 8	6.84- 8.09	6.5 - 9	7.19	7.01	7.03	7.01	7.00	7.01	6.99	7.16	7.11	7.03	6.98	6.99	7.17	7.18	7.24	7.13			
Total Suspended Solids	NG	3.0	3.0	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	1.30	<1.0			
Total Dissolved Solids	NG	19	246		<5.0	15	14	16	15	20	20	18	18	13	13	18	20	20	28	26			
Turbidity (NTU)	NG				0.21	0.35	0.38	0.30	0.38	0.20	0.20	0.22	0.22	0.29	0.27	0.21	0.34	0.19	2.16	0.26			
Anions & Nutrients (mg/L)																							
Alkalinity - Bicarbonate	NG	9.42	9.46		6.97	6.89	6.89	7.05	6.97	7.54	7.46	6.80	6.89	6.80	6.89	6.89	11.07	11.39	12.79	11.23			
Alkalinity - Carbonate	NG	4.0	4.0		<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<1.2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60			
Alkalinity - Hydroxide	NG				<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.68	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34			
Alkalinity - Total	NG	9.42	9.46		6.90	6.90	6.90	7.00	7.00	7.50	7.50	6.80	6.90	6.80	6.80	6.90	11.10	11.40	12.70	11.20			
Ammonia (as N) ²	2.61 - 8.24	0.07	0.07	0.126	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.07	<0.010			
Bromide	NG				<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10			
Chloride	NG	0.79	119.7		0.59	0.57	0.59	0.61	0.61	0.64	0.63	0.58	0.60	0.57	0.56	0.59	0.69	0.65	0.68	0.65			
Fluoride	NG				0.06	0.05	0.05	0.05	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.08	0.07	0.05	0.07			
Nitrate and Nitrite as N					0.04	0.05	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.09	0.02			
Nitrate (as N)	2.9	1.45	1.46	2.9	0.04	0.05	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.09	0.02			
Nitrite (as N)	0.060	0.031	0.031	0.06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00	<0.0010			
Total Kjeldahl Nitrogen	NG	0.18	0.19		0.09	0.10	0.09	0.10	0.10	0.11	0.10	0.11	0.11	0.09	0.10	0.09	0.09	0.09	0.09	0.21			
Ortho Phosphate (as P)	NG	0.002	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	<0.001	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010			
Total Phosphate (as P)	0.0040	0.0047	0.0061	0.004	<0.010	<0.010	<0.010	<0.010	<0.010	0.003	<0.0020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010			
Silicate (as SiO ₂)	NG	2.0	2.0		0.14	0.15	0.14	0.06	0.07	0.10	0.11	0.18	0.18	0.16	0.16	0.11	0.12	0.37	0.50	0.31			
Sulphate (SO ₄)	NG	2.61	17.3		3.66	3.67	3.67	3.75	3.74	4.02	3.94	3.25	3.21	3.49	3.42	3.58	3.49	3.33	2.54	3.32			
ORGANIC / INORGANIC CARBON (mg/L)																							
Dissolved Organic Carbon	NG	2.31	3.42		2.20	2.10	2.00	2.50	2.40	2.40	1.90	2.40	2.30	2.10	2.00	2.30	2.20	1.80	1.90	3.00	2.90		
Total Organic Carbon	NG	2.51	3.17		2.10	2.40	2.20	2.60	2.90	2.40	2.00	2.40	2.50	2.10	4.80	2.70	2.20	1.80	1.90	2.90	3.10		
PLANT PIGMENTS (µg/L)																							
Chlorophyll-a	NG				0.60	0.46	0.42	0.37	0.55	0.63	0.22	0.37	0.47	0.27	0.49	0.45	0.38	0.24	0.49	<0.10	0.13		
Phaeophytin-a	NG				0.20	0.14	0.13	0.15	0.33	0.29	0.22	0.17	0.23	<0.10	0.16	0.22	0.20	0.11	0.19	<0.10	0.12		
TOTAL METALS (mg/L)																							
Aluminum ³	0.100 - 0.100	0.053	0.053	0.1	0.0076	0.0070	0.0077	0.0073	0.0075	0.0068	0.0073	0.0080	0.0086	0.0076	0.0074	0.0071	<0.0050	<0.0050	0.0956	<0.0050			
Antimony	NG	0.001	0.001		<0.00020	<0.00020	<0.00020	0.00	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			
Arsenic	0.0050	0.0028	0.0028	0.005	<0.00020	<0.00020	0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0002	0.0002	<0.00020	<0.00020	0.0003	0.0003	0.0005	0.0003			
Barium	NG	0.04	0.04		0.0030	0.0031	0.0029	0.0030	0.0033	0.0032	0.0030	0.0030	0.0030	0.0029	0.0030	0.0030	0.0026	0.0027	0.0027	0.0031			
Beryllium	NG	0.002	0.002		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			
Bismuth	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			
Boron ⁴	NG	0.65	0.65	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010			
Cadmium ⁵⁺	2.5E-06 - 9.0E-06	0.0000585	0.0000585	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010			
Calcium	NG	3.346	5.2455		1.89	1.92	1.99	2.09	2.13	2.33	2.19	1.78	1.88	1.85	1.84	1.98	2.07	2.78	2.93	3.83	3.19		
Cesium	NG				<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010			
Chromium ⁶	0.0010	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010			
Cobalt	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			
Copper ⁵	0.002 - 0.002	0.0015	0.0015	0.002	0.0006	0.0004	0.0006	0.0006	0.0005	<0.00020	<0.00020	0.0005	0.0006	0.0007	0.0006	0.0005	0.0006	0.0014	0.0006	0.0007			
Iron	0.3	0.165	0.165	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.01	<0.01	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10			
Lead ⁶	0.001 - 0.001	0.00075	0.00075	0.001	<0.00090	<0.00090	<0.00090	0.07440	<0.00090	0.00009	<0.00090	<0.00090	<0.00090	<0.00090	<0.00090	<0.00090	<0.00090	<0.00090	0.00009	<0.00090			
Lithium	NG	0.01	0.01		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020			
Magnesium	NG	0.9555	8.8985		0.79	0.76	0.77	0.83	0.79	0.96	0.86	0.74	0.81	0.74	0.79	0.78	0.96	1.00	0.83	1.05			
Manganese ⁵⁺	NG	0.32	0.32	0.627 - 0.701	0.0068	0.0054	0.0051	0.0042	0.0042	0.0029	0.0025	0.0053	0.0052	0.0043	0.0041	0.0039	0.0040	0.0008	0.0008	0.0097	0.0009		
Mercury	0.000026	0.000018	0.000018	0.000026	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010			
Molybdenum	0.073	0.037	0.037	0.073	<0.00020	<0.00020	0.0002	0.0002	0.0002	0.0002	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.0002	<0.00020	<0.00020	0.0004	<0.00020			
Nickel ⁷	0.025 - 0.025	0.013	0.013	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020			
Phosphorus	NG				<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10			
Potassium	NG	4.0	4.0		0.45	0.44	0.44	0.49	0.49	0.53	0.51	0.44	0.46	0.43	0.45	0.49	0.48	0.49	0.53	0.53			
Rubidium	NG				0.0006	0.0006	0.0006	0.0006	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0006	0.0007	0.0008	0.0007			
Selenium	0.0010	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010			
Silicon	NG				0.15	0.10	0.13	0.09	0.09	0.15	0.16	0.15	0.15	0.12	0.14	0.09	0.10	0.31	0.32	0.31			
Silver	0.0001				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	&										

Notes:

¹CCME (Canadian Council of Ministers of the Environment) Canadian Water Quality Guidelines for the Protection of Aquatic Life, 1999, updated December 2007.

²Ammonia CCME guideline is for 10°C and is pH dependent.

³Aluminum CCME guideline and threshold are pH dependent.

⁴Chromium CCME guideline is for Cr VI.

⁵Cadmium, copper, lead, manganese, nickel, and zinc guidelines (or thresholds) are hardness dependent.

*t-boron, t-cadmium, t-manganese, t-zinc, and d-aluminum thresholds were derived from methods other than CCME guidelines. See xxx for details.

133 Shaded concentrations exceed the trigger value

123	Shaded concentrations exceed the trigger value.
123	Boxed concentrations also exceed the threshold value.

Table 3.3-1. Conventional water chemistry and total and dissolved metals (mg/L), Meadowbank study lakes and Baker Lake, 2012.

Lake & Basin					Second Portage								Tehek Lake							
Area-Replicate ID	CCME (2007)	Trigger		Threshold	SP - 50	SP - 51	SP-52	SP-53	SP-54	SP-55	SP-56	SP-57	TE-46	TE-47	TE-48	TE-49	TE-50	TE-51	TE-52	TE-53
Depth (m)					3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Date	Guideline ¹	Meadowbank	Baker Lake		7/20/2012	7/20/2012	8/20/2012	8/20/2012	9/18/2012	9/18/2012	11/29/2012	11/29/2012	4/19/2012	4/19/2012	05/11/2012	05/11/2012	7/28/2012	7/28/2012	8/18/2012	8/18/2012
CONVENTIONAL PARAMETERS																				
Physical Tests (mg/L)																				
Conductivity (µS/cm)	NG	27.4	464.9		28.0	29.0	28.0	28.0	29.0	28.0	24.0	28.0	39.0	30.0	34.0	28.0	22.0	21.0	22.0	25.0
Hardness	NG	12.26	49.49		11.40	11.50	10.30	10.60	11.50	11.00	20.80	9.23	13.70	9.83	12.50	8.91	7.32	7.39	8.03	8.44
pH	6.5 - 9.0	6.47 - 8	6.84 - 8.09	6.5 - 9	7.28	7.27	7.26	7.24	7.22	7.21	7.14	7.17	7.21	7.14	7.14	7.01	7.18	7.17	7.16	7.10
Total Suspended Solids	NG	3.0	3.0	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Dissolved Solids	NG	19	246		16	18	15	15	22	21	15	17	24	16	28	22	16	14	12	14
Turbidity (NTU)	NG				0.56	0.54	0.42	0.40	0.37	0.21	0.21	0.22	0.19	0.20	0.22	0.17	0.36	0.34	0.44	0.62
Anions & Nutrients (mg/L)																				
Alkalinity - Bicarbonate	NG	9.42	9.46		10.33	10.49	10.41	10.49	10.66	10.57	8.20	9.92	13.20	9.67	11.56	9.10	7.87	7.79	7.79	8.20
Alkalinity - Carbonate	NG	4.0	4.0		<1.2	<1.2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<1.2	<1.2	<1.2	<1.2
Alkalinity - Hydroxide	NG				<0.68	<0.68	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.68	<0.68	<0.68	<0.68
Alkalinity - Total	NG	9.42	9.46		10.40	10.50	10.40	10.50	10.70	10.60	8.20	9.90	13.20	9.70	11.50	9.10	7.90	7.80	7.80	8.20
Ammonia (as N) ²	2.61 - 8.24	0.07	0.07	0.126	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	<0.010	0.02	<0.010	<0.010
Bromide	NG				<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	NG	0.79	119.7		0.54	0.53	0.57	0.56	0.55	0.55	0.37	0.52	0.84	0.83	0.75	0.84	0.49	0.49	0.53	0.54
Fluoride	NG				0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.06	0.09	0.08	0.08	0.07	0.06	0.05	0.06	0.06
Nitrate and Nitrite as N					<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	0.03	0.01	0.04	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
Nitrate (as N)	2.9	1.45	1.46	2.9	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.03	0.01	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (as N)	0.060	0.031	0.031	0.06	<0.0010	<0.0010	0.00	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	NG	0.18	0.19		0.10	0.09	0.09	0.09	0.11	0.13	0.11	0.09	0.10	0.11	0.11	0.12	0.09	0.09	0.09	0.09
Ortho Phosphate (as P)	NG	0.002	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.001	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Phosphate (as P)	0.0040	0.0047	0.0061	0.004	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.003	<0.0020	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010
Silicate (as SiO ₂)	NG	2.0	2.0		0.49	0.42	0.44	0.44	0.40	0.44	0.33	0.35	0.51	0.50	0.43	0.37	0.36	0.29	0.28	0.27
Sulphate (SO ₄)	NG	2.61	17.3		2.72	2.72	3.02	2.99	2.83	2.78	2.14	2.88	4.08	3.16	3.73	3.10	1.99	1.97	2.16	2.26
ORGANIC / INORGANIC CARBON (mg/L)																				
Dissolved Organic Carbon	NG	2.31	3.42		2.50	2.70	2.00	2.00	2.50	2.50	2.80	2.70	2.10	2.00	2.80	2.90	2.00	2.00	1.90	1.90
Total Organic Carbon	NG	2.51	3.17		2.90	2.90	2.30	2.00	2.60	2.60	2.90	3.90	2.20	1.90	3.00	3.30	2.10	2.10	1.80	1.90
PLANT PIGMENTS (µg/L)																				
Chlorophyll-a	NG				0.45	0.41	0.38	0.27	0.33	0.28	<0.10	<0.10	0.79	0.48	0.16	0.69	0.35	0.33	0.28	0.35
Phaeophytin-a	NG				0.19	0.16	0.14	0.14	0.14	0.14	0.66	0.62	0.26	0.17	0.13	0.30	<0.10	<0.10	<0.10	0.11
TOTAL METALS (mg/L)																				
Aluminum ³	0.100 - 0.100	0.053	0.053	0.1	0.0163	0.0167	0.0088	0.0090	0.0100	0.0101	0.0066	0.0054	<0.0050	0.0057	0.0073	<0.0050	0.0111	0.0107	0.0104	0.0195
Antimony	NG	0.001	0.001		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic	0.0050	0.0028	0.0028	0.005	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	<0.00020	0.0004	<0.00020	0.0004	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Barium	NG	0.04	0.04		0.0026	0.0026	0.0024	0.0024	0.0025	0.0025	0.0035	0.0017	0.0037	0.0032	0.0039	0.0037	0.0024	0.0022	0.0021	0.0022
Beryllium	NG	0.002	0.002		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron ⁴	NG	0.65	0.65	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium ⁵	2.5E-06 - 9.0E-06	0.0000585	0.0000585	0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00	<0.000010	<0.000010	<0.000010	<0.000010
Calcium	NG	3.346	5.2455		2.95	2.96	2.55	2.59	3.18	3.13	5.43	2.38	3.62	2.41	3.43	2.48	2.01	1.97	1.83	2.05
Cesium	NG				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium ⁴	0.0010	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper ⁵	0.002 - 0.002	0.0015	0.0015	0.002	0.0009	0.0009	0.0008	0.0007	0.0007	0.0008	0.0005	<0.00020	0.0007	0.0005	0.0011	0.0005	0.0006	0.0006	0.0004	0.0005
Iron	0.3	0.165	0.165	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.01	<0.01	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lead ⁵	0.001 - 0.001	0.00075	0.00075	0.001	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Lithium	NG	0.01	0.01		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Magnesium	NG	0.9555	8.8985		0.99	1.00	0.74	0.74	1.02	1.04	1.77	0.80	1.3.							

Table 3.3-1. Conventional water chemistry and total and dissolved metals (mg/L), Meadowbank study lakes and Baker Lake, 2012.

[illegible]

Notes:

¹CCME (Canadian Council of Ministers of the Environment) Canadian Water Quality Guidelines for the Protection of Aquatic Life, 1999, updated December 2007.

²Ammonia CCME guideline is for 10°C and is pH dependent.

³Aluminum CCME guideline and threshold are pH dependent.

⁴Chromium CCME guideline is for Cr VI.

⁵Cadmium, copper, lead manganese, nickel, and zinc guidelines (or thresholds) are hardness dependent.

*t-boron, t-cadmium, t-manganese, t-zinc, and d-aluminum thre

123 Shaded concentrations exceed the trigger value.

Table 3.3-1. Conventional water chemistry and total and dissolved metals (mg/L), Meadowbank study lakes and Baker Lake, 2012.

Lake & Basin					Inuggugayualik Lake						Wally Lake						Pipedream Lake			
Area-Replicate ID	CCME (2007)	Trigger		Threshold	INUG-40	INUG-41	INUG - 42	INUG - 43	INUG - 44	INUG - 45	WAL-21	WAL-22	WAL-23	WAL-24	WAL - 25	WAL - 26	PDL-23	PDL-24	PDL-25	PDL-26
Depth (m)					3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Date	Guideline ¹	Meadowbank	Baker Lake		8/21/2012	8/21/2012	9/16/2012	9/16/2012	12/03/2012	12/03/2012	7/29/2012	7/29/2012	8/17/2012	8/17/2012	09/12/2012	09/12/2012	8/22/2012	8/22/2012	9/18/2012	9/18/2012
CONVENTIONAL PARAMETERS																				
Physical Tests (mg/L)																				
Conductivity (µS/cm)	NG	27.4	464.9		10.5	10.6	10.6	10.5	11.0	11.9	30.0	30.0	31.0	31.0	32.0	33.0	22.0	22.0	22.0	21.0
Hardness	NG	12.26	49.49		5.10	4.97	5.39	5.39	9.04	6.42	11.60	11.90	12.70	13.20	13.60	14.70	7.49	7.95	8.74	8.67
pH	6.5 - 9.0	6.47 - 8	6.84 - 8.09	6.5 - 9	6.95	6.96	7.05	7.03	6.96	6.95	7.42	7.42	7.34	7.32	7.35	7.37	7.16	7.15	7.15	7.13
Total Suspended Solids	NG	3.0	3.0	5	<1.0	<1.0	<1.0	1.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Dissolved Solids	NG	19	246		<5.0	<5.0	13	15	10	6	13	22	17	19	18	24	12	12	17	16
Turbidity (NTU)	NG				0.38	0.37	0.46	0.48	0.21	0.20	0.37	0.45	0.27	0.28	0.47	0.43	0.32	0.27	0.26	0.24
Anions & Nutrients (mg/L)																				
Alkalinity - Bicarbonate	NG	9.42	9.46		6.31	6.31	6.48	6.31	5.98	6.31	11.97	12.21	12.62	12.46	12.95	13.28	8.77	8.77	8.85	8.77
Alkalinity - Carbonate	NG	4.0	4.0		<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<1.2	<1.2	<1.2	<1.2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
Alkalinity - Hydroxide	NG				<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.68	<0.68	<0.68	<0.68	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Alkalinity - Total	NG	9.42	9.46		6.30	6.30	6.50	6.30	6.00	6.30	11.90	12.20	12.60	12.40	13.00	13.30	8.80	8.70	8.90	8.80
Ammonia (as N) ²	2.61 - 8.24	0.07	0.07	0.126	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bromide	NG				<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	NG	0.79	119.7		0.66	0.68	0.61	0.61	0.58	0.63	0.48	0.46	0.49	0.52	0.49	0.46	0.58	0.57	0.56	0.56
Fluoride	NG				0.06	0.06	0.05	0.05	0.05	0.06	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
Nitrate and Nitrite as N					<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
Nitrate (as N)	2.9	1.45	1.46	2.9	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (as N)	0.060	0.031	0.031	0.06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00	<0.0010	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	NG	0.18	0.19		0.09	0.08	0.10	0.10	0.15	0.12	0.12	0.11	0.10	0.11	0.11	0.11	0.07	0.07	0.09	0.09
Ortho Phosphate (as P)	NG	0.002	0.002		<0.010	<0.010	<0.010	<0.010	<0.001	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Phosphate (as P)	0.0040	0.0047	0.0061	0.004	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silicate (as SiO ₂)	NG	2.0	2.0		0.30	0.19	0.29	0.17	0.17	0.24	0.78	0.74	0.74	0.78	0.47	0.32	0.20	0.20	0.28	0.25
Sulphate (SO ₄)	NG	2.61	17.3		0.86	0.86	0.75	0.75	0.76	0.82	2.17	2.20	2.53	2.48	2.51	2.52	1.58	1.57	1.45	1.44
ORGANIC / INORGANIC CARBON (mg/L)																				
Dissolved Organic Carbon	NG	2.31	3.42		2.20	2.20	2.60	2.50	2.90	2.70	2.60	2.50	2.20	2.40	3.20	3.70	1.90	1.80	2.50	2.40
Total Organic Carbon	NG	2.51	3.17		2.10	2.20	2.80	2.70	2.90	2.90	2.80	2.40	2.40	2.50	3.90	4.50	2.20	1.80	2.50	2.50
PLANT PIGMENTS (µg/L)																				
Chlorophyll-a	NG				0.38	0.46	0.48	0.46	0.45	0.44	0.42	0.45	0.51	0.57	0.11	0.10	0.29	0.51	0.22	0.43
Phaeophytin-a	NG				0.18	0.16	0.18	0.18	0.23	0.30	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	<0.10	0.14
TOTAL METALS (mg/L)																				
Aluminum ³	0.100 - 0.100	0.053	0.053	0.1	0.0083	0.0081	0.0057	0.0059	0.0087	0.0068	0.0108	0.0063	0.0060	0.0069	0.0303	<0.0050	<0.0050	<0.0050	0.0058	0.0059
Antimony	NG	0.001	0.001		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic	0.0050	0.0028	0.0028	0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0002	0.0002	0.0003	0.0002	0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Barium	NG	0.04	0.04		0.0021	0.0020	0.0017	0.0018	0.0027	0.0019	0.0018	0.0018	0.0017	0.0021	0.0021	0.0020	0.0015	0.0022	0.0020	0.0022
Beryllium	NG	0.002	0.002		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron [*]	NG	0.65	0.65	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium ^{5*}	2.5E-06 - 9.0E-06	0.0000585	0.0000585	0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium	NG	3.346	5.2455		0.90	0.90	1.25	1.25	1.84	1.35	3.39	3.47	3.42	3.36	4.35	4.57	1.86	1.79	2.29	2.28
Cesium	NG				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium ⁴	0.0010	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper ⁵	0.002 - 0.002	0.0015	0.0015	0.002	0.0004	0.0006	0.0005	0.0005	<0.00020	<0.00020	0.0011	0.0010	0.0009	0.0011	0.0018	0.0015	0.0005	0.0005	0.0006	0.0006
Iron	0.3	0.165	0.165	0.3	<0.10	<0.10	<0.10	<0.10	<0.01	<0.01	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lead ⁵	0.001 - 0.001	0.00075	0.00075	0.001	<0.000090	<0.000090	<0.000090	<0.000090	0.00010	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	0.00013	0.00020	<0.000090	<0.000090	<0.000090	<0.000090
Lithium	NG	0.01	0.01		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Magnesium	NG	0.9555	8.8985		0.61	0.49	0.82	0.71	1.08	0.74	1.01	1.01	1.00	0.99	1.16	1.22	0.55	0.71	0.81	0.77
Manganese [*]	NG	0.32	0.32	0.627 - 0.701	0.0028	0.0028	0.0012	0.0008	0.0017	0.0012	0.0016	0.0012	0.0012	0.0015	0.0014	0.0015	0.0012	0.0011	0.0013	0.0014
Mercury	0.000026	0.000018	0.000018	0.000026	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum	NG	0.037	0.037	0.073	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0002	<0.0020	<0.0020	<0.0020	<0.0020

Table 3.3-1. Conventional water chemistry and total and dissolved metals (mg/L), Meadowbank study lakes and Baker Lake, 2012.

Lake & Basin				Baker Lake																		
				Barge Dock						Proposed Jetty						Akilahaarjuk Point						
Area-Replicate ID	CCME (2007)	Trigger		Threshold	BBD-21	BBD-22	BBD-23	BBD-24	BBD-25	BBD-26	BPJ-21	BPJ-22	BPJ-23	BPJ-24	BPJ-25	BPJ-26	BAP-21	BAP-22	BAP-23	BAP-24	BAP-25	BAP-26
Depth (m)					3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Date	Guideline ⁵	Meadowbank	Baker Lake		7/27/2012	7/27/2012	8/25/2012	8/25/2012	9/18/2012	9/18/2012	7/27/2012	7/27/2012	8/25/2012	8/25/2012	9/18/2012	9/18/2012	7/27/2012	7/27/2012	8/24/2012	8/24/2012	9/18/2012	9/18/2012
CONVENTIONAL PARAMETERS																						
Physical Tests (mg/L)																						
Conductivity (µS/cm)	NG	27.4	464.9	6.5 - 9	27.0	31.0	28.0	28.0	31.0	33.0	34.0	33.0	32.0	29.0	51.0	45.0	154.0	156.0	120.0	116.0	51.0	63.0
Hardness	NG	12.26	49.49		10.70	10.80	11.20	10.30	10.90	11.00	11.10	11.70	11.00	10.80	11.90	11.90	21.20	21.90	17.90	18.90	12.00	13.70
pH	6.5 - 9.0	6.47 - 8	6.84 - 8.09		7.19	7.19	7.10	7.11	7.18	7.15	7.13	7.18	7.09	7.12	7.14	7.19	7.27	7.24	7.06	7.12	7.16	7.13
Total Suspended Solids	NG	3.0	3.0		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Dissolved Solids	NG	19	246		16	22	16	17	24	26	24	24	21	16	34	32	82	90	67	64	33	44
Turbidity (NTU)	NG			0.31	0.25	0.42	0.41	0.22	0.17	0.35	0.36	0.37	0.41	0.32	0.32	0.30	0.27	0.34	0.32	0.38	0.41	
Anions & Nutrients (mg/L)																						
Alkalinity - Bicarbonate	NG	9.42	9.46	0.126	10.57	10.49	10.49	10.49	10.25	10.41	10.57	10.57	10.57	10.49	10.49	10.41	10.49	10.57	10.66	10.74	10.41	10.57
Alkalinity - Carbonate	NG	4.0	4.0		<1.2	<1.2	<0.60	<0.60	<0.60	<0.60	<1.2	<1.2	<0.60	<0.60	<0.60	<0.60	<1.2	<1.2	<0.60	<0.60	<0.60	<0.60
Alkalinity - Hydroxide	NG				<0.68	<0.68	<0.34	<0.34	<0.34	<0.34	<0.68	<0.68	<0.34	<0.34	<0.34	<0.34	<0.68	<0.68	<0.34	<0.34	<0.34	<0.34
Alkalinity - Total	NG	9.42	9.46		10.60	10.50	10.50	10.50	10.30	10.40	10.60	10.60	10.60	10.50	10.50	10.40	10.50	10.60	10.60	10.70	10.40	10.60
Ammonia (as N) ⁷	2.61 - 8.24	0.07	0.07		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bromide	NG			<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	0.10	<0.10	<0.10	<0.10	<0.10
Chloride	NG	0.79	119.7	1.41	2.43	1.44	1.49	2.79	3.25	3.25	3.05	2.70	1.84	8.05	6.24	35.10	34.80	25.40	24.40	8.07	11.30	
Fluoride	NG			0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.04	
Nitrate and Nitrite as N				0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.03	0.03	0.02	0.01	0.01	0.01
Nitrate (as N)	2.9	1.45	1.46	2.9	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.03	0.03	0.02	0.01	0.01	0.01
Nitrite (as N)	0.060	0.031	0.031	0.06	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	NG	0.18	0.19		0.20	0.18	0.16	0.15	0.17	0.15	0.18	0.20	0.15	0.16	0.15	0.16	0.17	0.17	0.14	0.14	0.16	0.16
Ortho Phosphate (as P)	NG	0.002	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Phosphate (as P)	0.0040	0.0047	0.0061	0.004	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010
Silicate (as SiO ₂)	NG	2.0	2.0		0.51	0.50	0.41	0.37	0.16	0.14	0.51	0.48	0.30	0.31	0.32	0.31	0.38	0.46	0.31	0.32	0.31	0.33
Sulphate (SO ₄)	NG	2.61	17.3		0.61	0.75	0.62	0.61	0.72	0.78	0.86	0.84	0.76	0.65	1.45	1.18	5.48	5.33	3.98	3.84	1.44	1.89
ORGANIC / INORGANIC CARBON (mg/L)																						
Dissolved Organic Carbon	NG	2.31	3.42		3.90	5.00	4.10	4.20	4.40	4.40	4.40	3.80	4.50	4.20	3.90	3.80	4.30	3.70	3.90	3.90	3.50	4.20
Total Organic Carbon	NG	2.51	3.17		3.90	5.20	4.10	4.30	4.60	4.70	4.60	4.40	3.80	3.80	4.40	3.80	4.40	3.70	4.00	4.00	4.40	4.10
PLANT PIGMENTS (µg/L)																						
Chlorophyll-a	NG				1.35	1.33	0.99	1.17	0.62	-	1.48	1.34	0.67	0.76	0.73	0.85	0.75	0.82	0.61	0.57	0.69	1.02
Phaeophytin-a	NG				0.28	0.25	0.63	0.42	0.39	-	0.32	0.25	0.34	0.42	0.55	0.47	0.16	0.16	0.32	0.21	0.37	0.51
TOTAL METALS (mg/L)																						
Aluminum ³	0.100 - 0.100	0.053	0.053	0.1	0.0155	0.0154	0.0120	0.0106	0.0113	0.0114	0.0180	0.0149	0.0111	0.0117	0.0135	0.0105	0.0161	0.0161	0.0142	0.0159	0.0101	0.0102
Antimony	NG	0.001	0.001		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic	0.0050	0.0028	0.0028	0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Barium	NG	0.04	0.04		0.0193	0.0193	0.0216	0.0203	0.0190	0.0188	0.0193	0.0185	0.0202	0.0210	0.0190	0.0200	0.0178	0.0181	0.0197	0.0202	0.0191	0.0193
Beryllium	NG	0.002	0.002		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron ⁴	NG	0.65	0.65	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.01	<0.010	<0.010	<0.010	<0.010
Cadmium ^{5*}	2.5E-06 - 9.0E-06	0.0000585	0.0000585	0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium	NG	3.346	5.2455		2.55	2.55	2.58	2.34	2.60	2.54	2.67	2.52	2.48	2.45	2.72	2.72	3.34	3.39	3.02	3.03	2.71	2.84
Cesium	NG				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium ⁴	0.0010	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	NG				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper ⁵	0.002 - 0.002	0.0015	0.0015	0.002	0.0005	0.0004	0.0003	0.0003	0.0005	0.0007	0.0005	0.0005	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0004	0.0005	0.0005	0.0005
Iron	0.3	0.165	0.165	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10</											

Table 3.3-2. Screening process for water quality parameters, Meadowbank study lakes.

CONVENTIONALS				TOTAL METALS				DISSOLVED METALS			
Screening Level	1	2	3	Screening Level	1	2	3	Screening Level	1	2	3
Screening Rule ¹	>DL ≥ 10% frequency	C-I > 0.1 frequency	Pattern = Activity	Screening Rule ¹	>DL ≥ 10% frequency	C-I > 0.1 frequency	Pattern = Activity	Screening Rule ¹	>DL ≥ 10% frequency	C-I > 0.1 frequency	Pattern = Activity
Conductivity	Figure 3.3-1			Aluminum	Figure 3.3-17			Aluminum	Figure 3.3-33		
Hardness	Figure 3.3-2			Antimony			*	Antimony			*
pH	Figure 3.3-3			Arsenic	Figure 3.3-18			Arsenic	Figure 3.3-34		
TSS	Figure 3.3-4			Barium	Figure 3.3-19			Barium	Figure 3.3-35		
TDS	Figure 3.3-5			Beryllium			*	Beryllium			*
B-Alkalinity	Figure 3.3-6			Boron			*	Boron			*
C-Alkalinity			*	Cadmium			*	Cadmium			*
T-Alkalinity	Figure 3.3-7			Calcium	Figure 3.3-20			Chromium			*
Ammonia-N	Figure 3.3-8			Chromium			Figure 3.3-21	Copper	Figure 3.3-36		
Chloride	Figure 3.3-9			Copper	Figure 3.3-22			Iron			*
Nitrate-N	Figure 3.3-10			Iron	Figure 3.3-23			Lead			*
Nitrite-N			*	Lead			*	Lithium			*
TKN	Figure 3.3-11			Lithium			*	Manganese	Figure 3.3-37		
T-phosphorous	Figure 3.3-12			Magnesium	Figure 3.3-24			Mercury			*
Ortho-phosphate			*	Manganese	Figure 3.3-25			Molybdenum	Figure 3.3-38		
Reactive silica	Figure 3.3-13			Mercury			*	Nickel			*
Sulphate	Figure 3.3-14			Molybdenum		Figure 3.3-26		Selenium			*
DOC	Figure 3.3-15			Nickel			Figure 3.3-27	Strontium	Figure 3.3-39		
TOC	Figure 3.3-16			Potassium	Figure 3.3-28			Thallium			*
				Selenium			*	Tin			*
				Sodium	Figure 3.3-29			Titanium			*
				Strontium	Figure 3.3-30			Uranium			*
				Thallium			*	Vanadium			*
				Tin			*	Zinc			*
				Titanium	Figure 3.3-31						
				Uranium			Figure 3.3-32				
				Vanadium			*				
				Zinc			*				

Notes: ¹ See text for further detail; * Plots for these parameters are presented in **Appendix E**.



Table 3.3-3. Water chemistry mean 2012 results exceeding the trigger value for Meadowbank stations.

		Meadowbank Study Lakes							
Parameter Measured	Trigger	REF	REF	NF	NF	NF	MF	MF	FF
		INUG	PDL	TPN	SP	TPE	TPS	TE	TEFF
TOC	2.5	3.0	-	-	2.7	-	2.8	-	-
DOC	2.3	2.9	-	-	2.4	-	-	-	-
Bicarbonate alkalinity	9.42	-	-	-	10.63	-	-	-	-
Conductivity	27.4	-	-	-	29.5	-	-	-	-
Magnesium	0.96	-	-	-	0.99	-	-	-	-
Sulphate	2.61	-	-	3.74	2.90	3.03	3.42	2.61	-
Total alkalinity	9.4	-	-	-	10.6	-	-	-	-
TDS	19	-	-	-	19	-	-	-	-
Lead (T)	0.00075	-	-	0.00630	-	-	-	-	-
Strontium (T)	0.0089	-	0.0090	0.0096	0.0141	0.0105	0.0091	0.0114	-
Manganese (D)	0.0014	-	-	0.0027	0.0018	-	0.0035	-	-
Strontium (D)	0.0092	-	-	-	0.0126	0.0094	-	0.0110	-

Notes:

REF = reference; NF = near-field; MF = mid-field; FF = far-field

"- " = mean value does not exceed the trigger

Table 3.3-4. Results of BACI tests for selected water variables and Meadowbank stations.

Parameter Measured	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Proportional Change		
							Exp(Est.)	LCI	UCI
TOC	SP	5	6	-0.03	0.11	0.606	0.97	0.75	1.25
	TPS	15	3	0.34	0.11	0.003	1.41	1.12	1.77
DOC	SP	5	6	-0.10	0.08	0.879	0.91	0.76	1.08
Bicarbonate alkalinity	SP	5	6	0.03	0.06	0.292	1.03	0.91	1.18
Conductivity	SP	5	6	0.30	0.14	0.029	1.35	0.99	1.85
Magnesium	SP	5	6	0.01	0.13	0.478	1.01	0.75	1.36
Sulphate	TPN	6	6	0.94	0.12	0	2.56	1.95	3.36
	TPE	8	6	0.71	0.07	0	2.04	1.74	2.39
	SP	5	6	0.15	0.11	0.109	1.16	0.9	1.5
	TPS	15	3	0.79	0.19	0	2.19	1.47	3.27
	TE	5	6	0.13	0.06	0.03	1.14	0.99	1.3
Total alkalinity	SP	5	6	0.03	0.06	0.287	1.03	0.91	1.18
TDS	SP	5	6	0.51	0.15	0.004	1.67	1.18	2.36
Lead (T)	TPN	6	6	0.51	0.82	0.275	1.66	0.27	10.21
Strontium (T)	TPE	1	6	0.39	0.13	0.013	1.48	1.07	2.03
	TPS	3	3	0.16	0.04	0.008	1.18	1.05	1.32
Manganese (D)	TPS	9	3	0.71	0.73	0.176	2.04	0.4	10.4
Strontium (D)	TPE	1	6	0.43	0.14	0.015	1.54	1.06	2.23

Notes:* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = one-tailed test of the null hypothesis of no change or a decrease in mean

Exp(Est.) = estimated proportional change (i.e., exp[Estimate])

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Table 3.3-5. Screening process for water quality parameters, Baker Lake.

CONVENTIONALS			TOTAL METALS			DISSOLVED METALS		
Screening Level	1	2	Screening Level	1	2	Screening Level	1	2
Screening Rule ¹	>DL ≥ 10% frequency	C-I > 0.05 frequency	Screening Rule ¹	>DL ≥ 10% frequency	C-I > 0.05 frequency	Screening Rule ¹	>DL ≥ 10% frequency	C-I > 0.05 frequency
Conductivity	Figure 3.3-40		Aluminum	Figure 3.3-57		Aluminum	Figure 3.3-69	
Hardness	Figure 3.3-41		Antimony		*	Antimony		*
pH	Figure 3.3-42		Arsenic		*	Arsenic		*
TSS	Figure 3.3-43		Barium	Figure 3.3-58		Barium	Figure 3.3-70	
TDS	Figure 3.3-44		Beryllium		*	Beryllium		*
B-Alkalinity	Figure 3.3-45		Boron		*	Boron		*
C-Alkalinity		*	Cadmium		*	Cadmium		*
T-Alkalinity	Figure 3.3-46		Calcium	Figure 3.3-59		Chromium		*
Ammonia-N	Figure 3.3-47		Chromium		*	Copper	Figure 3.3-71	
Chloride	Figure 3.3-48		Copper	Figure 3.3-60		Iron		*
Nitrate-N	Figure 3.3-49		Iron	Figure 3.3-61		Lead		*
Nitrite-N		*	Lead		Figure 3.3-62	Lithium		*
TKN	Figure 3.3-50		Lithium		*	Manganese	Figure 3.3-72	
T-phosphorous	Figure 3.3-51		Magnesium	Figure 3.3-63		Mercury		*
Ortho-phosphate	Figure 3.3-52		Manganese	Figure 3.3-64		Molybdenum		*
Reactive silica	Figure 3.3-53		Mercury		*	Nickel		*
Sulphate	Figure 3.3-54		Molybdenum		*	Selenium		*
DOC	Figure 3.3-55		Nickel		*	Strontium	Figure 3.3-73	
TOC	Figure 3.3-56		Potassium	Figure 3.3-65		Thallium		*
			Selenium		*	Tin		*
			Sodium	Figure 3.3-66		Titanium		*
			Strontium	Figure 3.3-67		Uranium		*
			Thallium		*	Vanadium		*
			Tin		*	Zinc		*
			Titanium	Figure 3.3-68				
			Uranium		*			
			Vanadium		*			
			Zinc		*			

Notes: ¹ See text for further detail; * Plots for these parameters are presented in **Appendix E**.



Table 3.3-6. Water chemistry mean 2012 results exceeding the trigger value for Baker Lake stations.

		Baker Lake		
Parameter Measured	Trigger	REF	NF	NF
		BAP	BBD	BPJ
Total phosphorous	0.006	0.01	0.01	0.01
TOC	3.2	4.1	4.5	4.1
DOC	3.4	3.9	4.3	4.1
Bicarbonate alkalinity	9.46	10.57	10.45	10.52
Total alkalinity	9.5	10.6	10.5	10.5
Chromium (T)	0.001	0.001	0.001	0.001
Selenium (T)	0.001	0.001	0.001	0.001
Strontium (T).	0.0089	0.0264	0.0175	0.0184
Chromium (D)	0.002	0.002	0.002	0.002
Iron (D)	0.06	0.1	0.1	0.1
Strontium (D)	0.0092	0.0245	0.0164	0.0172

Notes:

REF = reference; NF = near-field

Table 3.3-7. Results of BACI tests for selected water variables and Baker Lake stations.

Parameter Measured	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Proportional Change		
							Exp(Est.)	LCI	UCI
TOC	BBD	11	3	0.071	0.033	0.025	1.07	1	1.15
	BPJ	11	3	-0.02	0.04	0.683	0.98	0.9	1.07
DOC	BBD	11	3	0.084	0.039	0.025	1.09	1	1.18
	BPJ	11	3	0.034	0.031	0.148	1.03	0.97	1.11
Bicarbonate alkalinity	BBD	11	3	0.019	0.085	0.415	1.02	0.85	1.23
	BPJ	11	3	-0.014	0.022	0.731	0.99	0.94	1.03
Total alkalinity	BBD	11	3	0.021	0.085	0.406	1.02	0.85	1.23
	BPJ	11	3	-0.012	0.022	0.703	0.99	0.94	1.04
Strontium (T)	BBD	2	3	-0.235	0.173	0.866	0.79	0.46	1.37
	BPJ	2	3	-0.169	0.221	0.749	0.84	0.42	1.71
Strontium (D)	BBD	2	3	-0.182	0.177	0.81	0.83	0.48	1.46
	BPJ	2	3	-0.171	0.181	0.792	0.84	0.47	1.5

Notes:

* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = one-tailed test of the null hypothesis of no change or a decrease in mean

Exp(Est.) = estimated proportional change (i.e., $\exp[\text{Estimate}]$)

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Figure 3.3-1. Conductivity ($\mu\text{S}/\text{cm}$) in water samples from Meadowbank study lakes since 2006.

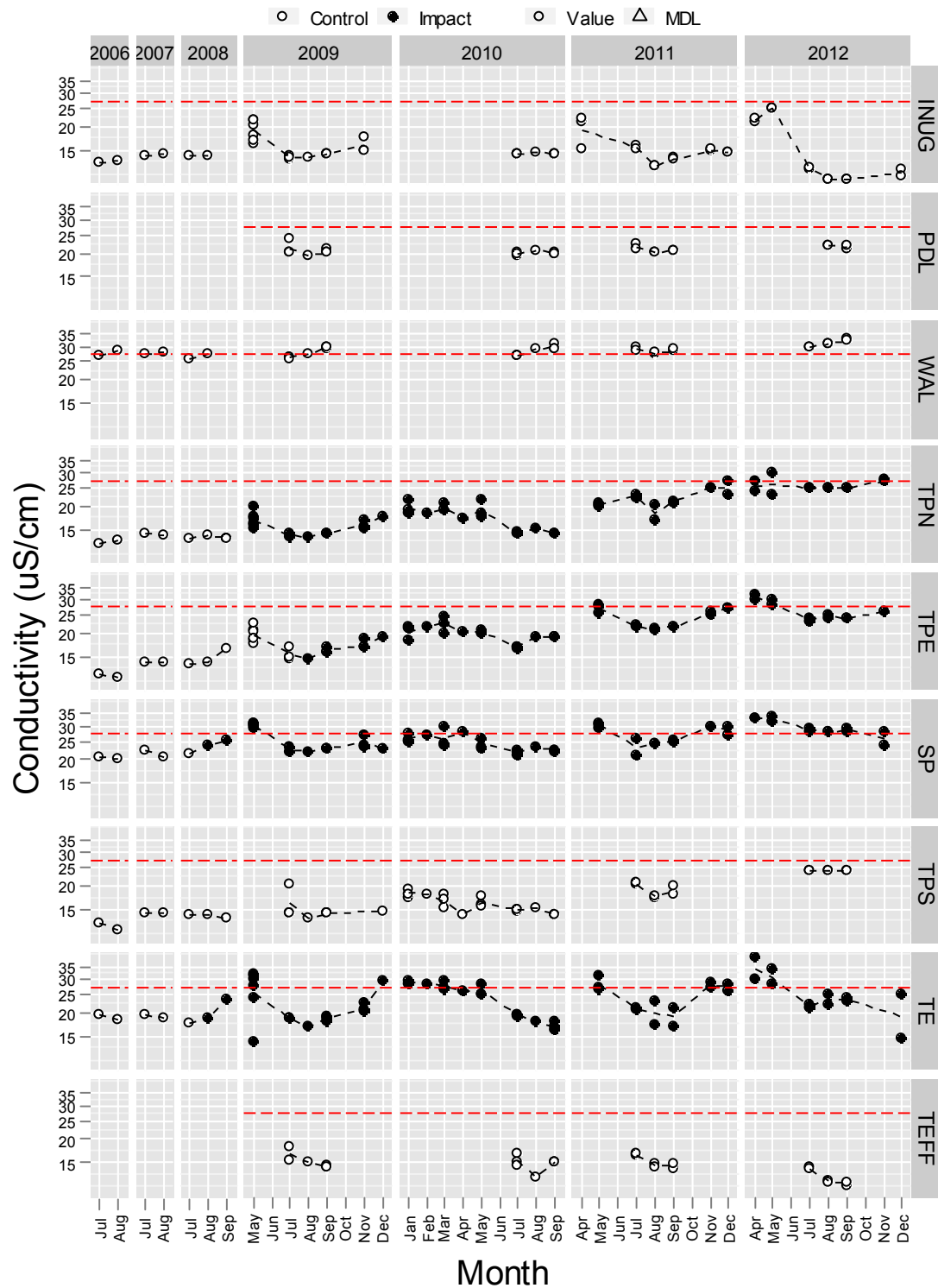


Figure 3.3-2. Hardness (mg/L) in water samples from Meadowbank study lakes since 2006.

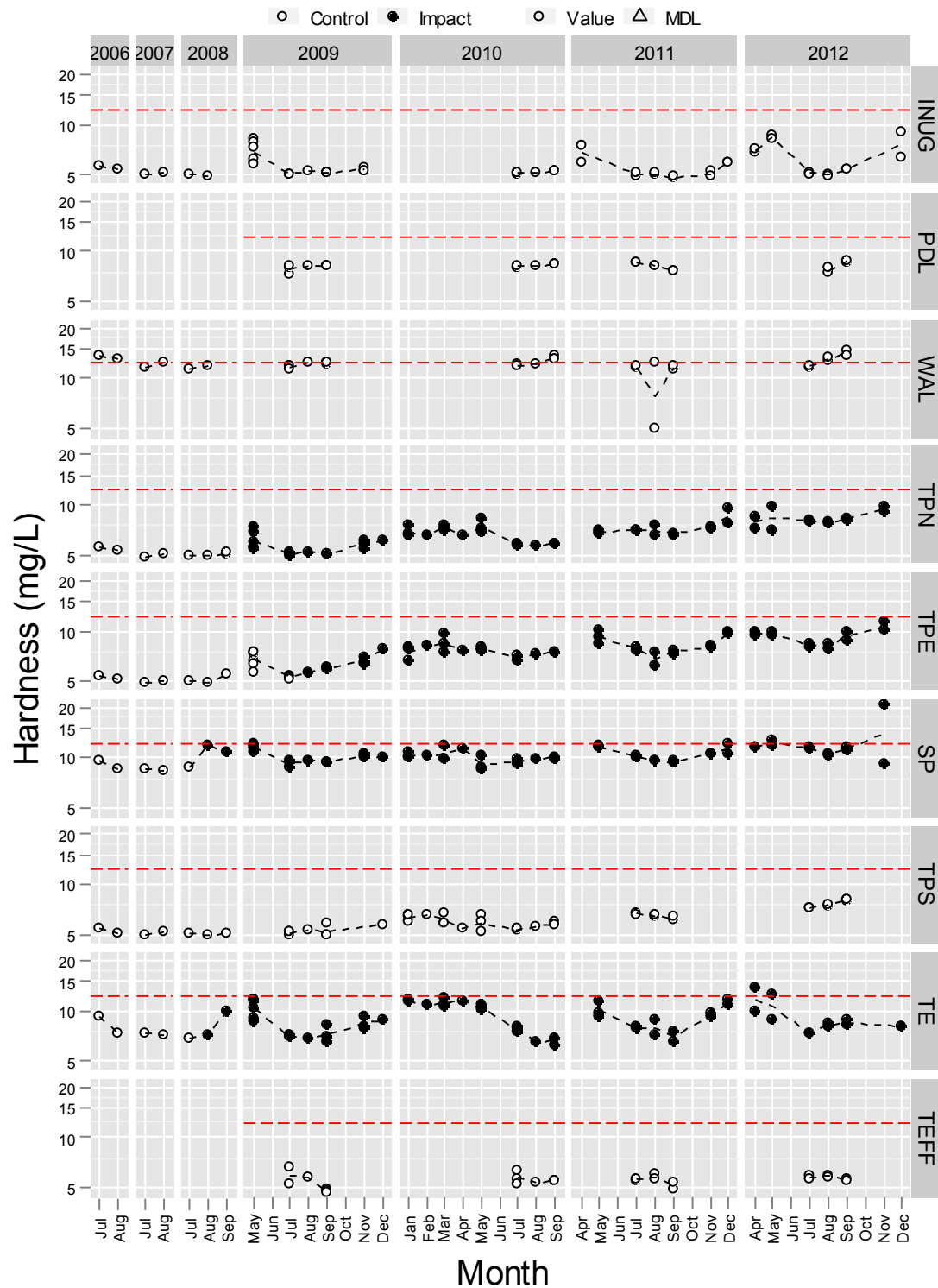


Figure 3.3-3. pH in water samples from Meadowbank study lakes since 2006.

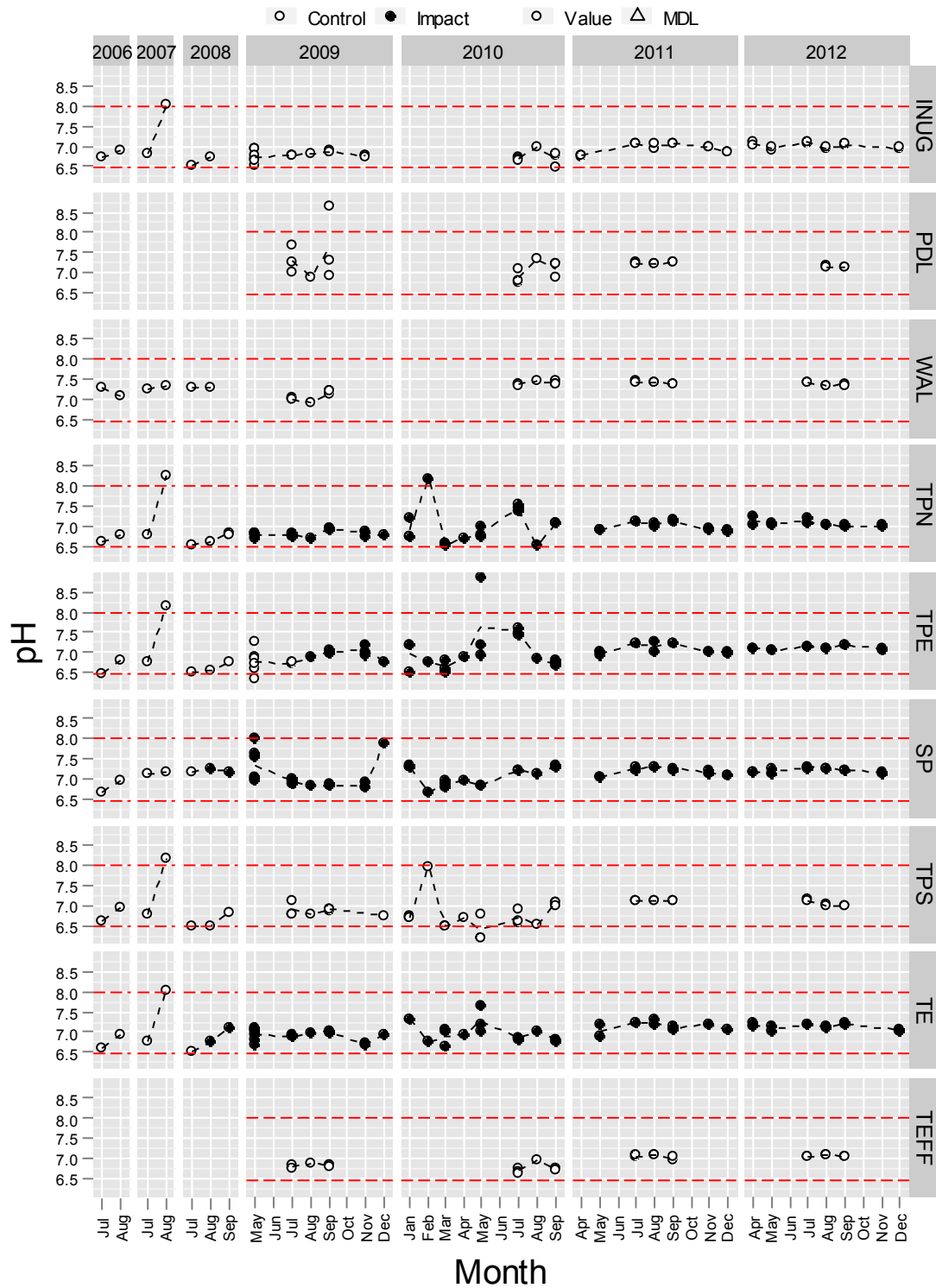


Figure 3.3-4. Total Suspended Solids (TSS; mg/L) in water samples from Meadowbank study lakes since 2006.

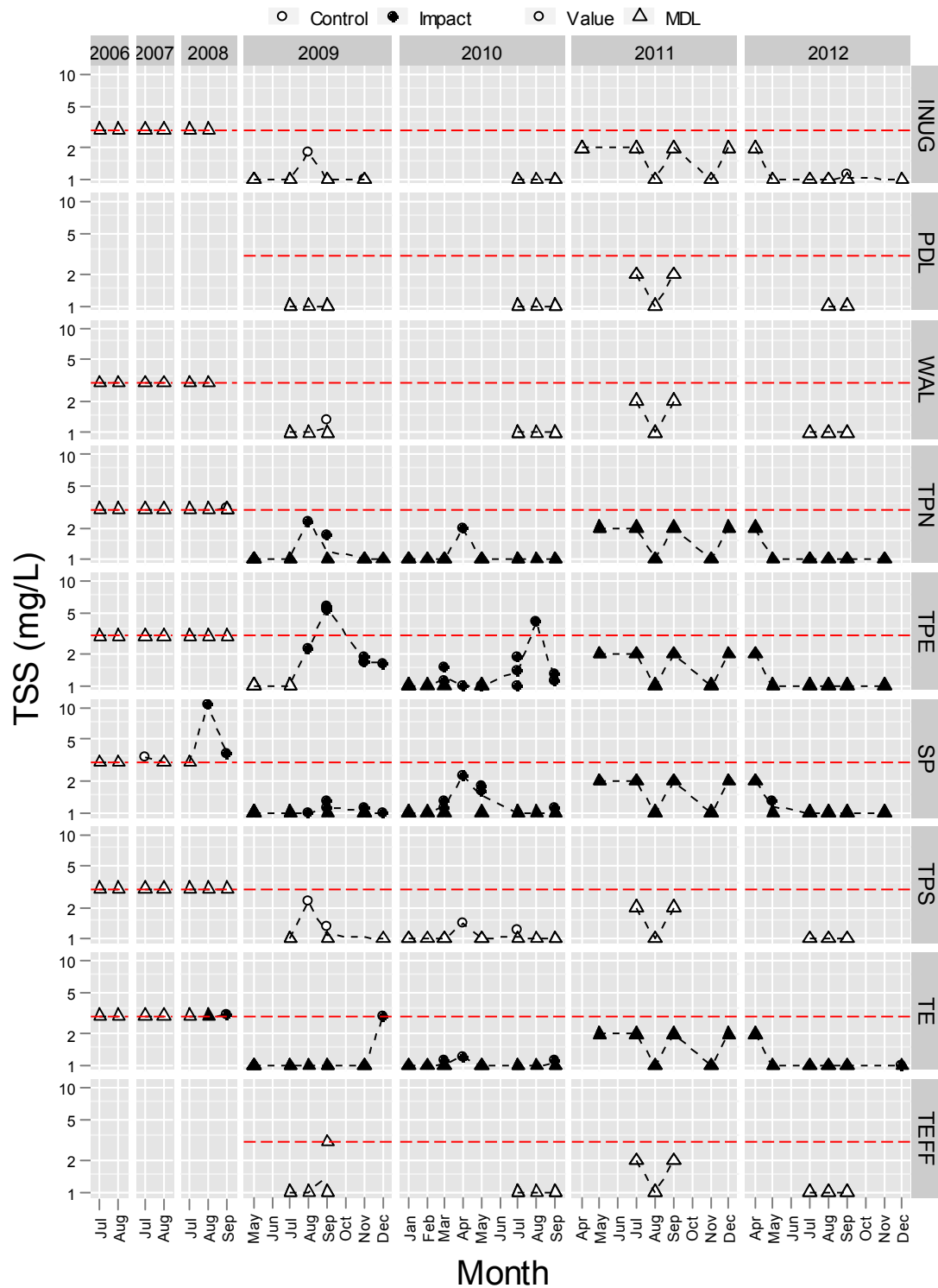


Figure 3.3-6. Bicarbonate Alkalinity (mg/L) in water samples from Meadowbank study lakes since 2006.

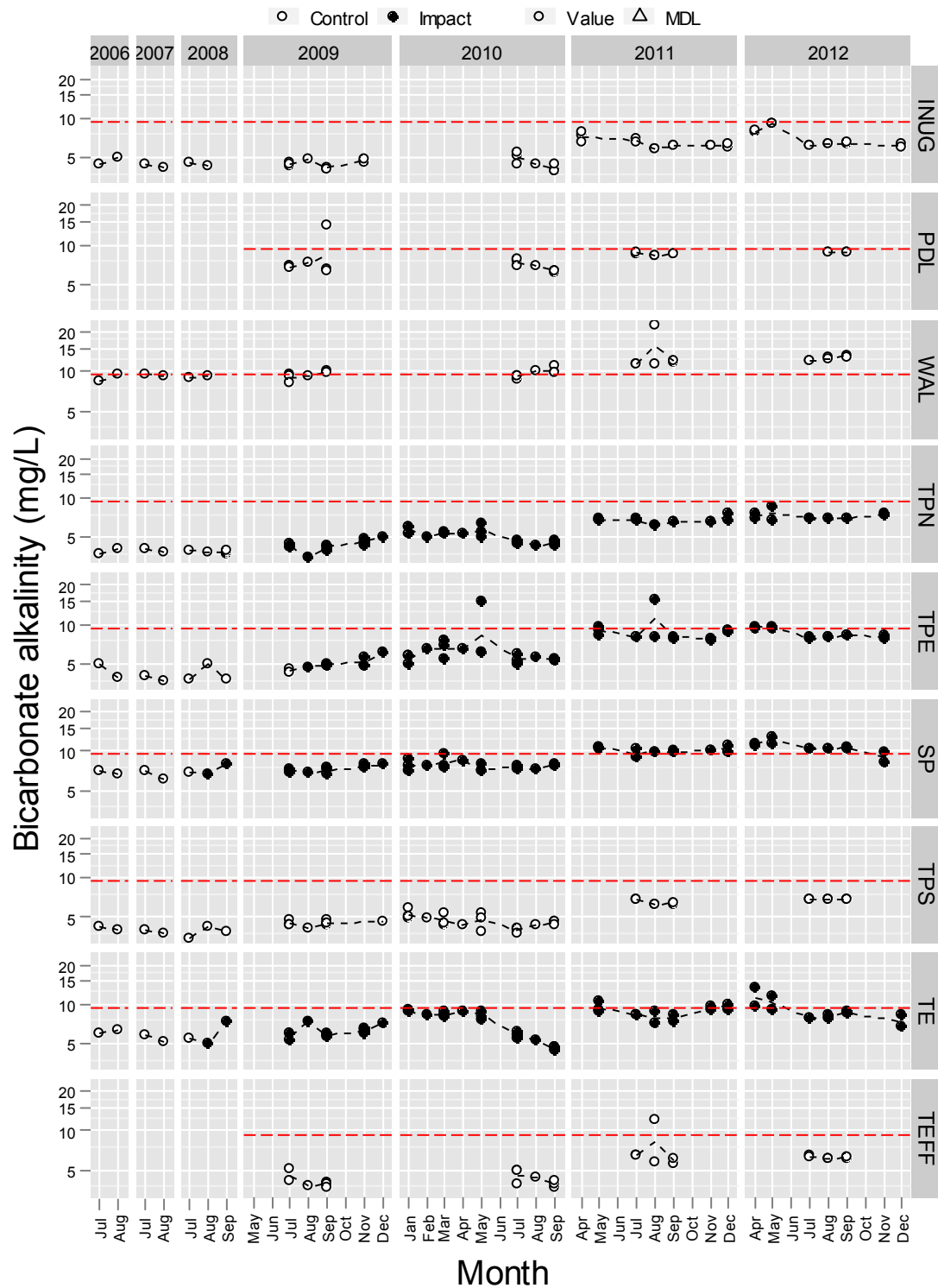


Figure 3.3-7. Total Alkalinity (mg/L) in water samples from Meadowbank study lakes since 2006.

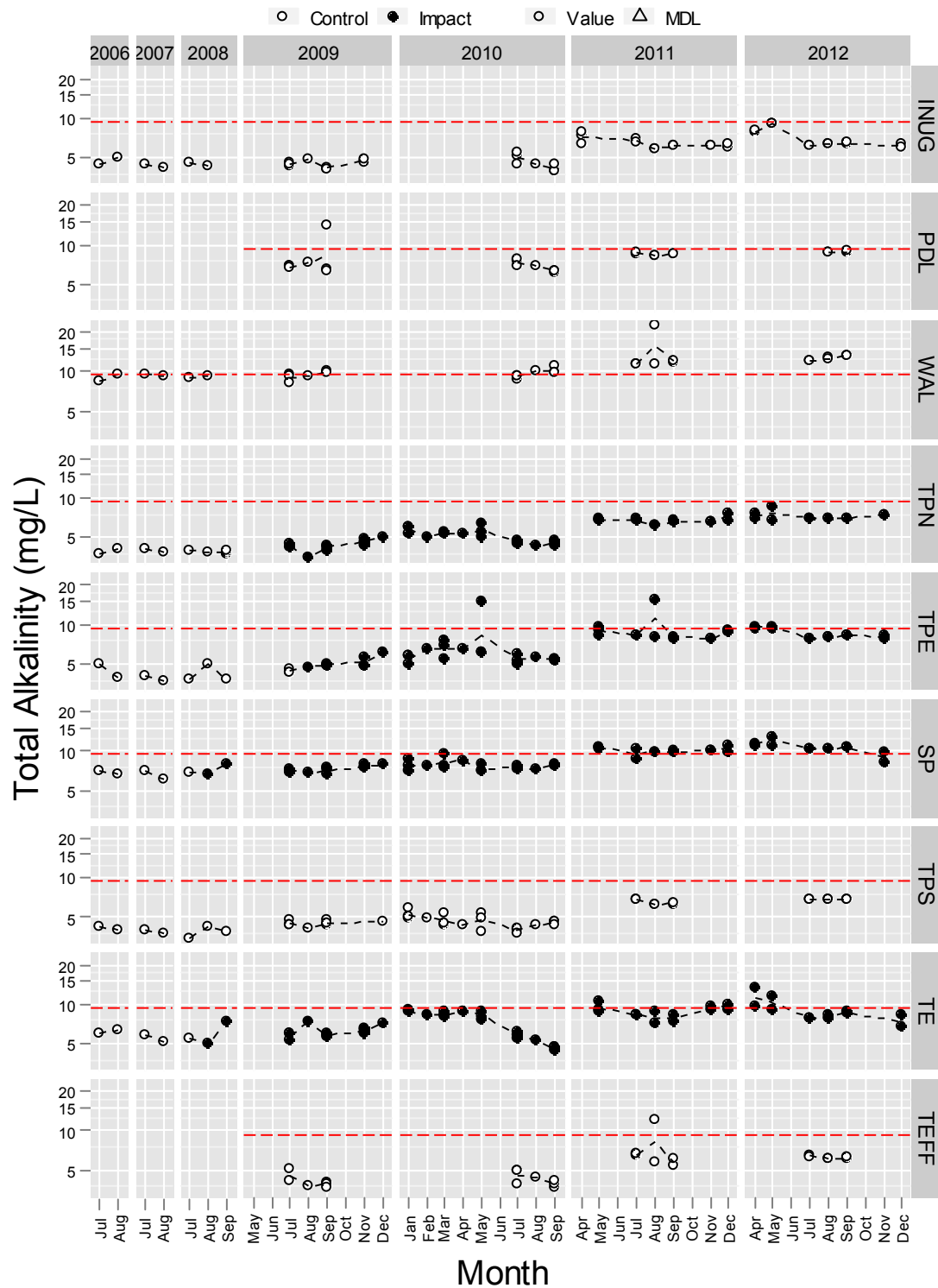


Figure 3.3-8. Ammonia-N (mg/L) in water samples from Meadowbank study lakes since 2006.

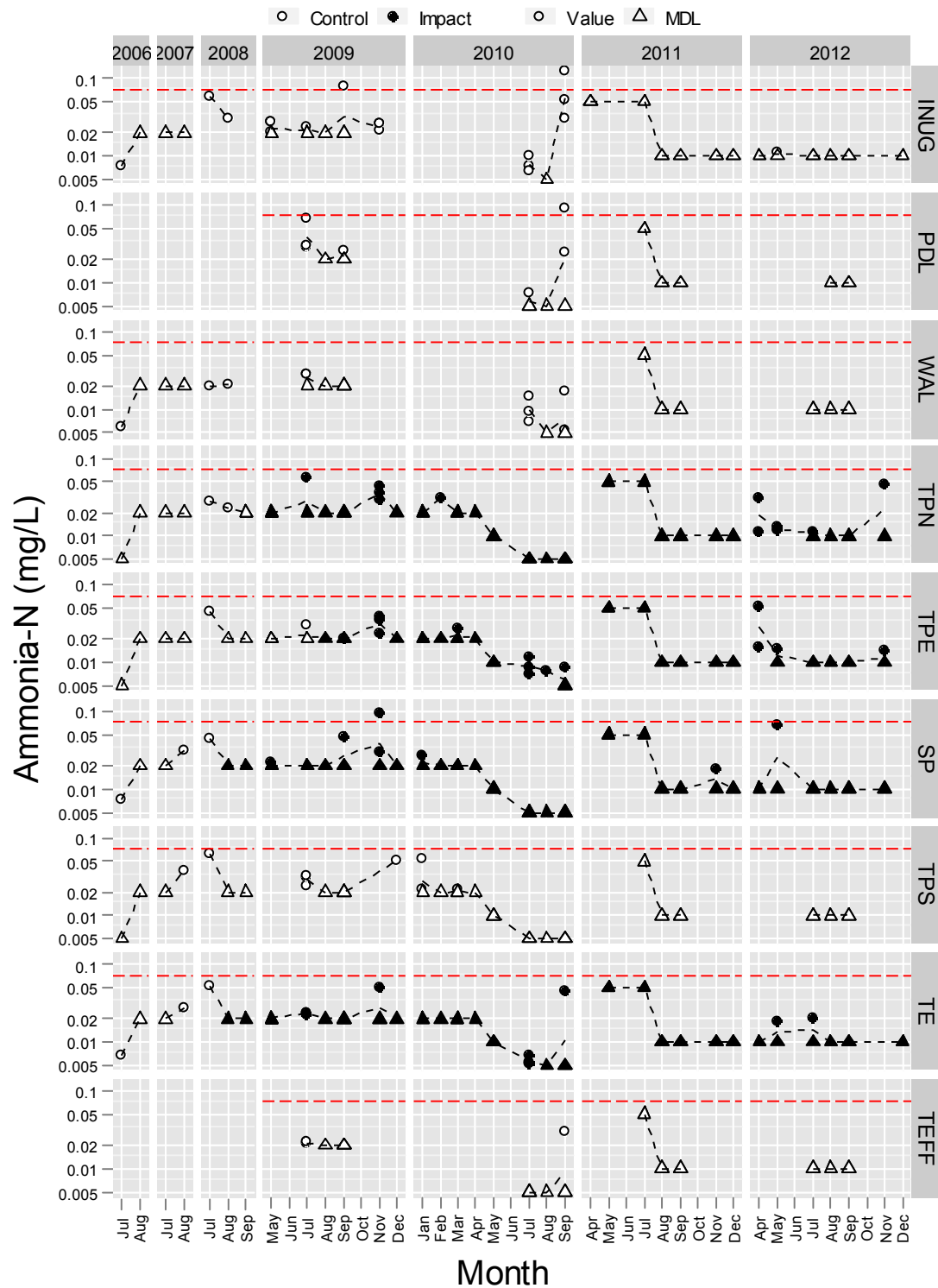


Figure 3.3-9. Chloride (mg/L) in water samples from Meadowbank study lakes since 2006.

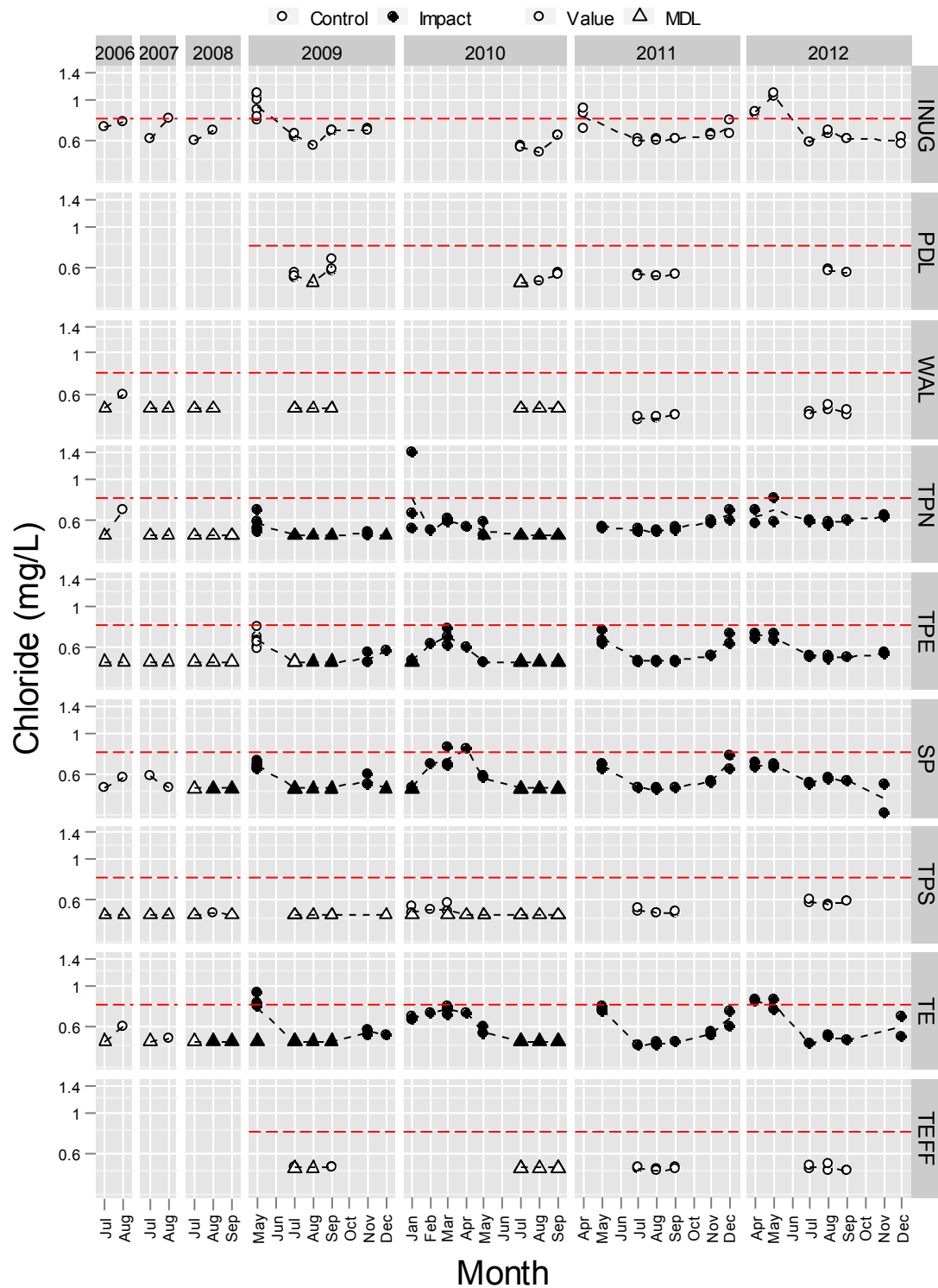


Figure 3.3-10. Nitrate-N (mg/L) in water samples from Meadowbank study lakes since 2006.

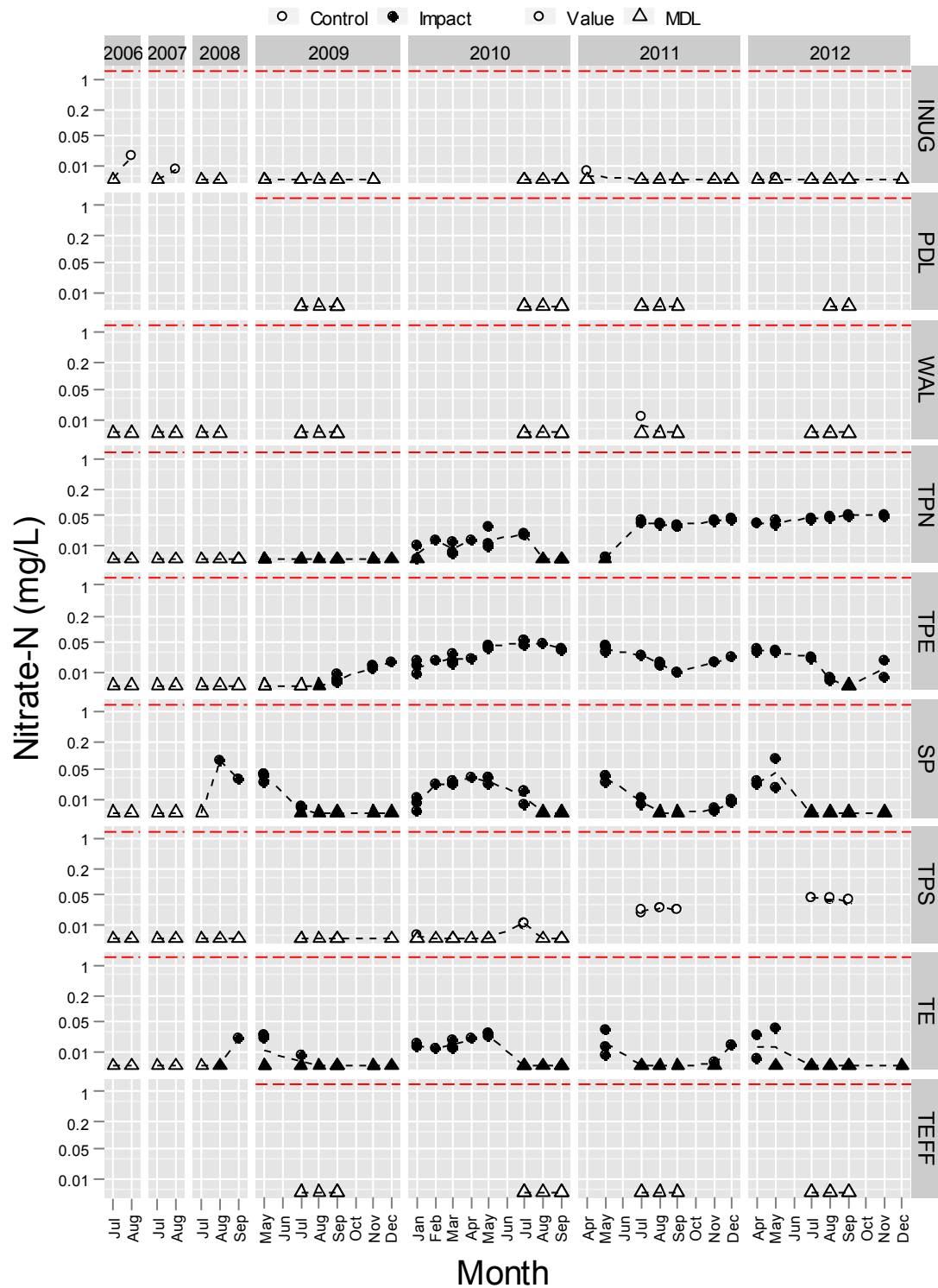


Figure 3.3-11. Total Kjeldahl Nitrogen (TKN; mg/L) in water samples from Meadowbank study lakes since 2006.

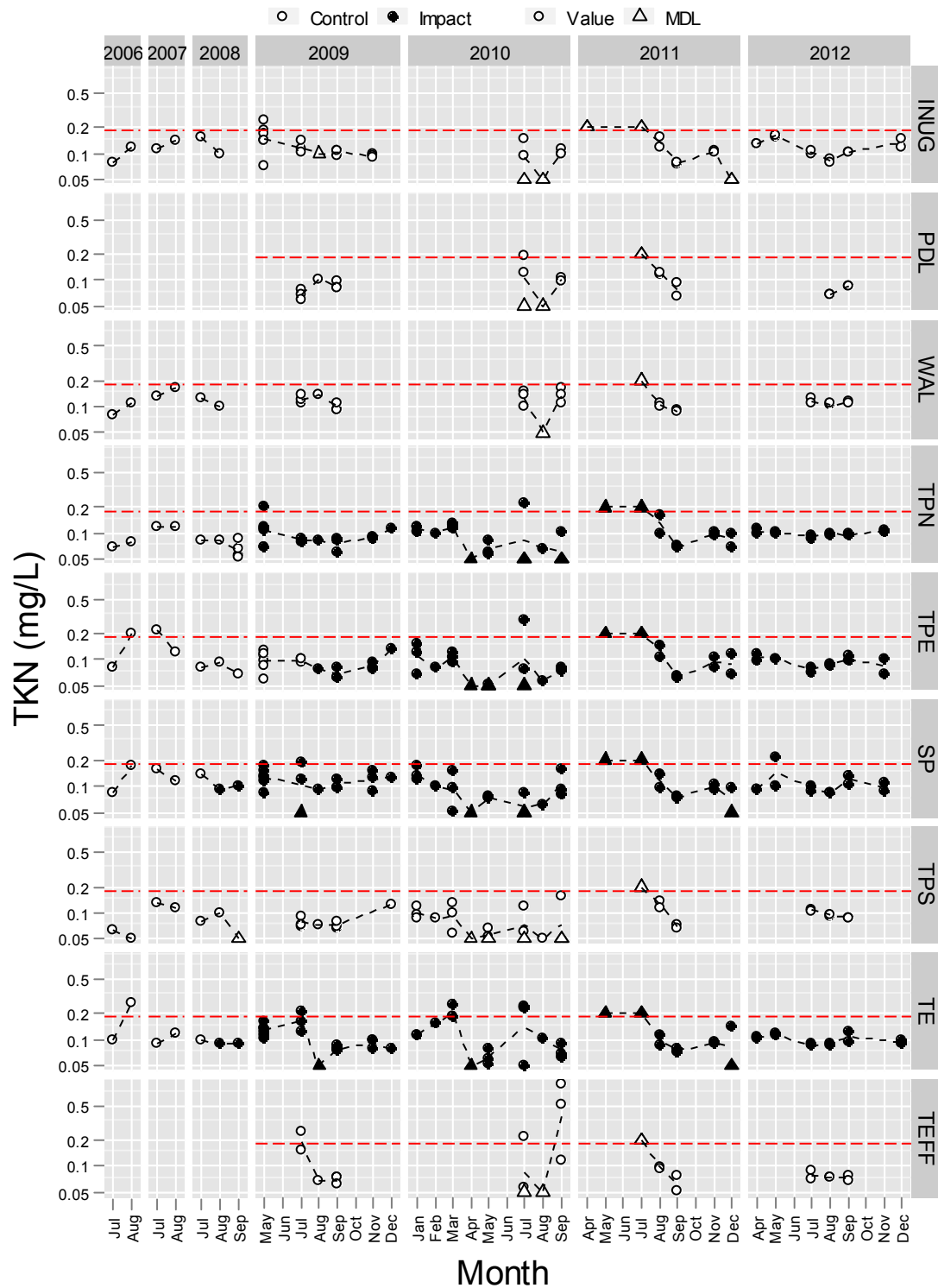


Figure 3.3-12. Total Phosphorus (mg/L) in water samples from Meadowbank study lakes since 2006.

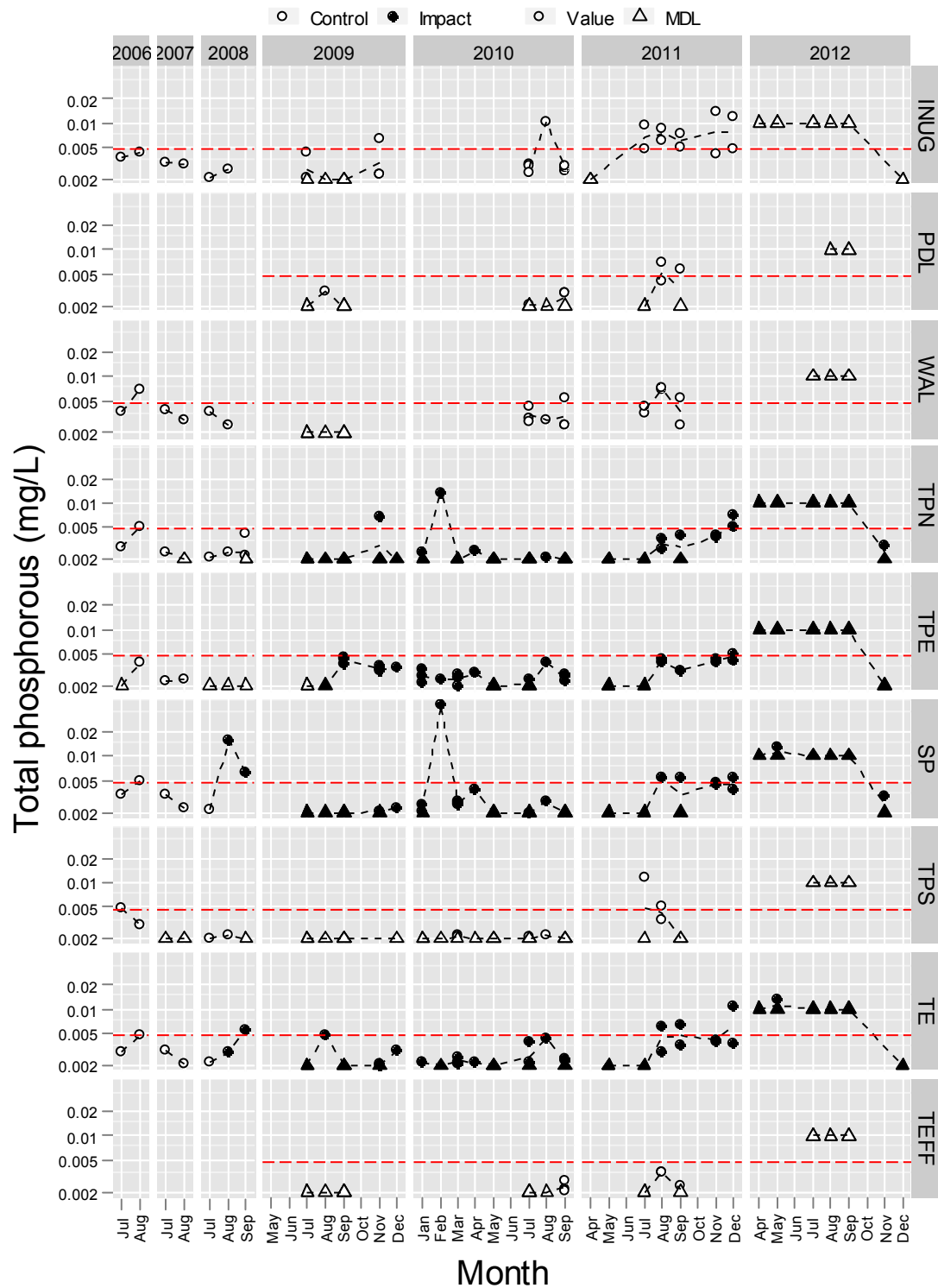


Figure 3.3-13. Reactive Silica (mg/L) in water samples from Meadowbank study lakes since 2006.

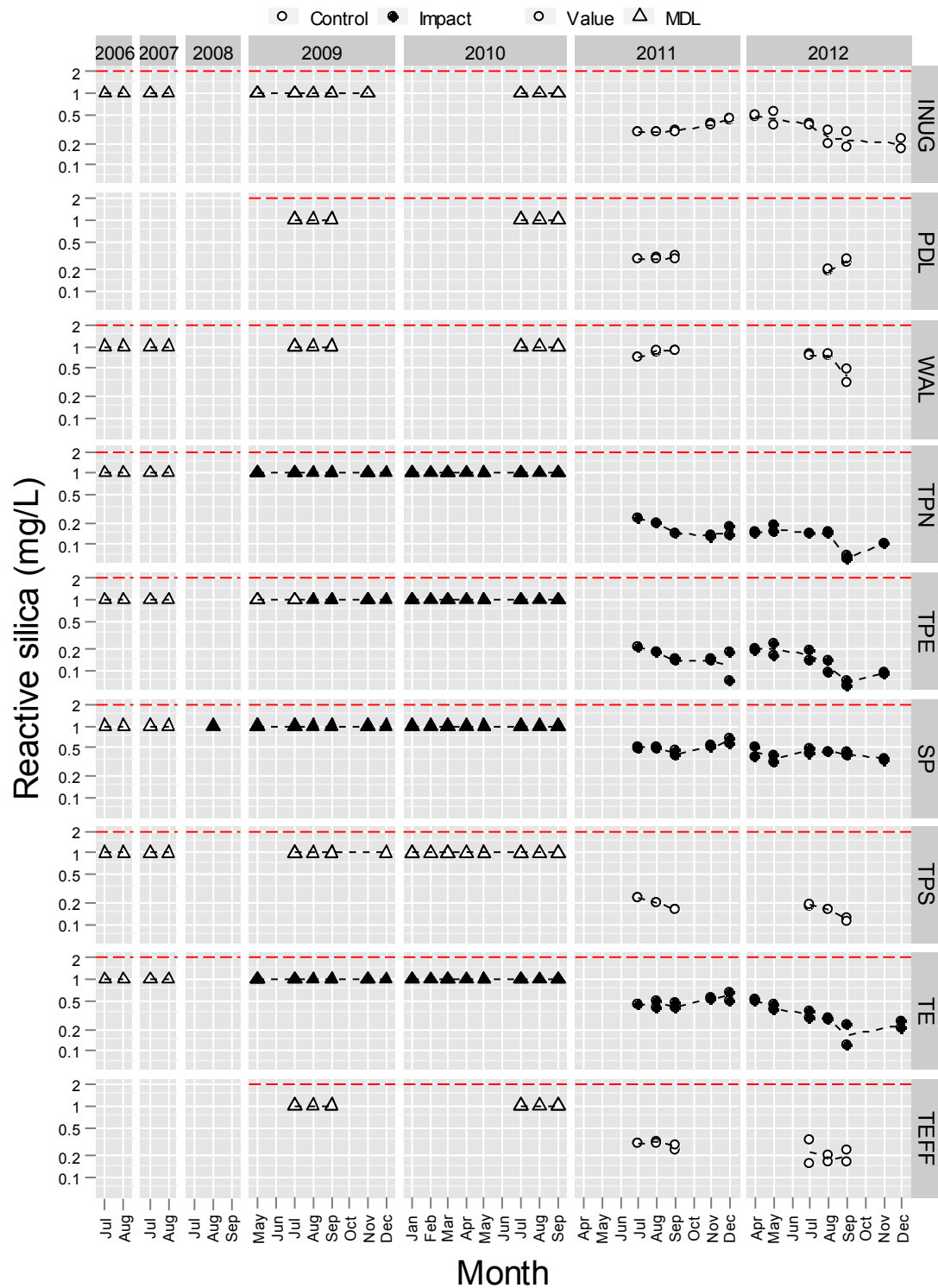


Figure 3.3-14. Sulphate (mg/L) in water samples from Meadowbank study lakes since 2006.

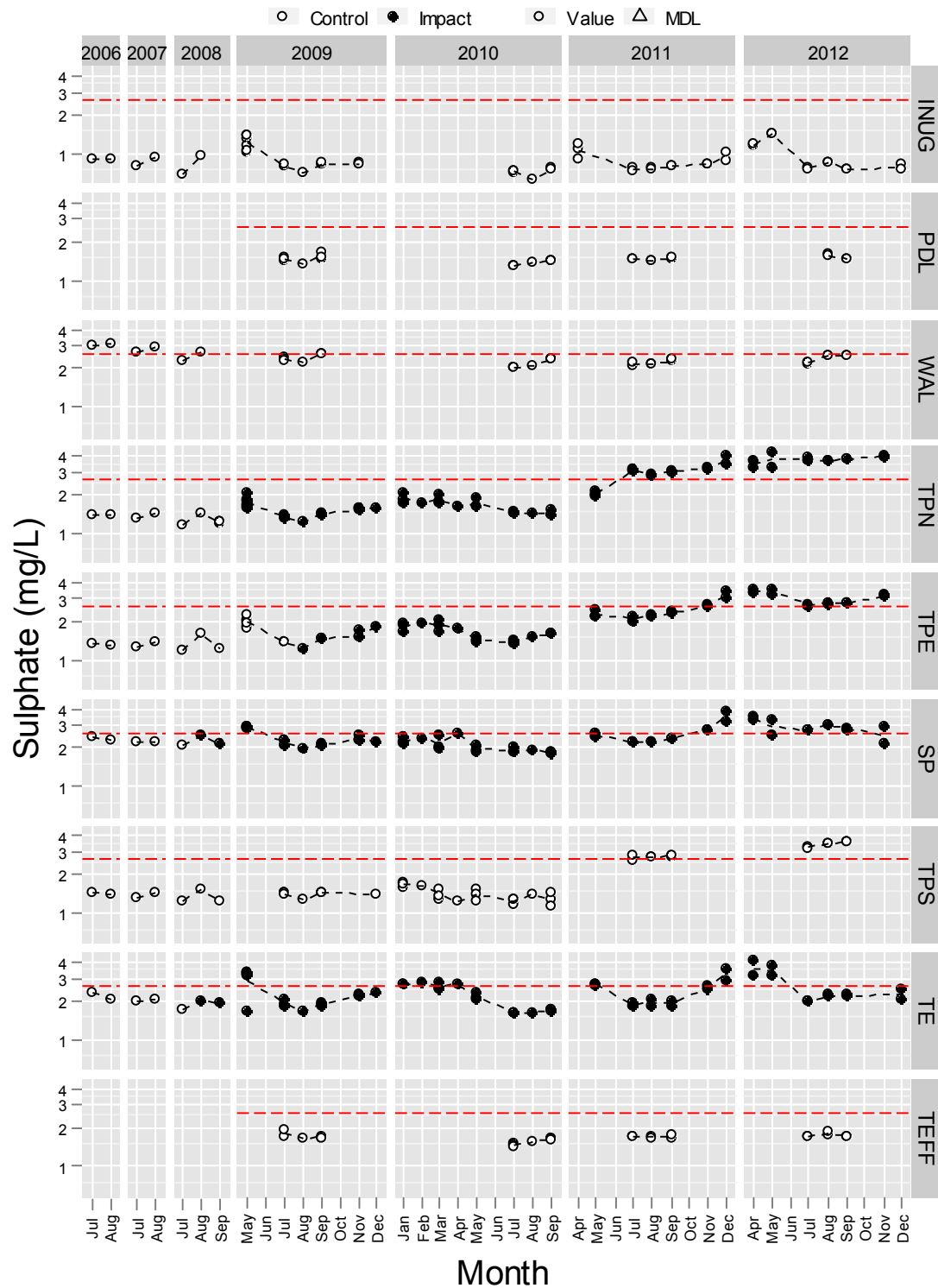


Figure 3.3-15. Dissolved Organic Carbon (DOC; mg/L) in water samples from Meadowbank study lakes since 2006.

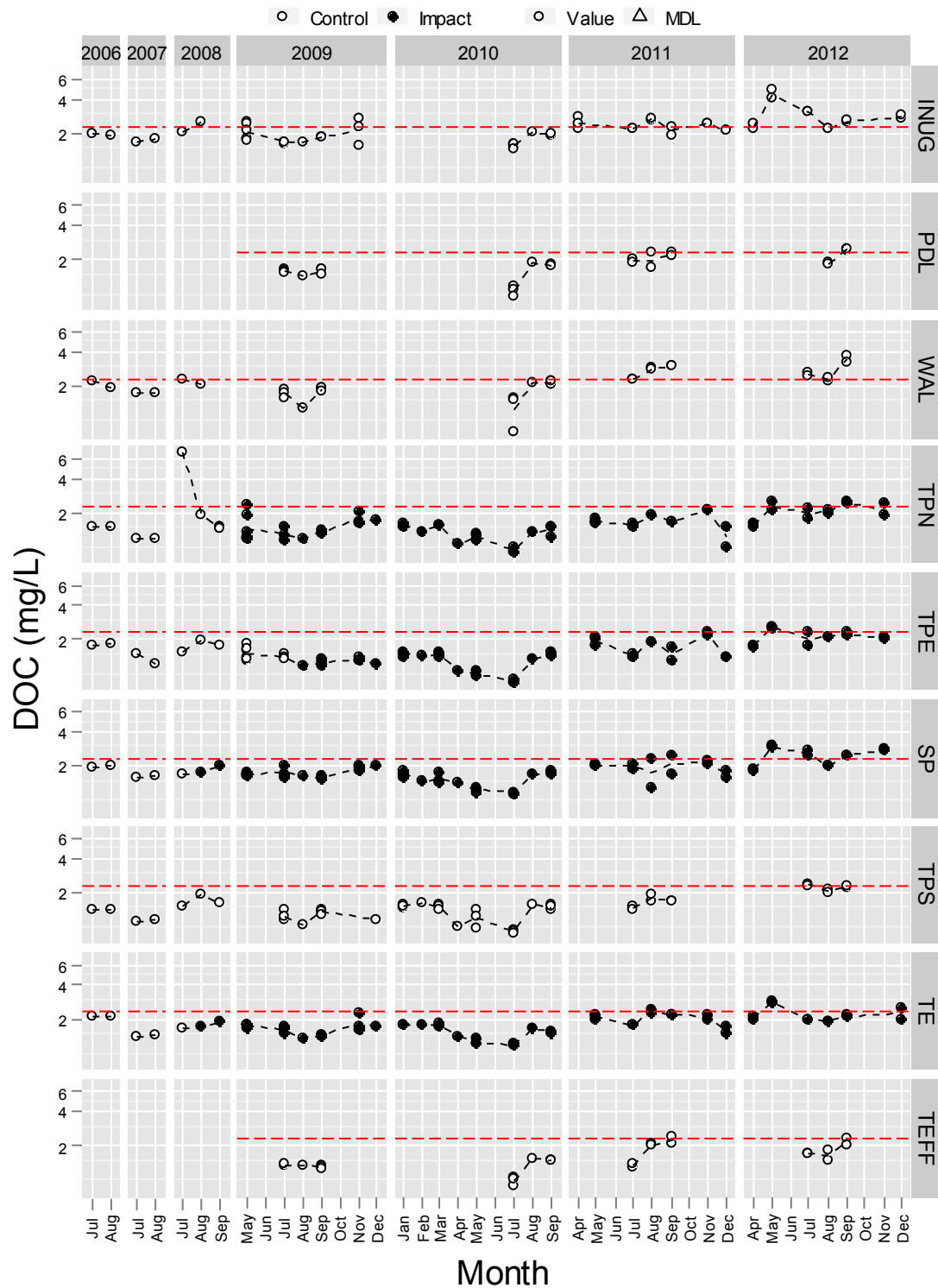


Figure 3.3-16. Total Organic Carbon (TOC; mg/L) in water samples from Meadowbank study lakes since 2006.

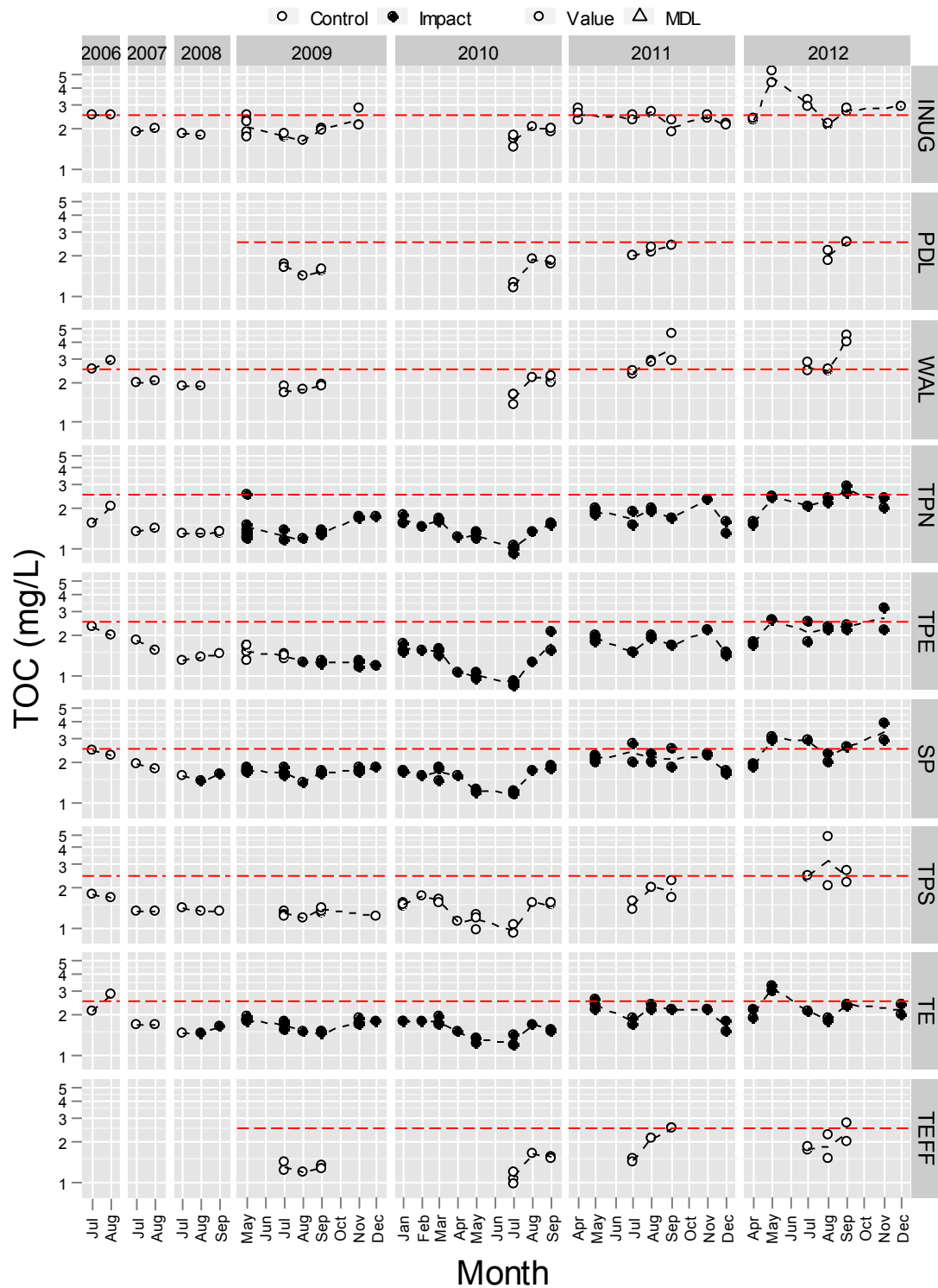


Figure 3.3-17. Total Aluminum (mg/L) in water samples from Meadowbank study lakes since 2006.

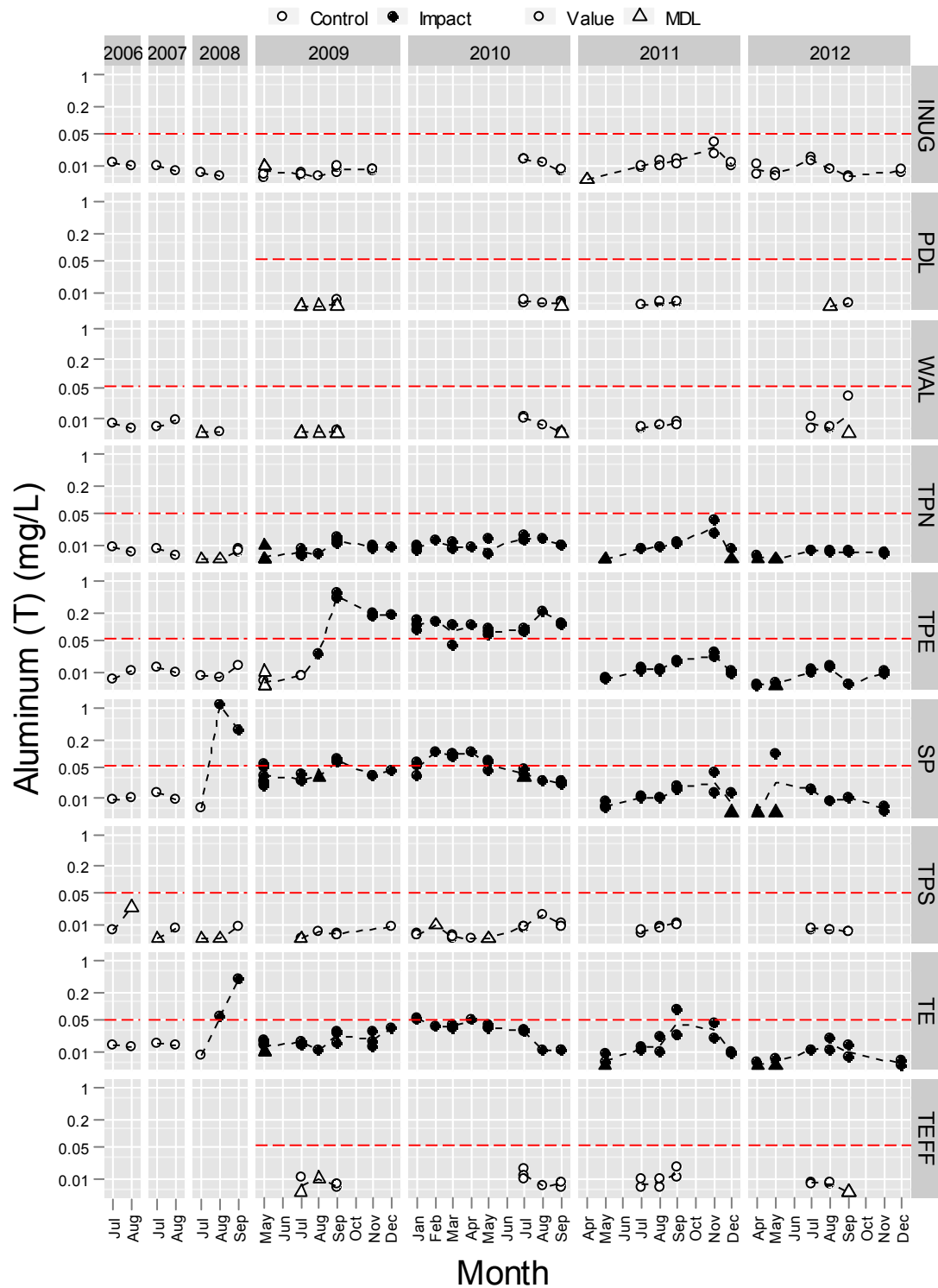


Figure 3.3-18. Total Arsenic (mg/L) in water samples from Meadowbank study lakes since 2006.

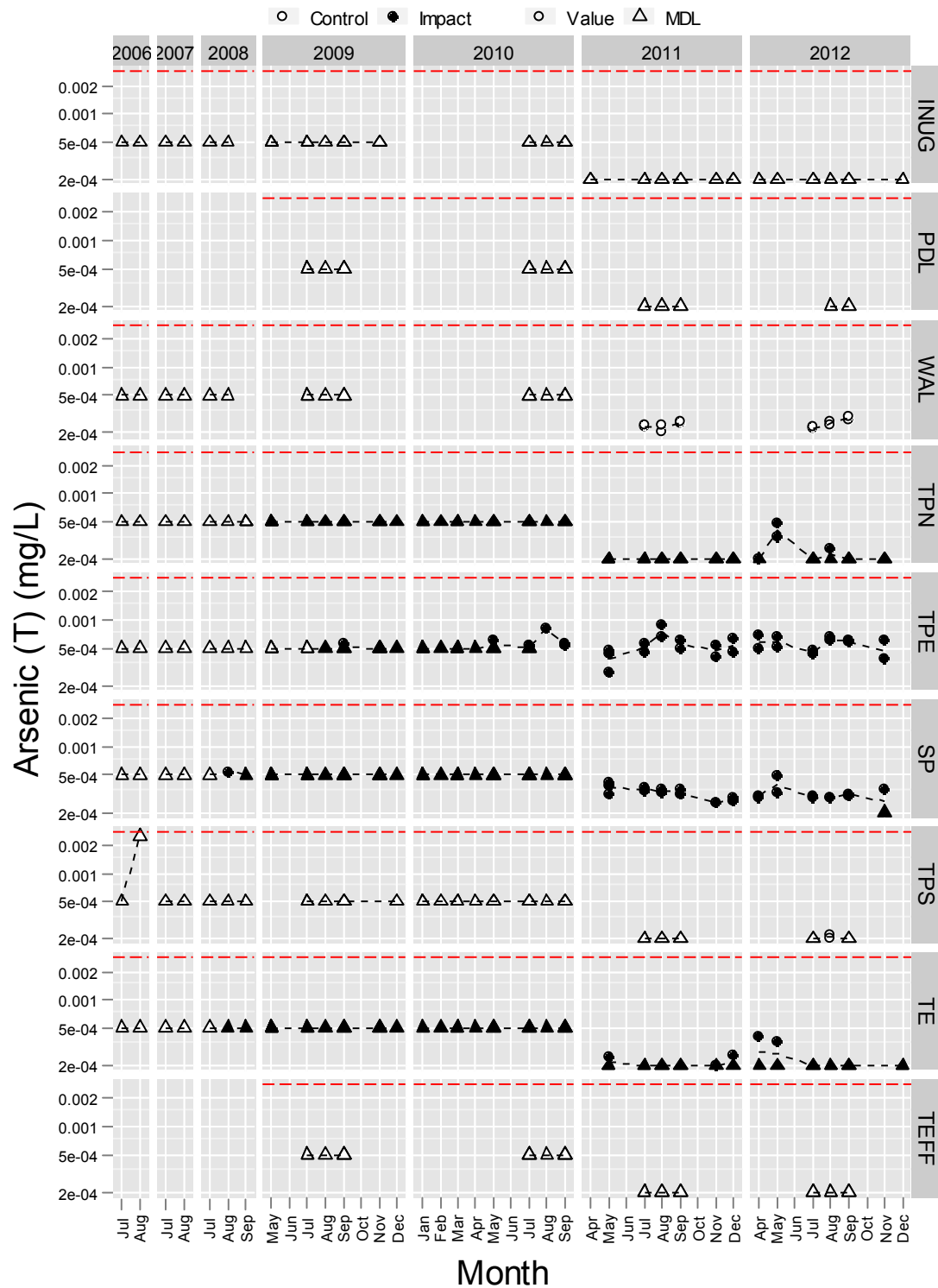


Figure 3.3-19. Total Barium (mg/L) in water samples from Meadowbank study lakes since 2006.

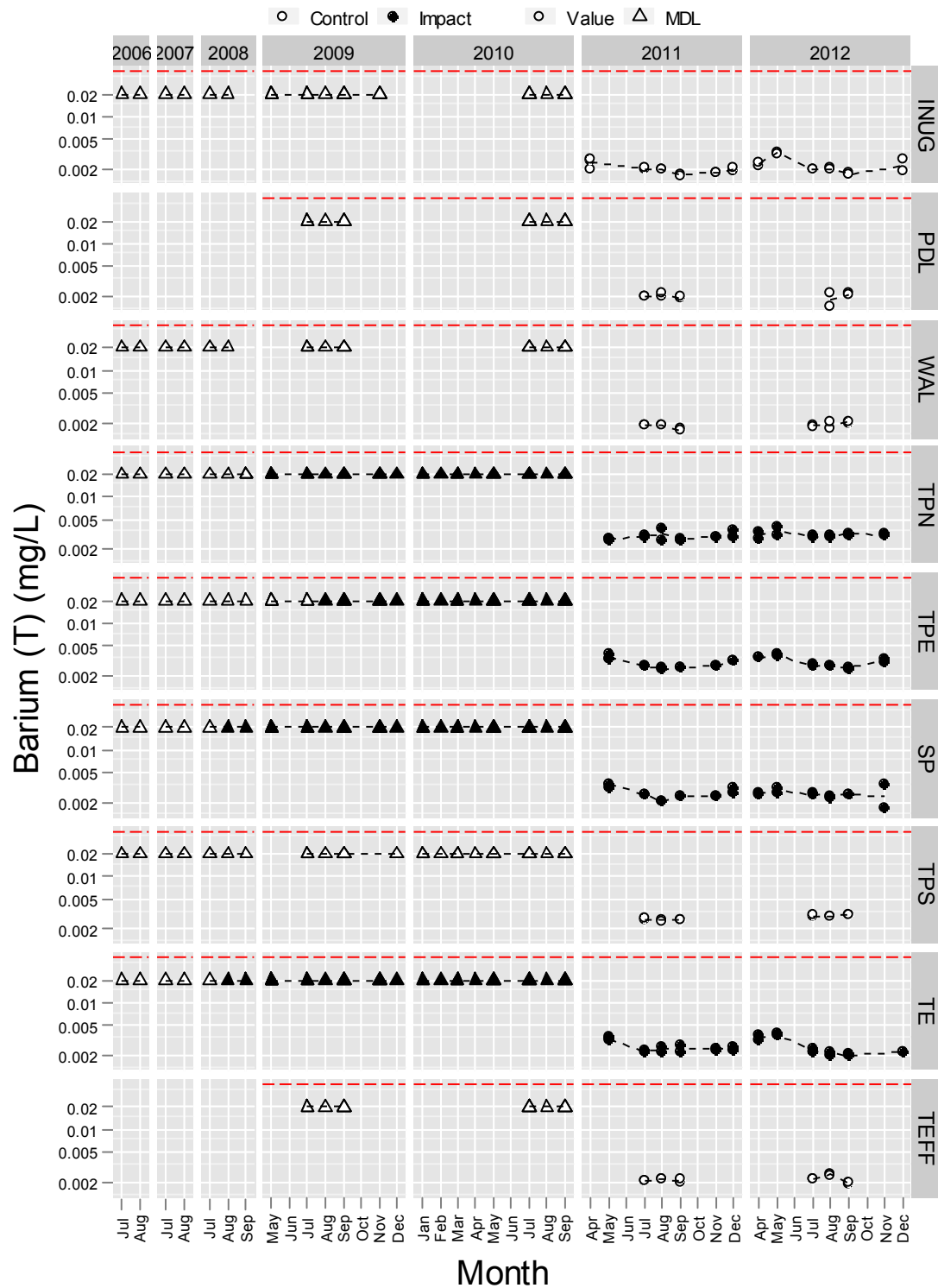


Figure 3.3-20. Total Calcium (mg/L) in water samples from Meadowbank study lakes since 2006.

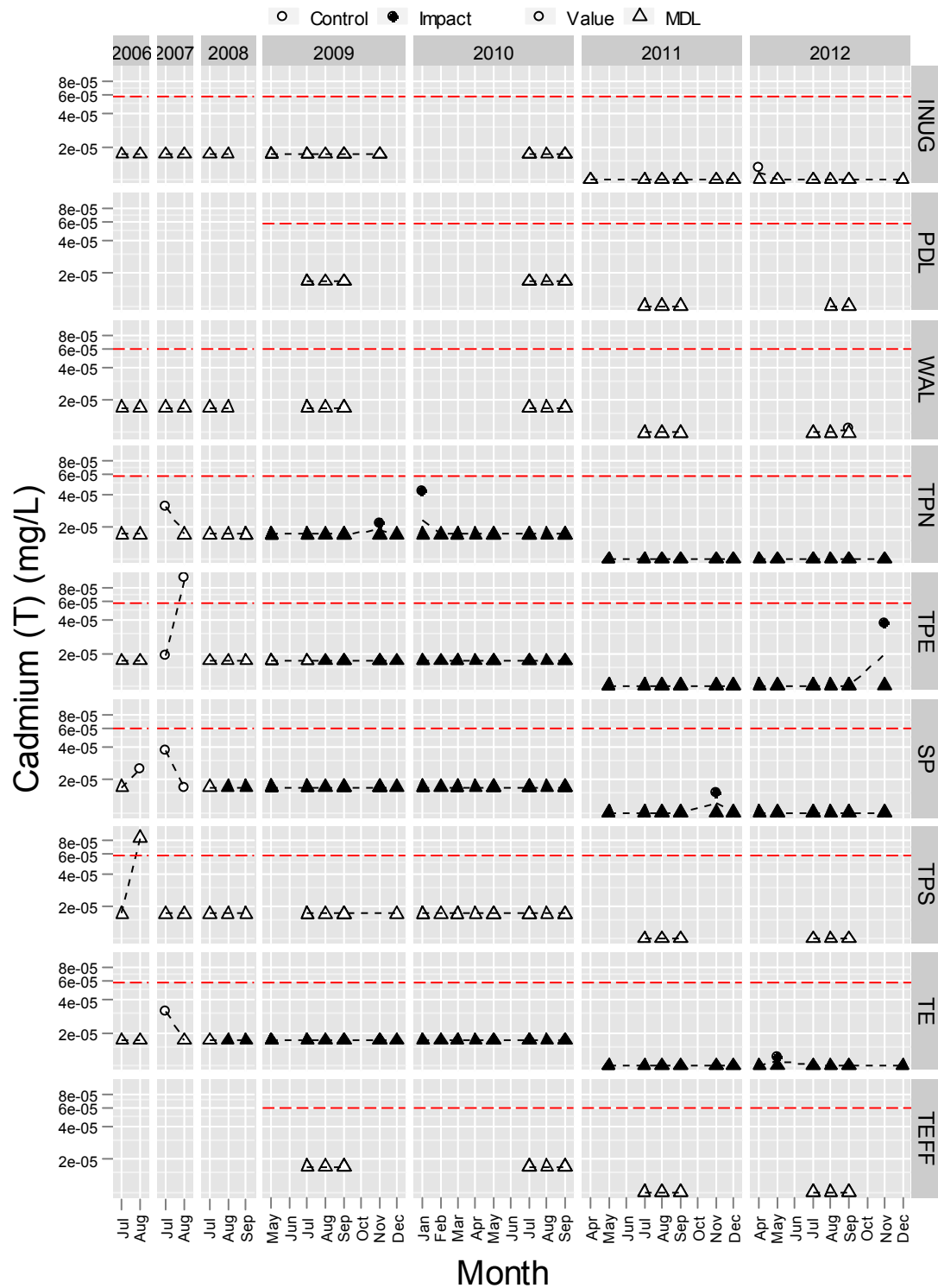


Figure 3.3-21. Total Chromium (mg/L) in water samples from Meadowbank study lakes since 2006.

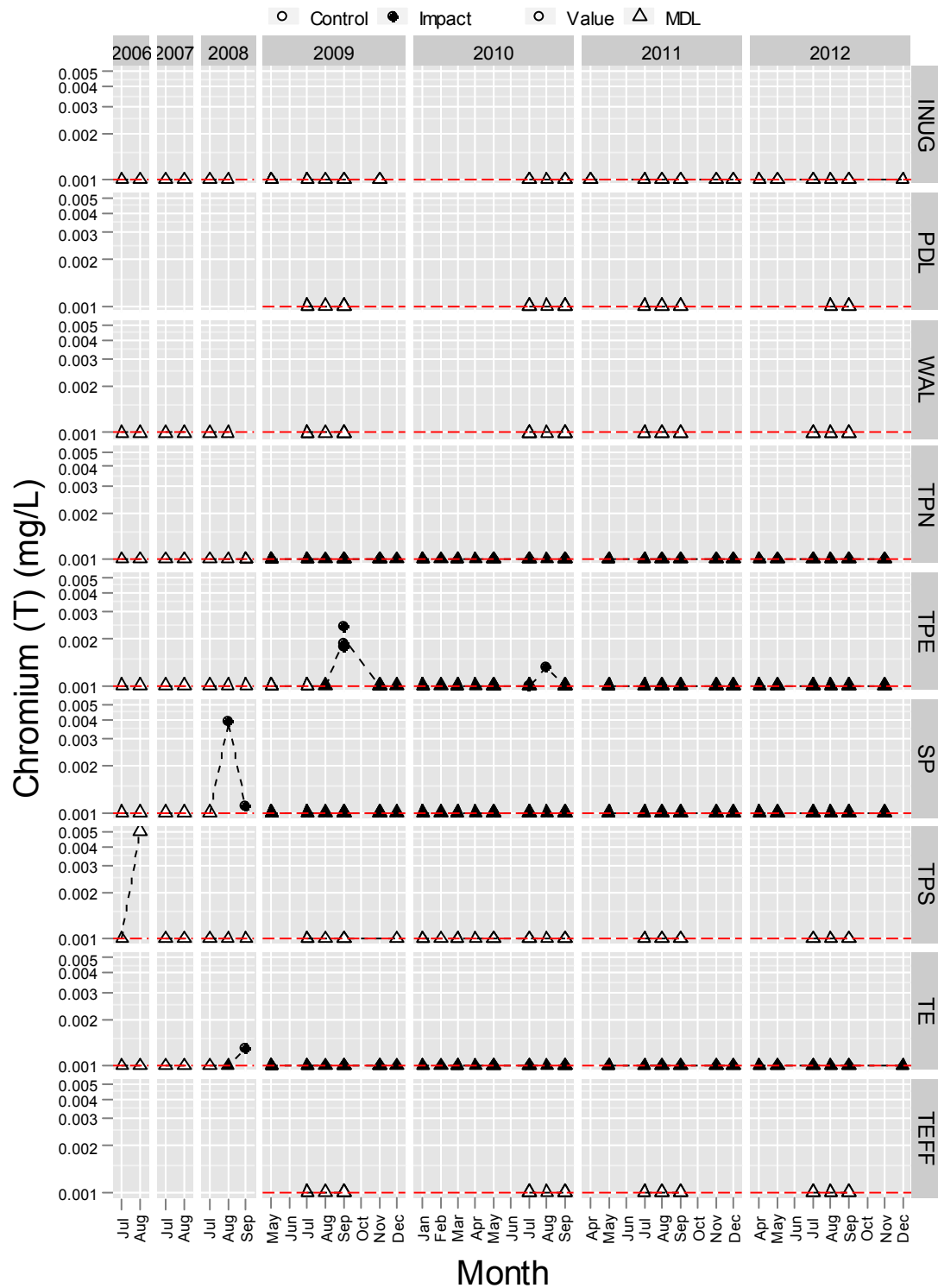


Figure 3.3-22. Total Copper (mg/L) in water samples from Meadowbank study lakes since 2006.

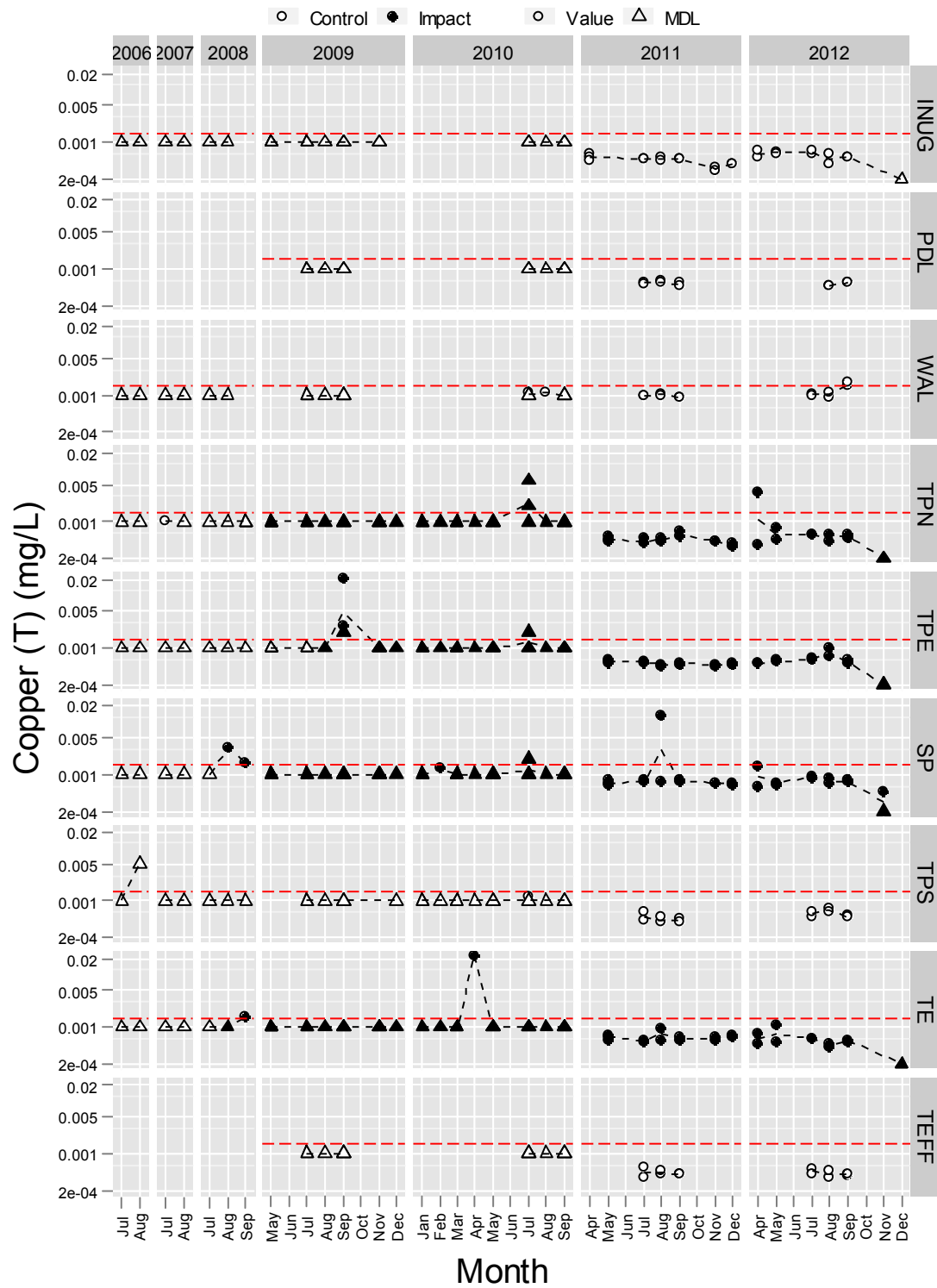


Figure 3.3-23. Total Iron (mg/L) in water samples from Meadowbank study lakes since 2006.

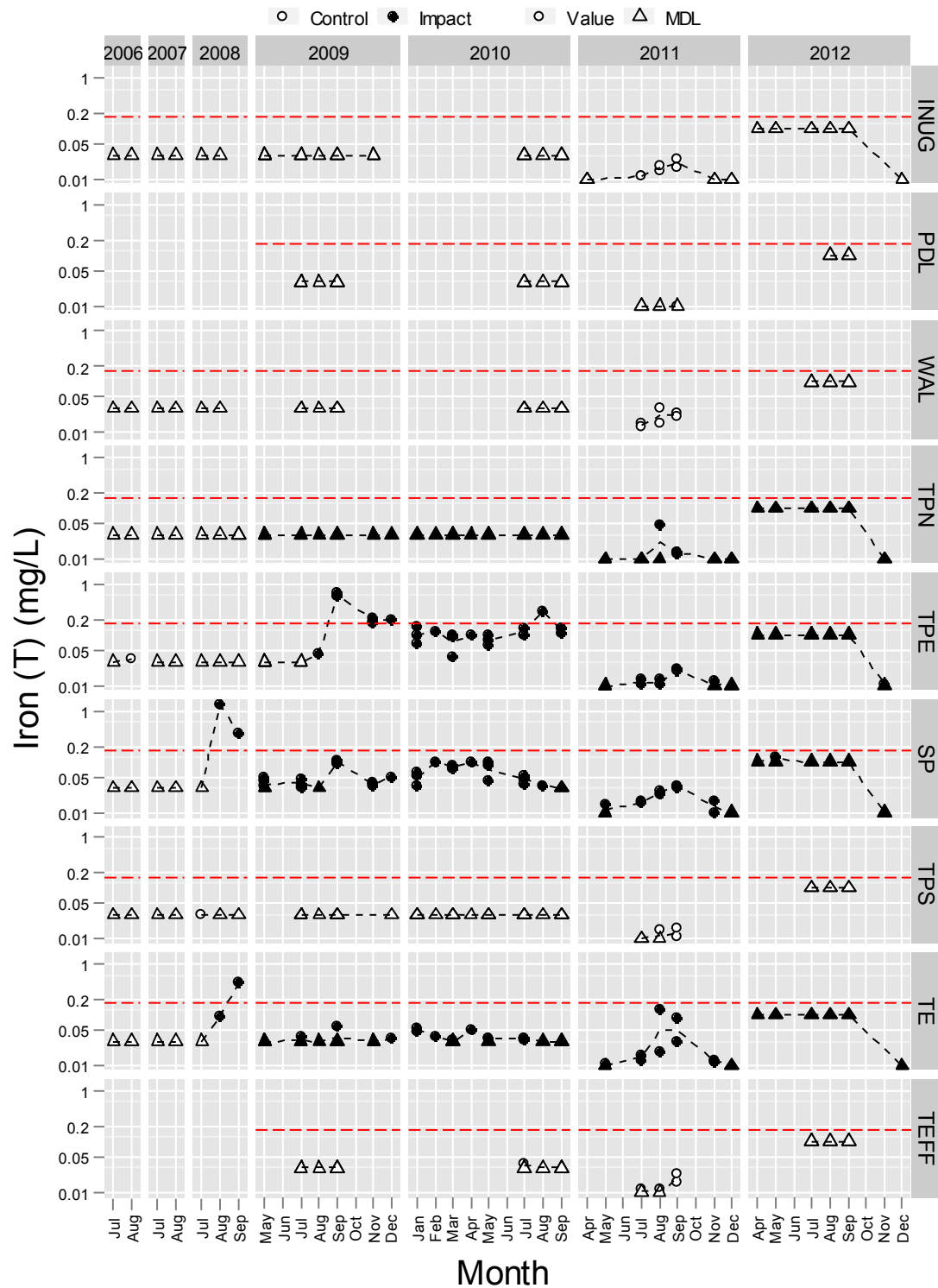


Figure 3.3-24. Total Magnesium (mg/L) in water samples from Meadowbank study lakes since 2006.

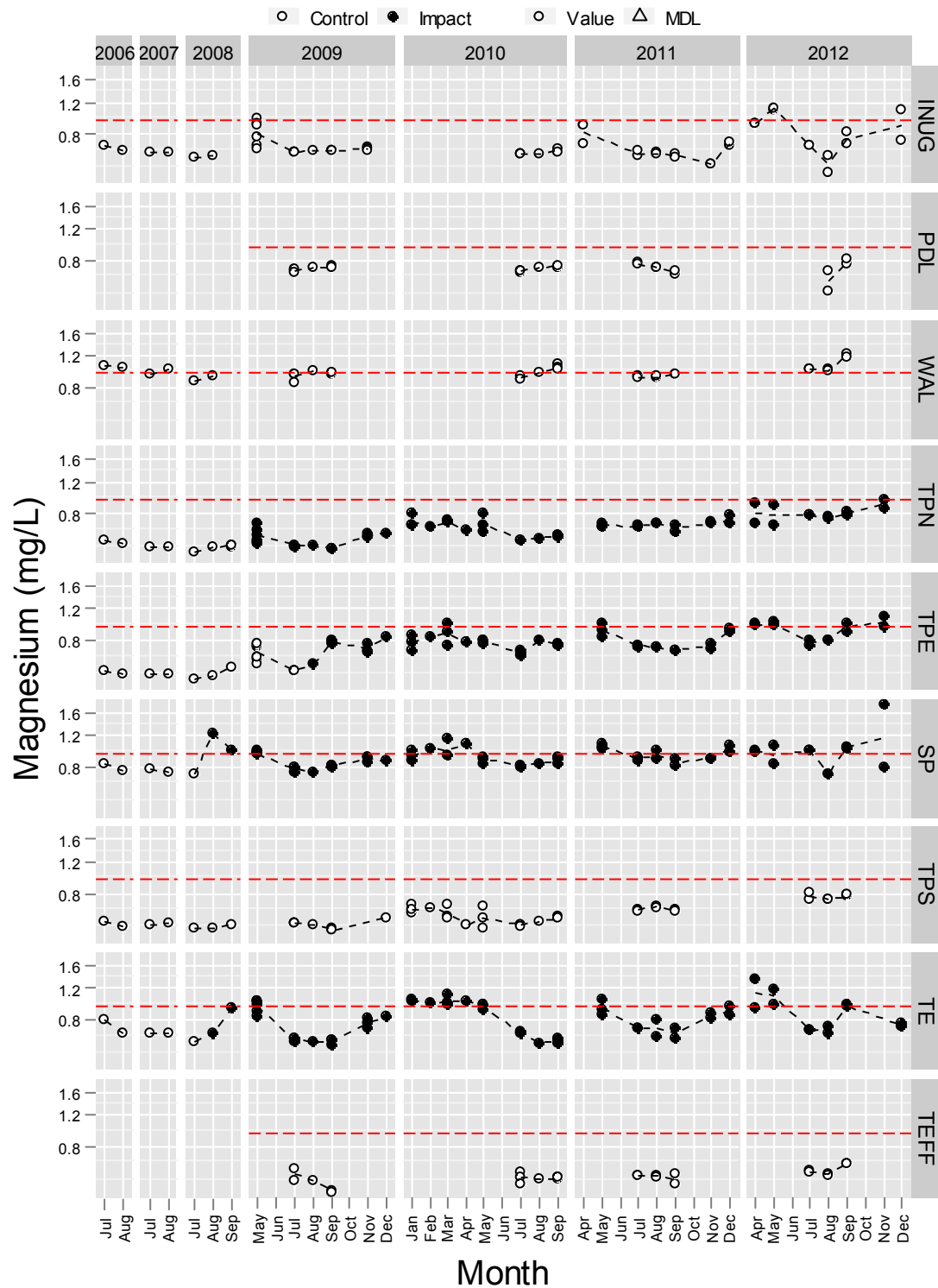


Figure 3.3-25. Total Manganese (mg/L) in water samples from Meadowbank study lakes since 2006.

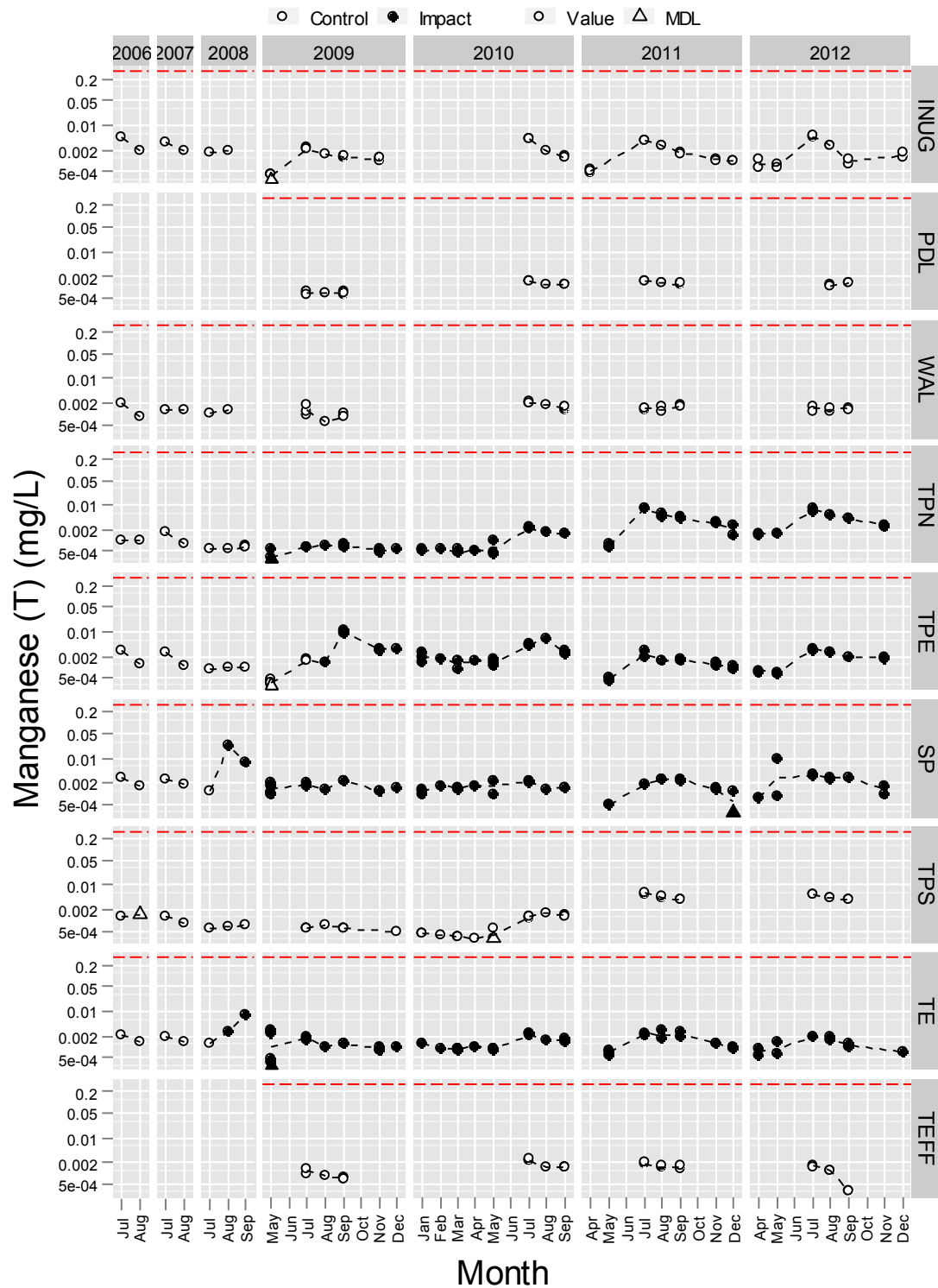


Figure 3.3-26. Total Molybdenum (mg/L) in water samples from Meadowbank study lakes since 2006.

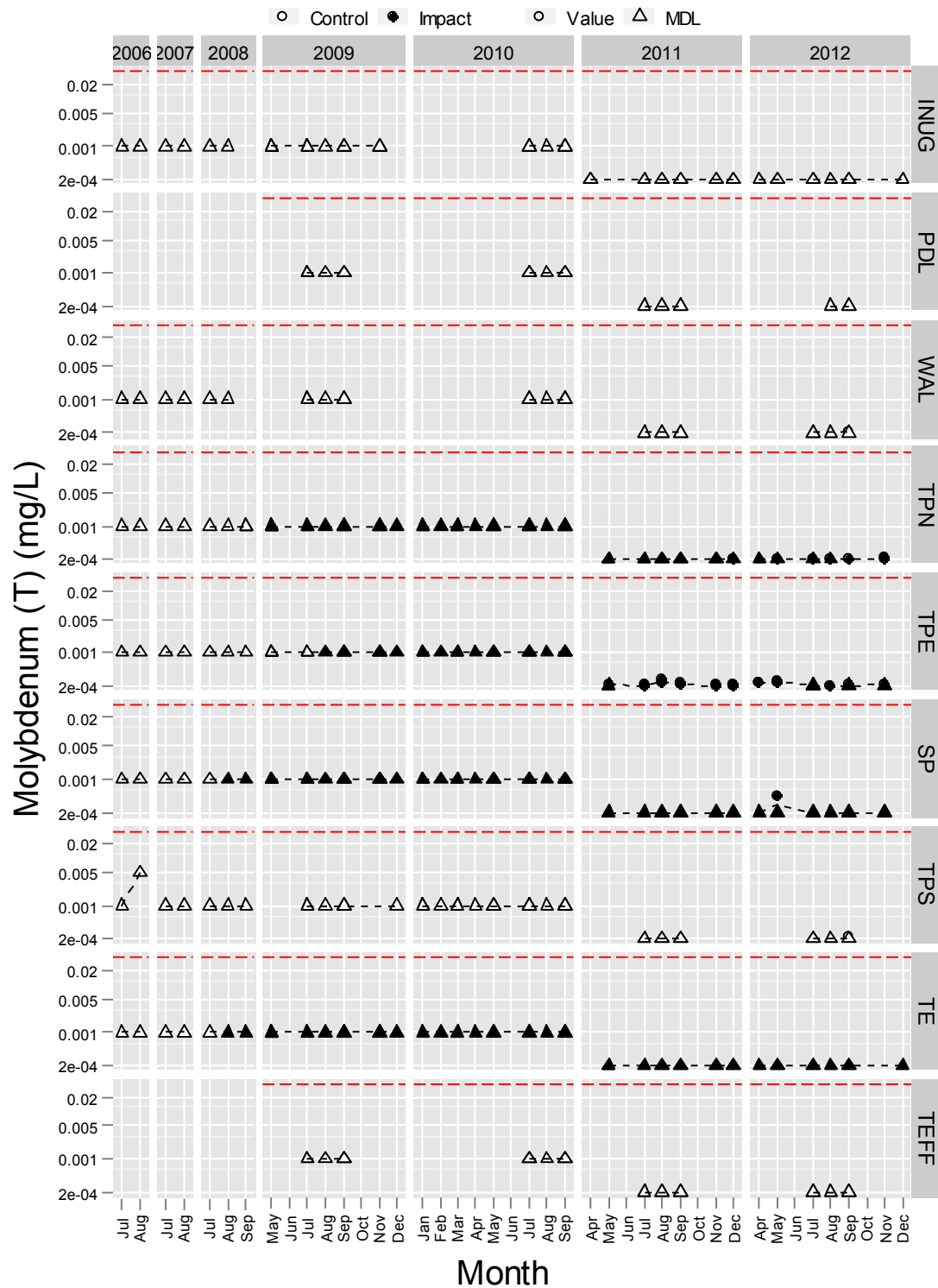


Figure 3.3-27. Total Nickel (mg/L) in water samples from Meadowbank study lakes since 2006.

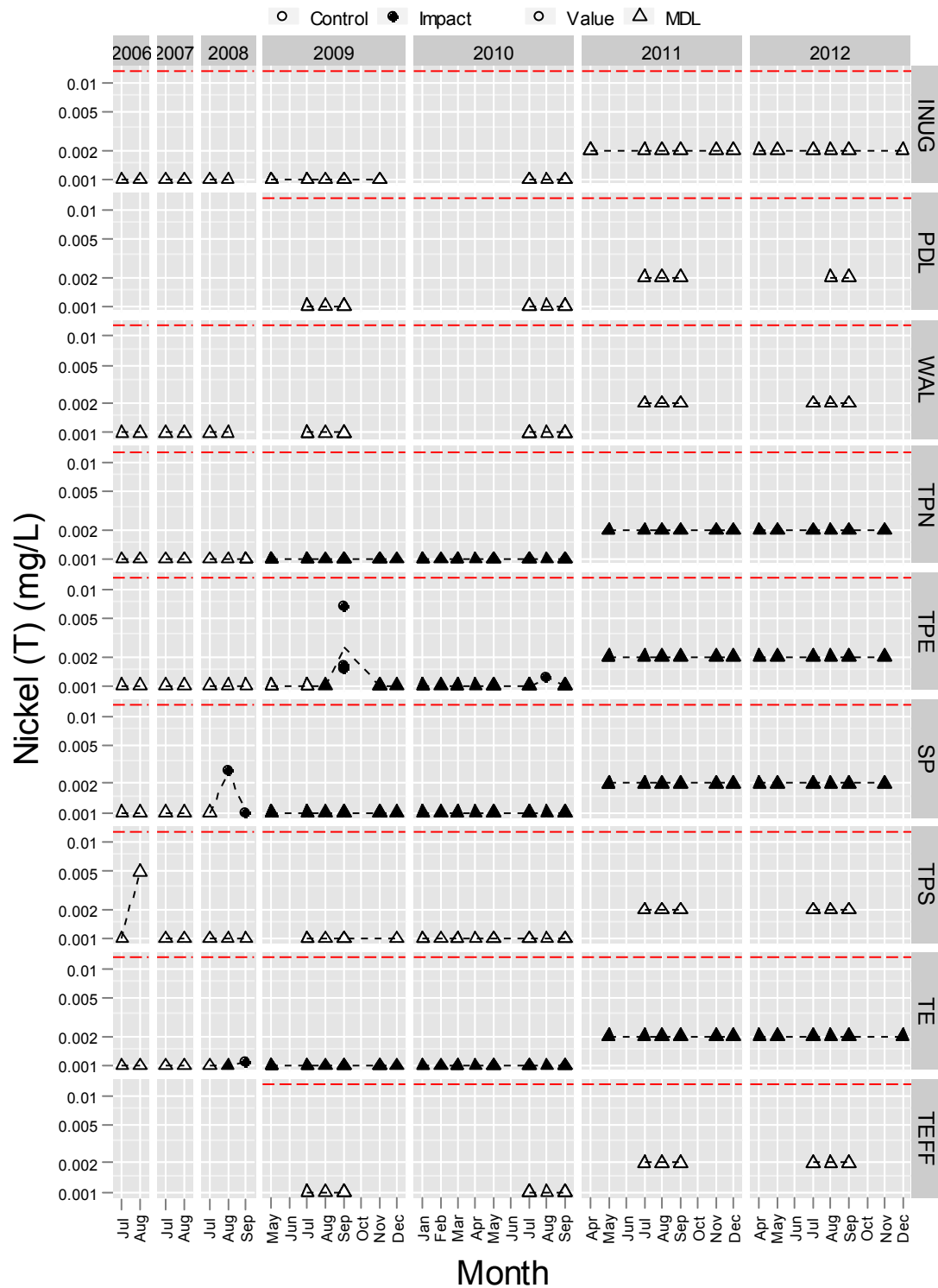


Figure 3.3-28. Total Potassium (mg/L) in water samples from Meadowbank study lakes since 2006.

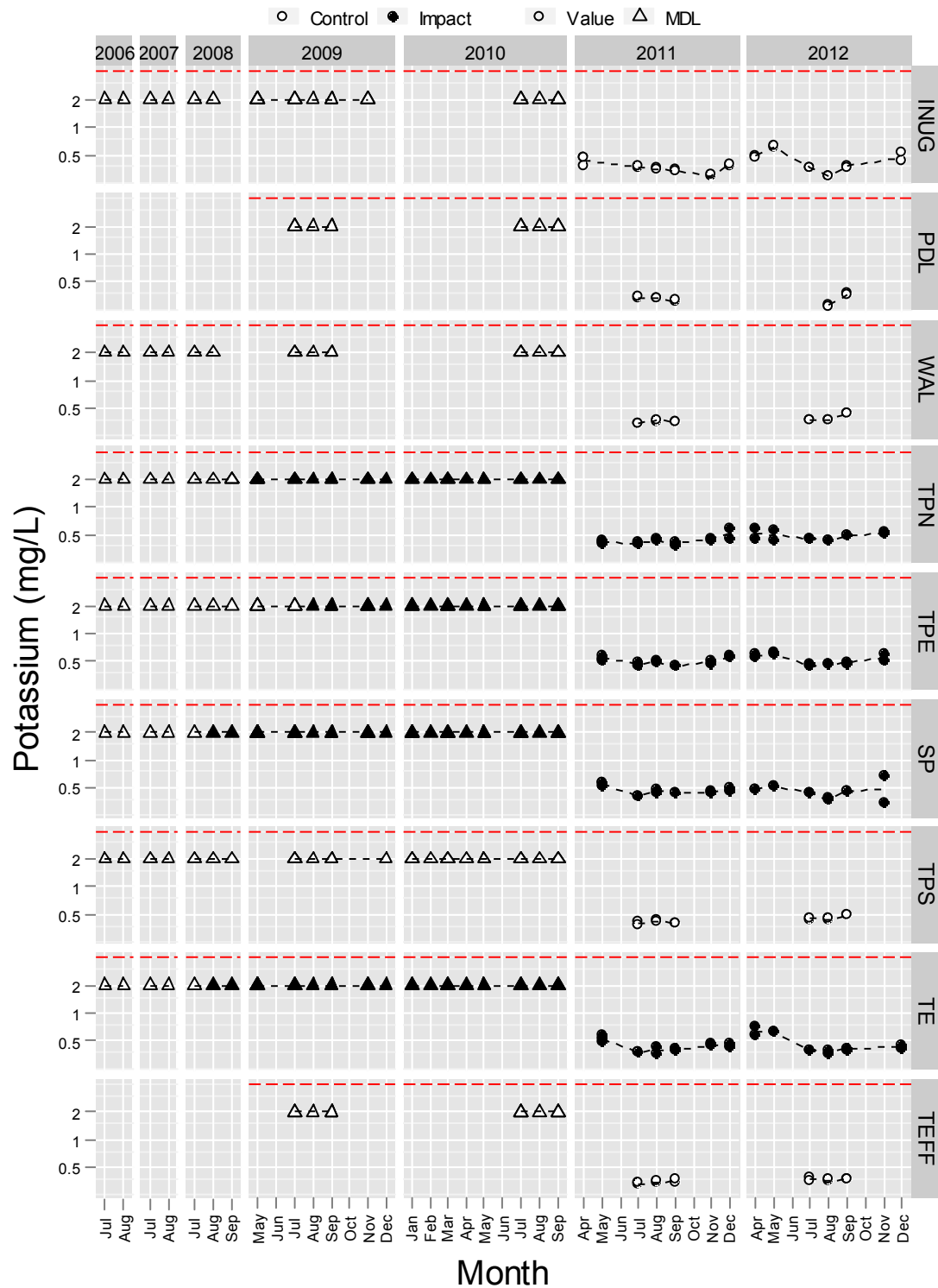


Figure 3.3-29. Total Sodium (mg/L) in water samples from Meadowbank study lakes since 2006.

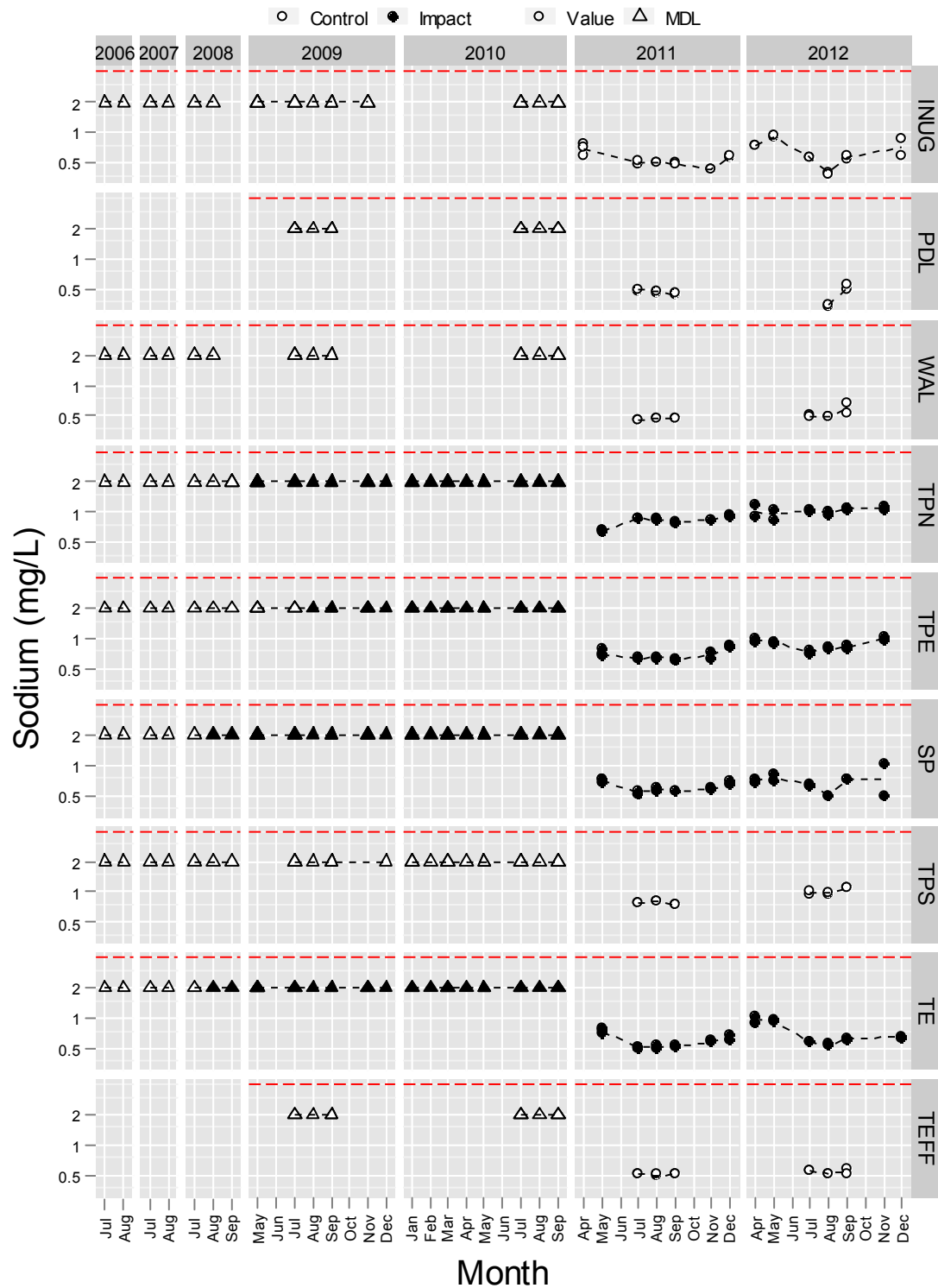


Figure 3.3-30. Total Strontium (mg/L) in water samples from Meadowbank study lakes since 2006.

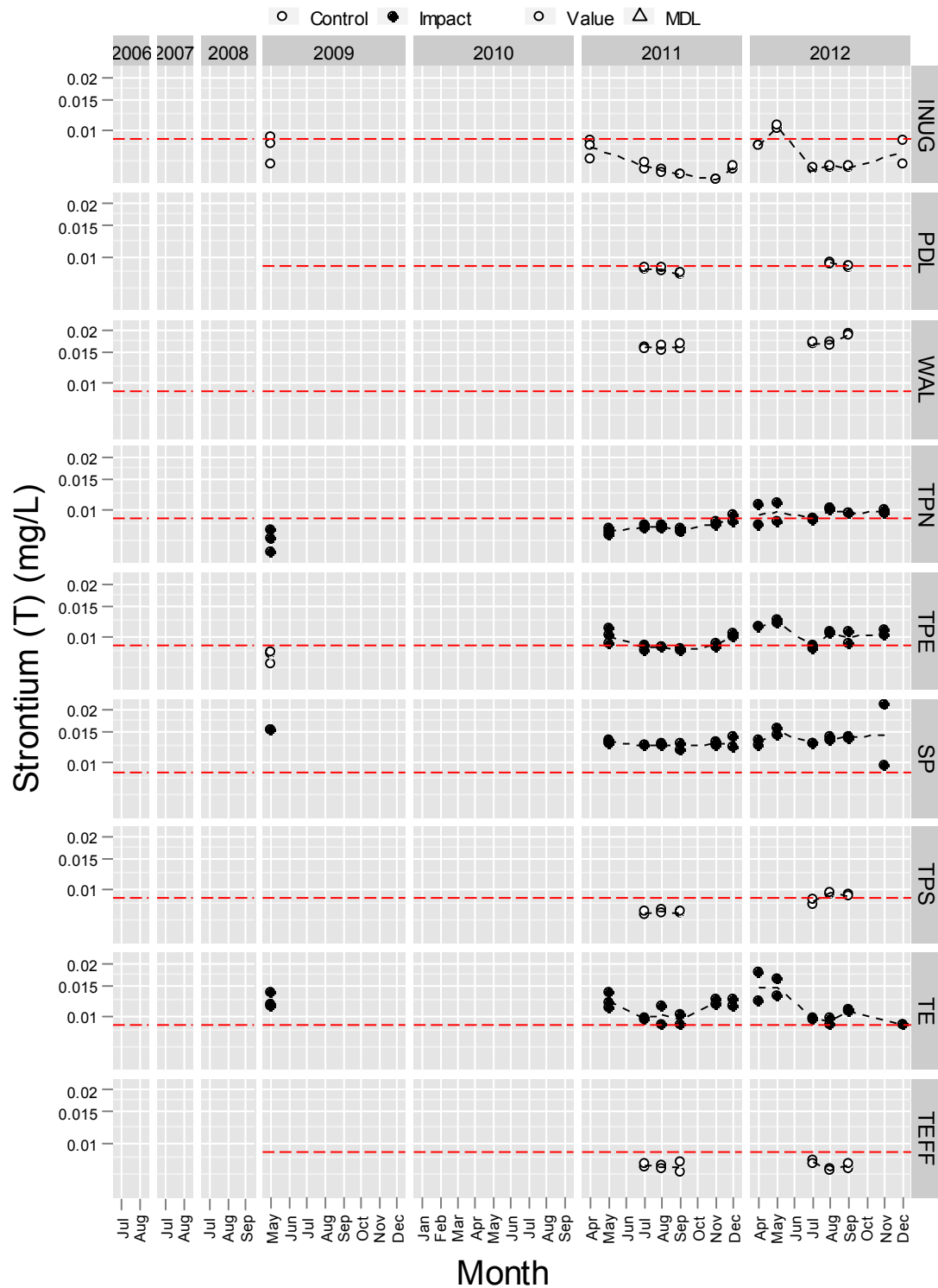


Figure 3.3-31. Total Titanium (mg/L) in water samples from Meadowbank study lakes since 2006.

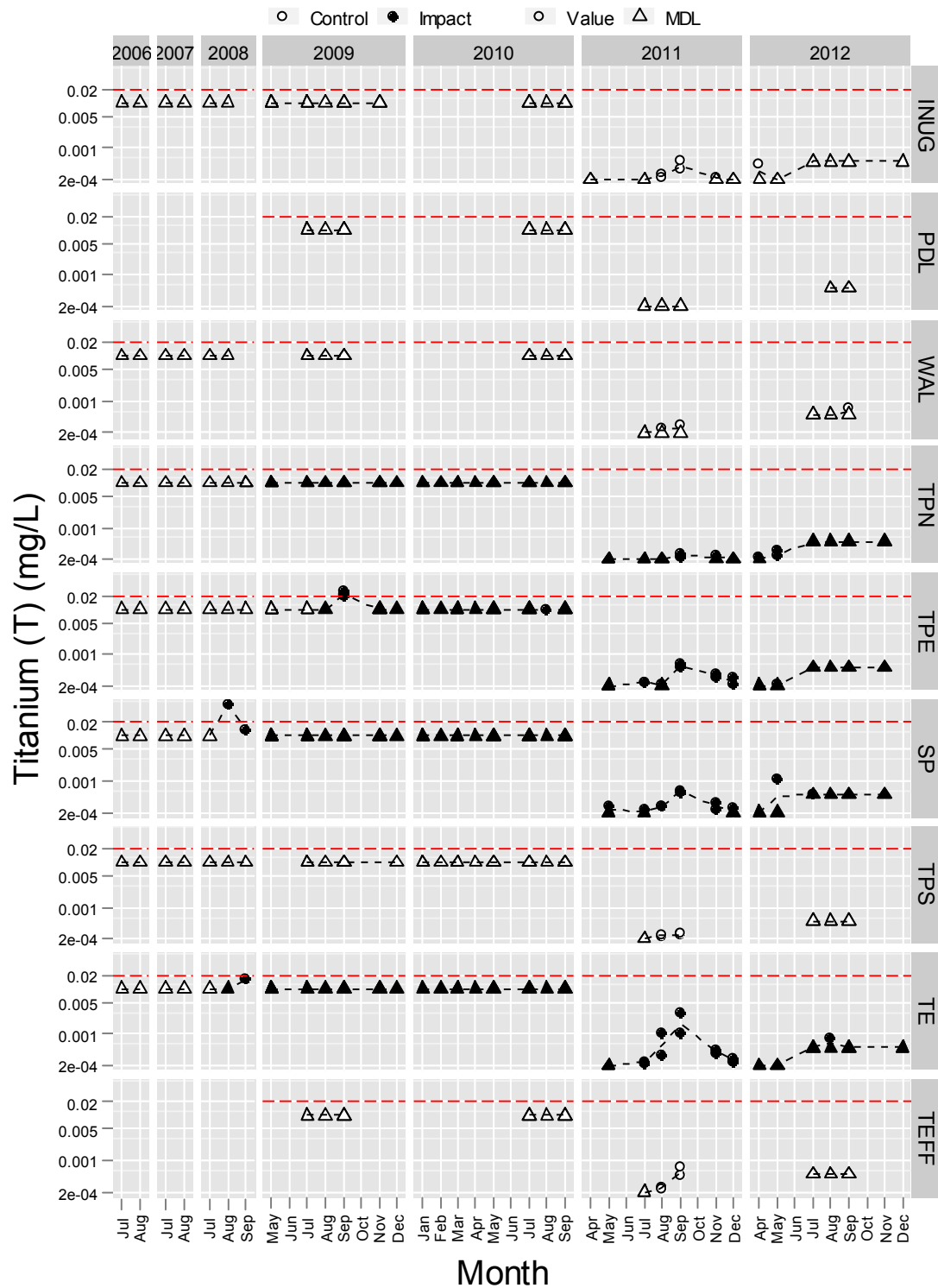


Figure 3.3-32. Total Uranium (mg/L) in water samples from Meadowbank study lakes since 2006.

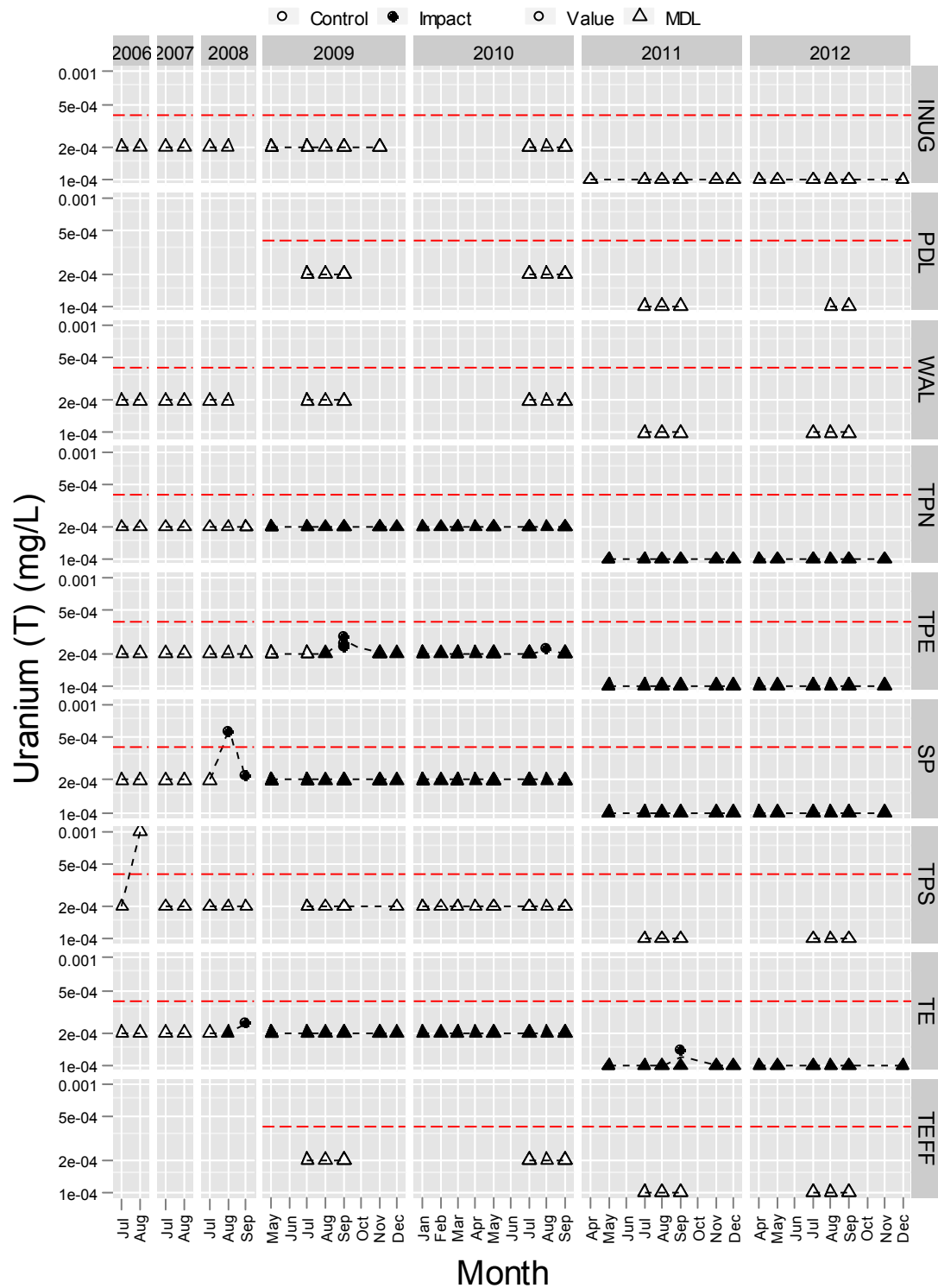


Figure 3.3-33. Dissolved Aluminum (mg/L) in water samples from Meadowbank study lakes since 2006.

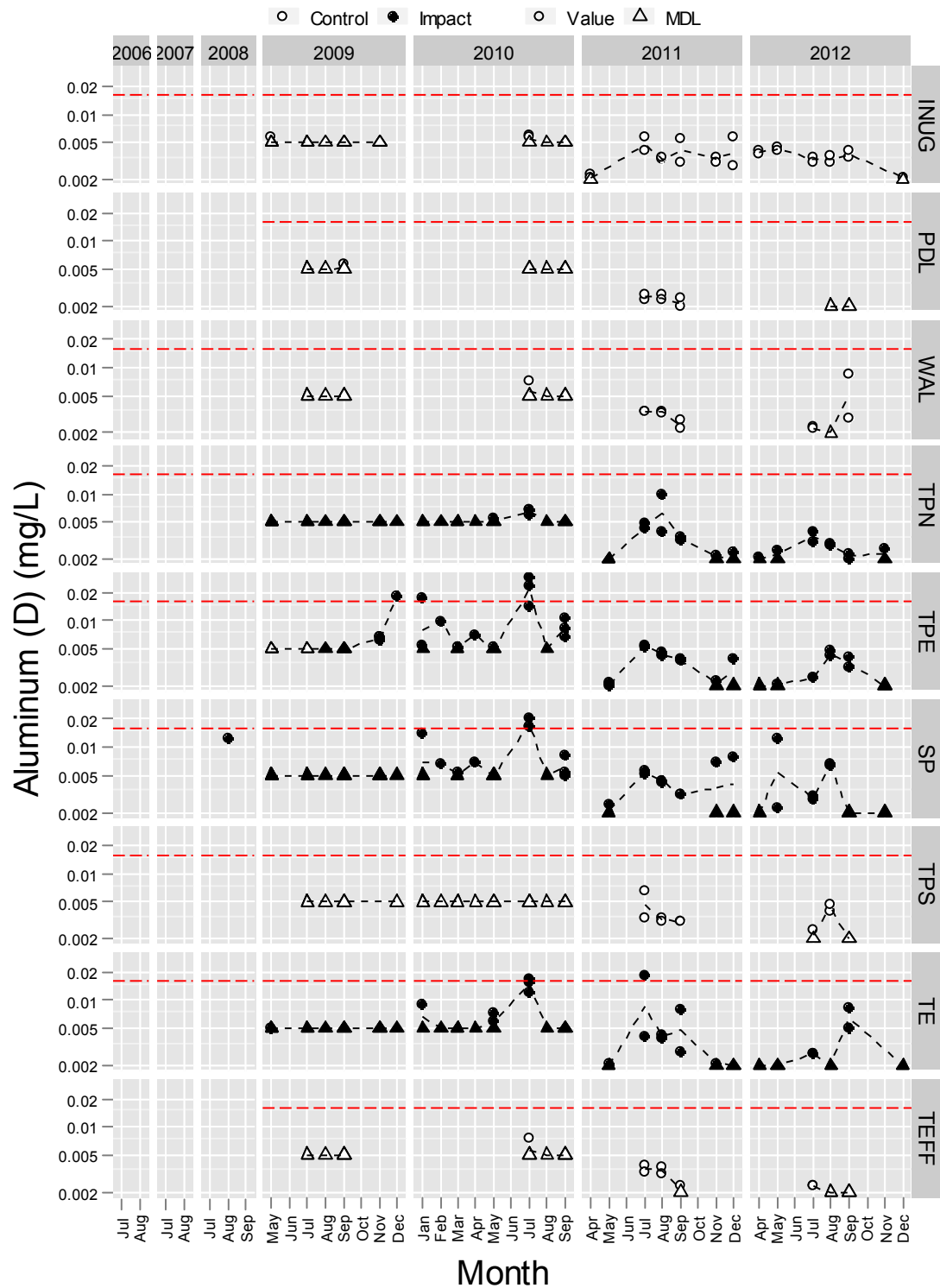


Figure 3.3-34. Dissolved Arsenic (mg/L) in water samples from Meadowbank study lakes since 2006.

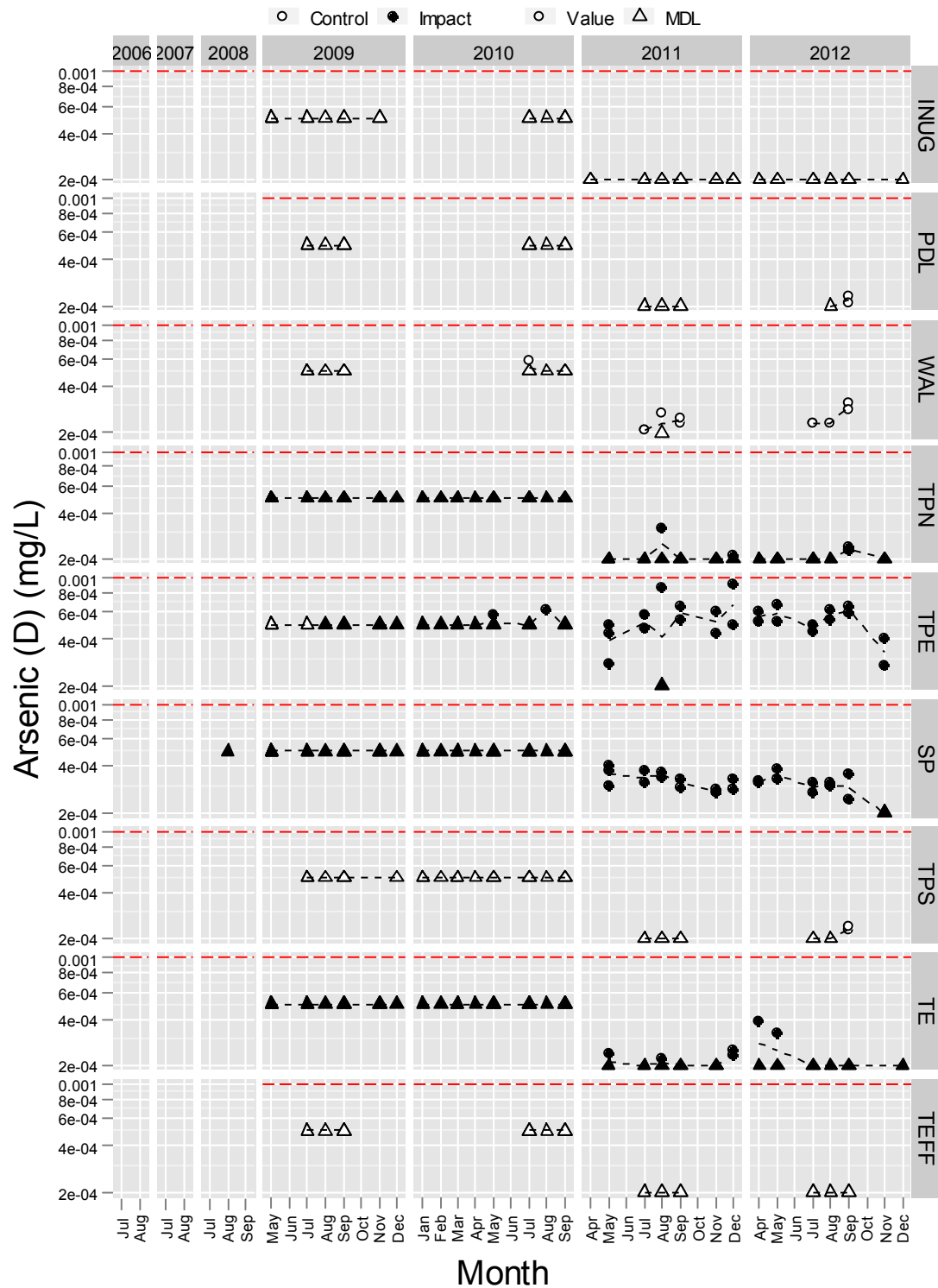


Figure 3.3-35. Dissolved Barium (mg/L) in water samples from Meadowbank study lakes since 2006.

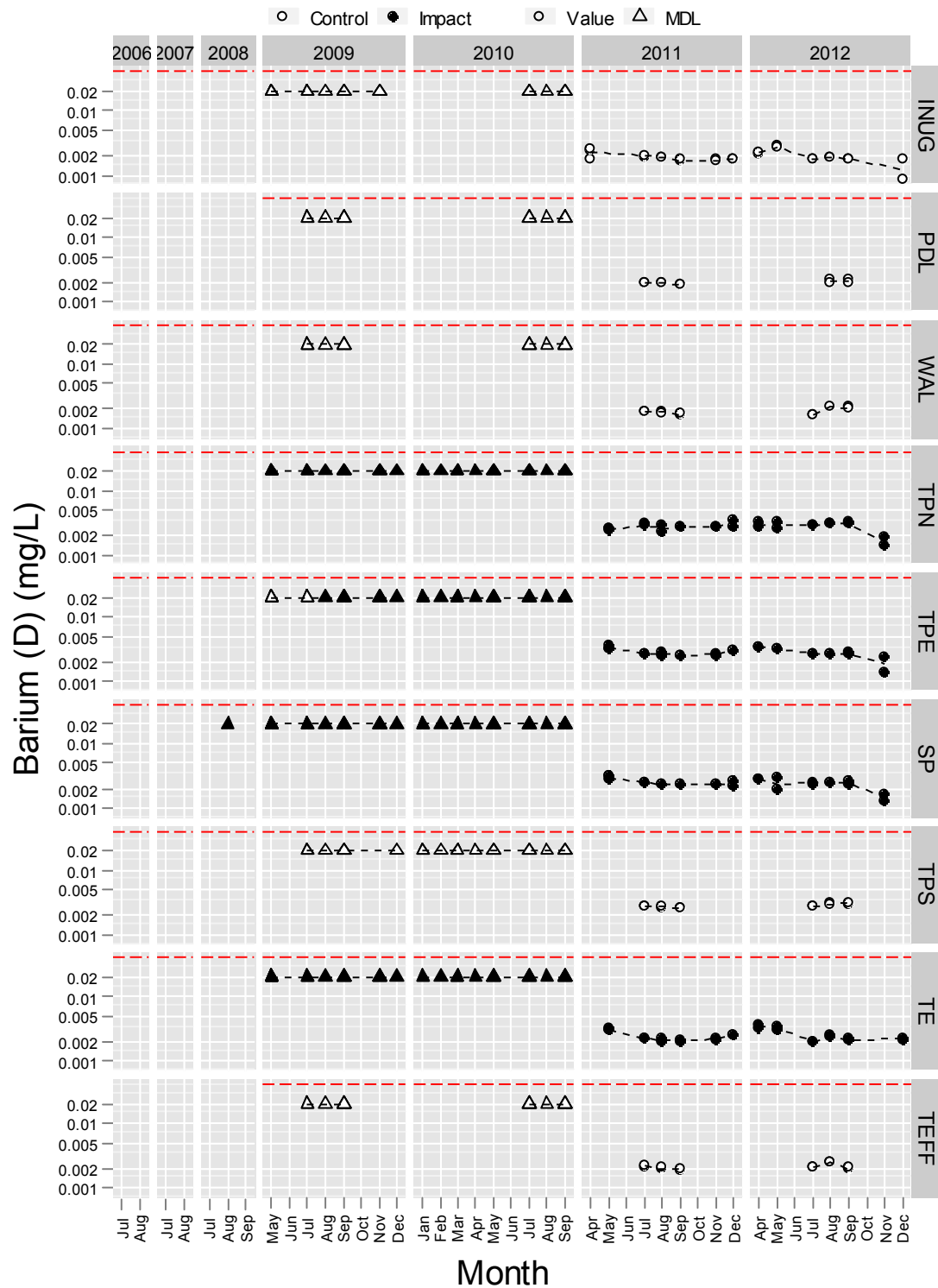


Figure 3.3-36. Dissolved Copper (mg/L) in water samples from Meadowbank study lakes since 2006.

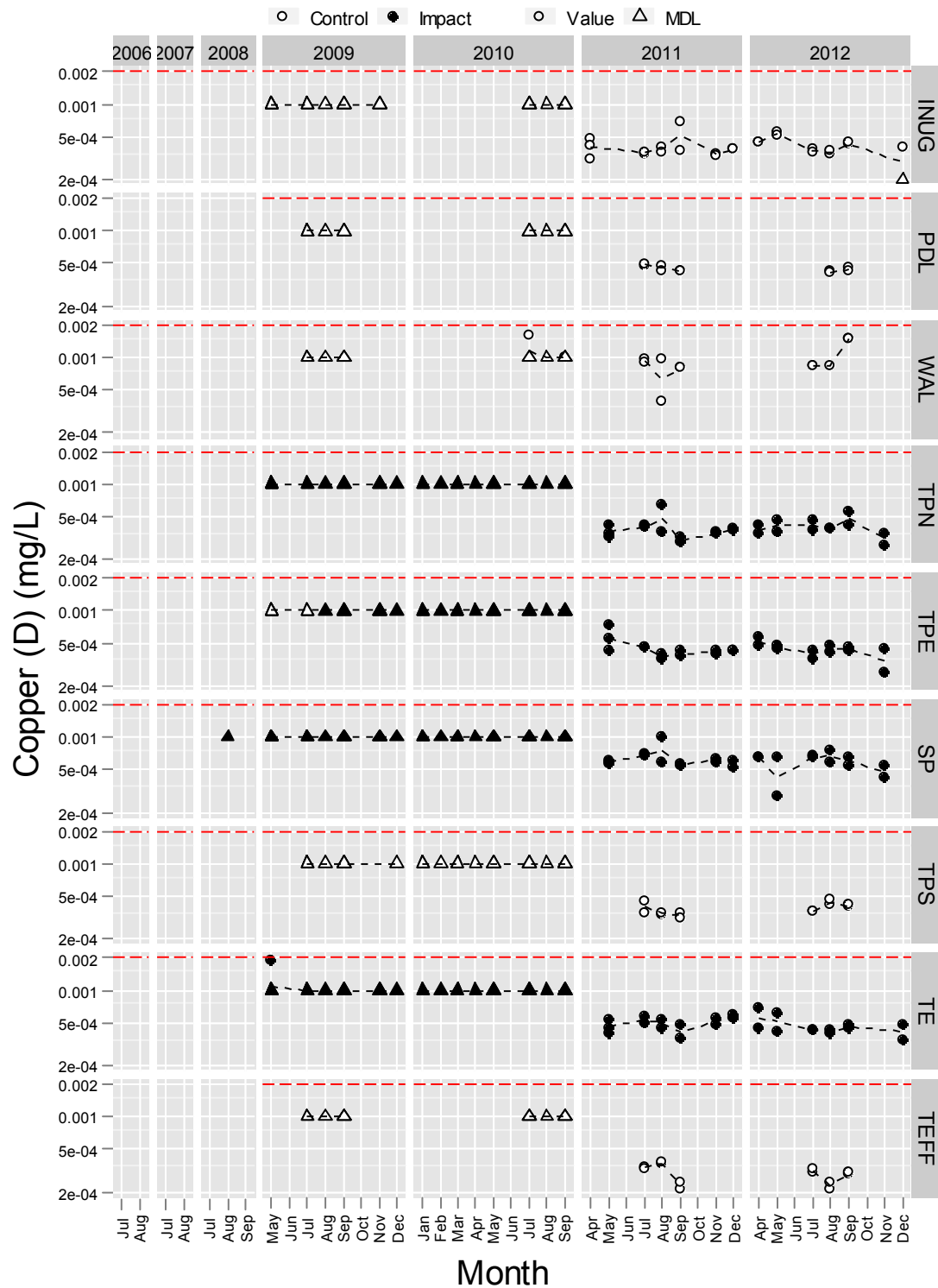


Figure 3.3-37. Dissolved Manganese (mg/L) in water samples from Meadowbank study lakes since 2006.

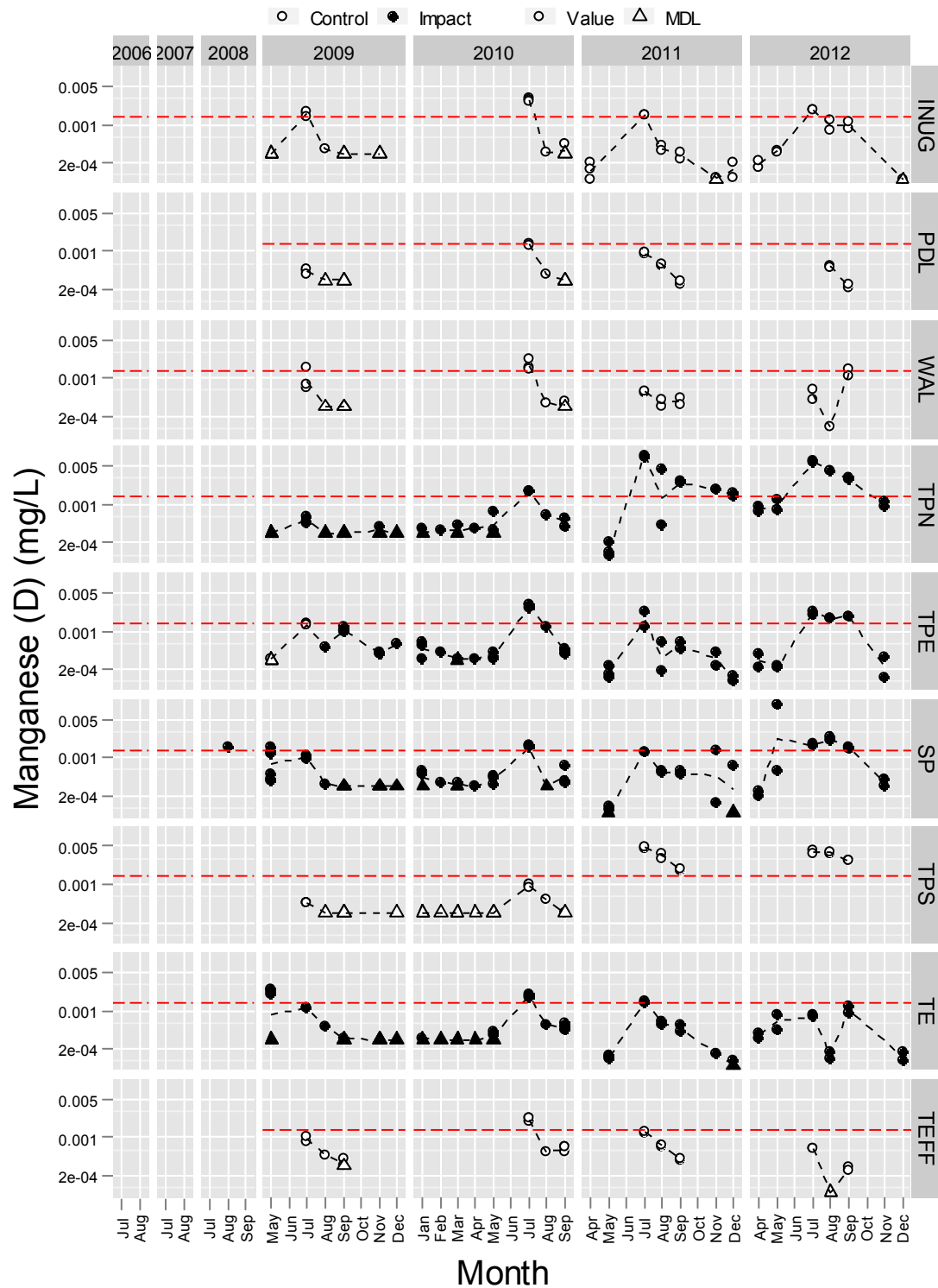


Figure 3.3-38. Dissolved Molybdenum (mg/L) in water samples from Meadowbank study lakes since 2006.

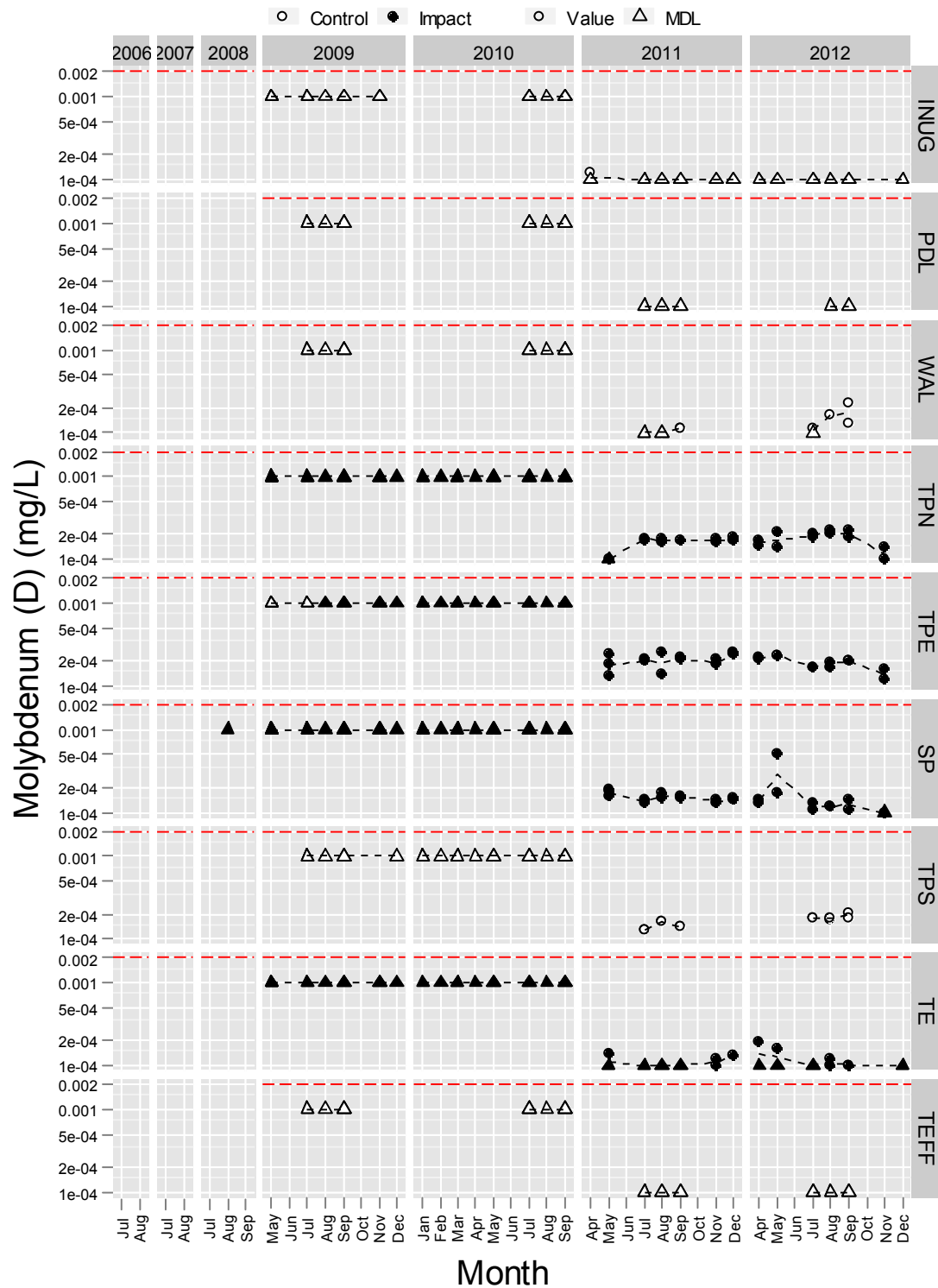


Figure 3.3-39. Dissolved Strontium (mg/L) in water samples from Meadowbank study lakes since 2006.

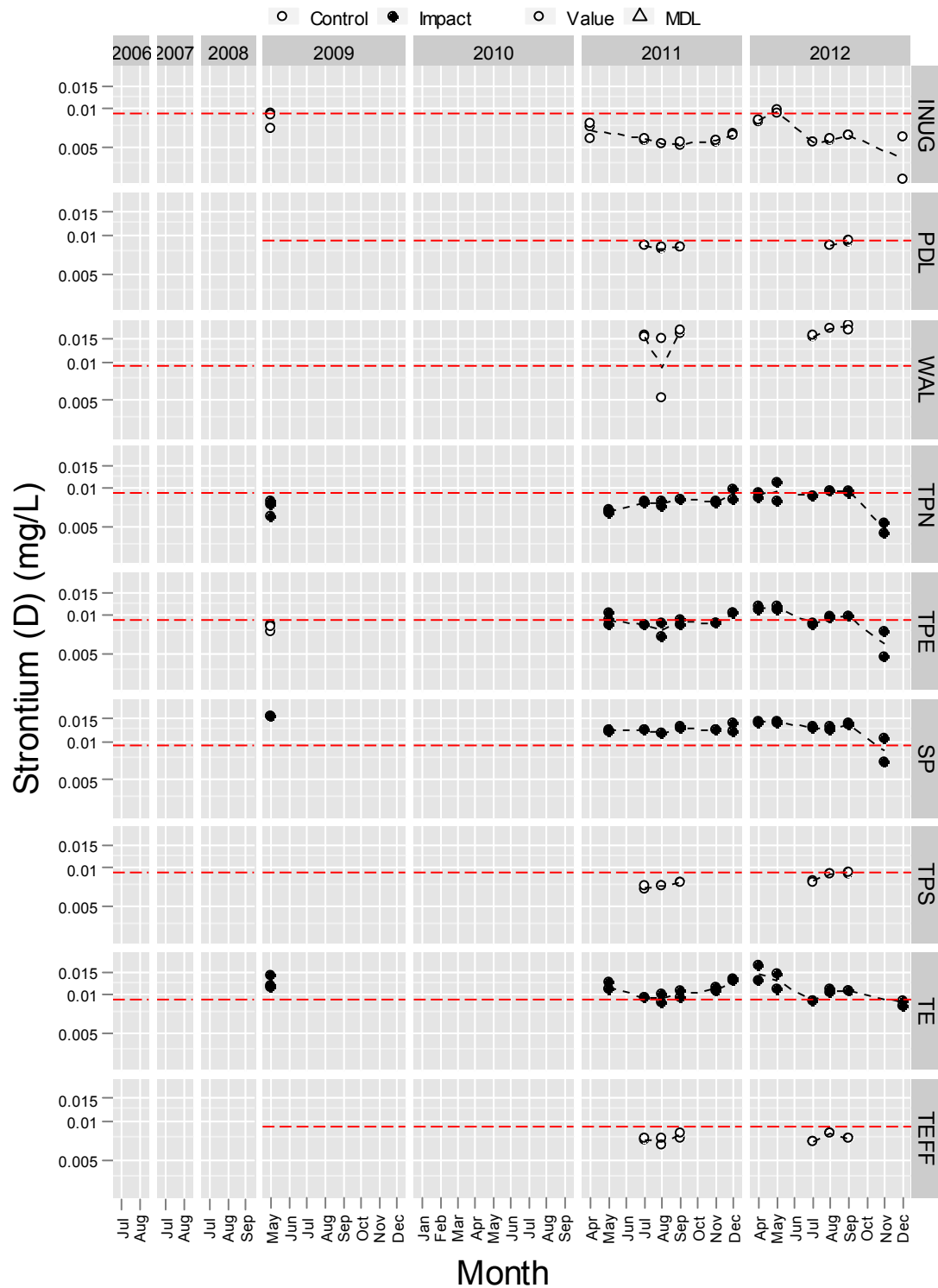


Figure 3.3-40. Conductivity ($\mu\text{S}/\text{cm}$) in water samples from Baker Lake since 2008.

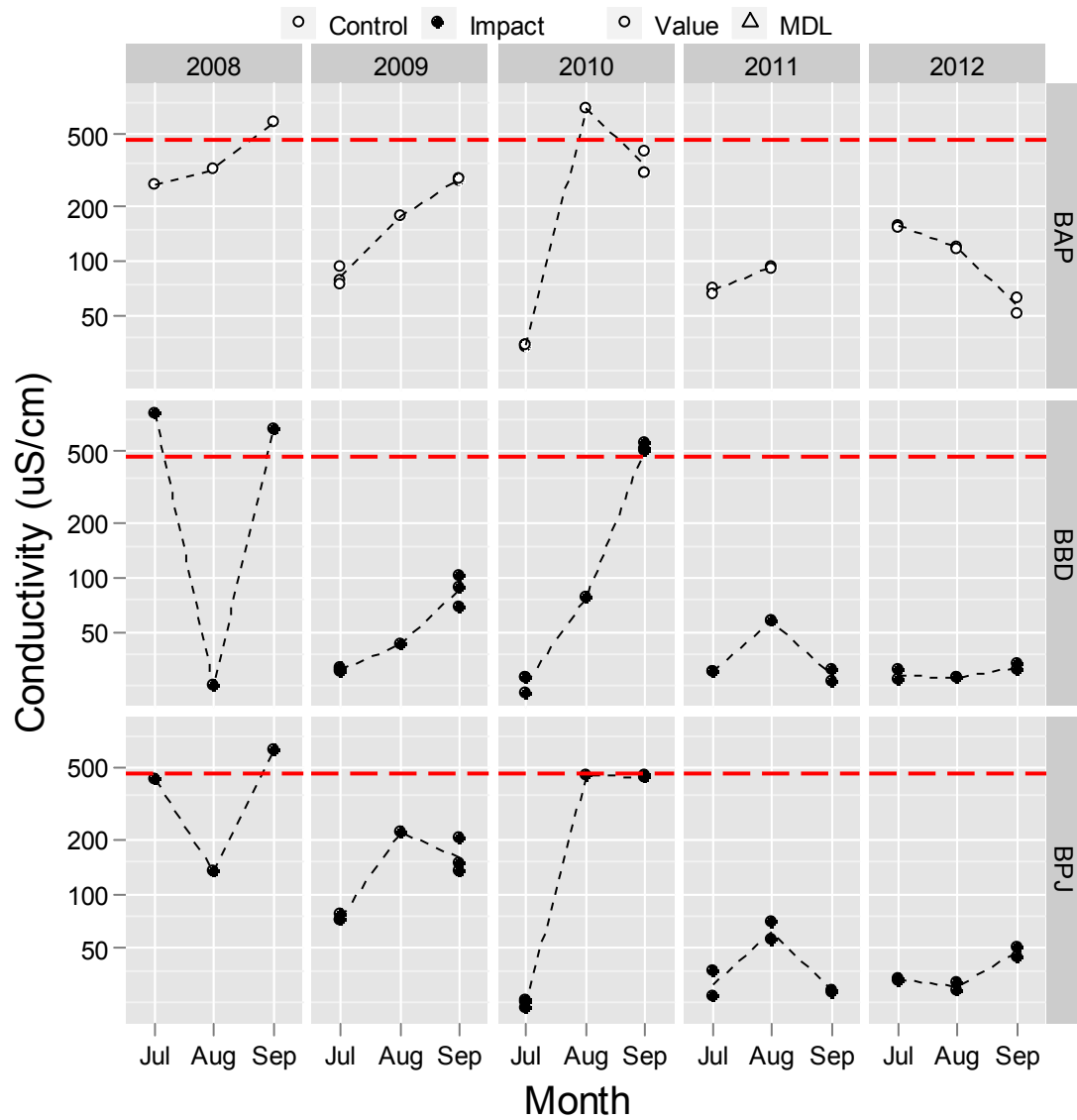


Figure 3.3-41. Hardness (mg/L) in water samples from Baker Lake since 2008.

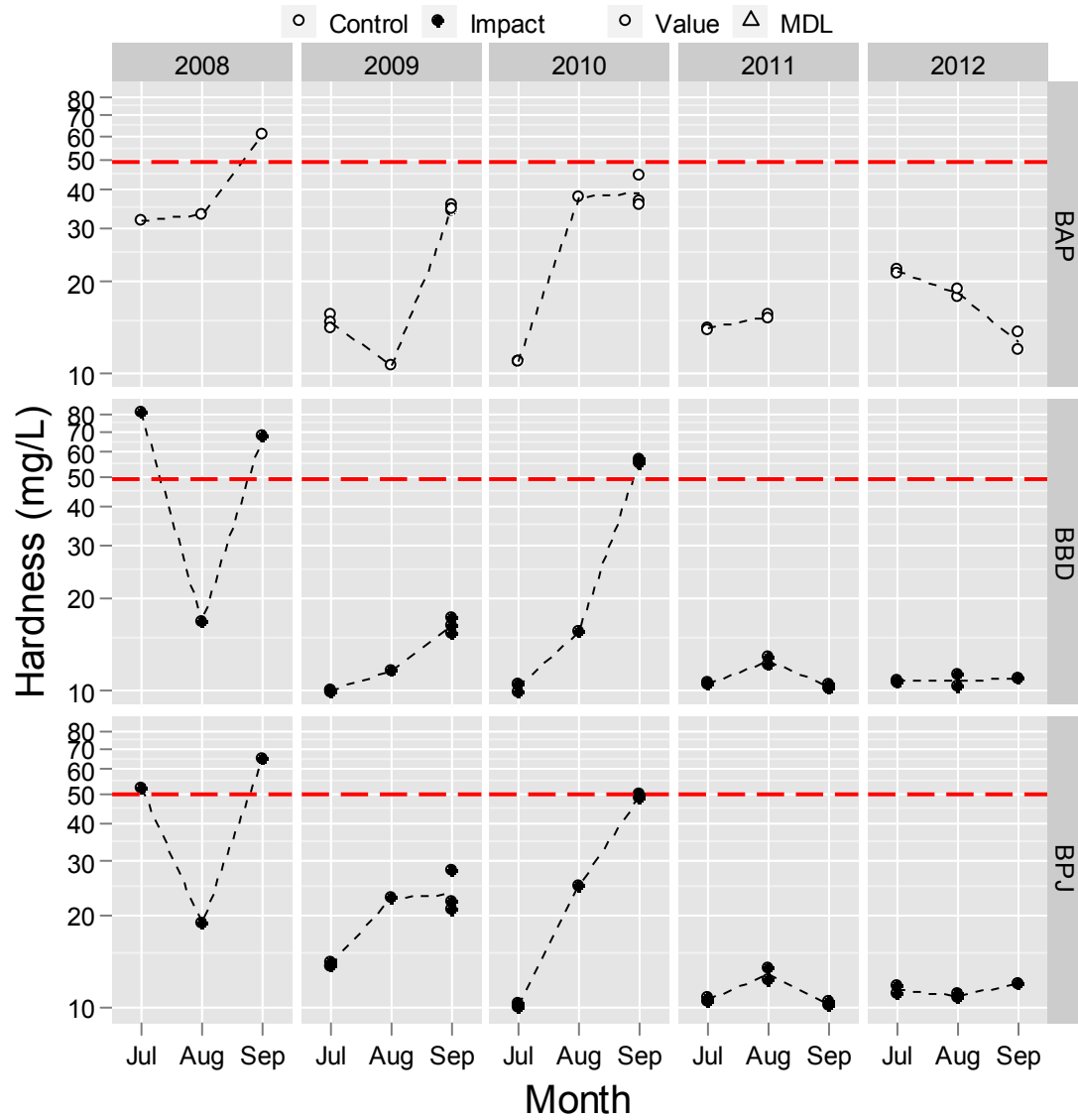


Figure 3.3-42. pH in water samples from Baker Lake since 2008.

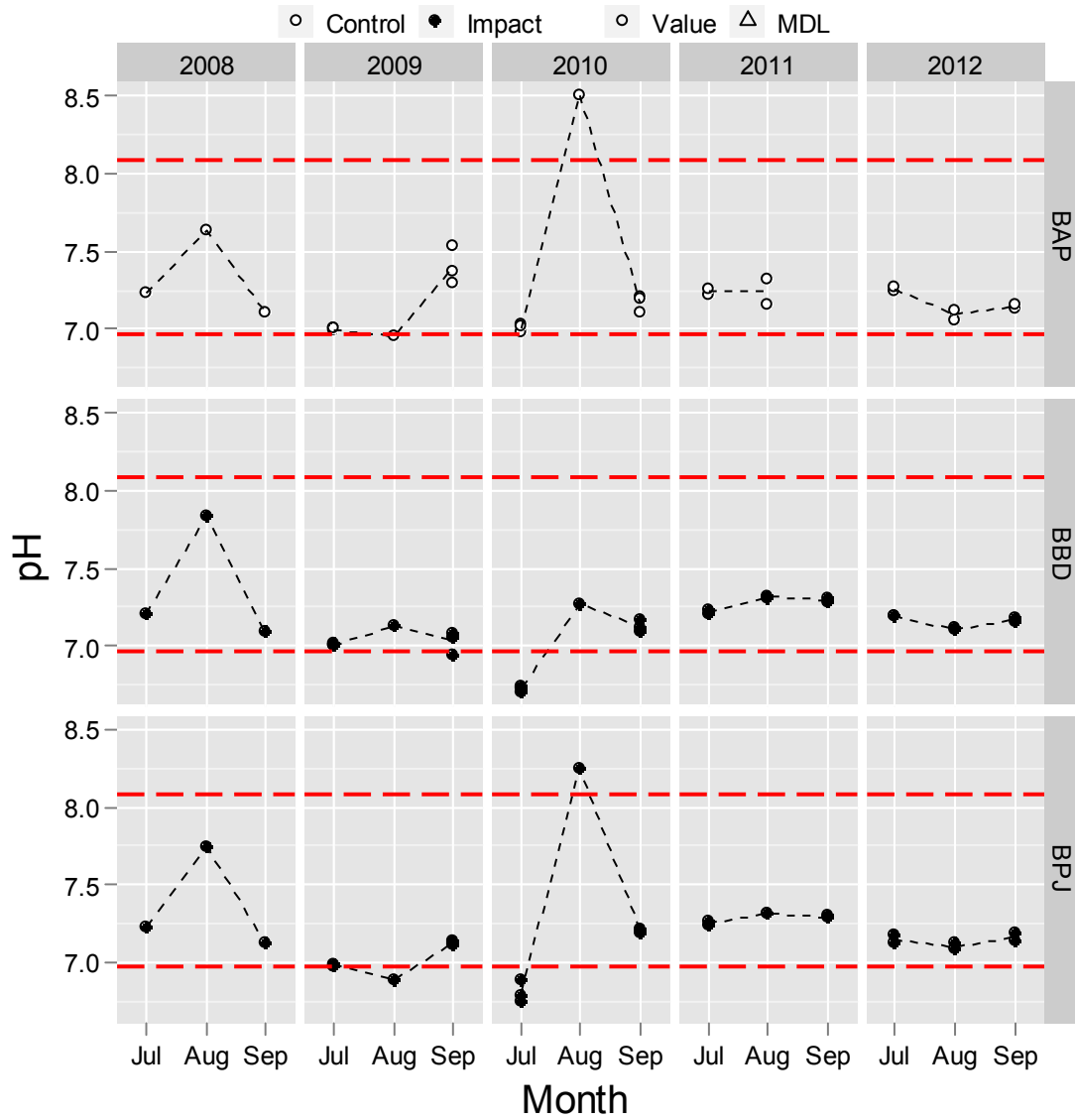


Figure 3.3-43. Total Suspended Solids (TSS; mg/L) in water samples from Baker Lake since 2008.

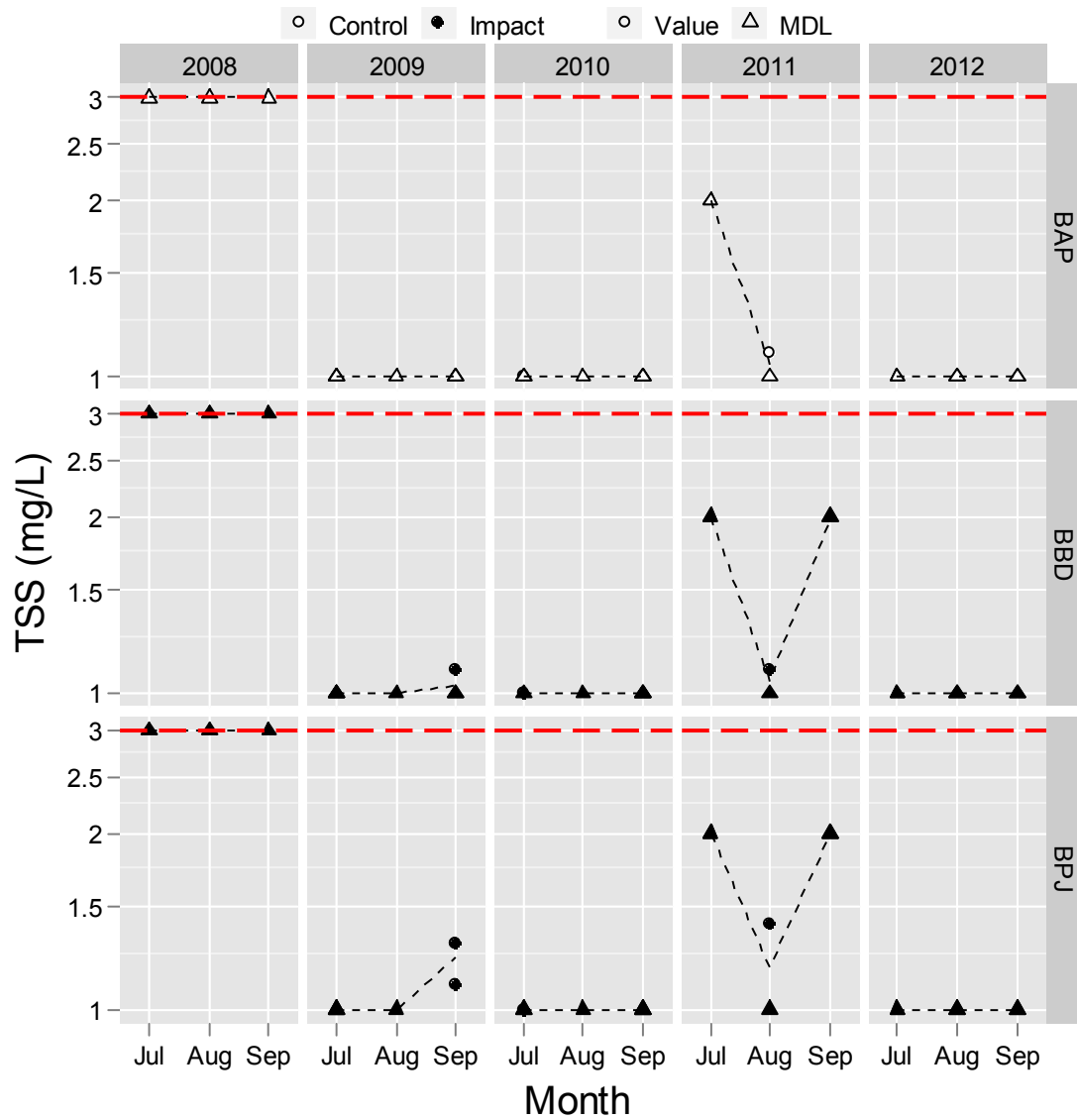


Figure 3.3-44. Total Dissolved Solids (TDS; mg/L) in water samples from Baker Lake since 2008.

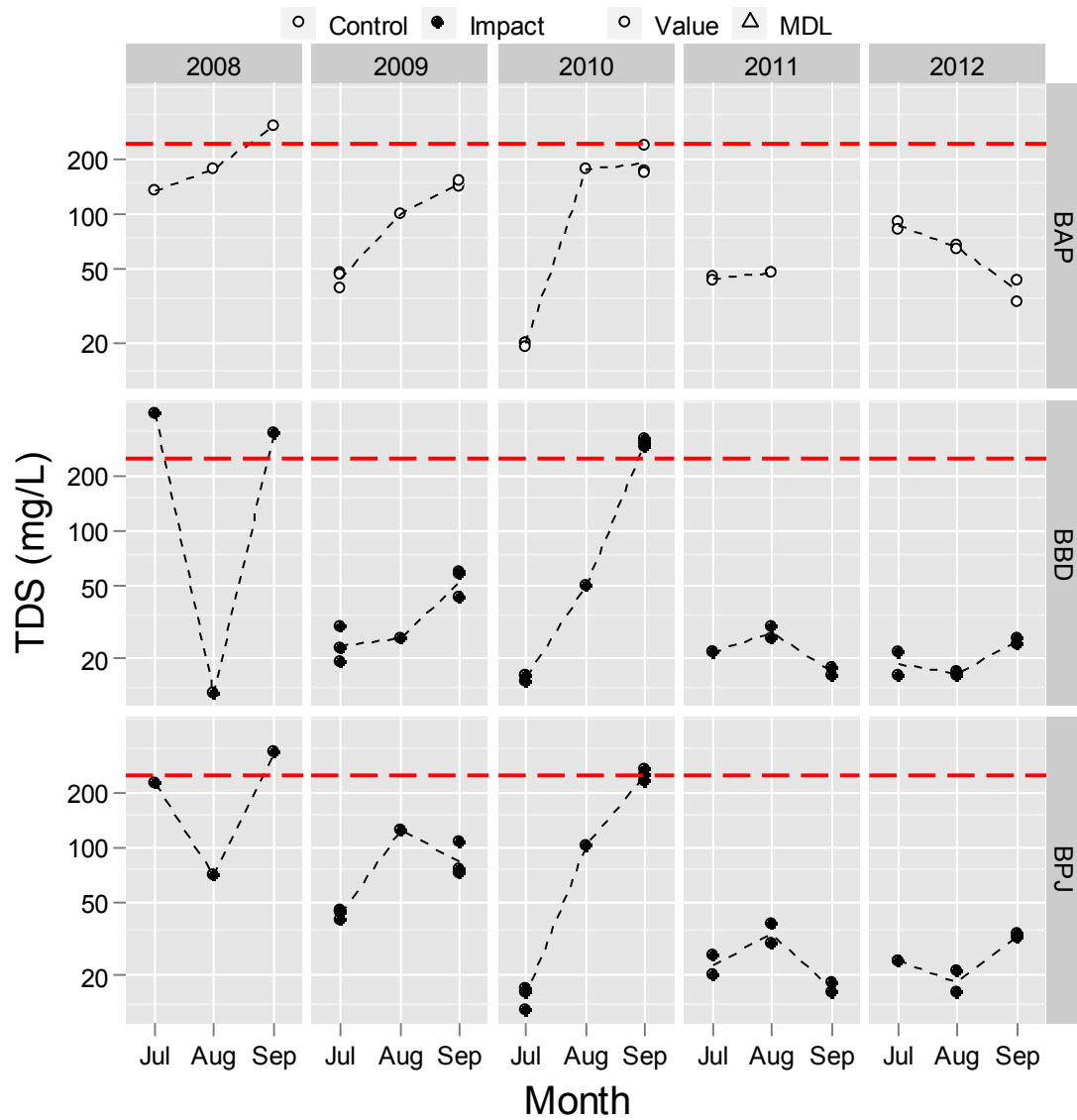


Figure 3.3-45. Bicarbonate Alkalinity (mg/L) in water samples from Baker Lake since 2008.

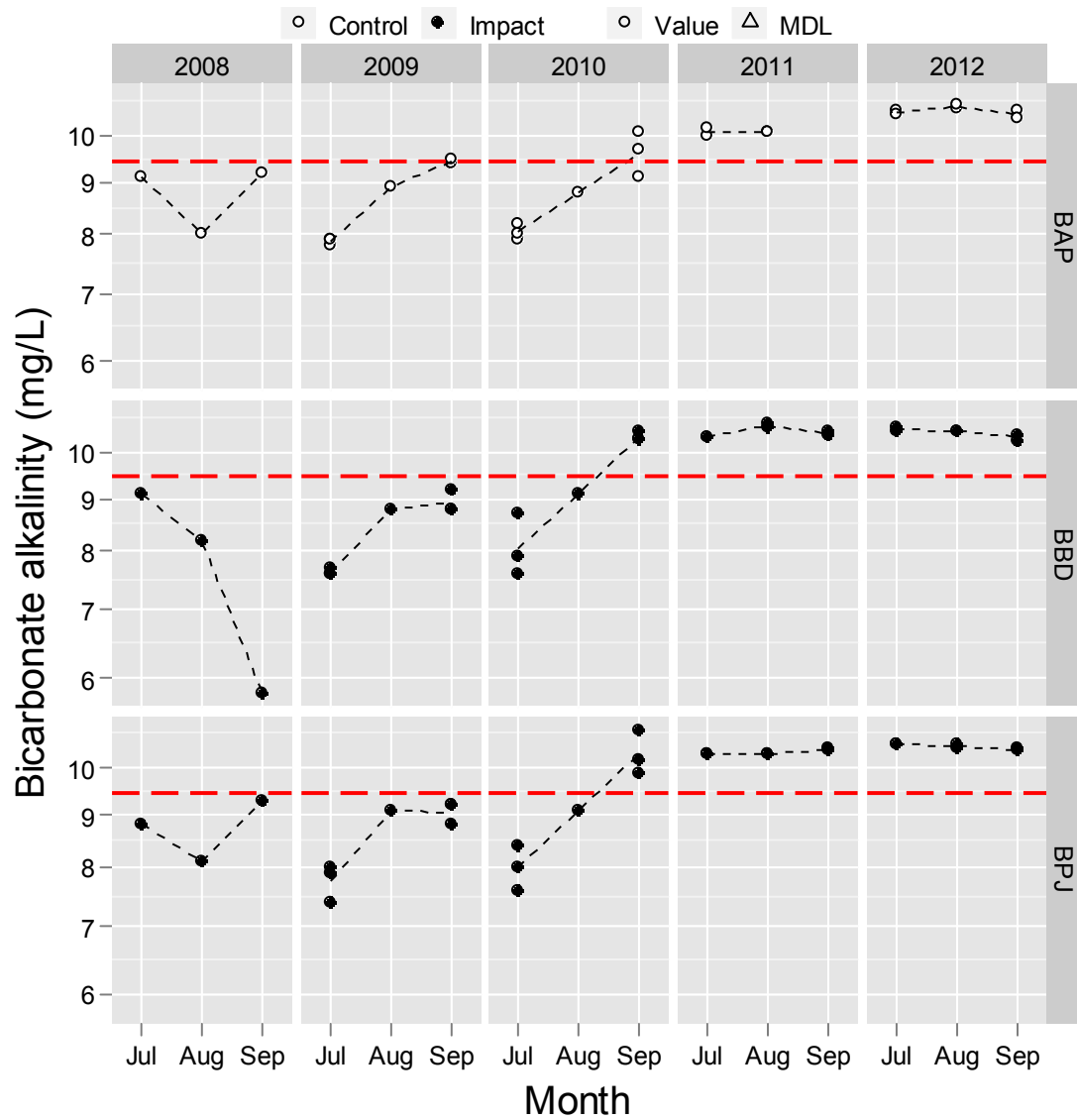


Figure 3.3-46. Total Alkalinity (mg/L) in water samples from Baker Lake since 2008.

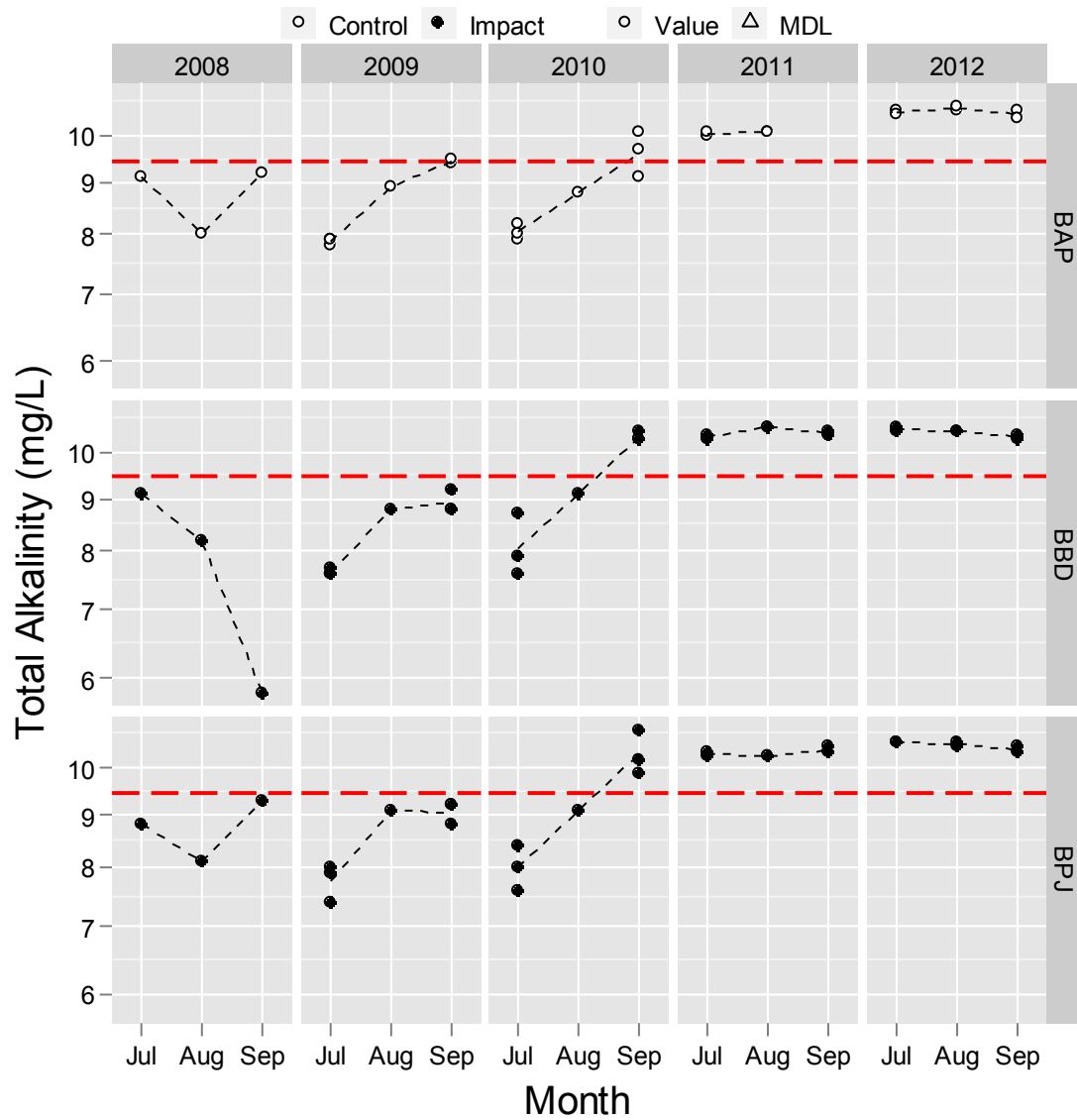


Figure 3.3-47. Ammonia-N (mg/L) in water samples from Baker Lake since 2008.

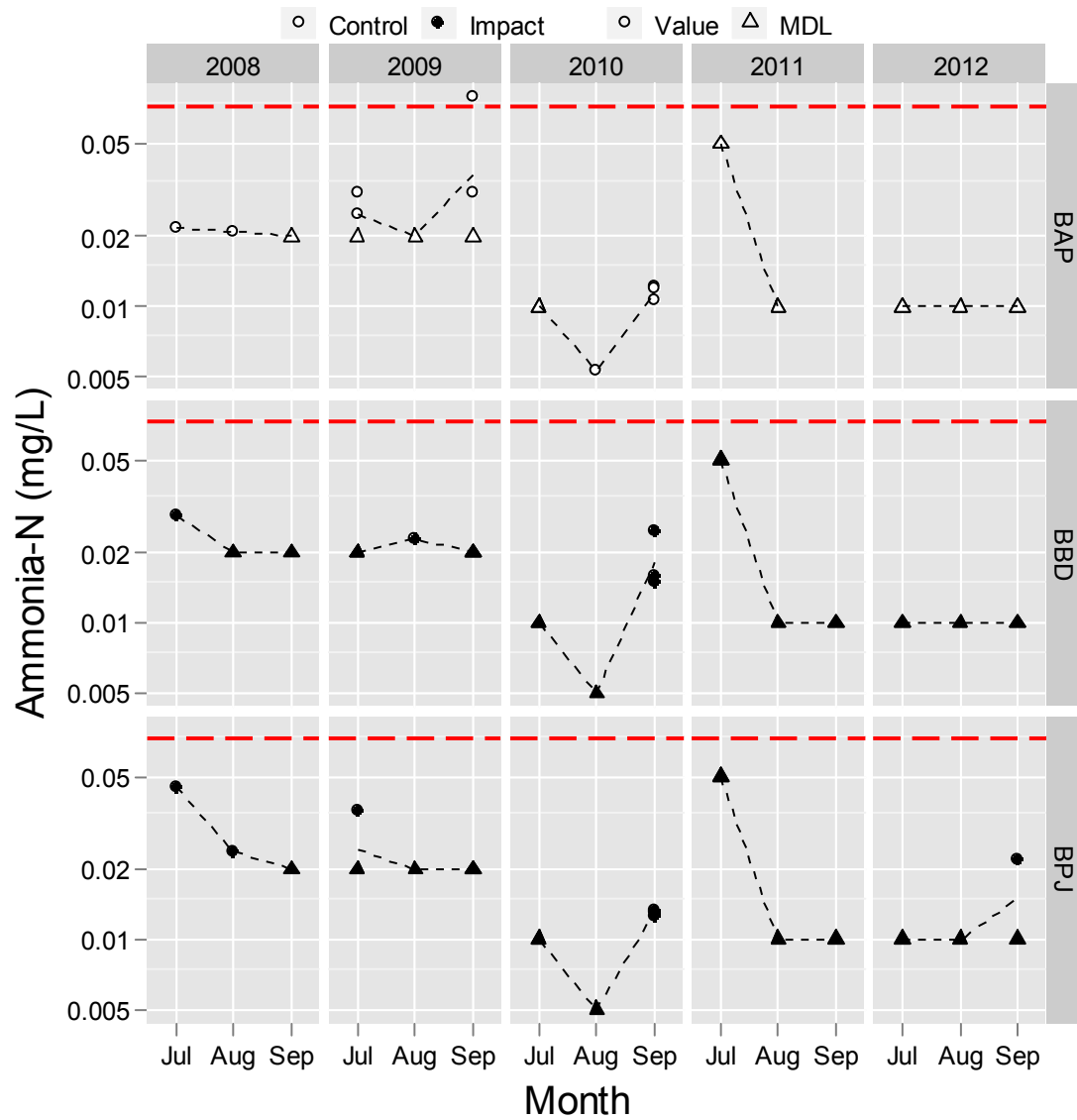


Figure 3.3-48. Chloride (mg/L) in water samples from Baker Lake since 2008.

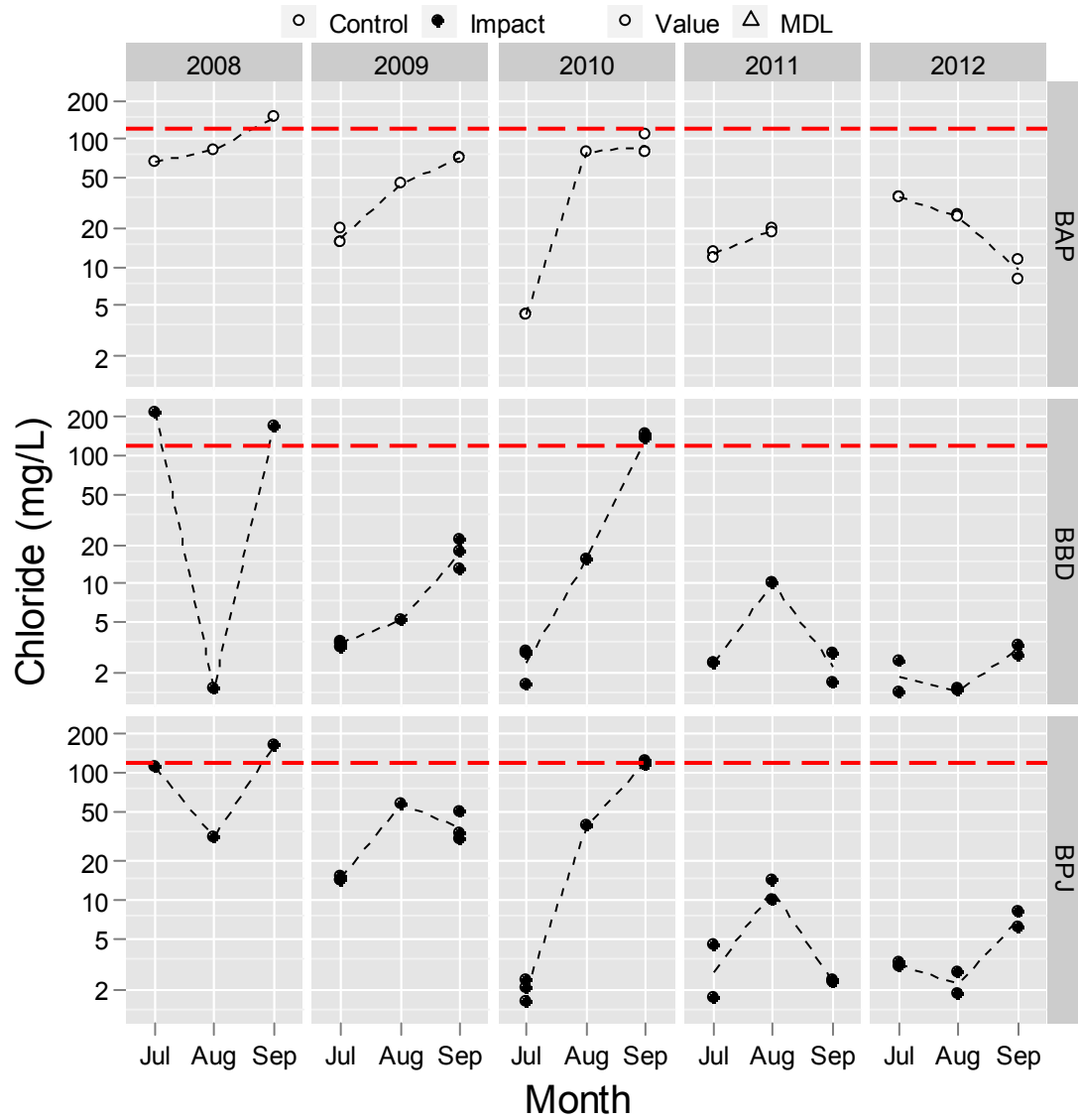


Figure 3.3-49. Nitrate-N (mg/L) in water samples from Baker Lake since 2008.

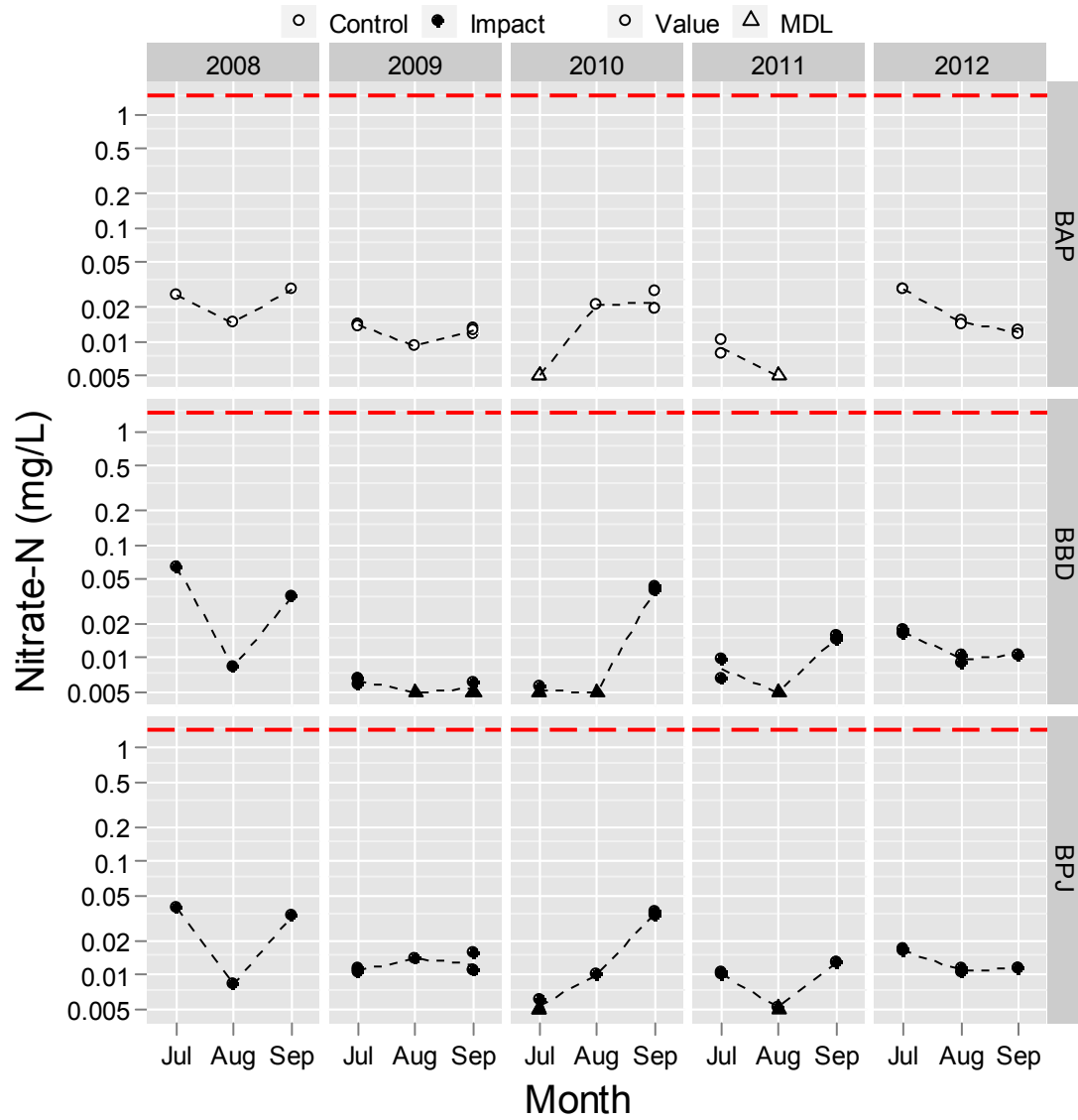


Figure 3.3-50. Total Kjeldahl Nitrogen (TKN; mg/L) in water samples from Baker Lake since 2008.

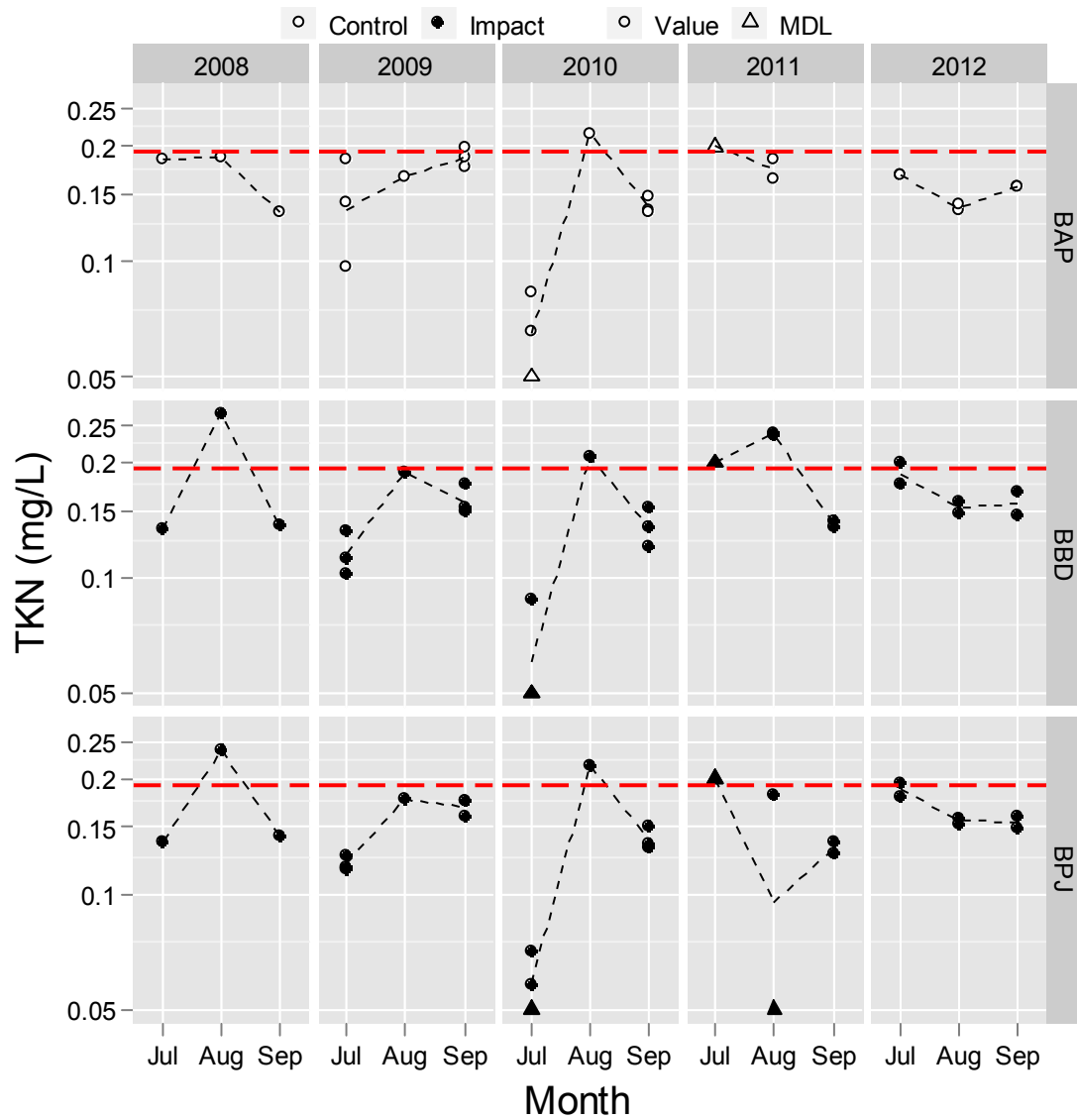


Figure 3.3-51. Total Phosphorus (mg/L) in water samples from Baker Lake since 2008.

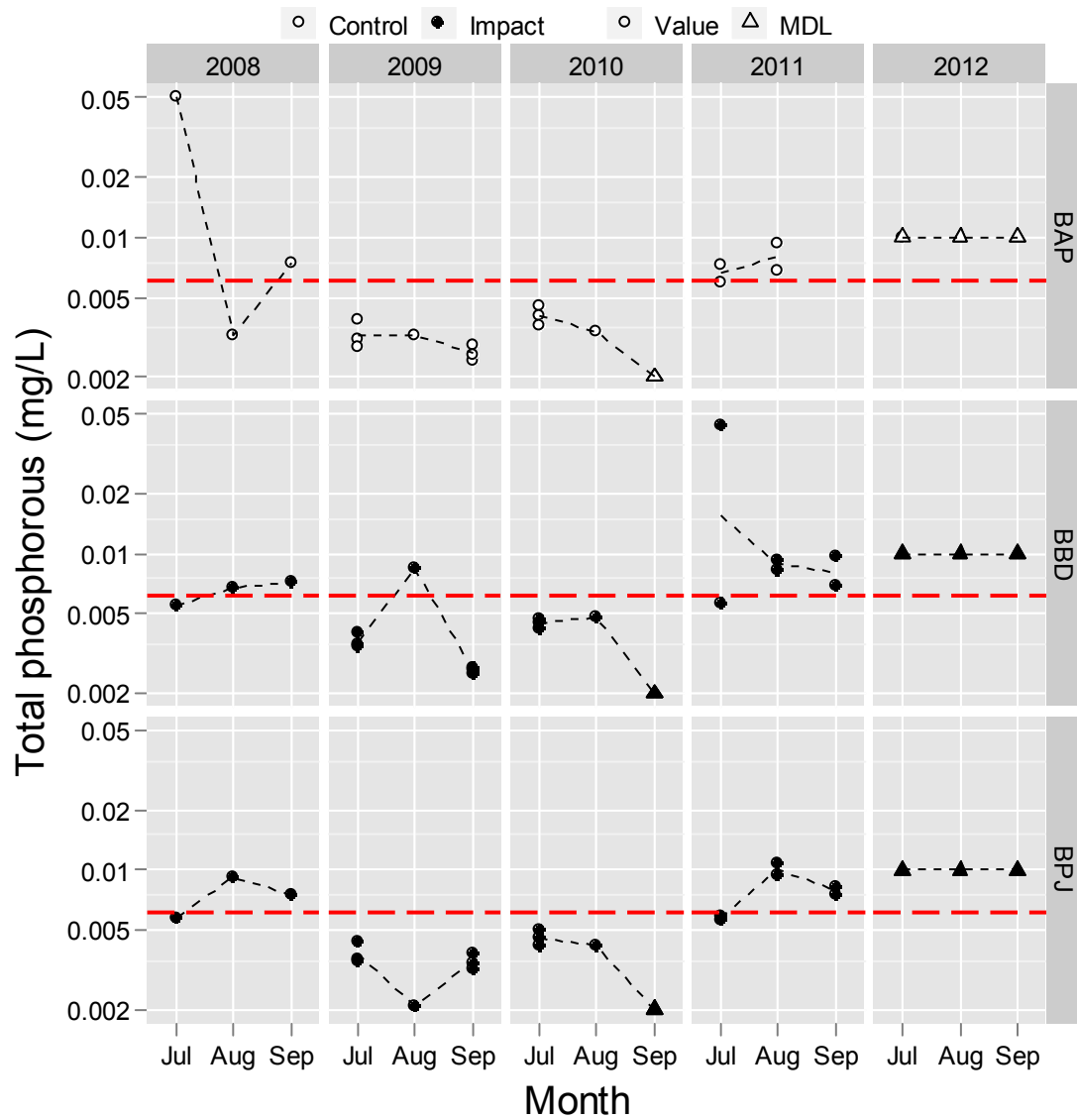


Figure 3.3-52. Reactive Silica (mg/L) in water samples from Baker Lake since 2008.

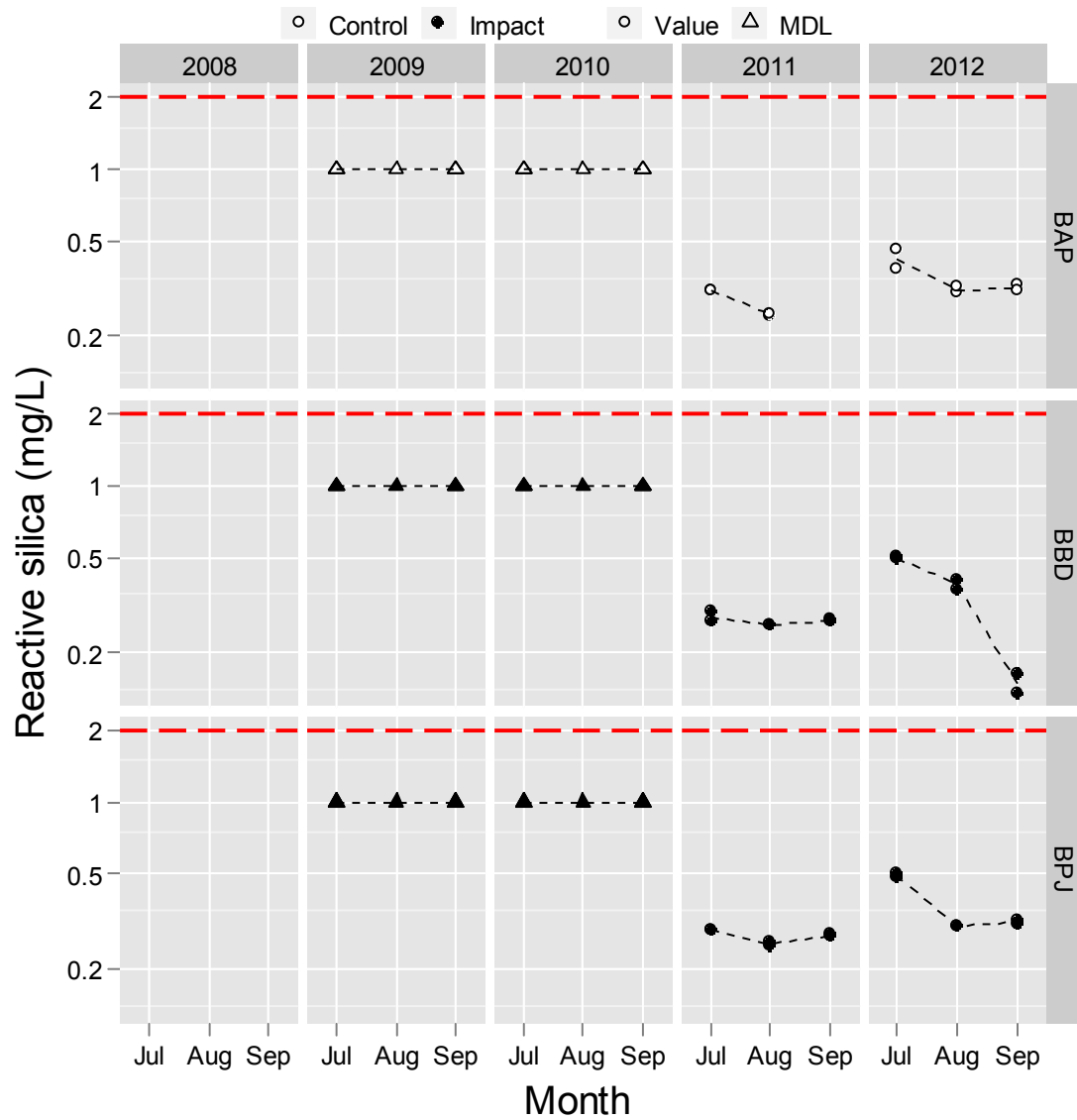


Figure 3.3-53. Sulphate (mg/L) in water samples from Baker Lake since 2008.

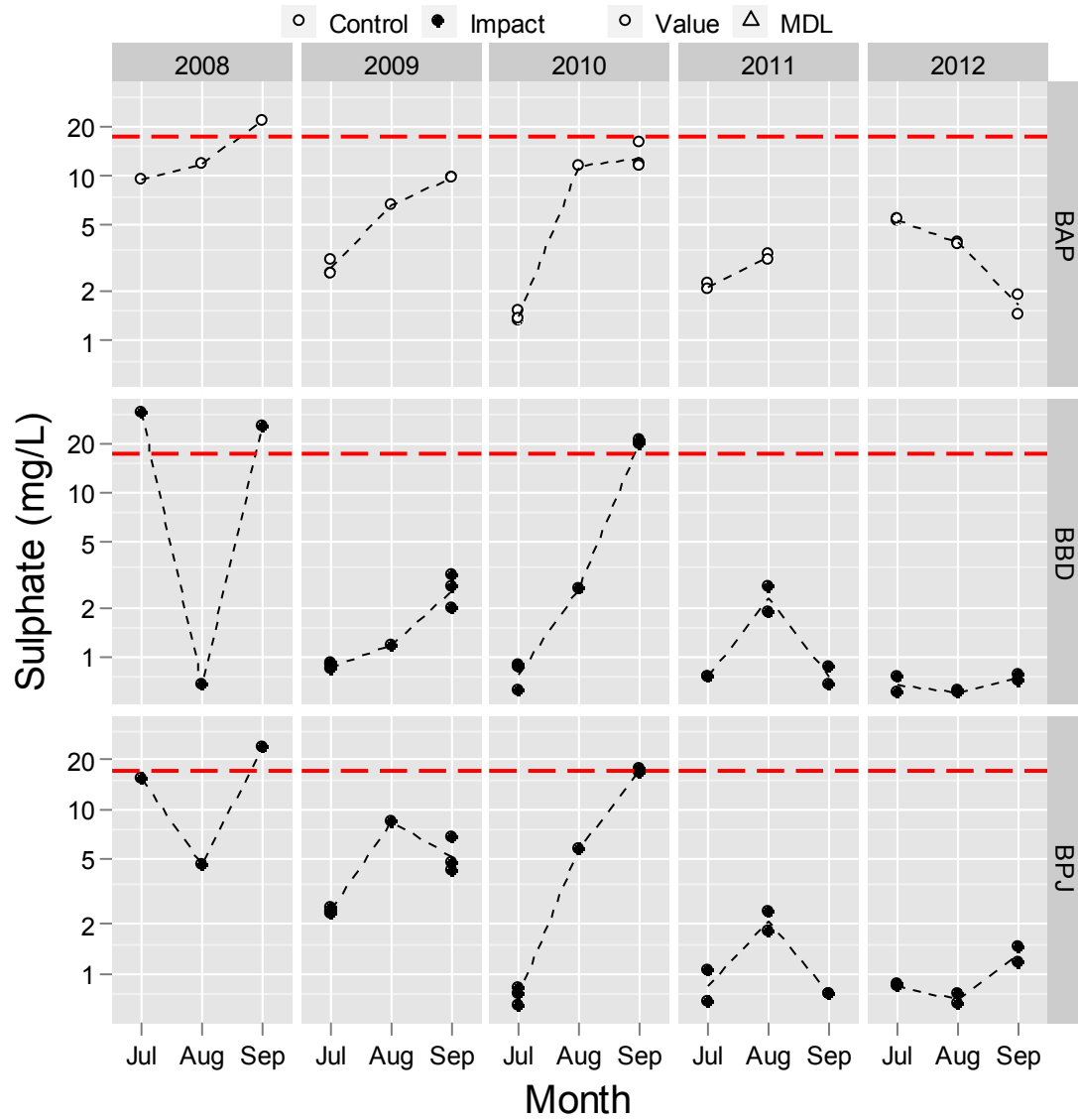


Figure 3.3-54. Dissolved Organic Carbon (DOC; mg/L) in water samples from Baker Lake since 2008.

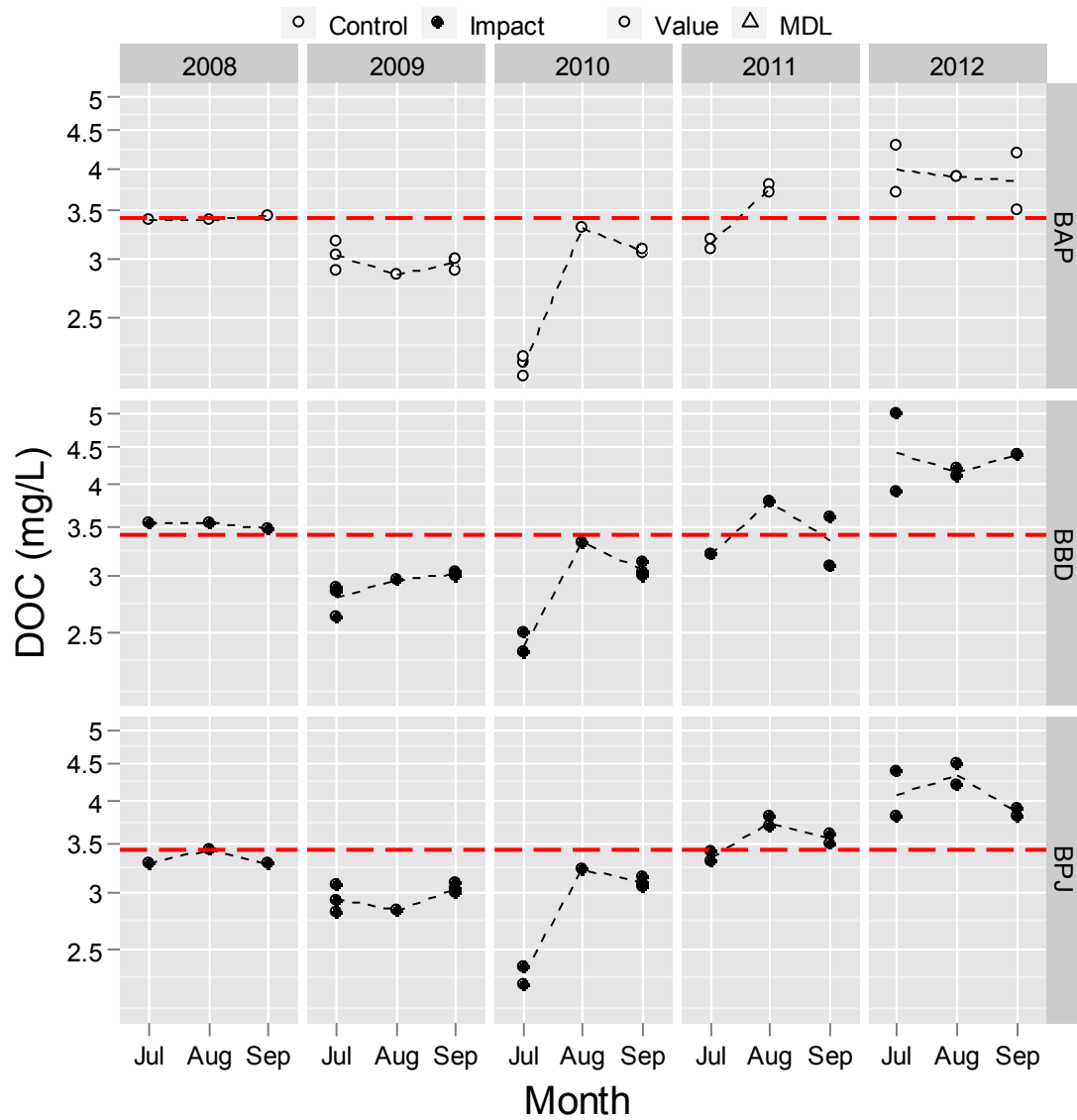


Figure 3.3-55. Total Organic Carbon (TOC; mg/L) in water samples from Baker Lake since 2008.

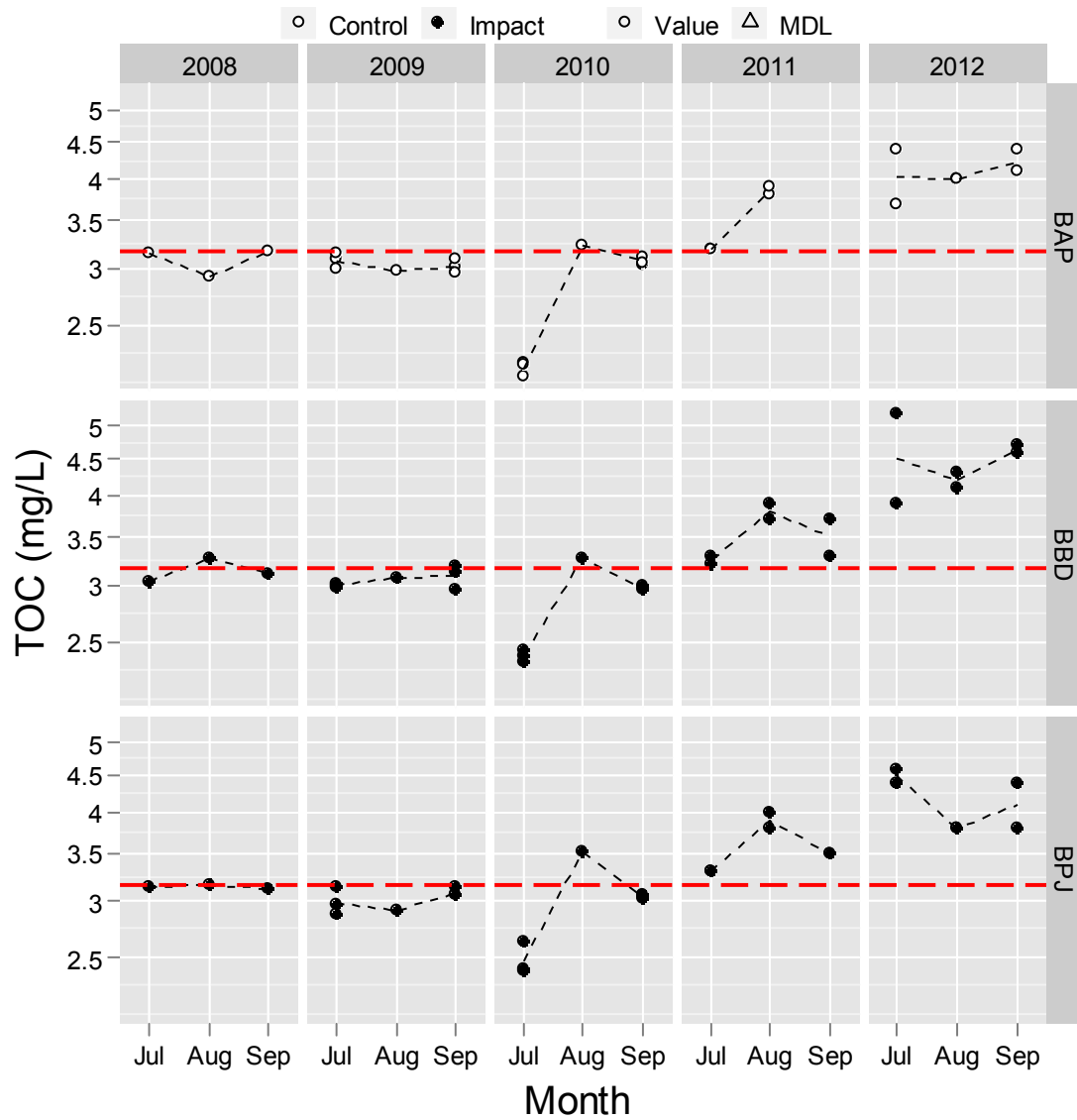


Figure 3.3-56. Total Aluminum (mg/L) in water samples from Baker Lake since 2008.

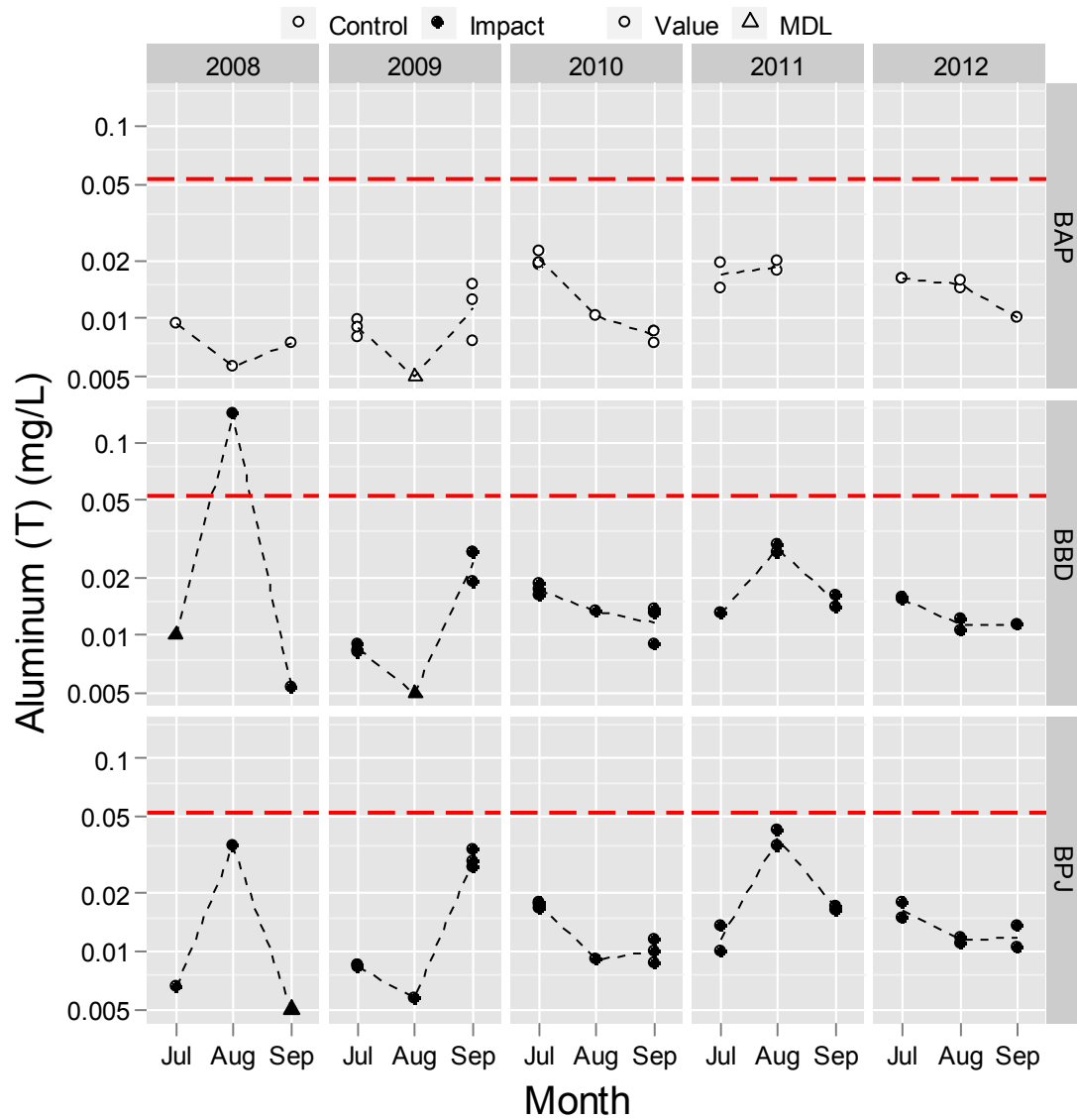


Figure 3.3-57. Total Barium (mg/L) in water samples from Baker Lake since 2008.

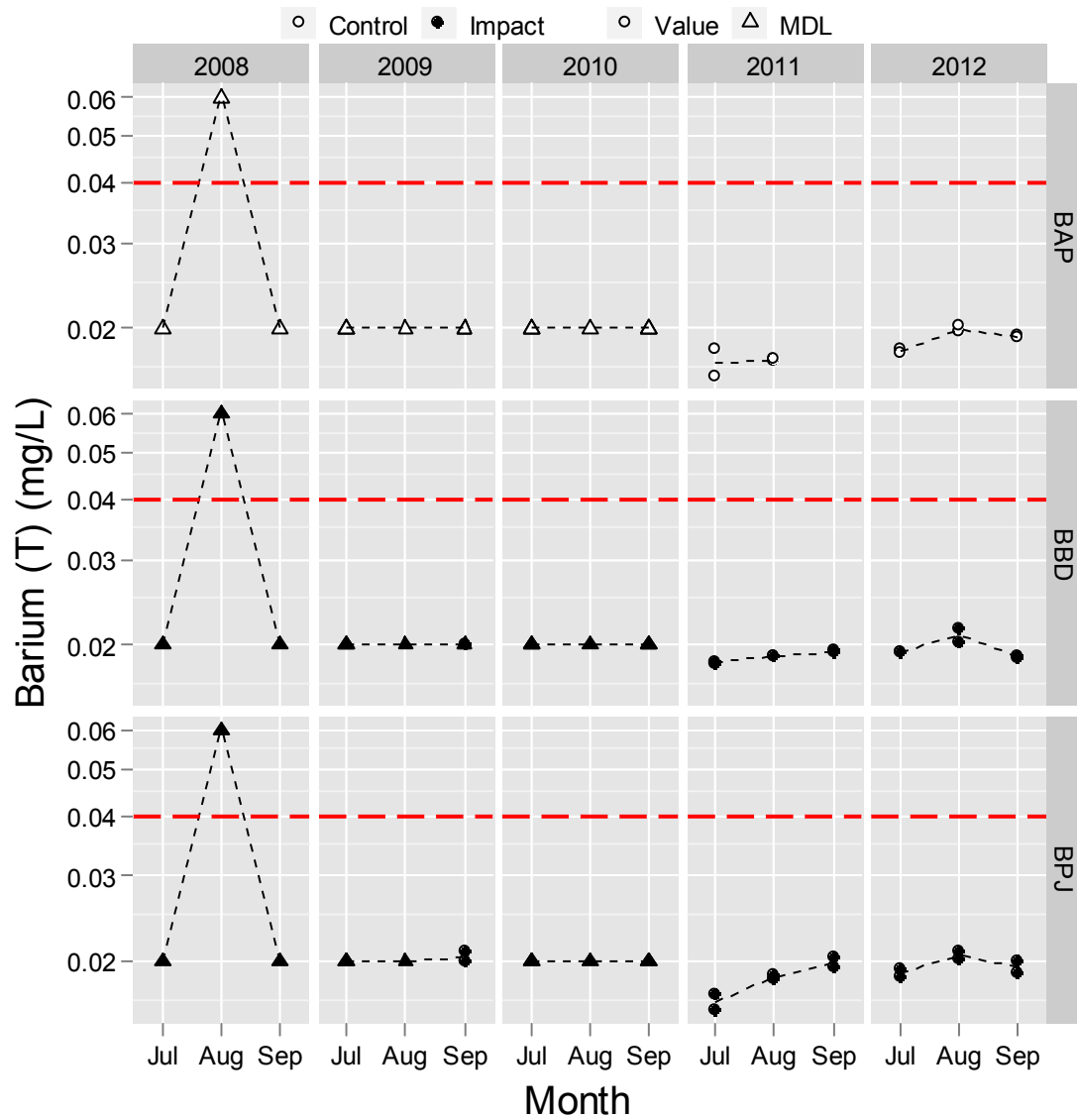


Figure 3.3-58. Total Calcium (mg/L) in water samples from Baker Lake since 2008.

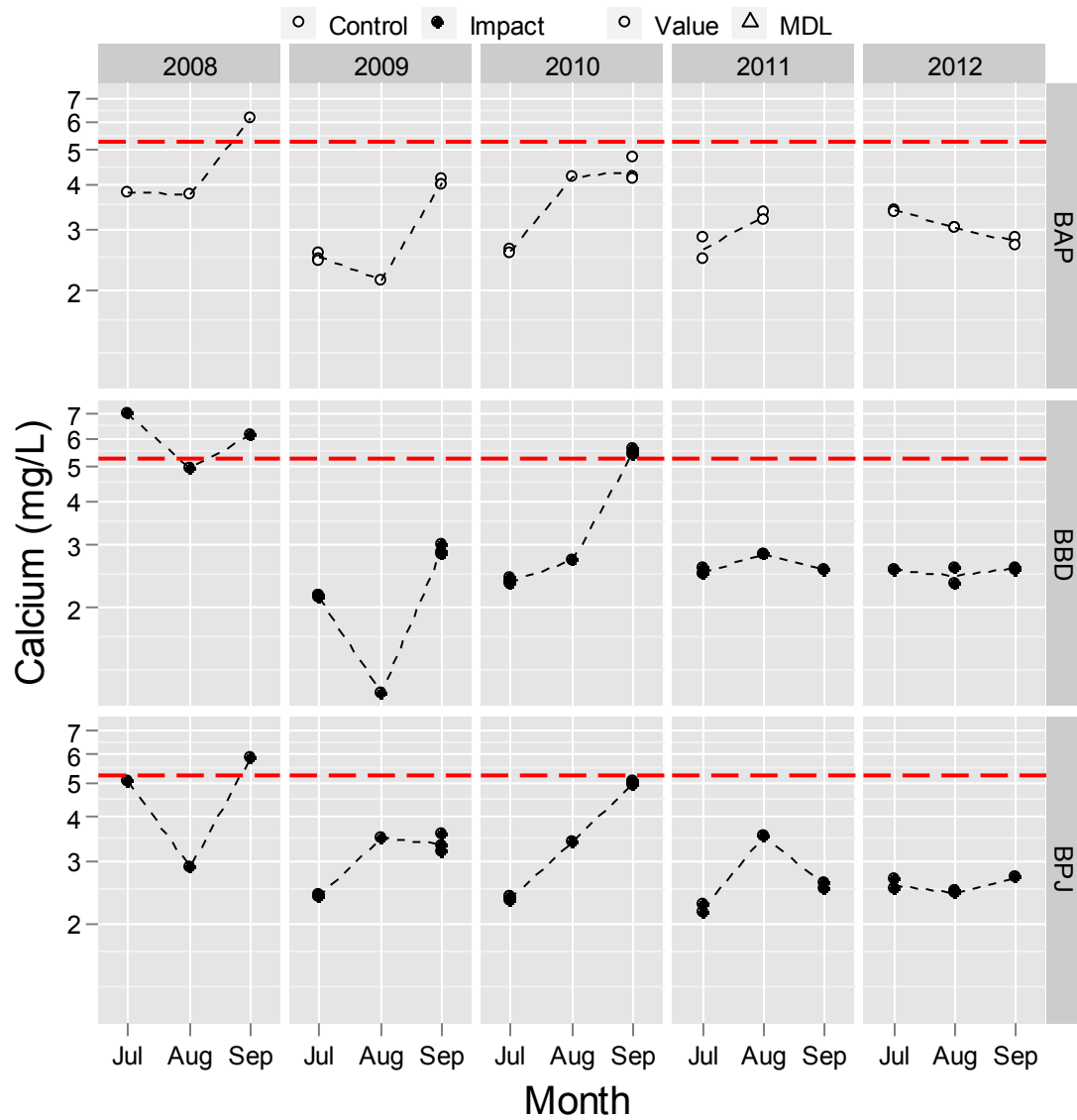


Figure 3.3-59. Total Copper (mg/L) in water samples from Baker Lake since 2008.

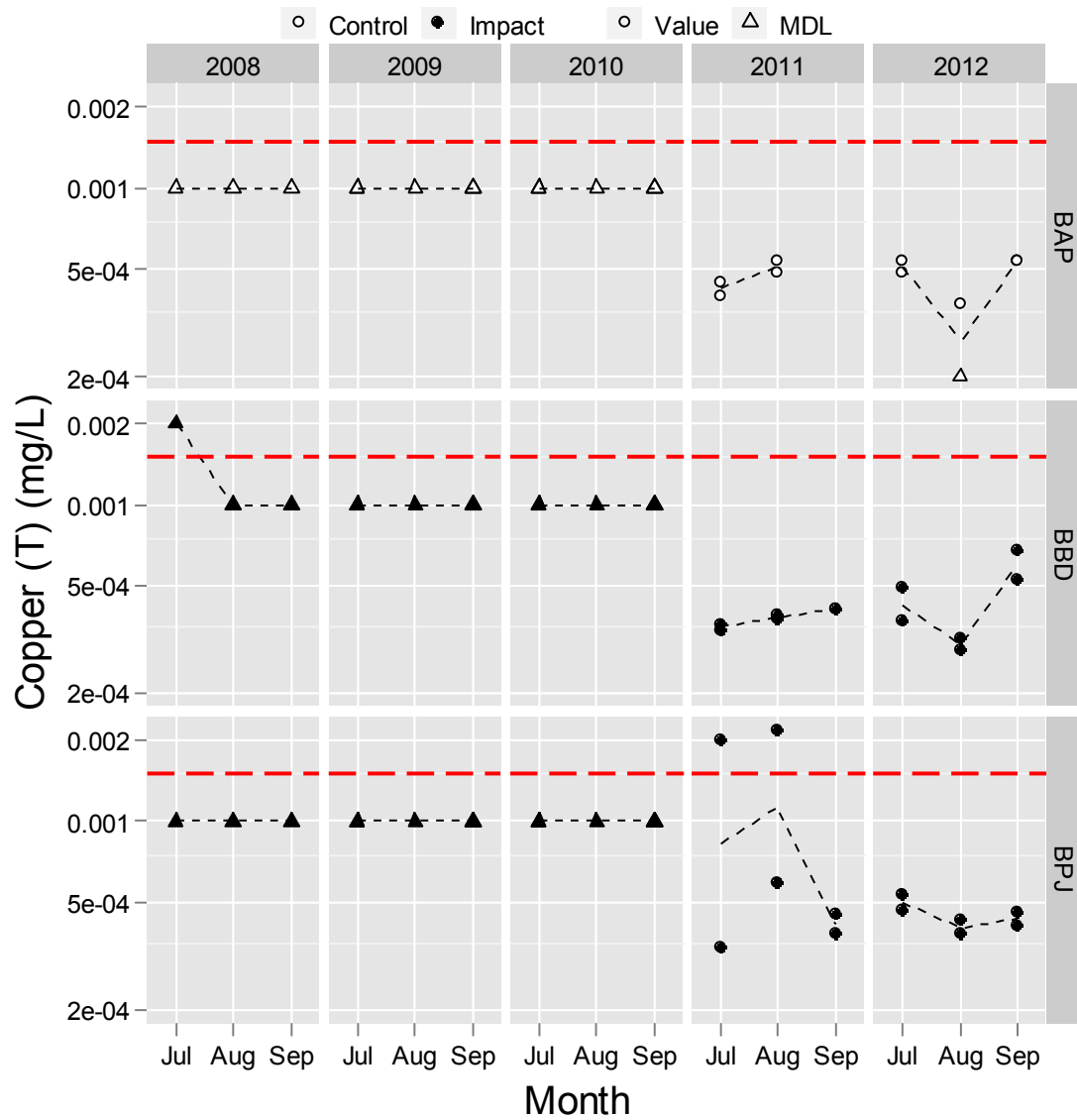


Figure 3.3-60. Total Iron (mg/L) in water samples from Baker Lake since 2008.

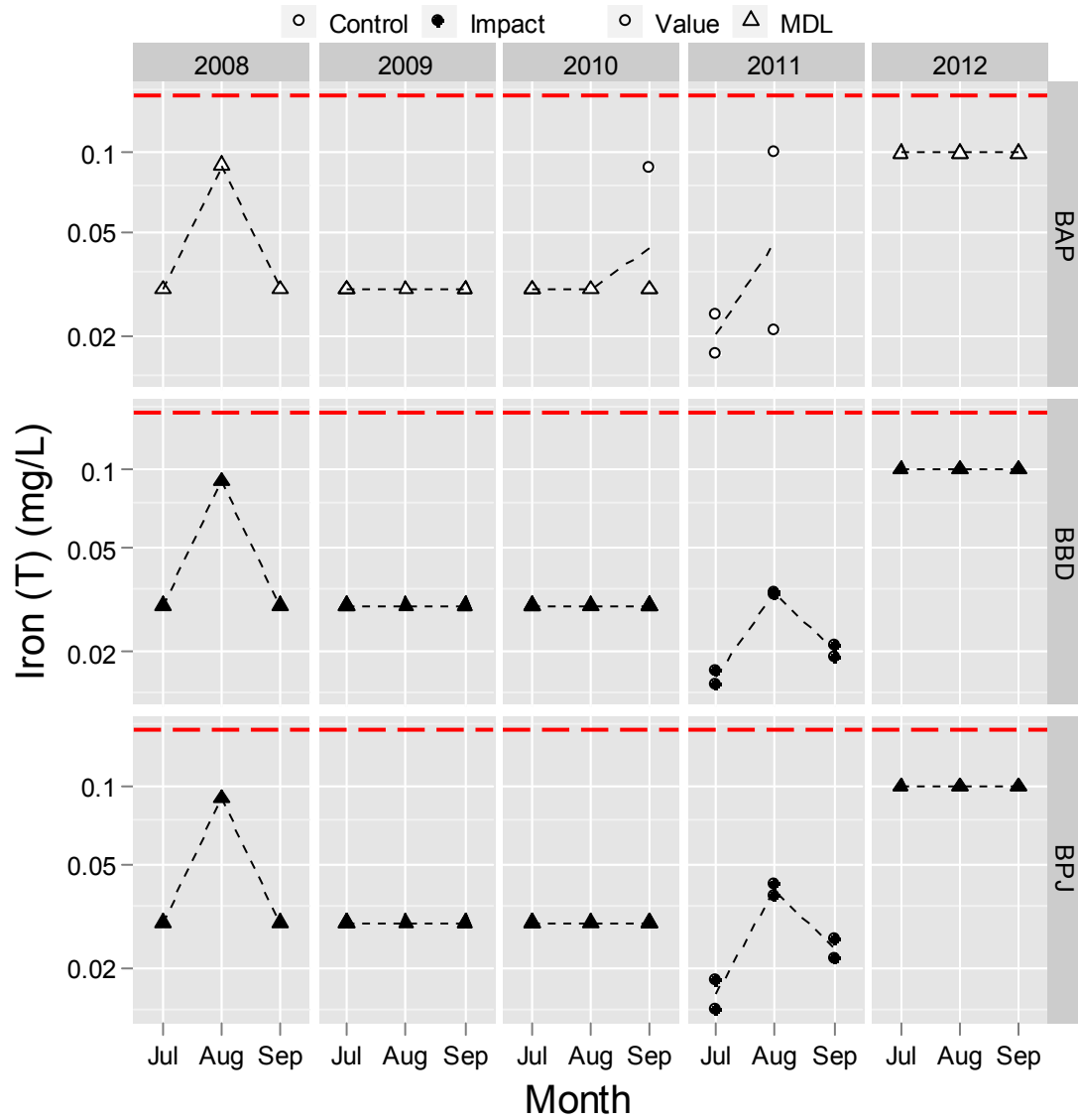


Figure 3.3-61. Total Lead (mg/L) in water samples from Baker Lake since 2008.

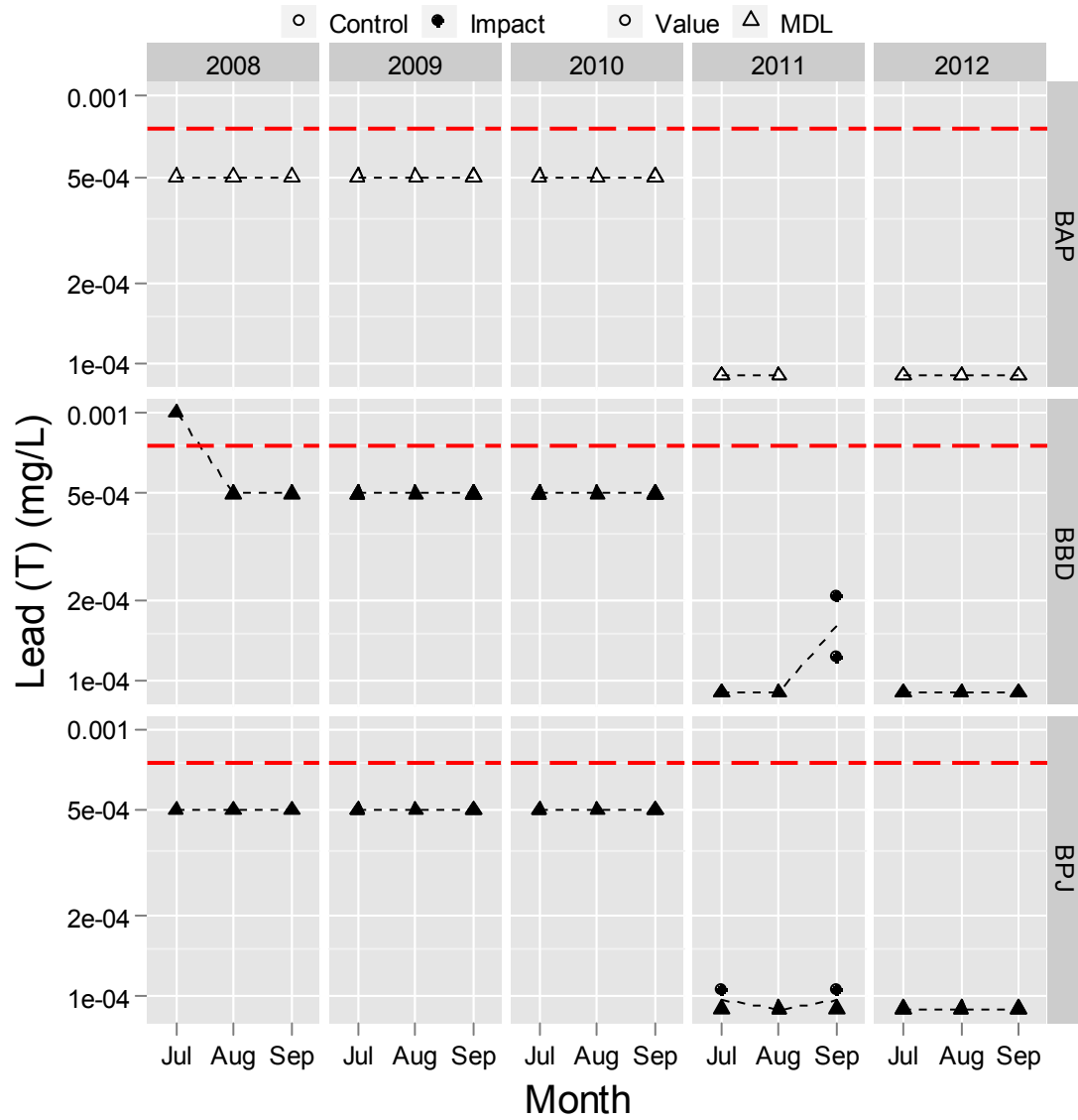


Figure 3.3-62. Total Magnesium (mg/L) in water samples from Baker Lake since 2008.

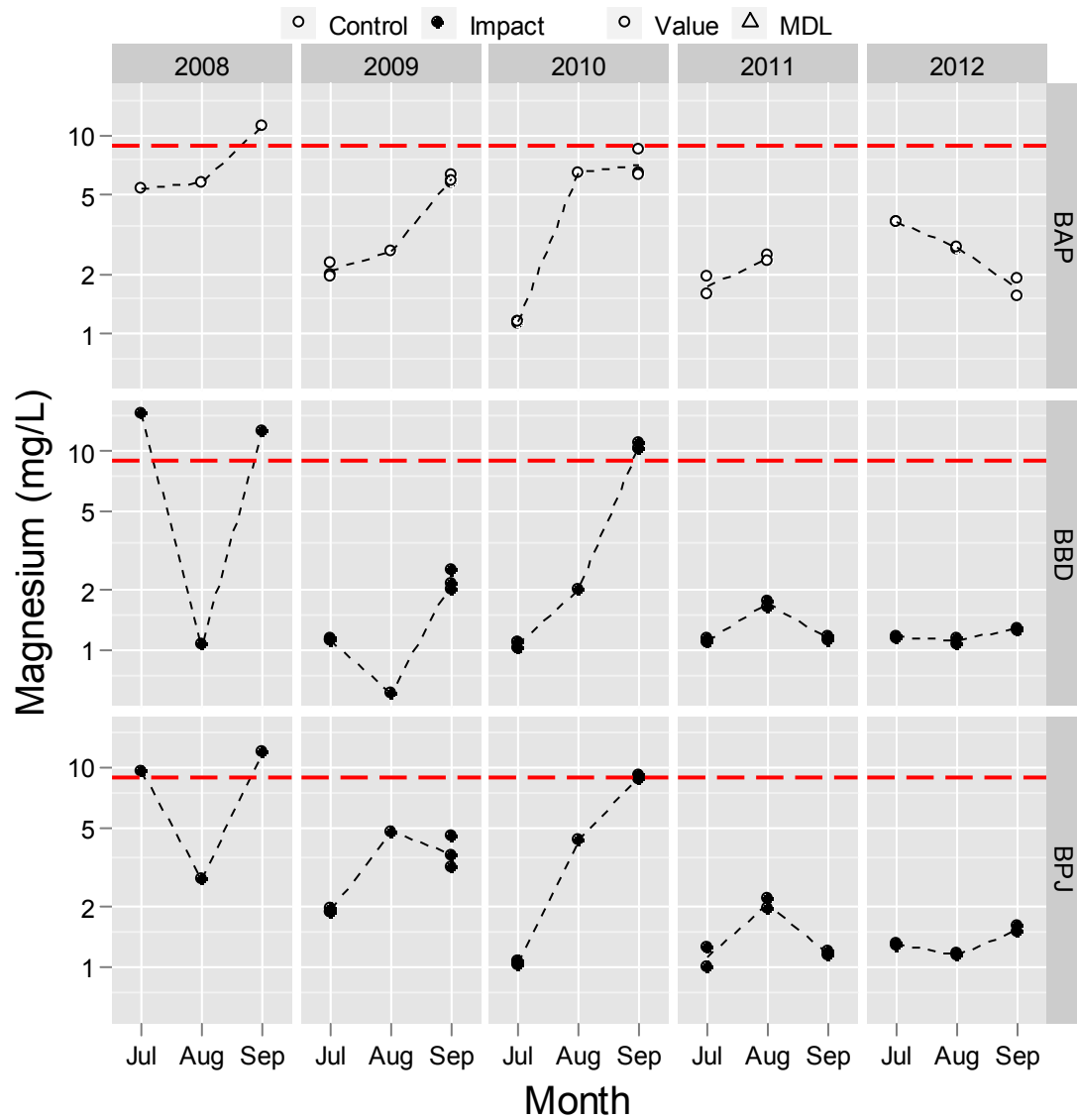


Figure 3.3-63. Total Manganese (mg/L) in water samples from Baker Lake since 2008.

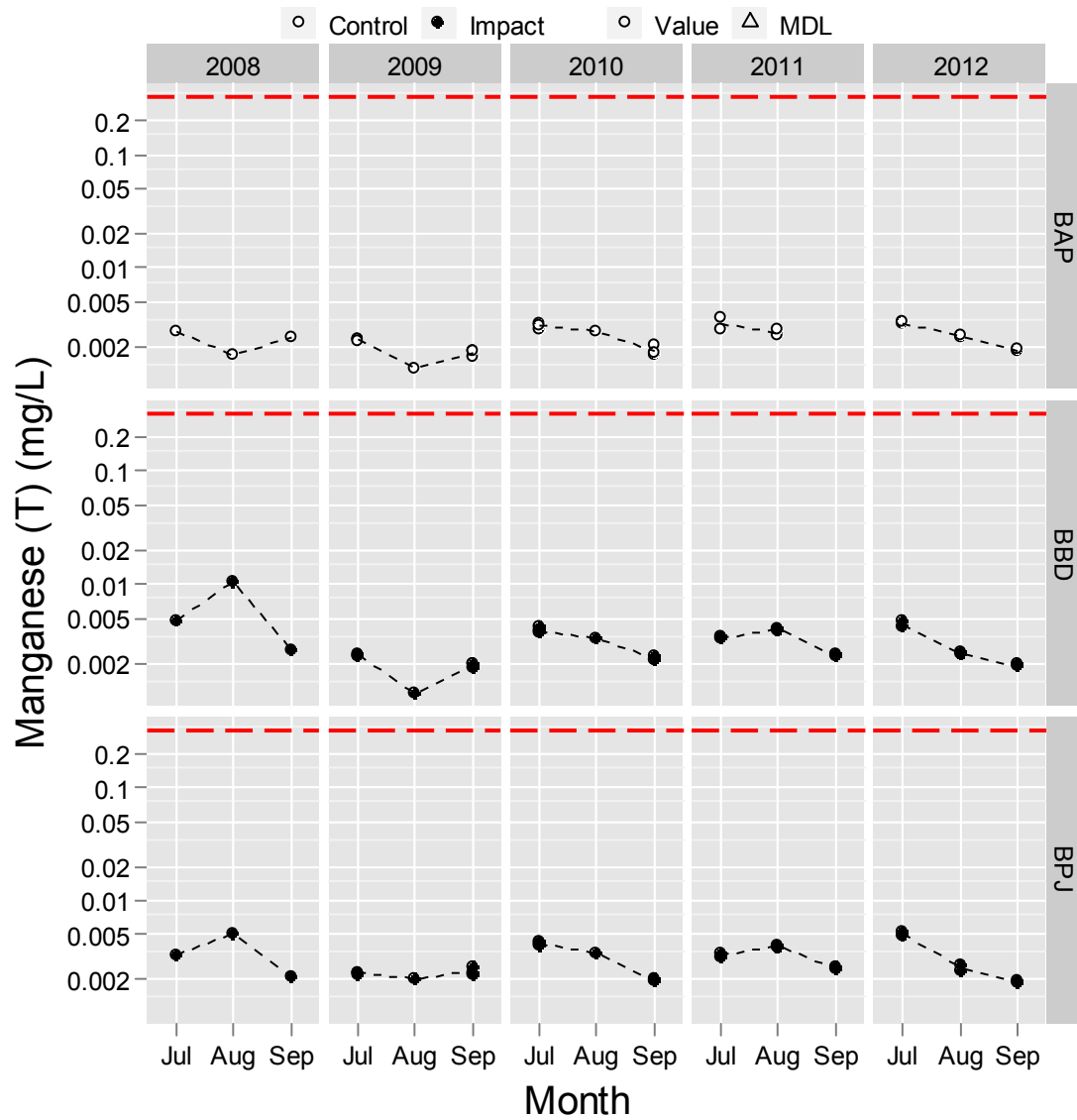


Figure 3.3-64. Total Potassium (mg/L) in water samples from Baker Lake since 2008.

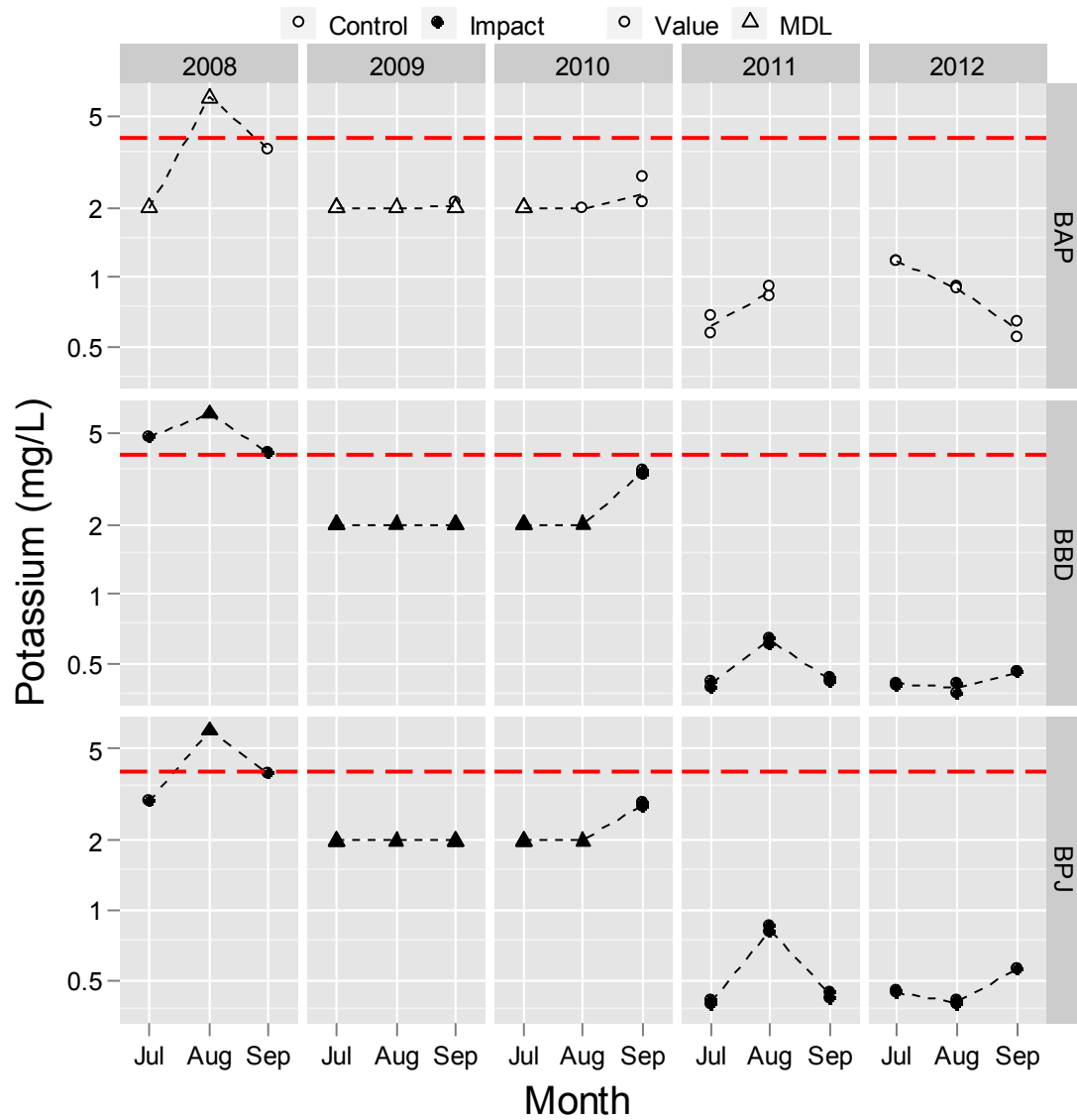


Figure 3.3-65. Total Sodium (mg/L) in water samples from Baker Lake since 2008.

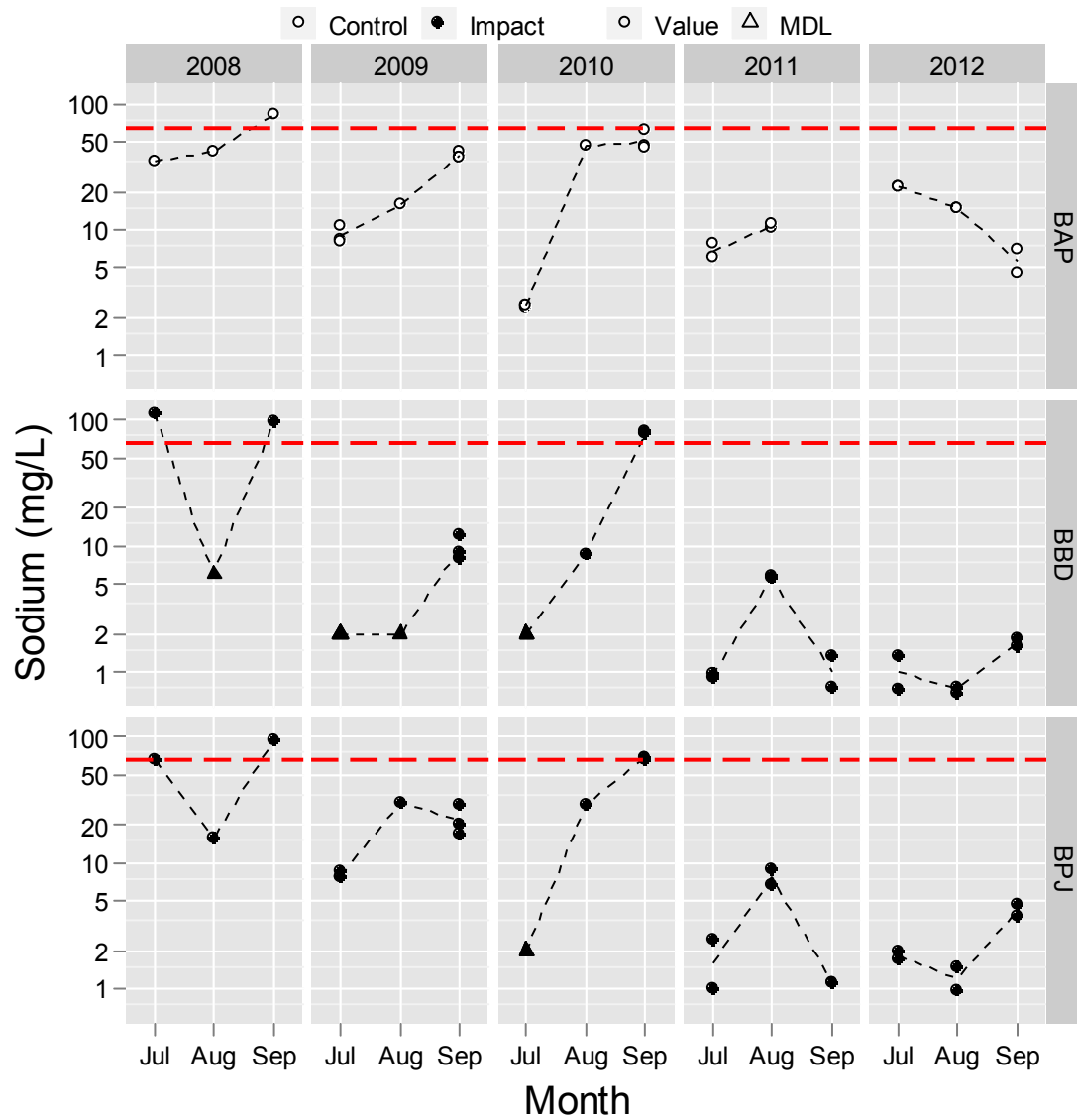


Figure 3.3-66. Total Strontium (mg/L) in water samples from Baker Lake since 2008.

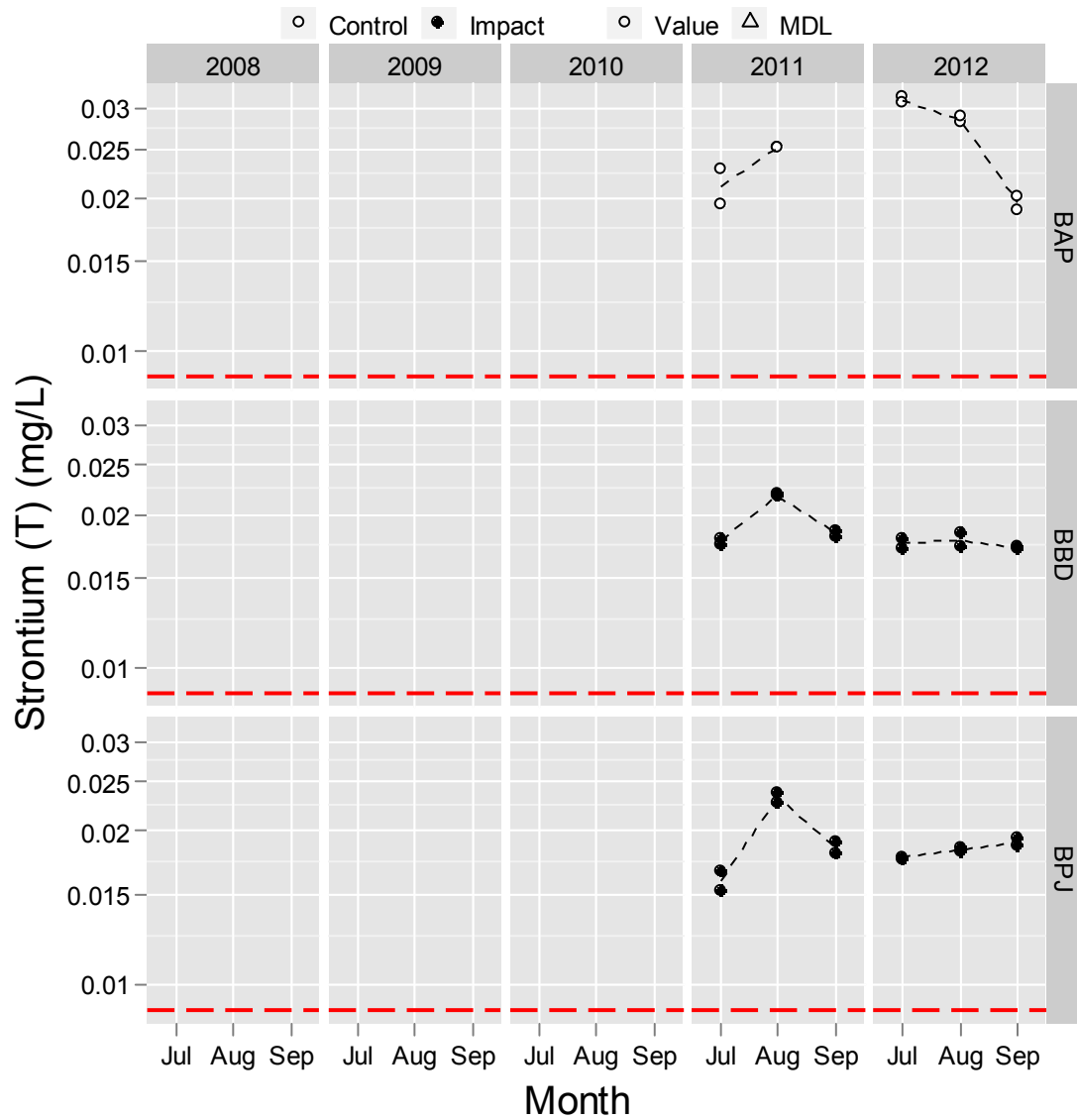


Figure 3.3-67. Total Titanium (mg/L) in water samples from Baker Lake since 2008.

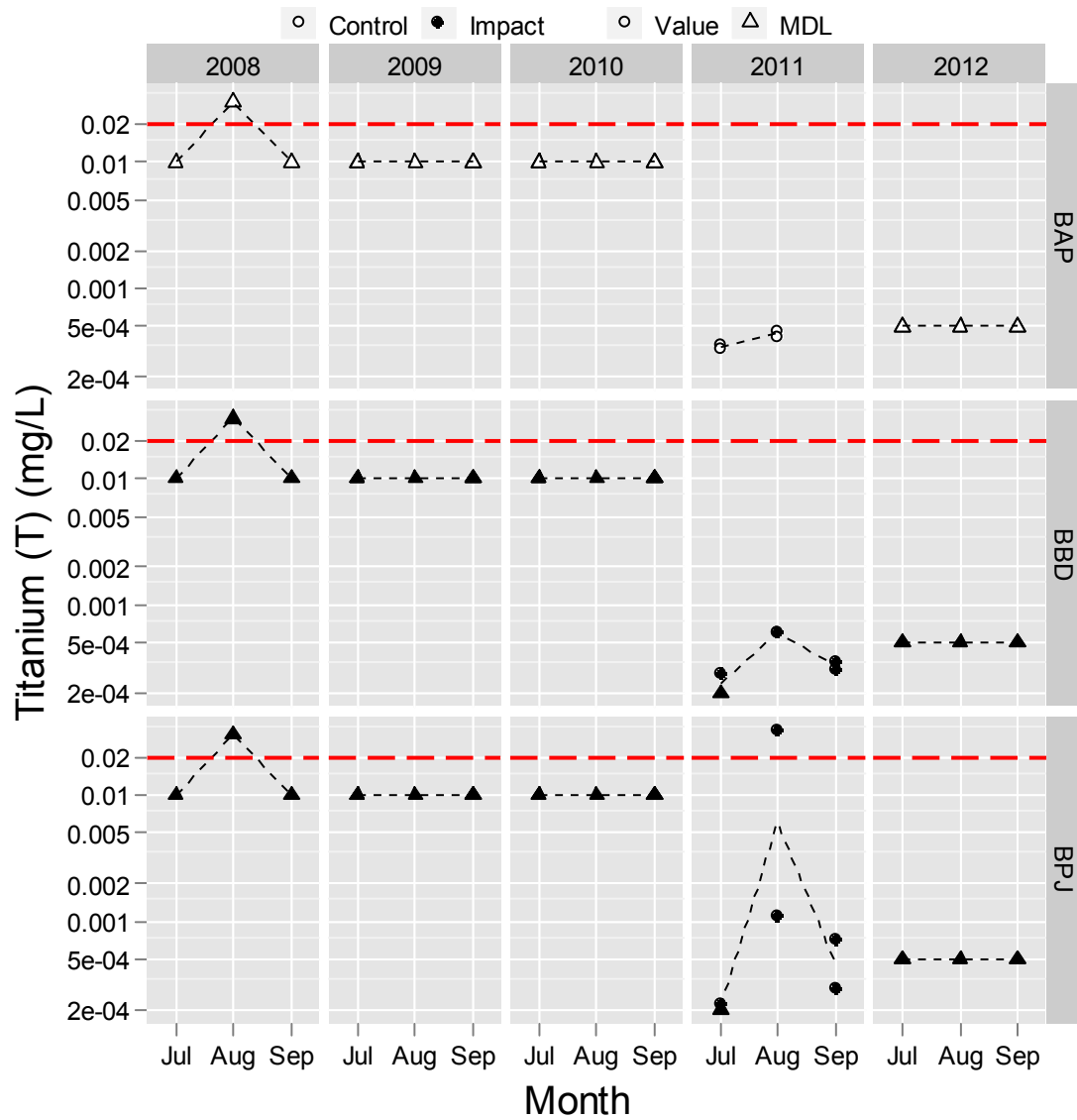


Figure 3.3-68. Dissolved Aluminum (mg/L) in water samples from Baker Lake since 2008.

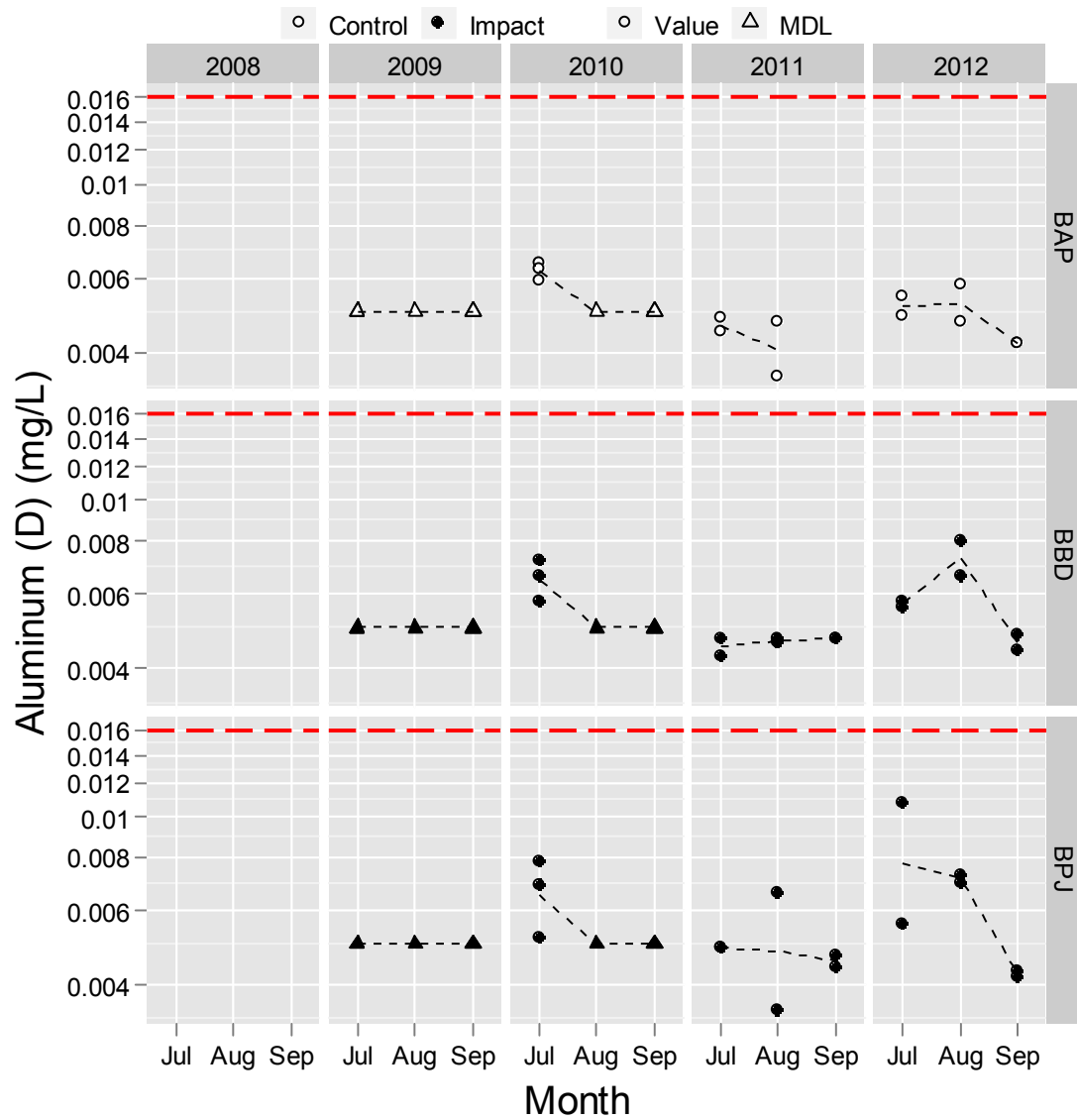


Figure 3.3-69. Dissolved Barium (mg/L) in water samples from Baker Lake since 2008.

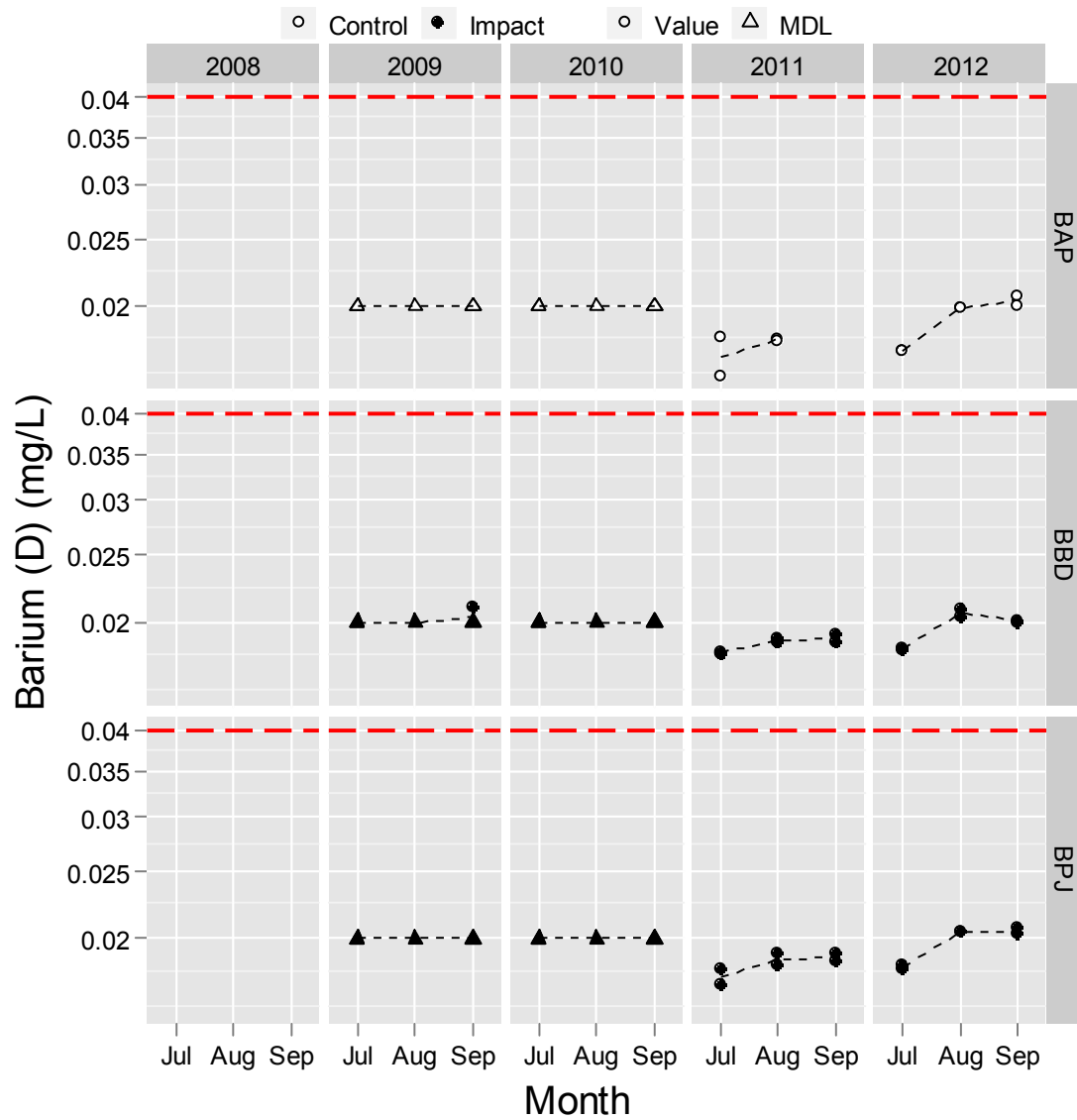


Figure 3.3-70. Dissolved Copper (mg/L) in water samples from Baker Lake since 2008.

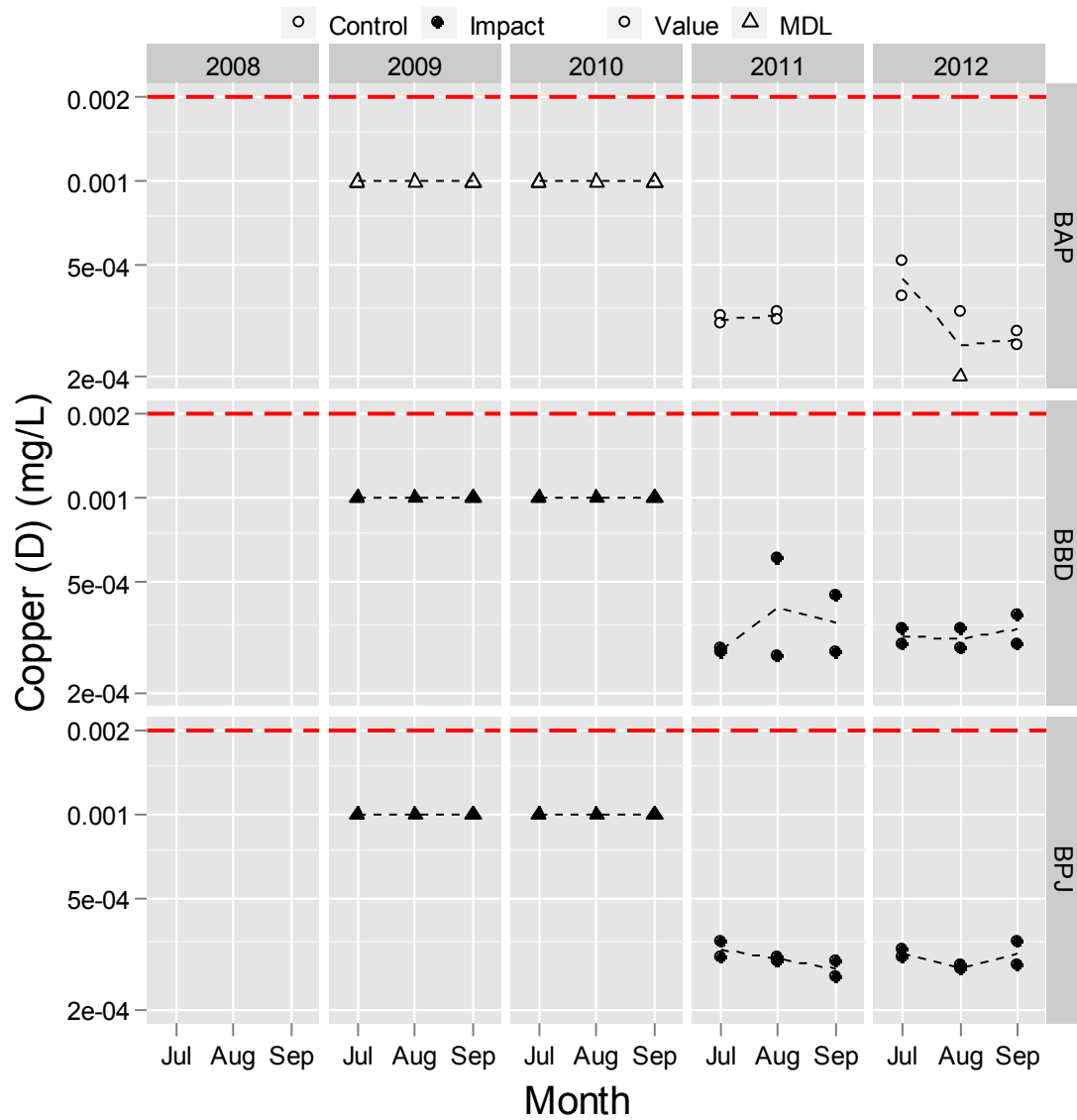


Figure 3.3-71. Dissolved Manganese (mg/L) in water samples from Baker Lake since 2008.

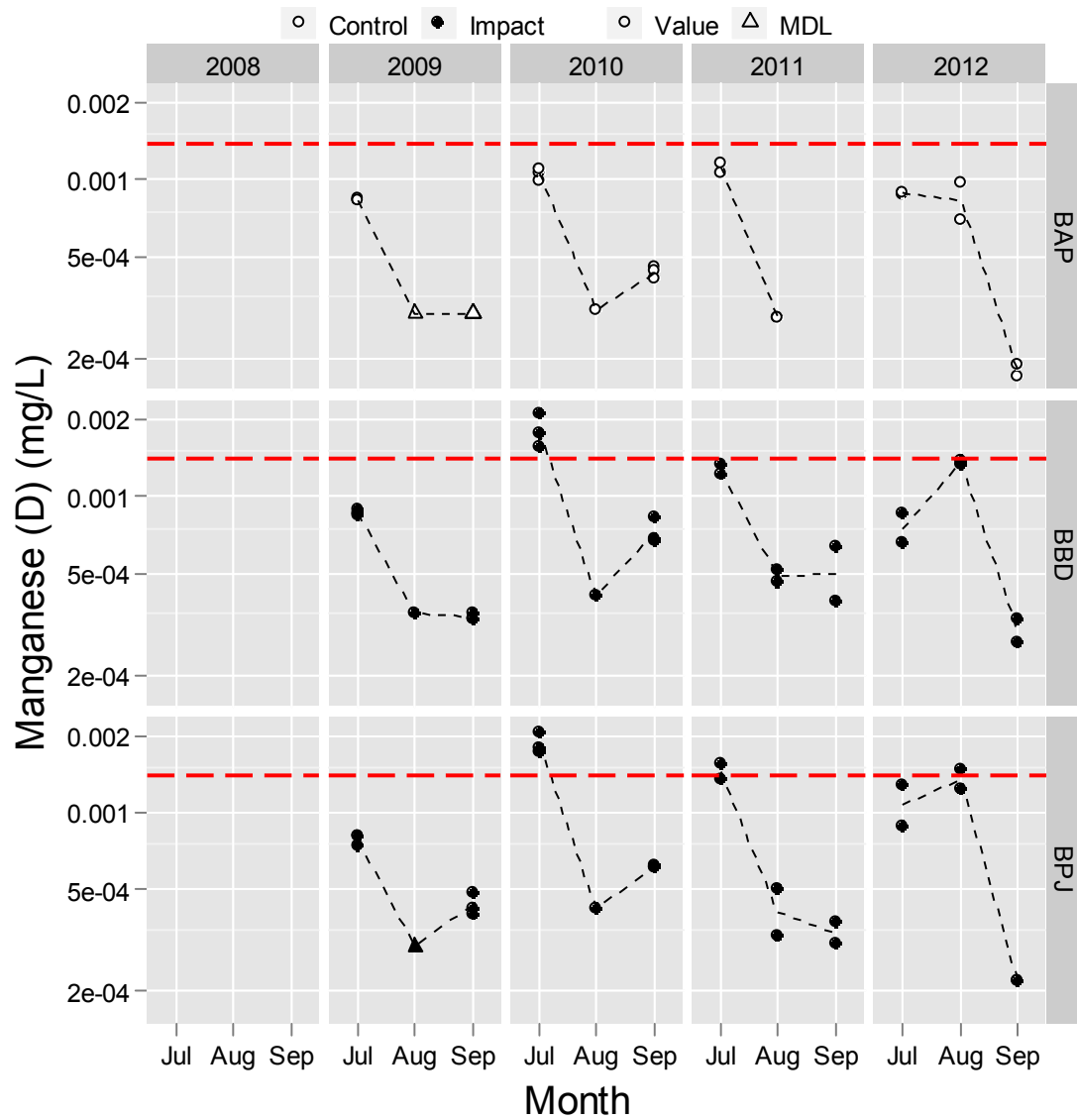
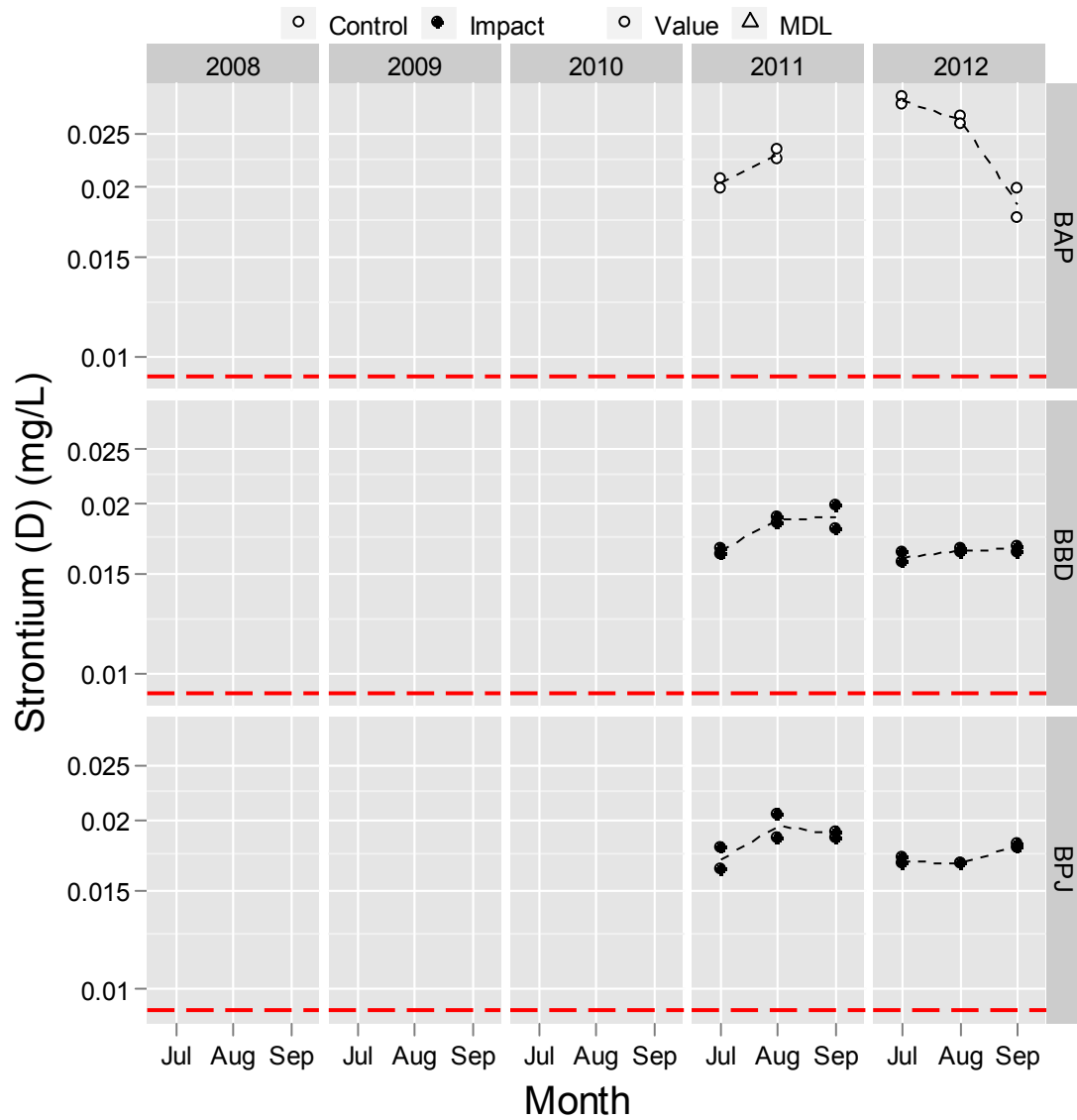


Figure 3.3-72 Dissolved Strontium (mg/L) in water samples from Baker Lake since 2008.



3.4. Sediment Chemistry

Sediment is an important sink, as well as a potential source for many contaminants including metals. Contaminants entering aquatic systems via tributary streams or directly from local sources are often associated with suspended particulate matter in the water column. Particulates eventually settle in depositional areas as sediment, especially in deeper areas of lakes and provide a good temporal record of deposition, integrating concentrations over time and provide more than just snapshots of water quality. Sediments, therefore, typically act as accumulators of contaminants over time in aquatic systems and are typically a sink, but can also potentially become a source of contaminants within a system, if disturbed and re-introduced into the water column. In the case of the Meadowbank lakes, disturbance of lake sediments re-introduced historically laid down particulates back into the water during East Dike construction in 2008. It is important to distinguish at this point what defines a ‘contaminant’. A contaminant is a substance that occurs at higher concentrations than what is typical for a local environment and can potentially cause harm to receiving environment biota. Some contaminants (e.g., metals) may be naturally elevated in some environments (e.g., in mineralized areas) and pose no harm, while the same concentration when introduced to another environment may be potentially toxic. Toxicity is a function of speciation, concentration, organism acclimatization, organism sensitivity and other factors. Re-introduction of metal contaminants from sediments may not be expected to be a source of toxicity if concentrations are within the range of what is ‘typical’ for a particular area.

3.4.1. Meadowbank Study Lakes

3.4.1.1. General Observations

The volume or rate of introduction of particulate materials into the Meadowbank study lakes is low. Because none of the study lakes receives any substantial riverine or tributary inflow, very little sediment is carried into the lakes besides what may drain off of the nearby tundra, or is deposited as dust in rain and snowfall. There are a number of mine-site activities however, that can generate dust, possibly exacerbating net deposition into project lakes in excess of natural rates (see **Section 1.4.2**).

Based on historical bulk sampling of sediment using grab samples, we have observed reasonably large differences in surface sediment (i.e., top 3 – 5 cm) concentrations for a variety of metals. Although one might intuitively believe that because of the slow net depositional rate of sediments in these lakes, metal concentrations might be more uniform or homogeneous, this is not the case. There are a number of processes that can affect the pattern of metals distribution to sediments, including differential deposition of different grain size materials according to wind direction and speed, water depth, water currents,



basin morphometry, bioturbation (i.e., vertical mixing of sediment by burrowing insect larvae) and patchy, heterogeneous distribution of metals in mineralized areas. Sediment coring studies within each major basin in 2008 (to characterize baseline conditions), 2009 (to monitor changes in sediment chemistry in a subset of basins as part of the EAS following East Dike construction; Azimuth, 2010c) and 2012 (reported herein) further illustrate the magnitude of natural heterogeneity in metals concentrations in the top 1 cm of sediment (discussed in more detail below).

Finally, the degree to which sediments metals concentrations may vary, independent of mine-related activities, include the historical (pre-mine) sedimentation patterns, mineralization areas, bioturbation and different grain size distribution. Grain size has a very large influence on metals concentrations – the more coarse the grain size (i.e., sandier), the lower the metals concentrations. Thus, our sediment programs have attempted to target areas that are dominated by silt/clay sediment in areas of similar depth (6 – 10 m) where grain size tends to be finer and more consistent (**Figure 3.4-1**).

3.4.1.2. Temporal and Spatial Trend Interpretation – General and 2012

To help with interpretation of long-term temporal and spatial trends, concentrations of individual metals have been plotted (**Figures 3.4-2 to 3.4-9**) over time within areas and depict bulk-sediment (i.e., open or closed circles [control versus impact data, respectively] collected using a grab sampler) and surface sediment (i.e., box and whisker plots using a sediment core device). The box and whisker plots illustrate the statistical distribution of core samples (top 1 cm only) within each area. Data interpretation for the box and whisker plots is as follows:

- The horizontal line inside the box represents the median concentration
- The upper and lower margins of the box represent the upper (75thile) and lower (25thile) percentile concentrations, respectively
- The vertical lines represent maximum and/or minimum concentrations (provided at least one value falls outside the box but within 1.5 times the interquartile range)
- ‘x’s that occur beyond the maximum or minimum lines represent concentrations that are greater than 1.5 times the interquartile distance and indicate ‘outlier’ concentrations that are real, but don’t fit within the distribution of the rest of the data, for whatever reason.

Coring was conducted initially in July 2008 (i.e., prior to onset of East Dike construction) to characterize baseline surface metals concentrations at all monitoring areas. As noted above, the 2009 study monitored potential changes to surface sediment chemistry that may have occurred as a result of the East Dike sedimentation event in August 2008. The 2009 study was conducted only at SP, TE, TPE, and INUG, with the last two areas

serving as reference areas for SP and TE. The 2012 program covered all Meadowbank study lakes sampling areas as well as reference areas.

Sediment metals concentrations can naturally be highly variable in mineralized areas, making detection of mine-related events difficult using grab samples (i.e., given the small amount of sediment introduced to the surface layer relative to the volume of sediment sampled from the bottom by the grab). Consequently, while grab data provide insights into sediment chemistry as a result of long-term historical deposition, coring data is much more sensitive and appropriate for assessing changes related to mining activity.

Furthermore, given the low sedimentation rates for this region, there is no expectation for inter-annual changes in sediment chemistry due to natural factors; variability seen in the grab data over time in control data is likely due to intra-area spatial heterogeneity (or to laboratory variability or error).

As discussed above (see **Section 1.5**), our approach to identify potential mine-related impacts involved visually searching for temporal/spatial patterns associated with mining activities. This was complemented by comparing the 2012 sediment core chemistry results to site-specific triggers/thresholds. It should be noted that certain metals (e.g., arsenic, chromium and copper) have consistently exceeded the CCME guidelines, even prior to mine development; in those cases trigger values were set using the 95th percentile of baseline data. Cases where the 2012 sediment core means exceeded trigger values were formally tested using a before-after (BA) statistical modeling framework (see **Section 2.8-2**).

It should also be noted that the ecological significance of changes in sediment chemistry identified in the 2009 EAS (i.e., after the 2008 East Dike sedimentation event) were studied in 2010. The 2010 EAS included sequential extraction analyses and sediment toxicity testing to assess the bioavailability of metals; the results were consistent and indicated that the elevated metals were not toxic (Azimuth, 2011a).

Trend plots for sediment chemistry parameters (including comparison to trigger values) are provided in **Figures 3.4-2 through 3.4-9**. The 2012 sediment chemistry data are screened against site-specific triggers/thresholds in **Table 3.2-1** (metals – grabs), **Table 3.2-2** (organics - grabs) and **Table 3.2-3** (metals - cores). Areas where the 2012 sediment core means exceeded the trigger values are highlighted in **Table 3.4-4**. Results of BA statistical model tests for trigger exceedances are presented in **Table 3.4-6**.

Aluminum

Aluminum concentrations at reference sites INUG and PDL were consistent over time ranging between 15,000 and 27,000 mg/kg (**Figure 3.4-2**). The coring data show an increase in concentrations at SP in 2009 (~30,000 mg/kg) after East Dike construction in 2008 (~24,000 mg/kg). This change also appeared to extend into TE. The 2012 results show lower concentrations at SP, suggesting that the earlier “elevation” may have been

due to local heterogeneity. There are no site-specific triggers or CCME guidelines for aluminum. Notwithstanding, the results of the 2010 EAS suggest that the increase in aluminum concentrations at SP was not ecologically relevant.

Arsenic

Arsenic concentrations at reference lakes varied over at least an order of magnitude from 7 to nearly 200 mg/kg (**Figure 3.4-3**). At near-field areas, arsenic concentrations were less variable, typically ranging from 12 – 50 mg/kg in TPE and 7 – 30 mg/kg at SP. The range in arsenic concentrations at impact areas do not appear to have changed over time, although there are some consistent spatial differences in arsenic concentration (e.g., TEFF lower than TPS). The coring data suggest no temporal changes occurred between 2008 and 2009. Arsenic in sediment routinely exceeds the ISQG of 5.9 mg/kg (CCME, 2002) in all samples and the PEL (17 mg/kg) in most samples from all lakes and is evidence of regional natural elevations in this metal. None of the 2012 core sample means exceeded the trigger value.

Cadmium

Cadmium concentrations varied over an order of magnitude across at all areas, with no apparent patterns in concentration over time or between areas (**Figure 3.4-4**). The change in MDL in 2011 resulted in better characterization at many areas. No mine-related impacts were evident as impact and control concentrations were similar. Lowering of the MDL confounds the data somewhat as mean concentrations appear to have decreased since 2010, even in areas where the MDL was often exceeded (e.g., TPN, SP, and TE). Cadmium concentrations frequently exceeded the ISQG (0.6 mg/kg) but never exceeded the PEL (3.5 mg/kg). None of the 2012 core sample means exceeded the trigger value.

Chromium

Chromium concentrations at reference area INUG and PDL ranged between 80 mg/kg – 140 mg/kg, while concentrations in WAL were consistently lower (40 – 70 mg/kg) (**Figure 3.4-5**). While the coring data show that chromium was slightly higher in SP and TE in 2009, the same result was also seen at TPE (which served as a reference in the study as the samples were collected prior to the onset of Bay-Goose Dike construction); this raises the possibility that the result may be due to natural spatial heterogeneity (notwithstanding, the 2010 EAS results suggest that chromium [or any metal] was not toxic). The ISQG for chromium (37 mg/kg) was exceeded for all grabs and cores in all areas; the PEL (90 mg/kg) was exceeded in one or more samples from all areas except WAL, TE and TEFF. The only 2012 core sample mean to exceed the trigger value was at PDL; there was a trend at TPE that should be revisited in 2013.

Copper

Copper concentrations at reference areas INUG and PDL ranged from 25 – 50 mg/kg and 10 – 200 mg/kg at WAL, illustrating the naturally heterogeneous nature of copper in

sediment in Meadowbank lakes (**Figure 3.4-6**). Concentrations generally exceeded the ISQG (35.7 mg/kg) but rarely exceeded the PEL (197 mg/kg). There was a marginal increase in copper concentrations at SP and TE in 2009 relative to 2008; however, the 2010 EAS results suggest that the increase is not relevant ecologically due to a lack of metals bioavailability (Azimuth, 2010c). The only 2012 core sample mean to exceed the trigger was WAL, which retained its “control” status in 2012, so the result is natural.

Lead

Sediment lead concentrations were consistently below the laboratory DL of 30 mg/kg, except for the coring data at reference area INUG and both grab and core samples at WAL (30 – 45 mg/kg) (**Figure 3.4-7**). The reduction in the DL in 2011 should help provide better characterization of this metal moving forward. Similar to cadmium, lowering the MDL in 2011 for lead has resulted in some unexpected results. For example, despite the highest lead concentrations in the 2008 cores for INUG, results since 2010 have been much lower. Most samples were below the ISQG (35 mg/kg) and all were below the PEL (91.3). The only 2012 core sample mean to exceed the trigger was WAL, so the result is natural.

Mercury

Mercury concentrations in control data varied spatially at INUG (0.01 – 0.05 mg/kg), PDL (<0.015 mg/kg) and WAL (0.05 – 0.08 mg/kg) (**Figure 3.4-8**). There are no apparent mine-related patterns. None of the area means in 2012 exceeded the trigger (0.104 mg/kg) and all samples were below the ISQG (0.17 mg/kg).

Zinc

Zinc concentrations ranged from 60 – 100 mg/kg at INUG and PDL and up to 160 mg/kg at WAL, again illustrating the natural metals enrichment in sediments at WAL (**Figure 3.4-9**). Following East Dike construction, zinc concentrations from SP and TE appeared to increase in 2009 from 2008 by about 30 mg/kg (95 – 125 mg/kg in SP; 90 – 115 in TE). However, given the comparative results for INUG and WAL, where each showed increases in core sample concentrations between 2008 and 2012, it is possible that the SP and TE results were a function of high spatial heterogeneity and/or laboratory variability. While the 2012 SP core results showed a 26% increase relative to baseline/reference conditions, the “change” at WAL was even greater. Notwithstanding, the 2010 EAS results (see below) suggest that the increases were not ecologically relevant as the metals were not bioavailable and not toxic. Furthermore, while there are occasional ISQG exceedances, none of the samples exceeded the PEL (**Table 3.4-1**).

Summary

Statistical analyses of the 2012 sediment core data relative to the 2008 baseline data identified zinc at SP as the only case where the site-specific triggers were exceeded. As discussed above, there is uncertainty as to whether the observed difference represents a



mine-related change from construction of the East Dike (as concluded originally in the 2009 EAS [Azimuth, 2010c]) or spatial heterogeneity (e.g., similar results were seen at WAL).

Concerns regarding potential metals toxicity were directly tested in 2010 using sediment toxicity tests and sequential extraction analysis (Azimuth, 2011a). Results of amphipod (*Hyalella azteca*) and midge (*Chironomus tentans*) survival and growth endpoints in bioassays showed that surface sediments collected from within or adjacent to the East Dike construction zone (i.e., the zone delineated by the turbidity barriers) were not toxic relative to local reference sediment. The sequential extraction results showed that most of the metals in the sediment are associated with the residual matrix fraction, which is not considered bioavailable. Consequently, the 2010 EAS concluded that metals toxicity is not likely an issue in Second Portage Lake following East Dike construction (Azimuth, 2011a).

3.4.2. Baker Lake

3.4.2.1. General Observations

As discussed earlier, Baker Lake is a large lake that has multiple confounding influences (e.g., the competing influence of less-saline Thelon River water and more-saline Baker Lake water) that affect water chemistry (see **Sections 3.2 and 3.3**) and likely also sediment chemistry. The combined influence of these factors may affect sampling areas differently (e.g., grain size and sedimentation rates).

Shipping-related influence on sediment metals concentrations would be limited to disturbance of bottom sediments from ship propeller wash and possibly from contaminant introductions (e.g., discharges, leaks or spills). A 200-L fuel spill occurred on August 9th, 2012, in which some diesel fuel entered Baker Lake along the shoreline. Both the fuel supply company and AEM worked together to contain and clean up the spill using maritime barriers and absorbent booms; follow-up spill-related water sampling showed no exceedance of CCME drinking water criteria of any substance associated with diesel fuel. Two weeks after (August 23 – 25) the spill, Azimuth collected sediment samples from Baker Lake as part of the routine CREMP monitoring; the sediment samples were measured for PAH and hydrocarbon concentrations, but none were detected (**Table 3.4-2**).

Sediment grain size, which is known to affect sediment chemistry, is a confounding factor in this case as the BAP reference area is generally more sandy, with less silt/clay (**Table 3.4-1** and **Figure 3.4-10**). Typically, the more coarse the grain size (i.e., sandier), the lower the metal concentration. Despite our attempt to target areas that are dominated by silt/clay sediment in areas of similar depth (6 – 10 m), this was not always possible.



The existing temporal patterns in benthic community abundance (and to a lesser extent richness) have raised concerns regarding the suitability of the existing reference area.

Azimuth evaluated the suitability of the reference area BAP because it has inherently coarser sediments than exposure areas and thus lower metals concentrations. Rather than dropping the BAP area and losing potentially valuable temporal information, a second Baker Lake reference area (Baker East Shore [BES]) was added to the CREMP in 2011 to address these concerns

3.4.2.2. Temporal and Spatial Trend Interpretation – General and 2012

Patterns in metals concentrations within and between areas were quite consistent since monitoring began in 2008. In general, metals concentrations have not appeared to have changed or trended higher or lower over time regardless of area. Concentrations at exposure or impact areas are uniformly higher than at control / reference areas because of grain size. In 2012, impact area BPJ percent silt/clay was 79 % with about 20% sand. At the second impact area, BBD, and the reference areas BAP and BES, sand dominated grain size distribution (60 %, 65 % and 71 %) with a much smaller fraction of silt/clay in the sediment (about 30 – 40 %) (**Table 3.4-1 and Figure 3.4-10**).

Aluminum, arsenic, chromium, copper, and zinc concentrations at impact areas were reasonably variable, sometimes ranging over an order of magnitude between minimum and maximum concentrations with a similar range in values for all metals between BBD and BPJ (**Figures 3.4-11, -12, -14, -15, and -18**). Concentrations of the same metals were about 50% lower at the reference areas and were less variable over time with a narrower range in concentration between minimum and maximum values again, likely due to larger grain size. The only 2012 core sample mean to exceed a trigger was arsenic at BPJ (**Table 3.4-5**); however the result was not statistically significant relative to 2008/reference conditions (**Table 3.4-6**).

Cadmium, lead and mercury were consistently at or just above (for mercury) laboratory MDLs (**Figures 3.4-13, -16, and -17**). When MDLs were lowered for these metals in 2011, concentrations were about an order of magnitude lower and similar across all areas.

Summary

There is no evidence of barge-related impacts to sediment metals or organics concentrations at impact areas in Baker Lake, despite the diesel fuel spill (some of which made its way into the shoreline area of Baker Lake) in August 2012. The majority of the influence of barge traffic would be disturbance and re-settling of existing sediment particles. Although sediment grain size is inherently different between exposure and reference areas (including the newly added BES area), there was no pattern of change for

any metal over time that would suggest metals contamination, such as from loss of paint from the hulls of barges.



Table 3.4-1. Conventional sediment grab chemistry, partical size, and total metals (mg/kg), Meadowbank study lakes and Baker Lake, August 2012.

Lake & Basin		Third Portage Lake																			
		Sediment Quality	Meadowbank Study Lakes		Baker Lake		East					North					South				
							TPE-1	TPE-2	TPE-3	TPE-4	TPE-5	TPN-1	TPN-2	TPN-3	TPN-4	TPN-5	TPS-1	TPS-2	TPS-3	TPS-4	TPS-5
Area-Replicate ID	Guidelines (CCME 2002) ¹																				
Date	ISQG	Trigger	Threshold*	Trigger	Threshold*	16-Aug-12	16-Aug-12	16-Aug-12	16-Aug-12	16-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	27-Aug-12	
CONVENTIONAL PARAMETERS																					
Physical & Organic Parameters																					
Moisture (%)	NG					88.2	85.8	88.8	87.4	87.1	55.3	40.2	65.7	86.5	81.8	86.0	85.7	85.4	83.9	85.5	
pH	NG					6.0	6.6	6.6	6.4	6.1	6.3	6.5	6.1	6.0	5.8	6.2	6.0	6.2	5.8	5.6	
Total Organic Carbon (% dw)	NG					4.3	3.8	4.6	3.9	3.7	0.8	0.3	1.3	4.2	2.3	4.2	3.9	4.3	3.0	4.6	
Particle Size																					
% Gravel (>2mm)	NG					<0.10	<0.10	<0.10	<0.10	<0.10	9.44	4.19	1.01	<0.10	<0.10	<0.10	<0.10	<0.10	0.27	<0.10	
% Sand (2.00mm - 0.063mm)	NG					4.2	1.8	1.7	2.4	5.7	27.9	43.5	33.6	17.3	28.7	5.5	3.4	2.8	12.9	9.3	
% Silt (0.063mm - 4µm)	NG					72.9	70.0	73.7	77.1	81.1	45.8	32.8	51.8	78.5	64.7	74.9	72.9	74.0	64.4	68.0	
% Clay (<4µm)	NG					22.9	28.2	24.7	20.5	13.2	16.9	19.5	13.6	4.2	6.6	19.6	23.8	23.2	22.5	22.6	
TOTAL METALS (mg/kg dw)																					
Aluminum	NG					22700	23200	20800	22200	22900	17800	15700	20400	16500	16400	19300	19600	16400	21600	17200	
Antimony	NG					0.24	0.24	0.23	0.26	0.23	0.13	<0.10	0.13	0.21	0.15	0.21	0.20	0.20	0.17	0.22	
Arsenic	5.9	120	-	8.3	-	18.2	18.4	18.8	17.4	18.8	11.2	7.9	10.3	20.6	12.9	16.9	13.9	22.3	10.7	12.7	
Barium	NG					118	126	110	107	108	80	71	79	72	69	89	87	75	90	86	
Beryllium	NG					1.54	1.66	1.46	1.57	1.63	0.89	0.68	1.11	1.02	0.93	1.19	1.23	1.11	1.19	1.15	
Bismuth	NG					2.16	2.26	1.93	2.14	2.22	0.95	0.79	1.24	1.12	1.01	1.38	1.44	1.26	1.45	1.24	
Cadmium	0.6	1.1	-	0.55	0.6	0.29	0.43	0.33	0.25	0.18	0.09	0.07	0.06	0.14	0.08	0.21	0.13	0.20	0.09	0.39	
Calcium	NG					2420	2070	2280	2190	2000	1460	1280	1370	1510	1360	1860	1440	1230	1620	1500	
Chromium	37.3	114.3	-	27	37.3	124.0	111.0	135.0	118.0	114.0	89.6	78.3	121.0	122.0	117.0	96.1	99.4	83.9	111.0	88.7	
Cobalt	NG					16.0	16.0	15.2	15.7	15.2	13.2	10.8	11.0	13.3	10.2	11.4	12.3	17.0	13.2	13.6	
Copper	35.7	126	-	20.5	35.7	47.6	49.3	43.6	46.8	51.3	30.1	21.6	48.5	56.7	40.6	54.0	55.5	51.2	53.6	49.6	
Iron	NG					40100	41300	39000	40300	42800	29100	25400	28200	37700	25600	27400	25500	31100	27800	26100	
Lead	35	32.5	35.0	32.5	35.0	20.3	19.8	18.7	18.8	19.1	12.4	10.3	14.9	14.7	13.2	17.5	16.6	15.4	17.4	17.0	
Lithium	NG					39.4	42.8	36.2	39.9	43.1	35.8	32.5	36.3	25.3	27.3	29.8	30.5	24.8	37.4	27.9	
Magnesium	NG					9880	9590	9860	9740	9720	8810	7920	9360	8720	8390	7910	8100	6910	9820	7700	
Manganese	NG					2140	2720	1970	2000	1680	761	575	331	625	405	490	534	1290	410	558	
Mercury	0.170	0.104	0.170	0.088	0.170	0.024	0.020	0.024	0.018	0.019	0.005	<0.0050	0.008	0.017	0.014	0.018	0.013	0.017	0.014	0.020	
Molybdenum	NG					3.43	3.74	3.42	3.54	3.80	2.47	1.73	2.59	3.68	2.09	2.77	2.92	4.16	1.92	2.87	
Nickel	NG					90.0	114.0	96.7	78.9	66.9	64.3	55.6	62.4	64.7	58.9	63.3	64.1	59.6	69.0	66.9	
Phosphorus	NG					435	386	429	384	407	278	190	297	889	348	441	378	375	391	586	
Potassium	NG					4210	4180	3750	4020	4250	3190	2820	3200	2670	2700	3260	3260	2640	3690	2820	
Selenium	NG					0.81	0.80	0.80	0.76	0.85	<0.20	<0.20	<0.20	0.73	0.32	0.62	0.55	0.64	0.43	0.59	
Silver	NG					0.12	<0.10	0.12	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	<0.10	0.16	0.12	<0.10	0.10	0.15	
Sodium	NG					170	170	150	150	150	190	130	100	130	110	140	130	100	130	110	
Strontium	NG					19.5	17.9	17.8	17.9	17.4	14.7	13.7	14.9	14.2	14.0	15.5	13.9	12.2	15.1	13.1	
Thallium	NG					0.41	0.45	0.36	0.37	0.35	0.26	0.23	0.24	0.20	0.18	0.24	0.24	0.22	0.27	0.24	
Tin	NG					<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Titanium	NG					834	827	757	845	902	800	767	708	540	564	595	599	503	726	512	
Uranium	NG					14.1	15.2	12.9	14.6	15.6	10.2	8.5	15.6	14.4	12.4	14.6	15.6	13.7	15.4	13.7	
Vanadium	NG					38.8	38.9	37.5	39.1	40.3	32.1	28.6	35.4	32.8	31.1	33.3	34.3	30.7	37.4	30.8	
Zinc	123	121.3		73.6	123.0	102.0	107.0	97.2	100.0	102.0	83.4	65.9	84.7	77.3	73.0	84.3	84.1	75.6	96.8	84.7	

Notes:
NG = no guideline.
¹CCME (Canadian Council of Ministers of the Environment) Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, 1999, updated in 2002.
ISQG = Interim freshwater Sediment Quality Guideline
* Threshold set equal to CCME guideline, where available.
"-." CCME guideline not used as threshold value. See report text for detail.
123 Shaded concentrations exceed the trigger value.
123 Boxed concentrations also exceed the threshold value.
Italicized numbers are below detection limits.

Table 3.4-1. Conventional sediment grab chemistry, partial size, and total metals (mg/kg), Meadowbank study lakes and Baker Lake, August 2012.

Lake & Basin						Second Portage Lake					Tehek Lake					Tehek Farfield				
Area-Replicate ID	Sediment Quality	Meadowbank Study Lakes		Baker Lake		SP-1	SP-2	SP-3	SP-4	SP-5	TE-1	TE-2	TE-3	TE-4	TE-5	TEFF-1	TEFF-2	TEFF-3	TEFF-4	TEFF-5
	Guidelines (CCME 2002) ¹	Trigger	Threshold*	Trigger	Threshold*	20-Aug-12	20-Aug-12	20-Aug-12	20-Aug-12	20-Aug-12	19-Aug-12	19-Aug-12	19-Aug-12	19-Aug-12	19-Aug-12	18-Aug-12	18-Aug-12	18-Aug-12	18-Aug-12	18-Aug-12
Date	ISQG																			
CONVENTIONAL PARAMETERS																				
Physical & Organic Parameters																				
Moisture (%)	NG					81.8	83.8	83.7	84.6	83.9	71.0	80.3	79.9	80.3	82.3	85.6	86.8	85.6	82.7	86.1
pH	NG					6.2	6.3	6.4	6.2	6.7	6.1	6.2	6.6	5.7	6.3	6.5	6.2	6.2	6.1	6.1
Total Organic Carbon (% dw)	NG					4.0	4.5	4.0	4.4	4.3	1.5	3.0	2.9	2.8	3.5	3.6	4.3	4.1	3.1	4.0
Particle Size																				
% Gravel (>2mm)	NG					<0.10	<0.10	<0.10	<0.10	<0.10	0.55	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
% Sand (2.00mm - 0.063mm)	NG					1.7	1.7	1.7	1.9	1.3	48.6	8.8	6.1	5.9	2.6	1.4	1.5	2.7	9.9	3.0
% Silt (0.063mm - 4µm)	NG					75.2	74.4	71.4	72.8	72.6	44.1	77.6	68.3	78.8	78.8	76.0	69.0	67.8	69.7	74.5
% Clay (<4µm)	NG					23.1	23.9	26.9	25.4	26.1	6.8	13.7	25.6	15.3	18.7	22.6	29.5	29.5	20.3	22.5
TOTAL METALS (mg/kg dw)																				
Aluminum	NG					22200	23000	23600	23800	23600	13100	18600	21100	20500	22200	19900	22300	21700	17600	21400
Antimony	NG					0.23	0.26	0.24	0.24	0.27	0.10	0.17	0.16	0.18	0.18	0.16	0.18	0.15	0.16	0.18
Arsenic	5.9	120	-	8.3	-	33.9	32.7	24.3	30.1	32.4	6.7	17.0	15.8	42.2	26.7	14.8	11.6	11.8	15.4	11.0
Barium	NG					111	129	110	115	112	65	100	102	110	113	155	112	111	93	102
Beryllium	NG					1.71	1.62	1.89	1.82	1.85	1.14	1.65	1.74	1.70	1.96	1.49	1.86	1.77	1.47	1.81
Bismuth	NG					2.10	2.07	2.19	2.18	2.21	1.19	1.92	2.04	1.91	2.12	1.66	1.80	1.79	1.51	1.80
Cadmium	0.6	1.1	-	0.55	0.6	0.22	0.27	0.20	0.24	0.20	0.11	0.23	0.15	0.16	0.24	0.39	0.20	0.22	0.15	0.12
Calcium	NG					2210	2880	2190	2420	2310	1600	1700	1770	1790	2060	1540	2110	1960	1600	1920
Chromium	37.3	114.3	-	27	37.3	75.4	98.6	76.7	89.4	84.3	33.7	49.3	53.2	50.4	54.5	46.1	53.2	52.6	44.4	53.6
Cobalt	NG					13.9	17.4	14.2	15.6	14.1	6.2	10.8	12.4	9.9	11.7	14.3	12.5	11.9	9.4	11.9
Copper	35.7	126	-	20.5	35.7	65.2	66.6	65.9	67.7	66.2	32.0	51.7	51.9	52.3	57.6	52.0	51.4	52.4	45.2	50.1
Iron	NG					69800	66900	49400	52700	58500	22900	57300	44700	77600	60000	80500	39700	43100	56700	38300
Lead	35	32.5	35.0	32.5	35.0	19.2	20.2	19.4	19.8	20.1	12.9	18.7	19.2	18.0	19.7	17.2	19.9	19.2	16.6	20.0
Lithium	NG					37.3	38.4	39.8	39.2	39.1	28.2	37.2	41.8	40.5	43.1	38.2	47.3	47.7	37.0	48.5
Magnesium	NG					8550	9470	8750	9100	8840	5770	7150	7730	7320	7690	6660	7600	7520	6430	7540
Manganese	NG					1740	5520	1710	2850	2700	382	2020	2230	1060	2060	6340	2480	2680	1550	1760
Mercury	0.170	0.104	0.170	0.088	0.170	0.026	0.033	0.027	0.028	0.028	0.014	0.022	0.018	0.017	0.021	0.019	0.020	0.018	0.015	0.017
Molybdenum	NG					7.56	6.12	5.39	5.58	6.07	1.62	7.24	4.54	9.29	7.05	9.57	4.50	4.53	6.99	4.02
Nickel	NG					58.3	77.8	58.2	68.1	61.0	24.4	39.1	40.9	40.3	45.7	60.2	39.8	44.4	32.6	34.1
Phosphorus	NG					602	612	501	523	512	642	535	472	1370	772	891	476	509	730	431
Potassium	NG					4040	4060	4200	4120	4050	2560	3590	4160	4070	4290	3940	4310	4150	3430	4090
Selenium	NG					0.70	0.76	0.58	0.58	0.60	0.31	0.67	0.59	0.64	0.81	0.89	0.66	0.63	0.79	0.57
Silver	NG					0.14	0.21	<0.10	0.14	0.13	<0.10	0.13	<0.10	0.12	0.13	0.12	<0.10	<0.10	<0.10	<0.10
Sodium	NG					170	180	160	170	170	110	140	170	170	170	180	190	170	140	170
Strontium	NG					18.4	22.5	18.7	20.0	19.3	12.3	15.1	16.1	16.8	18.0	16.0	18.7	17.4	14.3	17.3
Thallium	NG					0.32	0.35	0.33	0.34	0.34	0.21	0.33	0.35	0.34	0.38	0.44	0.39	0.38	0.31	0.37
Tin	NG					<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	NG					757	747	756	756	727	620	716	867	840	839	725	788	749	683	783
Uranium	NG					16.8	15.8	18.1	17.9	18.2	11.2	17.8	18.9	18.2	19.6	19.6	21.7	22.0	18.3	22.5
Vanadium	NG					36.3	37.5	36.9	37.6	36.6	22.7	31.4	34.4	32.7	34.4	31.2	34.4	34.3	30.3	34.5
Zinc	123	121.3		73.6	123.0	110.0	109.0	109.0	109.0	109.0	66.5	98.4	102.0	101.0	107.0	104.0	105.0	104.0	92.0	102.0

Notes:

NG = no guideline.

¹CCME (Canadian Council of Ministers of the Environment) Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, 1999, updated in 2002.

ISQG = Interim freshwater Sediment Quality Guideline

* Threshold set equal to CCME guideline, where available.

"-" CCME guideline not used as threshold value. See report text for detail.

123 Shaded concentrations exceed the trigger value.

123 Boxed concentrations also exceed the threshold value.

Italicized numbers are below detection limits.

Table 3.4-1. Conventional sediment grab chemistry, partical size, and total metals (mg/kg), Meadowbank study lakes and Baker Lake, August 2012.

Lake & Basin						Inuggayualik Lake					Wally Lake					Pipedream Lake				
	Sediment Quality	Meadowbank Study Lakes		Baker Lake																
Area-Replicate ID	Guidelines (CCME 2002) ¹					INUG-1	INUG-2	INUG-3	INUG-4	INUG-5	WAL-1	WAL-2	WAL-3	WAL-4	WAL-5	PDL-1	PDL-2	PDL-3	PDL-4	PDL-5
Date	ISQG	Trigger	Threshold*	Trigger	Threshold*	21-Aug-12	21-Aug-12	21-Aug-12	21-Aug-12	21-Aug-12	17-Aug-12	17-Aug-12	17-Aug-12	17-Aug-12	17-Aug-12	22-Aug-12	22-Aug-12	22-Aug-12	22-Aug-12	22-Aug-12
CONVENTIONAL PARAMETERS																				
Physical & Organic Parameters																				
Moisture (%)	NG					81.0	86.3	81.1	71.4	81.0	92.5	91.9	89.6	90.3	91.0	77.8	73.8	79.2	77.8	73.8
pH	NG					6.1	5.9	5.8	6.2	6.2	6.5	6.5	6.4	6.7	6.5	6.3	6.1	6.4	6.5	6.5
Total Organic Carbon (% dw)	NG					2.9	4.8	4.0	4.6	3.1	11.8	10.0	7.7	8.6	7.9	2.5	2.2	2.9	3.0	2.3
Particle Size																				
% Gravel (>2mm)	NG					<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
% Sand (2.00mm - 0.063mm)	NG					11.9	2.8	1.4	1.6	11.1	1.1	0.8	2.9	2.4	1.9	13.0	7.4	5.3	5.6	8.7
% Silt (0.063mm - 4µm)	NG					64.8	77.3	87.3	84.4	70.1	91.3	88.7	88.9	83.4	87.3	68.2	75.2	73.8	76.8	76.0
% Clay (<4µm)	NG					23.3	19.9	11.3	14.0	18.8	7.6	10.5	8.2	14.2	10.8	18.8	17.4	20.9	17.6	15.4
TOTAL METALS (mg/kg dw)																				
Aluminum	NG					19700	19300	13300	14300	19900	15200	18700	17500	19300	21000	18900	20700	18300	17700	18000
Antimony	NG					0.11	0.18	0.13	0.17	0.15	0.35	0.40	0.35	0.36	0.39	0.26	0.26	0.25	0.25	0.24
Arsenic	5.9	120	-	8.3	-	6.0	24.8	190.0	74.6	12.7	31.7	36.4	30.0	36.5	31.9	28.5	38.9	47.5	34.3	36.0
Barium	NG					106	116	82	94	94	90	109	100	103	120	78	95	77	75	78
Beryllium	NG					1.19	1.22	0.86	0.85	1.17	1.23	1.48	1.37	1.45	1.59	0.92	0.96	0.87	0.86	0.86
Bismuth	NG					1.11	1.16	0.77	0.88	1.15	1.57	1.95	1.85	2.06	2.28	0.92	1.01	0.92	0.94	0.90
Cadmium	0.6	1.1	-	0.55	0.6	0.11	0.25	0.12	0.16	0.13	0.38	0.45	0.39	0.40	0.49	0.11	0.38	0.13	0.17	00.2
Calcium	NG					1900	2160	1360	1690	1730	3990	4070	3700	3880	3730	1980	1830	1870	1940	1760
Chromium	37.3	114.3	-	27	37.3	102.0	100.0	65.9	72.1	104.0	48.2	56.3	51.1	53.5	60.4	129.0	140.0	128.0	127.0	135.0
Cobalt	NG					9.1	11.1	11.9	18.1	14.4	8.0	8.8	8.4	8.8	9.0	16.1	21.8	19.2	16.6	19.3
Copper	35.7	126	-	20.5	35.7	38.6	44.9	28.7	32.1	41.6	117.0	148.0	119.0	128.0	154.0	44.3	55.6	46.4	46.2	49.1
Iron	NG					24900	50500	136000	119000	40000	27400	33200	31000	35500	35100	37100	42500	47800	38800	39400
Lead	35	32.5	35.0	32.5	35.0	11.4	13.8	8.6	10.6	11.9	28.1	32.3	28.7	31.7	34.2	14.3	14.6	13.5	13.9	13.4
Lithium	NG					26.8	22.9	15.7	17.5	26.1	30.4	31.1	32.4	34.9	26.3	28.3	24.2	23.4	23.4	24.1
Magnesium	NG					9200	8580	5820	6430	9020	6470	7410	6970	6980	7770	10100	10800	9710	9950	10700
Manganese	NG					339	837	1440	3910	1200	341	296	331	498	343	1080	2390	1590	1580	1760
Mercury	0.170	0.104	0.170	0.088	0.170	0.016	0.030	0.020	0.028	0.017	0.068	0.063	0.047	0.059	0.048	0.011	0.011	0.011	0.013	0.011
Molybdenum	NG					1.60	3.94	12.70	7.14	2.88	6.53	9.25	7.18	8.10	8.46	2.50	3.74	3.19	2.79	2.88
Nickel	NG					68.5	77.6	51.3	71.5	71.4	47.0	51.7	46.3	49.1	55.2	78.2	119.0	80.7	88.8	94.7
Phosphorus	NG					752	1280	2470	1290	551	769	683	702	679	657	428	416	509	484	468
Potassium	NG					3050	3040	2060	2310	3170	2720	3160	2980	3220	3540	2690	2820	2460	2370	2490
Selenium	NG					0.39	0.68	0.52	0.61	0.46	0.73	0.89	0.74	0.79	0.91	0.33	0.29	0.42	0.37	0.28
Silver	NG					0.12	0.18	0.10	0.12	<0.10	0.53	0.67	0.47	0.51	0.56	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	NG					140	150	<100	110	140	150	170	150	150	170	<100	<100	<100	<100	<100
Strontium	NG					20.9	22.6	16.1	18.6	22.5	24.4	25.6	24.0	26.4	26.1	20.4	20.1	18.7	18.3	18.2
Thallium	NG					0.17	0.19	0.12	0.16	0.20	0.25	0.30	0.27	0.30	0.32	0.18	0.25	0.17	0.17	0.165
Tin	NG					<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	NG					540	551	358	387	592	427	525	574	512	594	522	545	456	401	483
Uranium	NG					14.1	15.1	9.7	10.7	14.7	12.6	16.0	14.0	14.9	16.8	8.2	10.0	8.7	8.4	8.4
Vanadium	NG					33.1	32.6	21.4	23.3	33.0	24.3	28.9	27.8	28.6	33.2	34.2	37.4	32.7	33.2	35.8
Zinc	123	121.3		73.6	123.0	79.4	90.6	60.0	66.7	82.7	109.0	122.0	106.0	112.0	120.0	77.6	88.1	76.9	79.0	81.3

Notes:

NG = no guideline.

¹CCME (Canadian Council of Ministers of the Environment) Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, 1999, updated in 2002.

ISQG = Interim freshwater Sediment Quality Guideline

* Threshold set equal to CCME guideline, where available.

"-" CCME guideline not used as threshold value. See report text for detail.

123 Shaded concentrations exceed the trigger value.

123 Boxed concentrations also exceed the threshold value.

Italicized numbers are below detection limits.

Table 3.4-1. Conventional sediment grab chemistry, partical size, and total metals (mg/kg), Meadowbank study lakes and Baker Lake, August 2012.

Lake & Basin		Baker Lake																								
		Sediment Quality		Meadowbank Study Lakes		Baker Lake		Barge Dock					Proposed Jetty					Akilahaarjuk Point					East Shore			
Area-Replicate ID	Guidelines (CCME 2002) ¹					BBD-1	BBD-2	BBD-3	BBD-4	BBD-5	BPJ-1	BPJ-2	BPJ-3	BPJ-4	BPJ-5	BAP-1	BAP-2	BAP-3	BAP-4	BAP-5	BES-1	BES-2	BES-3	BES-4	BES-5	
Date	ISQG	Trigger	Threshold*	Trigger	Threshold*	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	24-Aug-12	25-Aug-12	25-Aug-12	25-Aug-12	25-Aug-12	25-Aug-12	
CONVENTIONAL PARAMETERS																										
Physical & Organic Parameters																										
Moisture (%)	NG					37.0	33.8	28.3	24.6	29.3	48.2	42.8	46.7	44.8	50.8	27.7	28.4	40.1	33.1	36.6	39.8	43.6	50.9	48.3	53.4	
pH	NG					6.4	6.5	6.5	6.4	6.3	7.4	6.4	6.8	6.5	6.9	6.5	6.6	6.4	6.3	6.7	7.6	7.4	7.2	7.3	7.4	
Total Organic Carbon (% dw)	NG					0.5	0.4	0.2	0.1	0.2	0.6	0.4	0.3	0.4	0.7	0.2	0.2	0.5	0.4	0.4	0.3	0.4	0.5	0.4	0.4	
Particle Size																										
% Gravel (>2mm)	NG					<0.10	0.59	<0.10	1.23	<0.10	<0.10	0.45	0.35	0.15	0.61	0.40	0.26	<0.10	<0.10	0.20	1.59	<0.10	<0.10	<0.10	1.29	
% Sand (2.00mm - 0.063mm)	NG					46.7	56.5	48.2	66.4	81.5	39.4	17.6	15.5	15.8	17.1	80.2	76.3	61.3	65.5	70.4	69.6	73.1	57.0	66.1	59.4	
% Silt (0.063mm - 4µm)	NG					47.7	38.1	45.3	28.6	16.1	52.2	69.3	74.9	72.4	70.1	17.1	21.0	34.6	31.0	25.5	25.2	23.0	36.4	29.3	34.9	
% Clay (<4µm)	NG					5.6	4.8	6.5	3.8	2.4	8.4	12.6	9.2	11.7	12.2	2.3	2.4	4.1	3.5	3.8	3.6	3.9	6.6	4.6	4.4	
TOTAL METALS (mg/kg dw)																										
Aluminum	NG					5780	5700	6040	5390	4450	7420	9260	8370	8850	9530	4110	4110	6160	5360	5310	6060	6110	7700	6260	6370	
Antimony	NG					<0.10	<0.10	<0.10	<0.10	<0.10	0.11	0.13	0.14	0.12	0.17	0.12	0.13	0.13	0.14	0.12	0.18	0.21	0.22	0.19	0.19	
Arsenic	5.9	120	-	8.3	-	16.6	12.9	5.1	4.3	5.6	14.5	20.7	24.4	6.7	56.9	4.0	8.5	13.2	3.0	5.2	3.4	3.2	4.2	3.5	3.7	
Barium	NG					84	78	61	51	52	135	102	106	84	180	266	334	325	327	254	162	148	107	116	119	
Beryllium	NG					0.27	0.23	0.25	0.23	<0.20	0.34	0.43	0.39	0.41	0.52	0.28	0.31	0.36	0.32	0.34	0.31	0.33	0.43	0.36	0.33	
Bismuth	NG					<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.23	0.22	0.22	0.25	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Cadmium	0.6	1.1	-	0.55	0.6	<0.050	<0.050	<0.050	0.05	<0.050	0.09	0.05	0.06	0.08	0.09	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.05	0.05	<0.050	
Calcium	NG					2160	2050	2130	1660	1400	2260	2720	2410	2410	2700	1870	2010	2250	2260	2060	2070	2160	2460	2280	2280	
Chromium	37.3	114.3	-	27	37.3	14.3	14.9	15.0	13.4	9.7	18.3	21.1	20.2	22.5	14.2	12.5	17.3	15.6	15.2	18.7	18.8	21.6	18.0	19.0		
Cobalt	NG					4.5	4.5	4.7	4.0	3.3	6.7	6.9	6.4	6.3	10.6	3.2	3.3	4.9	4.1	4.5	4.7	4.8	5.7	5.0	5.0	
Copper	35.7	126	-	20.5	35.7	6.9	5.9	6.2	6.0	6.6	7.9	9.2	8.6	9.7	11.5	3.8	3.4	6.4	6.2	5.1	4.9	4.7	6.4	5.6	6.1	
Iron	NG					15200	14300	11900	11100	10700	18500	20700	24000	17200	34500	11000	12000	16300	13000	14900	13400	13300	15800	13600	13800	
Lead	35	32.5	35.0	32.5	35.0	6.1	5.6	8.4	5.1	3.6	8.1	9.4	8.9	9.3	11.0	3.9	3.9	5.8	5.0	5.2	4.6	4.7	6.6	5.1	5.3	
Lithium	NG					7.7	7.7	7.9	7.5	6.6	9.5	12.6	10.8	11.5	13.3	7.2	6.2	9.6	8.5	8.7	9.0	9.1	11.3	9.6	9.7	
Magnesium	NG					3350	3300	3550	3300	2780	4190	4970	4560	4860	5280	2640	2530	3640	3250	3190	3820	3760	4350	3760	3820	
Manganese	NG					373	355	234	199	206	4240	1510	1190	559	3360	126	251	286	134	412	454	381	568	459	436	
Mercury	0.170	0.104	0.170	0.088	0.170	0.006	0.005	0.005	<0.0050	<0.0050	0.010	0.010	0.009	0.010	0.011	<0.0050	<0.0050	0.008	<0.0050	0.007	0.006	0.006	0.010	0.008	0.007	
Molybdenum	NG					0.62	0.60	0.62	0.52	<0.50	2.32	1.91	0.71	0.53	4.17	<0.50	0.57	0.73	<0.50	0.70	<0.50	<0.50	0.65	0.59	<0.50	
Nickel	NG					8.5	9.4	9.4	8.6	6.6	12.4	13.1	12.6	13.3	15.7	8.2	7.5	11.0	10.0	9.4	11.4	11.5	13.0	11.2	11.4	
Phosphorus	NG					837	714	687	561	497	843	1010	1530	864	1840	606	672	786	771	704	717	682	688	641	688	
Potassium	NG					990	980	1160	900	720	1370	1610	1450	1610	1750	890	930	1420	1260	1150	1270	1290	1590	1290	1340	
Selenium	NG					<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Silver	NG					<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Sodium	NG					<100	<100	<100	<100	<100	120	180	160	160	180	<100	<100	110	<100	<100	<100	100	130	<100	110	
Strontium	NG					34.1	34.7	37.7	30.1	27.0	44.2	50.8	42.8	43.6	50.9	35.2	37.2	43.7	40.6	40.1	37.5	39.0	45.7	41.0	39.7	
Thallium	NG					<0.050	<0.050	<0.050	<0.050	<0.050	0.06	0.07	0.06	0.07	0.08	<0.050	0.06	0.07	0.06	0.05	0.05	0.06	0.07	0.06	0.05	
Tin	NG					<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Titanium	NG					327	301	349	260	213	355	402	340	382	341	216	253	348	321	262	324	357	361	374	323	
Uranium	NG					1.2	1.1	1.2	0.9	0.7	1.7	2.0	1.8	1.8	2.6	1.1	1.1	1.7	1.5	1.4	1.2	1.2	1.5	1.3	1.3	
Vanadium	NG					15.9	15.6	17.0	14.3	11.8	21.6	24.2	23.4	23.0	28.5	16.1	16.4	22.1	20.1	19.4	19.3	22.4	19.3	19.6	19.6	
Zinc	123	121.3		73.6	123.0	26.0	39.7	30.7	24.6	20.3	36.4	37.9	36.8	38.2	45.3	17.9	17.0	26.4	23.7	22.9	26.7	26.3	31.6	27.2	27.7	

Notes:

NG = no guideline.

¹CCME (Canadian Council of Ministers of the Environment) Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, 1999, updated in 2002.

ISQG = Interim freshwater Sediment Quality Guideline

* Threshold set equal to CCME guideline, where available.

"-" CCME guideline not used as threshold value. See report text for detail.

123 Shaded concentrations exceed the trigger value.

123 Boxed concentrations also exceed the threshold value.

Italicized numbers are below detection limits.

Table 3.4-2. Composite sediment grab hydrocarbons and PAHs, Meadowbank study lakes and Baker Lake, August 2012.

Lake & Basin	Third Portage Lake				Second Portage Lake	Tehek Lake	Tehek Farfield	Inuggugayualik Lake	Wally Lake	Pipedream Lake	Baker Lake			
	Sediment Quality Guidelines (CCME)	East	North	South							Barge Dock	Proposed Jetty	Akilahaarjuk Point	East Shore
	ISQG	TPE	TPN	TPS		TE	TEFF	INUG	WAL	PDL	BBD	BPJ	BAP	BES
Area-Replicate ID	Date	16-Aug-12	27-Aug-12	27-Aug-12	20-Aug-12	19-Aug-12	18-Aug-12	21-Aug-12	17-Aug-12	22-Aug-12	23-Aug-12	24-Aug-12	24-Aug-12	25-Aug-12
CONVENTIONAL PARAMETERS														
Physical & Organic Parameters														
Moisture (%)	NG	87.5	72.7	86.5	88.8	80.3	86.1	86.2	91.6	80.6	42.6	52.5	43.6	48.5
AGGREGATE ORGANICS (mg/kg)														
Mineral Oil and Grease	NG	<1700	<800	<500	<1800	<900	<1500	<1600	<2400	<1100	<500	<500	<500	<500
HYDROCARBONS (mg/kg)														
EPH10-19	NG	<700	<310	<610	<200	<490	410	<200	<1100	<200	<200	<200	<200	<200
EPH19-32	NG	<700	<310	<610	<200	<490	290	<200	<1100	<200	<200	<200	<200	<200
LEPH	NG	<700	<310	<610	<200	<490	410	<200	<1100	<200	<200	<200	<200	<200
HEPH	NG	<700	<310	<610	<200	<490	290	<200	<1100	<200	<200	<200	<200	<200
POLYCYCLIC AROMATIC HYDROCARBONS (mg/														
Acenaphthene	0.00671	<0.020	<0.0050	<0.0050	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	0.00587	<0.020	<0.0050	<0.0050	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	0.0469	<0.020	<0.0040	<0.0040	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.0040	<0.0050	<0.0040	<0.0040
Benz(a)anthracene	0.0317	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	0.0319	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	NG	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	NG	<0.028	<0.015	<0.015	<0.028	<0.018	<0.028	<0.024	<0.042	<0.018	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	NG	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	NG	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Chrysene	0.0571	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	0.00622	<0.020	<0.0050	<0.0050	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	0.111	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Fluorene	0.0212	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	NG	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	0.0202	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Naphthalene	0.0346	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Phenanthrene	0.0419	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010
Pyrene	0.053	<0.020	<0.010	<0.010	<0.020	<0.013	<0.020	<0.017	<0.030	<0.013	<0.010	<0.010	<0.010	<0.010

Notes:
NG = no guideline.
¹CCME (Canadian Council of Ministers of the Environment) Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, 1999, updated in 2002.
ISQG = Interim freshwater Sediment Quality Guideline

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Shaded concentrations exceed the trigger value.

Italicized numbers are below detection limits.

Table 3.4-3. Conventional sediment core chemistry and total metals, Meadowbank study lakes and Baker Lake, August 2012

Lake	Station ID	Date	CONVENTIONAL PARAMETERS			TOTAL METALS (mg/kg dw)															
			pH	Total Organic Carbon (% dw)	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)
Sediment Quality Guidelines (CCME 2002) ¹	ISQG		NG	NG	NG	NG	5.9	NG	NG	NG	0.6	NG	37.3	NG	35.7	NG	35.0	NG	NG	NG	0.170
	PEL		NG	NG	NG	NG	17	NG	NG	NG	3.5	NG	90.0	NG	197	NG	91.3	NG	NG	NG	0.486
Meadowbank Study Lakes	Trigger						120				1.1		114.3		126		32.5		NG	NG	0.104
	Threshold																35				0.17
Baker Lake	Trigger						8.3				0.55		27		20.5		32.5				0.088
	Threshold										0.6		37.3		35.7		35				0.17
Third Portage Lake	TPE-SC-1	16-AUG-12	5.9	3.7	23900	0.23	17.4	116	1.7	2.3	0.210	2240	116.0	15.5	49.4	41100	20.1	43.4	9870	1830	0.022
	TPE-SC-3	26-AUG-12	5.8	3.3	25600	0.22	21.6	126	2.0	2.7	0.139	1910	115.0	18.2	60.8	52100	22.1	53.6	11200	2170	0.018
	TPE-SC-5	26-AUG-12	5.7	2.7	29200	0.24	25.5	142	2.2	3.1	0.159	1880	111.0	20.7	71.1	65700	24.1	60.6	11600	2700	0.017
	TPE-SC-7	26-AUG-12	5.9	3.4	21400	0.20	16.4	103	1.6	2.3	0.104	1790	95.9	13.4	53.2	42800	18.8	45.8	9410	892	0.020
	TPE-SC-9	26-AUG-12	5.9	3.1	22500	0.21	18.0	113	1.8	2.4	0.212	1780	86.1	19.0	55.6	52000	19.2	43.8	8950	3380	0.020
	TPS-SC-1	27-AUG-12	5.9	3.8	20500	0.20	24.8	94	1.2	1.5	0.153	1750	105.0	13.3	58.7	35300	19.0	32.6	8630	629	0.021
	TPS-SC-3	27-AUG-12	5.9	3.6	20100	0.21	13.1	90	1.2	1.5	0.123	1400	103.0	12.6	60.1	25900	17.4	31.3	8410	475	0.014
	TPS-SC-5	27-AUG-12	6.0	3.9	22000	0.22	14.5	101	1.5	1.6	0.154	1500	122.0	18.5	71.0	31200	18.5	33.2	9870	740	0.020
	TPS-SC-7	27-AUG-12	6.0	3.7	21700	0.20	12.0	89	1.3	1.6	0.111	1550	109.0	13.3	60.6	27500	18.1	34.4	9090	408	0.018
	TPS-SC-9	27-AUG-12	5.8	2.6	19000	0.16	9.9	91	1.2	1.3	0.131	1420	93.1	10.5	46.9	24900	16.2	33.0	8220	347	0.010
	TPN-SC-1	27-AUG-12	6.1	0.3	14500	0.11	15.6	59	0.7	0.8	0.062	967	80.6	10.3	26.9	28400	10.0	30.2	7070	599	<0.0050
	TPN-SC-3	27-AUG-12	6.4	0.3	9660	<0.10	5.0	38	0.4	0.6	0.065	998	44.6	7.7	10.2	17000	6.6	20.4	5310	441	<0.0050
	TPN-SC-5	27-AUG-12	6.1	3.7	18100	0.17	14.2	74	1.0	1.2	0.095	1570	111.0	10.5	46.2	26600	15.8	30.1	8180	409	0.021
	TPN-SC-7	27-AUG-12	6.1	4.3	12400	0.18	19.3	48	0.8	0.9	0.104	1380	87.7	9.7	38.0	33100	13.1	19.0	6160	558	0.019
TPN-SC-9	27-AUG-12	6.3	2.6	12900	0.14	9.0	52	0.7	0.9	0.070	1140	79.7	8.3	29.9	20300	11.0	23.0	6240	354	0.010	
Second Portage Lake	SP-SC-1	20-AUG-12	6.2	3.7	24200	0.26	28.6	125	2.0	2.4	0.265	2090	84.3	17.4	79.5	59600	21.4	44.0	9730	2390	0.136
	SP-SC-3	20-AUG-12	6.2	4.1	22100	0.27	28.0	141	1.8	2.2	0.333	2150	84.5	17.1	79.7	68200	20.8	42.0	9390	3640	0.059
	SP-SC-5	20-AUG-12	6.1	4.0	24400	0.23	32.6	115	2.1	2.4	0.195	2590	82.7	17.4	76.5	59600	21.6	45.5	9570	2600	0.030
	SP-SC-7	20-AUG-12	6.3	4.2	23500	0.27	32.2	120	2.0	2.4	0.229	2430	88.8	17.1	81.3	57000	21.2	44.8	9970	2660	0.034
	SP-SC-9	20-AUG-12	7.0	4.3	24900	0.27	35.2	139	2.1	2.4	0.256	2130	86.7	19.3	86.5	61900	21.9	46.0	9940	3840	0.048
Wally Lake	WAL-SC-1	17-AUG-12	6.5	12.3	16500	0.47	38.9	96	1.4	1.6	0.455	4880	48.8	8.1	243.0	32600	30.4	28.9	6560	370	0.082
	WAL-SC-3	17-AUG-12	6.6	10.1	20000	0.53	36.7	119	1.5	2.0	0.532	4780	56.4	9.3	258.0	35500	34.0	31.6	7360	310	0.079
	WAL-SC-5	17-AUG-12	6.3	9.5	17000	0.37	44.6	97	1.3	1.7	0.386	4090	48.8	8.8	201.0	39000	29.1	28.8	6700	396	0.076
	WAL-SC-7	17-AUG-12	6.5	9.2	20100	0.44	38.0	117	1.5	2.1	0.479	4320	57.4	9.3	257.0	39400	34.4	33.2	7580	418	0.082
	WAL-SC-9	17-AUG-12	6.5	9.1	21500	0.43	42.5	125	1.7	2.2	0.518	4000	60.8	10.0	247.0	42900	36.3	34.2	7740	416	0.076
Tehek Lake	TE-SC-1	18-AUG-12	5.1	1.5	12300	0.11	6.9	56	1.1	1.2	0.053	1350	33.3	5.8	34.4	25000	12.1	26.9	5350	269	0.024
	TE-SC-3	19-AUG-12	5.5	1.0	16500	0.13	18.8	81	1.7	1.6	0.060	1540	42.4	7.6	46.2	49500	16.2	33.5	6610	510	0.020
	TE-SC-5	19-AUG-12	5.5	2.2	20200	0.14	10.5	108	1.6	2.0	0.148	1780	52.2	12.0	52.0	45000	18.6	42.3	7810	1180	0.040
	TE-SC-7	19-AUG-12	6.1	2.7	20400	0.18	21.4	104	1.8	2.0	0.146	1680	52.9	14.2	54.6	54900	18.8	41.3	7690	2060	0.051
	TE-SC-9	19-AUG-12	5.8	3.3	18500	0.17	71.1	114	1.7	1.8	0.240	1880	51.3	10.9	54.5	96400	17.5	36.9	7350	1980	0.037
	TEFF-SC-1	18-AUG-12	6.0	4.3	19700	0.20	11.8	115	1.7	1.8	0.216	1970	50.4	12.4	53.5	39200	19.6	42.6	7200	3430	0.037
	TEFF-SC-3	18-AUG-12	6.1	3.8	21300	0.18	13.5	119	1.8	2.0	0.164	1930	59.6	14.8	61.7	45100	20.6	45.8	8710	2860	0.023
	TEFF-SC-5	18-AUG-12	5.6	3.5	18800	0.15	13.2	116	1.5	2.2	0.277	1600	52.0	14.0	56.8	63300	17.8	40.2	7680	2510	0.045
	TEFF-SC-7	18-AUG-12	5.7	3.1	15200	0.16	20.3	82	1.3	1.3	0.152	1570	39.9	8.5	40.9	67800	15.3	32.1	5970	1030	0.034
	TEFF-SC-9	18-AUG-12	6.1	3.4	21600	0.15	11.8	108	1.9	1.9	0.118	1890	56.1	13.0	55.1	41400	20.4	51.5	8130	1940	0.019
Inugugvualik Lake	INUG-SC-1	21-AUG-12	5.7	3.6	20700	0.14	8.3	117	1.4	1.2	0.147	2040	113.0	10.7	45.3	29400	12.6	29.2	10100	438	0.046
	INUG-SC-3	21-AUG-12	5.9	4.6	21200	0.19	18.4	137	1.5	1.3	0.338	2120	120.0	12.7	55.6	45800	14.7	27.5	10300	814	0.061
	INUG-SC-5	21-AUG-12	5.7	4.1	27400	0.30	6.0	32	0.6	<0.20	0.116	22200	50.8	17.5	63.0	44500	6.6	30.6	18700	752	0.032
	INUG-SC-7	21-AUG-12	5.7	3.2	18700	0.14	114.0	88	1.1	1.1	0.094	1400	87.1	21.6	40.8	132000	10.3	19.8	7470	1270	0.019
	INUG-SC-9	21-AUG-12	6.1	2.7	23600	0.16	14.1	101	1.4	1.4	0.120	1570	117.0	14.6	52.6	40600	14.9	33.8	10400	871	0.014
Pipedream Lake	PDL-SC-1	22-AUG-12	6.2	2.6	20200	0.30	30.0	81	1.0	0.9	0.125	1910	129.0	17.0	47.1	38300	14.4	27.6	10500	1160	0.010
	PDL-SC-3	22-AUG-12	6.3	2.4	21500	0.22	36.5	84	1.0	1.0	0.236	1770	137.0	19.9	53.7						

Table 3.4-3. Conventional sediment core chemistry and total metals, Meadowbank study lakes and Baker Lake, August 2012

Lake		Station ID	Date	TOTAL METALS (mg/kg dw)													
				Molybdenum (Mo)	Nickel (Ni)	Phosphorus (P)	Potassium (K)	Selenium (Se)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Thallium (Tl)	Tin (Sn)	Titanium (Ti)	Uranium (U)	Vanadium (V)	Zinc (Zn)
Sediment Quality Guidelines (CCME 2002) ¹		ISQG		NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	123
		PEL		NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	315
Meadowbank Study Lakes		Trigger															121.3
		Threshold															
Baker Lake		Trigger															73.6
		Threshold															123
Third Portage Lake	TPE-SC-1	16-AUG-12	3.7	70.5	424	4430	0.89	<0.10	170	19.2	0.383	3.8	910	14.8	40.2		102.0
	TPE-SC-3	26-AUG-12	4.5	68.4	420	4870	0.44	<0.10	190	17.6	0.393	3.0	991	19.8	47.2		124.0
	TPE-SC-5	26-AUG-12	5.7	72.3	422	5560	0.38	<0.10	170	18.3	0.464	3.1	1080	23.4	51.1		130.0
	TPE-SC-7	26-AUG-12	3.8	56.3	428	4300	0.80	<0.10	170	15.7	0.339	4.3	951	16.0	40.0		102.0
	TPE-SC-9	26-AUG-12	4.9	69.1	350	4090	0.74	<0.10	150	15.6	0.409	3.9	830	17.8	38.9		107.0
	TPS-SC-1	27-AUG-12	3.4	65.2	521	3350	0.70	0.15	150	15.8	0.250	2.0	624	16.1	36.5		92.8
	TPS-SC-3	27-AUG-12	2.9	64.2	392	3220	0.60	0.12	140	13.3	0.238	<2.0	617	16.5	36.1		90.6
	TPS-SC-5	27-AUG-12	3.7	80.2	470	3560	0.79	0.14	170	14.2	0.298	2.6	642	18.8	41.1		110.0
	TPS-SC-7	27-AUG-12	2.8	62.7	375	3420	0.59	0.13	130	14.5	0.273	2.6	659	17.1	36.8		92.8
	TPS-SC-9	27-AUG-12	1.7	60.7	566	3070	0.40	0.11	150	13.3	0.222	<2.0	647	14.2	33.1		82.9
	TPN-SC-1	27-AUG-12	4.1	48.8	191	2320	<0.20	<0.10	<100	11.7	0.170	<2.0	665	10.8	27.9		64.4
	TPN-SC-3	27-AUG-12	1.0	32.8	143	1560	<0.20	<0.10	100	9.4	0.124	<2.0	470	4.4	17.3		42.8
	TPN-SC-5	27-AUG-12	2.5	55.8	412	2780	0.44	<0.10	120	14.5	0.212	2.2	521	15.3	31.9		79.0
	TPN-SC-7	27-AUG-12	3.2	45.3	596	1760	0.55	0.13	<100	11.7	0.138	<2.0	344	10.0	23.2		57.1
	TPN-SC-9	27-AUG-12	1.8	43.6	273	1980	0.29	<0.10	100	10.9	0.147	<2.0	449	9.9	23.7		59.0
Second Portage Lake	SP-SC-1	20-AUG-12	5.9	72.7	637	4860	0.64	<0.10	190	19.2	0.378	3.0	985	20.3	42.5		121.0
	SP-SC-3	20-AUG-12	7.1	75.5	635	4480	0.79	0.21	190	18.9	0.371	2.7	870	18.1	41.0		119.0
	SP-SC-5	20-AUG-12	6.2	65.6	549	4360	0.60	<0.10	160	19.7	0.350	3.3	782	20.4	40.8		121.0
	SP-SC-7	20-AUG-12	5.9	70.6	580	4490	0.65	<0.10	180	19.6	0.348	4.2	885	20.3	42.9		122.0
	SP-SC-9	20-AUG-12	6.5	74.3	651	4760	0.67	<0.10	180	19.2	0.370	2.8	870	21.3	44.3		128.0
Wally Lake	WAL-SC-1	17-AUG-12	7.5	49.0	908	3040	0.92	0.58	230	30.3	0.279	7.8	519	13.2	26.1		130.0
	WAL-SC-3	17-AUG-12	9.9	52.6	741	3330	1.03	0.70	230	28.2	0.315	7.5	611	16.5	30.3		142.0
	WAL-SC-5	17-AUG-12	8.4	48.3	850	2890	0.81	0.42	210	26.3	0.274	4.5	531	13.2	27.7		118.0
	WAL-SC-7	17-AUG-12	9.3	53.7	729	3290	0.92	0.59	200	28.0	0.313	11.0	525	15.6	31.0		143.0
	WAL-SC-9	17-AUG-12	11.5	56.3	684	3390	1.01	0.68	190	26.7	0.324	6.8	498	17.1	33.2		139.0
Tehek Lake	TE-SC-1	18-AUG-12	1.8	22.0	690	2460	0.36	0.10	110	10.6	0.196	<2.0	609	11.4	21.8		62.1
	TE-SC-3	19-AUG-12	4.3	26.4	1240	3210	0.24	<0.10	120	12.3	0.249	<2.0	786	19.1	29.0		72.6
	TE-SC-5	19-AUG-12	5.8	40.0	494	4130	0.52	0.12	170	16.0	0.346	2.1	913	18.5	33.5		95.2
	TE-SC-7	19-AUG-12	6.3	40.9	527	4120	0.53	<0.10	180	15.4	0.337	2.5	865	19.0	34.2		102.0
	TE-SC-9	19-AUG-12	11.7	47.6	1250	3970	0.76	0.16	180	16.5	0.319	2.4	797	17.1	32.9		101.0
	TEFF-SC-1	18-AUG-12	4.5	44.8	519	4240	0.81	<0.10	180	17.3	0.393	5.2	785	21.3	33.9		101.0
	TEFF-SC-3	18-AUG-12	4.8	42.6	498	4580	0.54	<0.10	190	16.7	0.391	5.1	855	23.6	39.3		114.0
	TEFF-SC-5	18-AUG-12	5.7	50.1	607	4080	0.69	<0.10	170	15.0	0.374	4.0	786	20.8	35.1		106.0
	TEFF-SC-7	18-AUG-12	7.1	26.4	891	3170	0.78	<0.10	140	13.6	0.263	2.2	660	15.9	28.0		79.3
	TEFF-SC-9	18-AUG-12	4.4	37.2	411	4350	0.47	<0.10	160	17.0	0.381	3.4	792	23.9	37.5		106.0
Inugugavualik Lake	INUG-SC-1	21-AUG-12	2.0	81.8	891	3560	0.48	0.13	160	23.6	0.184	2.1	721	15.2	38.2		86.7
	INUG-SC-3	21-AUG-12	3.5	91.8	1210	3640	0.70	0.20	190	24.6	0.213	2.6	708	17.0	39.8		102.0
	INUG-SC-5	21-AUG-12	0.7	37.4	865	740	<0.20	0.11	100	75.6	<0.050	<2.0	2610	0.7	111.0		85.3
	INUG-SC-7	21-AUG-12	12.0	69.2	1720	2800	0.76	0.13	130	18.6	0.162	<2.0	542	13.5	29.0		78.1
	INUG-SC-9	21-AUG-12	3.6	77.8	518	3480	0.24	<0.10	130	22.8	0.255	<2.0	729	22.3	38.6		90.2
Pipedream Lake	PDL-SC-1	22-AUG-12	2.6	84.0	446	2670	0.33	<0.10	150	20.3	0.190	2.7	513	8.5	35.0		77.8
	PDL-SC-3	22-AUG-12	3.3	105.0	410	2850	0.29	<0.10	110	20.0	0.201	<2.0	563	10.0	37.2		82.7
	PDL-SC-5	22-AUG-12	4.9	92.1	997	2600	0.44	0.11	110	19.0	0.175	<2.0	468	9.9	35.7		86.7
	PDL-SC-7	22-AUG-12	3.3	109.0	566	2850	0.33	<0.10	120	24.3	0.194	2.2	552	9.8	39.1		87.5
	PDL-SC-9	22-AUG-12	3.0	99.2	426	2570	0.31	<0.10	<100	20.3	0.200	2.5	530	9.2	36.2		79.6
Baker Lake	BBD-SC-1	23-AUG-12	0.7	10.2	699	1120	<0.20	<0.10	130	35.4	0.054	<2.0	316	1.4	17.5		30.5
	BBD-SC-3	23-AUG-12	0.6	7.5	703	800	<0.20	<0.10	<100	28.3	<0.050	<2.0	216	1.0	14.5		23.0
	BBD-SC-5	23-AUG-12	0.5	7.8	609	970	<0.20	<0.10	<100	32.8	<0.050	<2.0	251	1.2	15.4		23.6
	BBD-SC-7	23-AUG-12	<0.50	5.2	296	530	<0.20	<0.10	<100	22.8	<0.050	<2.0	177	0.5	10.2		15.0
	BBD-SC-9	23-AUG-12	<0.50	7.2	581	800	<0.20	<0.10	<100	29.5	<0.050	<2.0	228	0.8	13.6		21.4
	BPJ-SC-1	24-AUG-12	1.9	11.3	813	1310	<0.20	<0.10	140	43.0	0.059	<2.0	340	1.5	21.2		34.2
	BPJ-SC-3	24-AUG-12	1.3	14.3	1260	1640	<0.20	<0.10	160	49.0	0.069	<2.0	369	2.0	24.7		42.0
	BPJ-SC-5	24-AUG-12	1.3	12.4	1670	1430	<0.20	<0.10	150	45.0	0.058	<2.0	343	1.7	22.8		35.9
	BPJ-SC-7	24-AUG-12	0.9	13.5	779	1790	<0.20	<0.10	190	54.8	0.077	<2.0	490	2.0	24.8		40.1
	BPJ-SC-9	24-AUG-12	0.9	14.5	983	1870	<0.20	<0.10	190	52.2	0.082	<2.0	496	2.1	25.9		42.0
	BAP-SC-1	24-AUG-12	<0.50	9.2	708	1070	<0.20	<0.10	<100	38.8	0.050	<2.0	270	1.2	18.6		20.1
	BAP-SC-3	24-AUG-12	2.0	9.6	700	1200	<0.20	<0.10	<100	41.9	0.061	<2.0	311	1.3	19.0		23.4
	BAP-SC-5	24-AUG-12	0.6	11.5	797	1580	<0.20	<0.10	130	43.1	0.077	<2.0	382	1.8	22.8		30.9
	BAP-SC-7	24-AUG-12	0.7	11.3	796	1620	<0.20	<0.10	140	43.1	0.073	<2.0	377	1.8	23.7		30.9
	BAP-SC-9	24-AUG-12	<0.50	8.3	548	830	<0.20	<0.10	<100	34.0	<0.050	<2.0	224	1.4	16.6		17.6
	BES-SC-1	25-AUG-12	0.6	19.4	475	940	<0.20	<0.10	<100	27.1	<0.050	<2.0	265	0.9	15.4		21.5
	BES-SC-3	25-AUG-12	<0.50	10.6	560	1040	<0.20	<0.10	<100	28							

Notes:

NG = no guideline.

¹CCME (Canadian Council of Ministers of the Environment) Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, 1999, updated in 2002.

ISQG = Interim freshwater Sediment Quality Guideline, PEL = Probably Effects Level

123 Shaded concentrations exceed the trigger value.

123 Boxed concentrations also exceed the threshold value.

Italicized numbers are below detection limits.

Table 3.4-4. Sediment core chemistry mean 2012 results exceeding the trigger value at Meadowbank study lakes.

		Meadowbank Sampling Areas								
Parameter Measured	Trigger	REF	REF	NF	NF	NF	NF	MF	MF	FF
		INUG	PDL	TPN	SP	TPE	WAL	TPS	TE	TEFF
Aluminum	-	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	120.0	-	-	-	-	-	-	-	-	-
Cadmium	1.10	-	-	-	-	-	-	-	-	-
Chromium	114.3	-	136.0	-	-	-	-	-	-	-
Copper	126.0	-	-	-	-	-	241.2	-	-	-
Lead	32.5	-	-	-	-	-	32.8	-	-	-
Mercury	0.104	-	-	-	-	-	-	-	-	-
Zinc	121.3	-	-	-	122.2	-	134.4	-	-	-

Notes:

REF = reference; NF = near-field; MF = mid-field; FF = far-field

"- " = mean value does not exceed the trigger

Table 3.4-5. Sediment core chemistry mean 2012 results exceeding the trigger value at Baker Lake stations.

Baker Lake Areas					
Parameter Measured	Trigger	REF	REF	NF	NF
		BAP	BES	BBD	BPJ
Aluminum	-	NA	NA	NA	NA
Arsenic	8.3	-	-	-	25.4
Cadmium	0.55	-	-	-	-
Chromium	27.0	-	-	-	-
Copper	20.5	-	-	-	-
Lead	32.5	-	-	-	-
Mercury	0.088	-	-	-	-
Zinc	73.6	-	-	-	-

Notes:

REF = reference; NF = near-field

"-" = mean value does not exceed the trigger

Table 3.4-6. Results of BACI tests for selected water variables at Meadowbank and Baker Lake stations.

Parameter Measured	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Proportional Change		
							Exp(Est.)	LCI	UCI
Zinc	SP	15	5	0.056	0.0003	0.231	1.26	1.12	1.42
Arsenic	BPJ	15	5	-0.174	0.393	0.67	0.84	0.37	1.92

Notes:

* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = one-tailed test of the null hypothesis of no change or a decrease in mean

Exp(Est.) = estimated proportional change (i.e., exp[Estimate])

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Figure 3.4-1. Sediment grain size composition in sediment samples from Meadowbank study lakes since 2008.

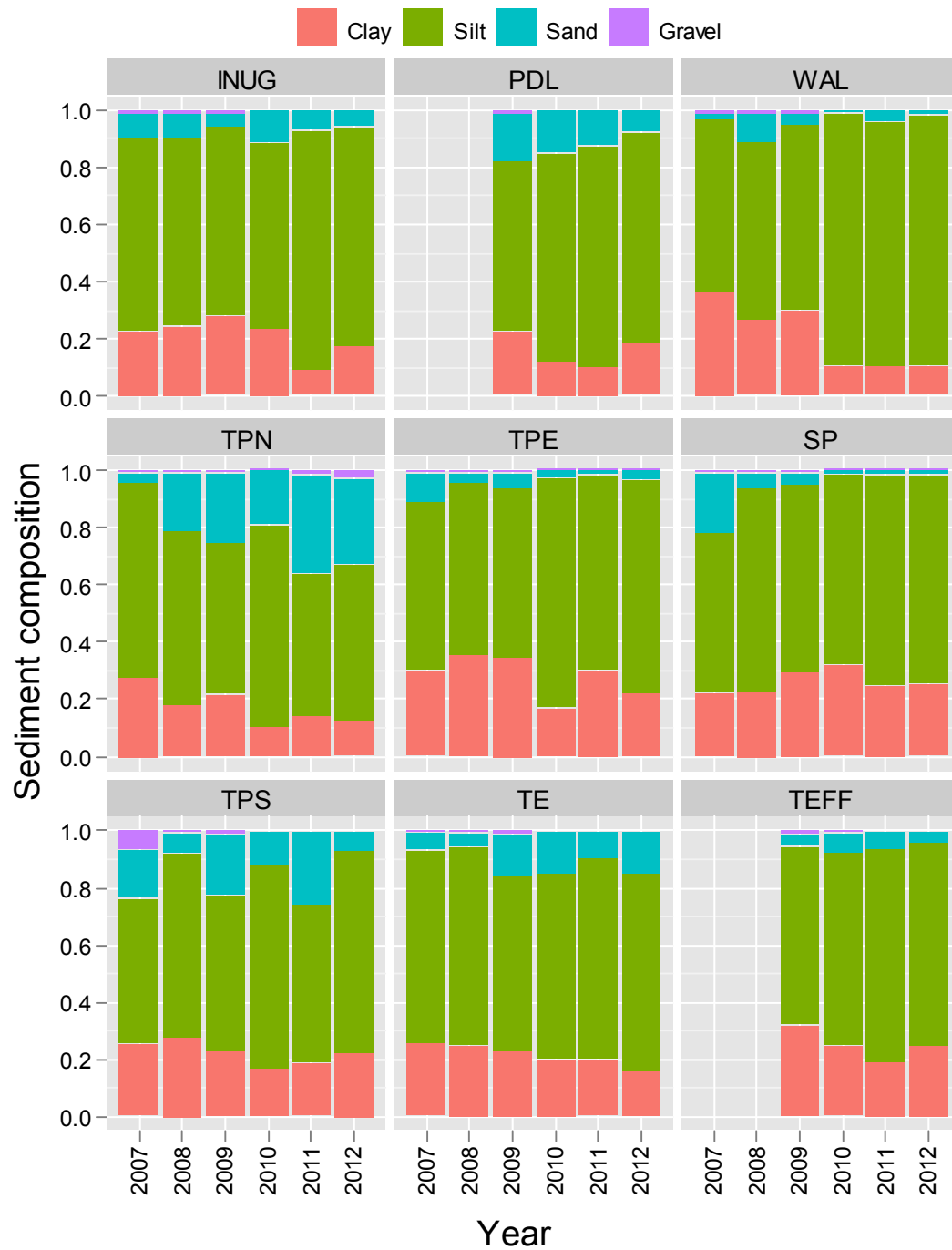


Figure 3.4-2. Total Aluminum (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

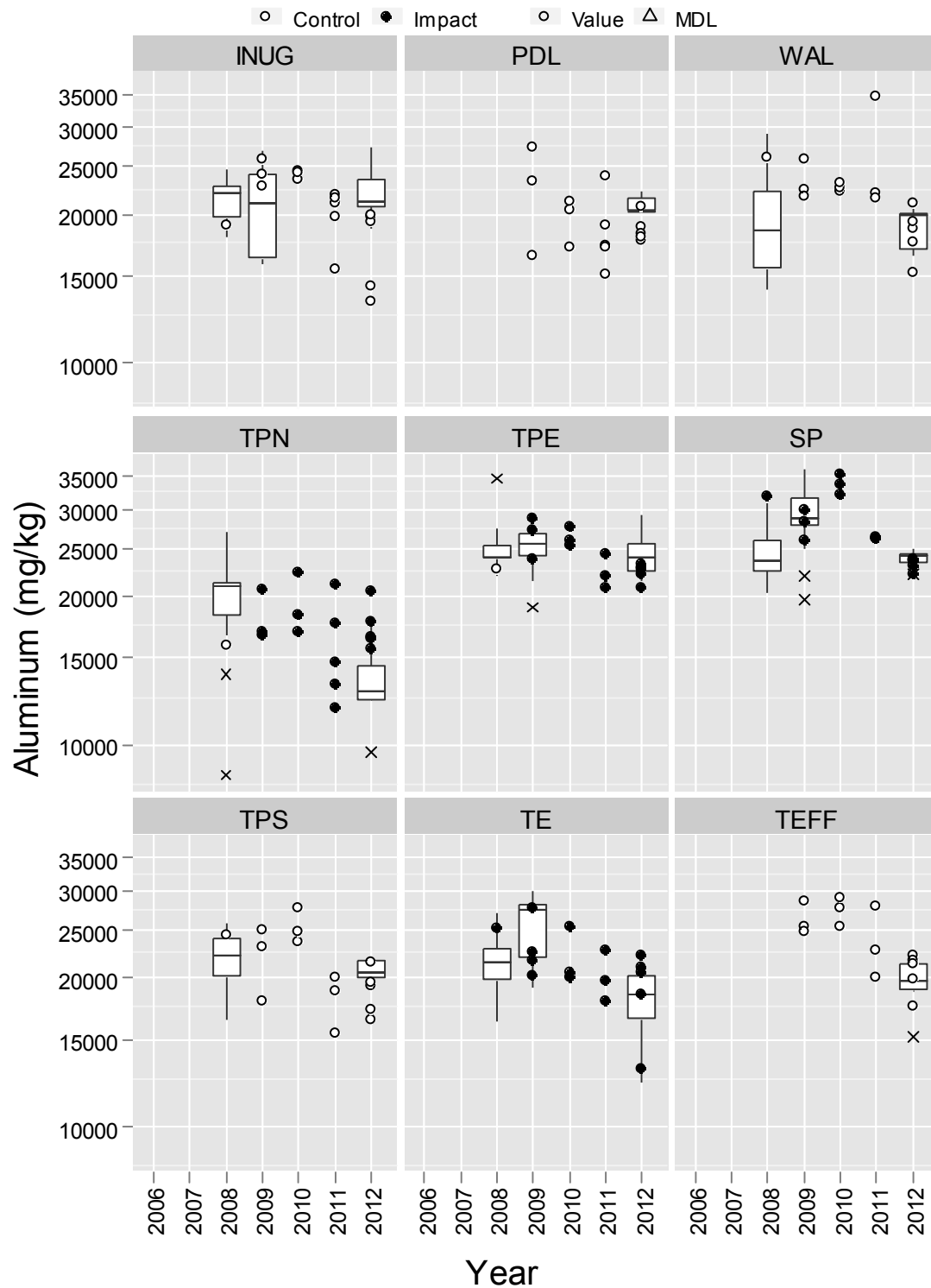


Figure 3.4-3. Total Arsenic (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

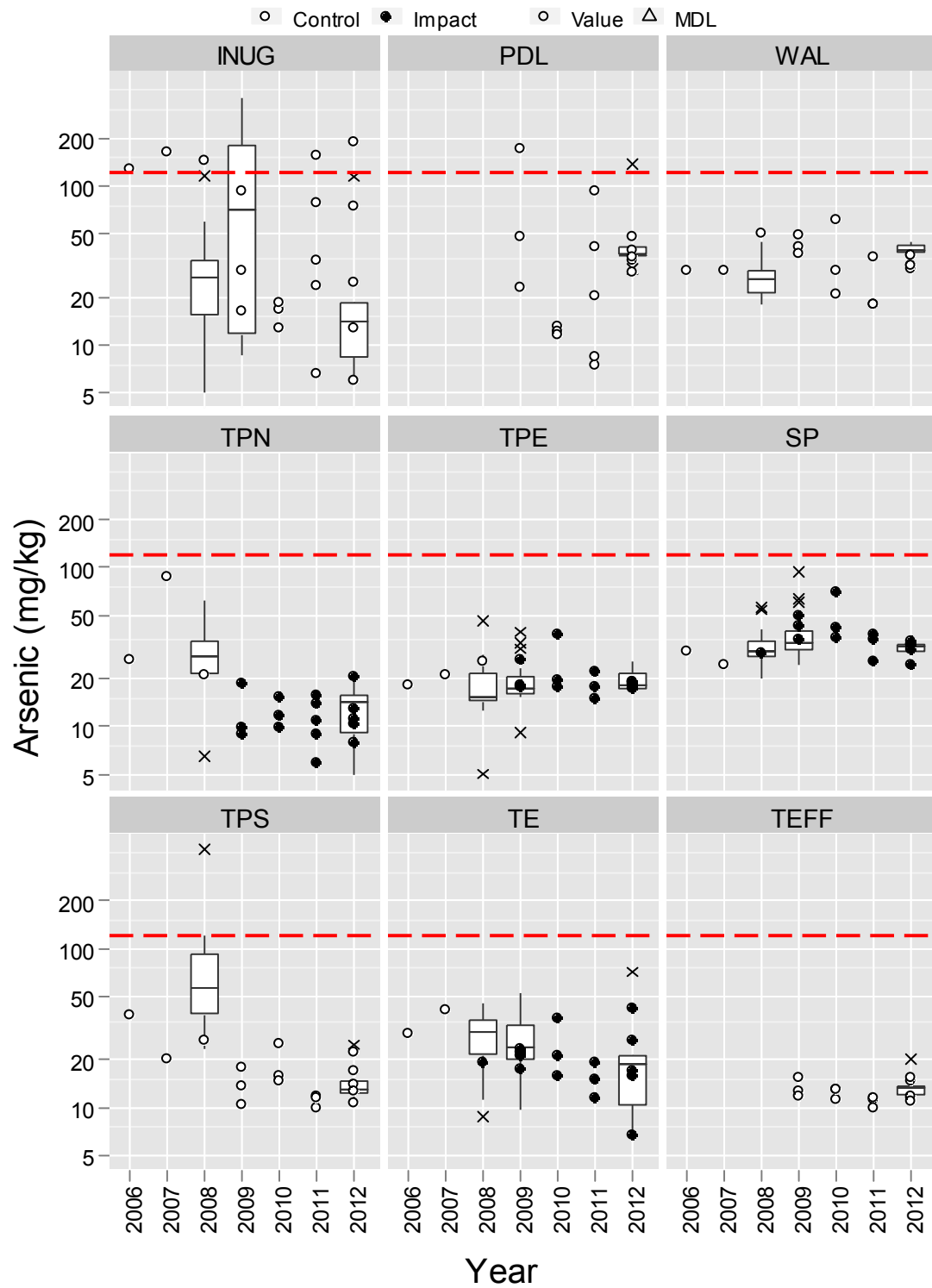


Figure 3.4-4. Total Cadmium (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

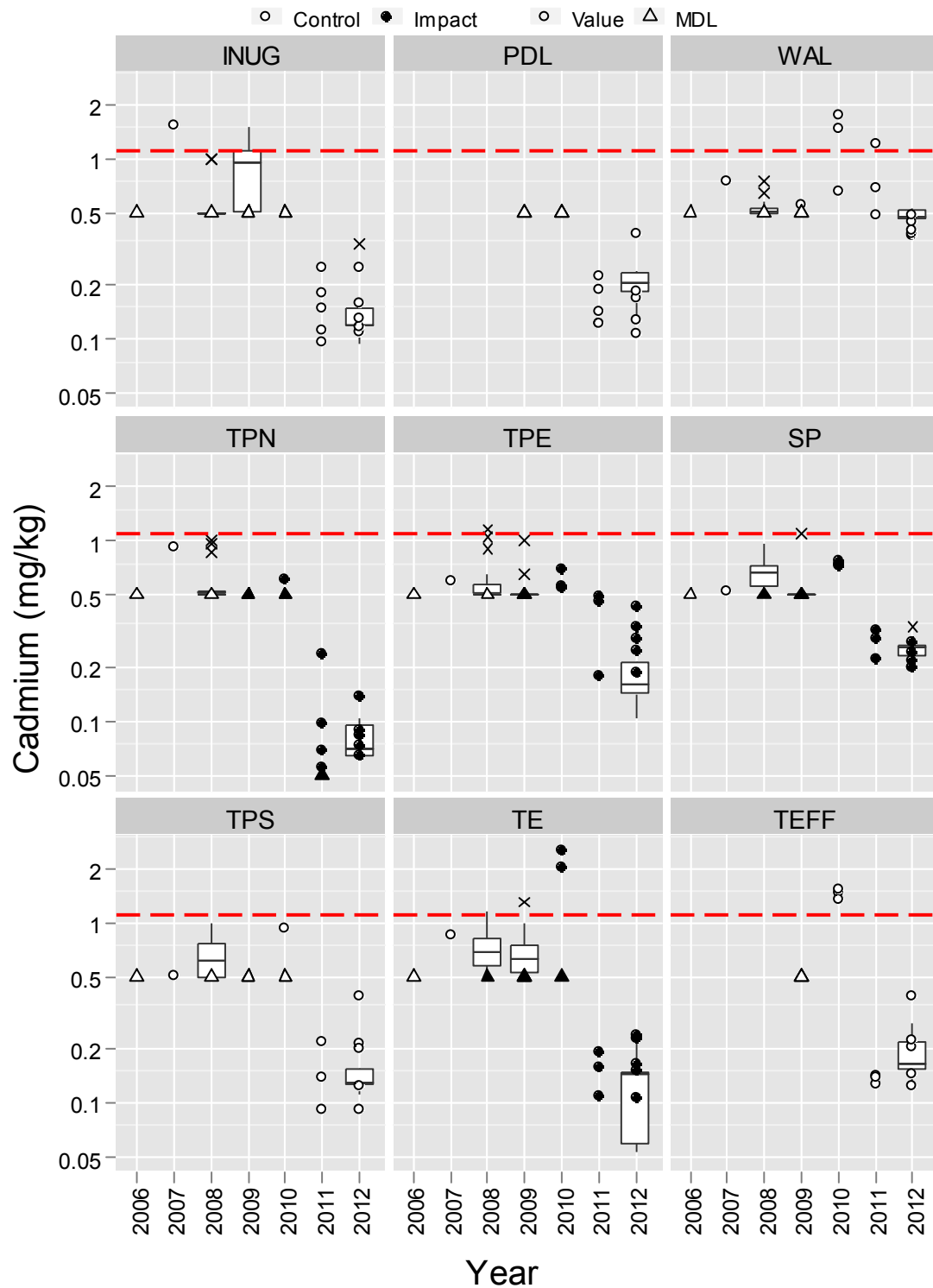


Figure 3.4-5. Total Chromium (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

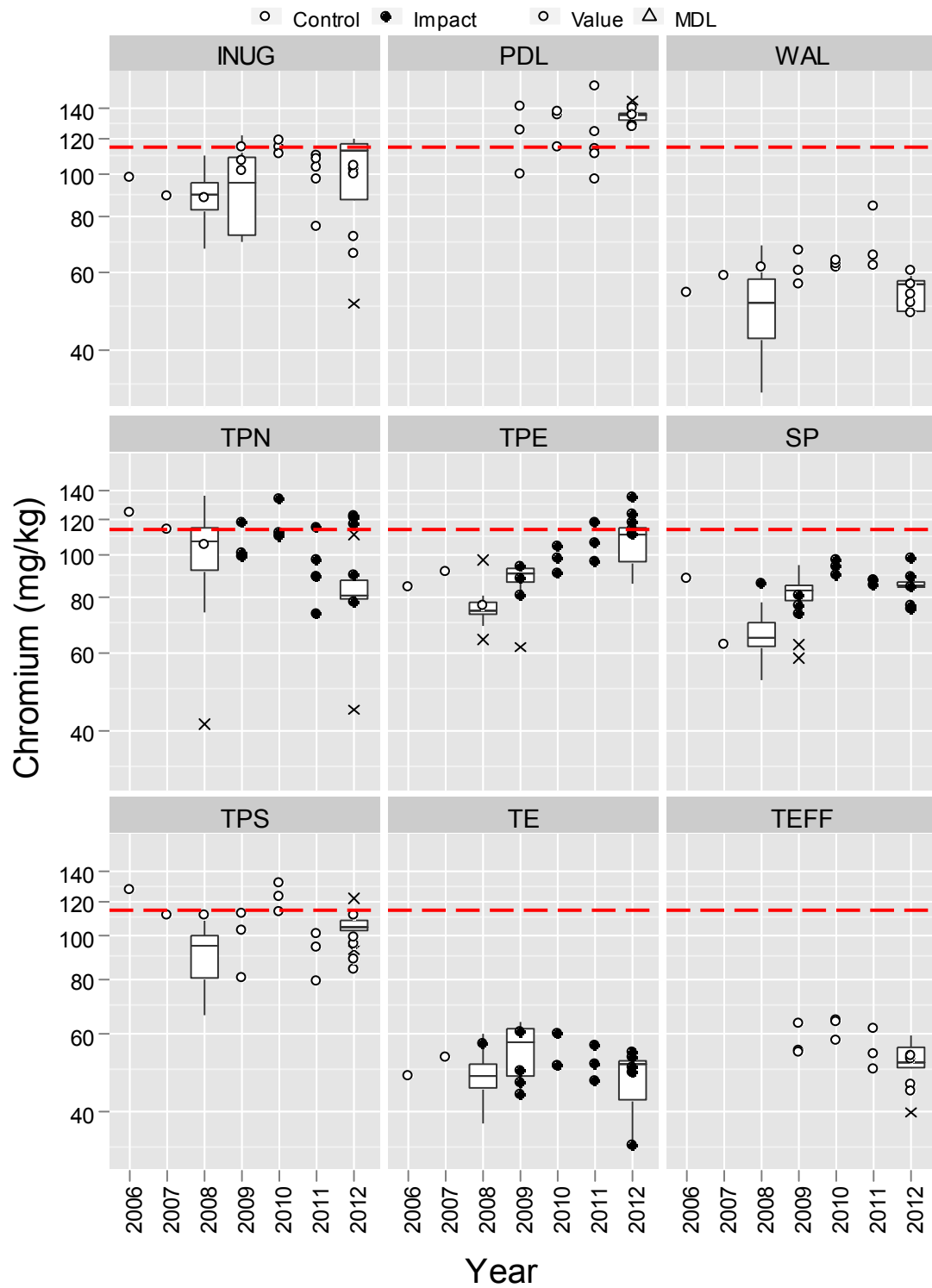


Figure 3.4-6. Total Copper (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

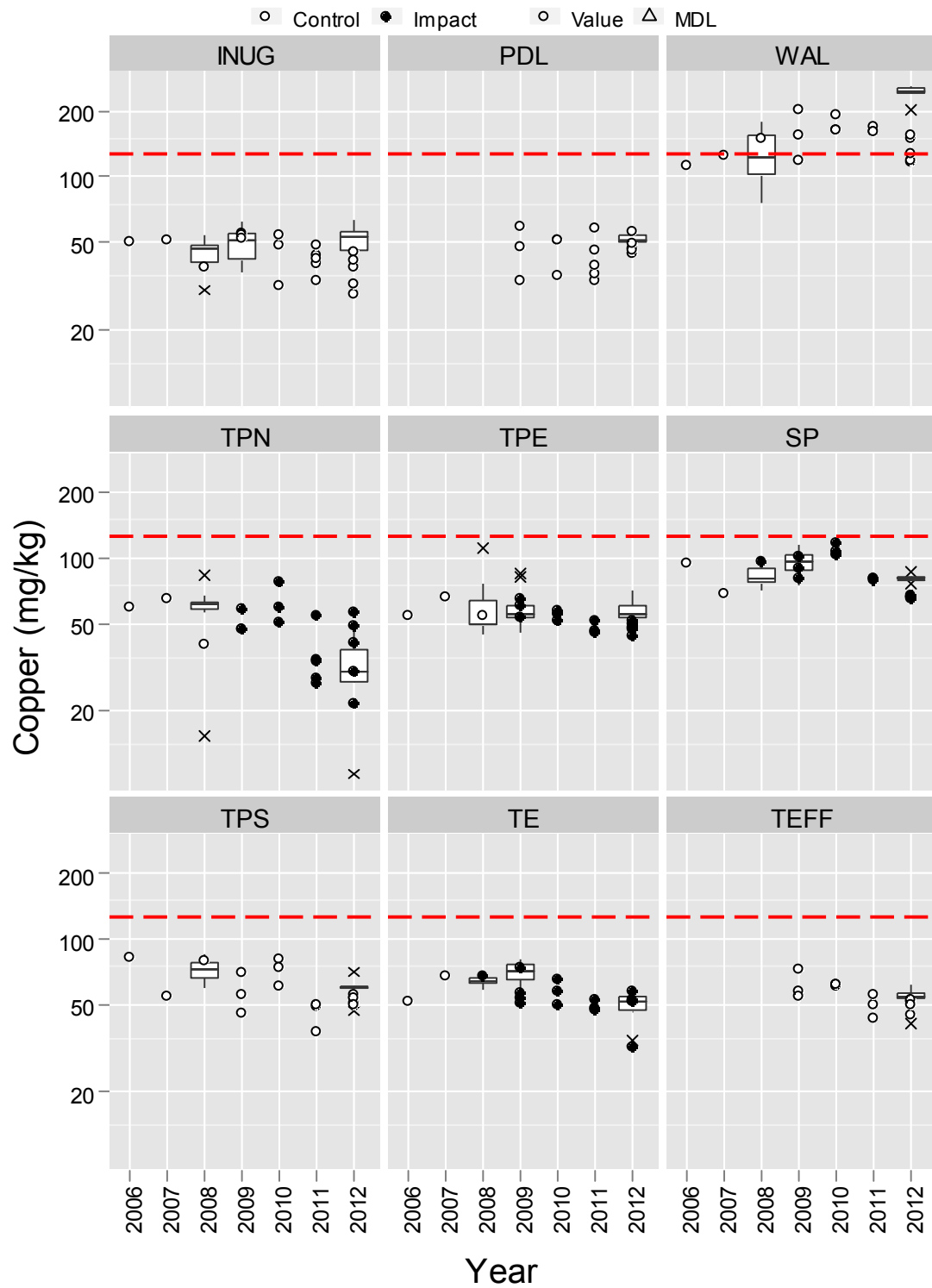


Figure 3.4-7. Total Lead (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

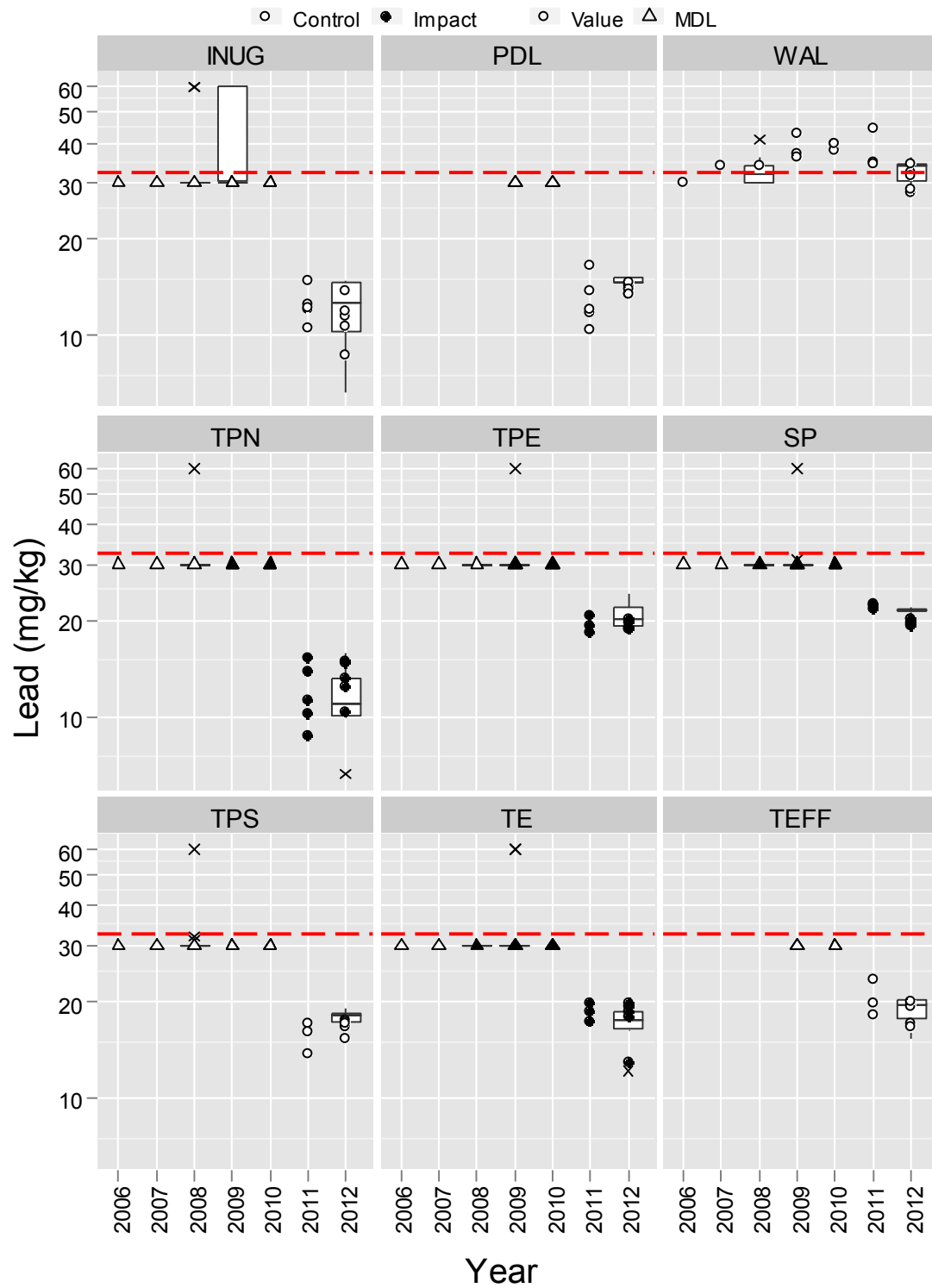


Figure 3.4-8. Total Mercury (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

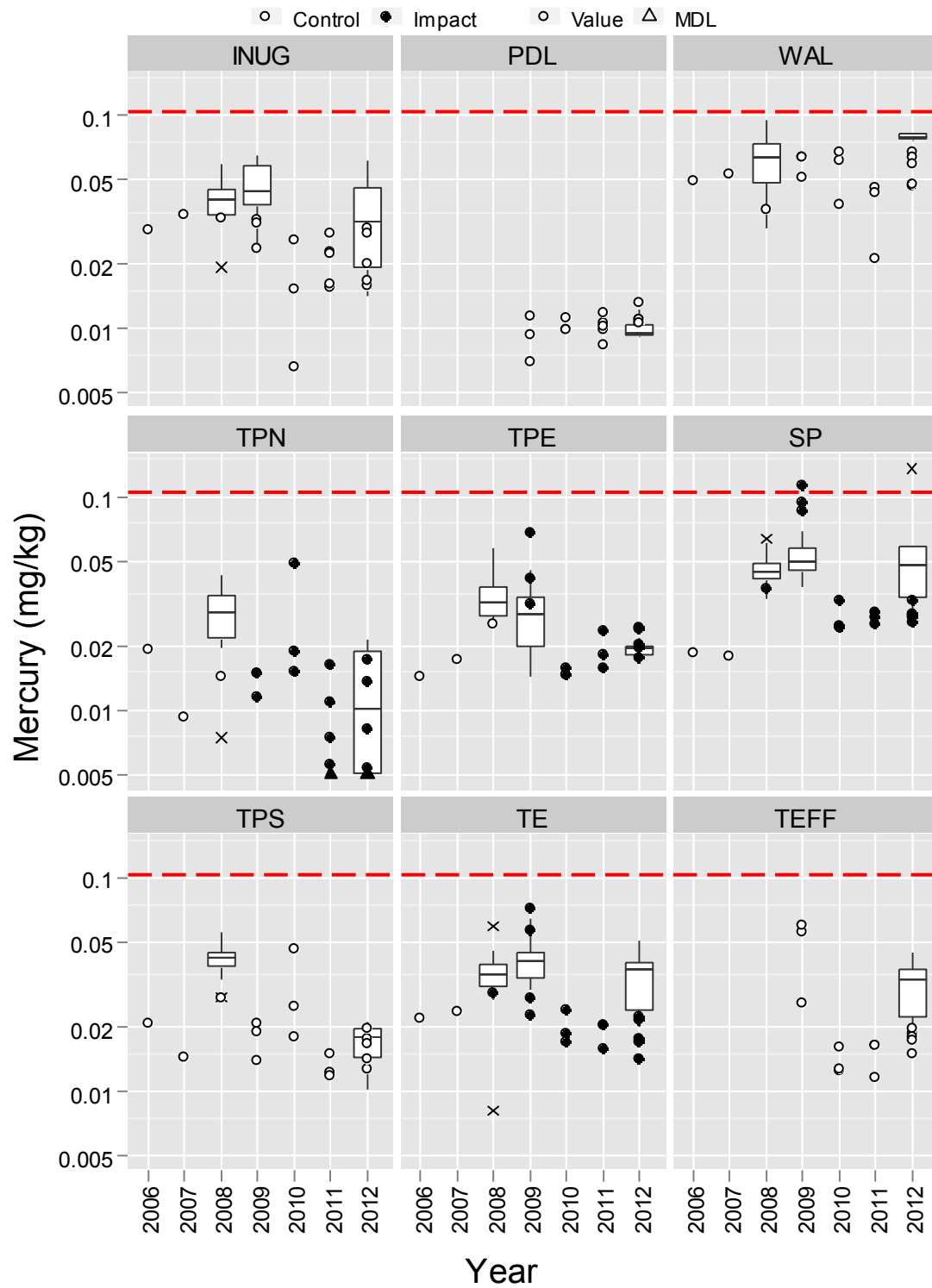


Figure 3.4-9. Total Zinc (mg/kg) in sediment samples from Meadowbank study lakes since 2006.

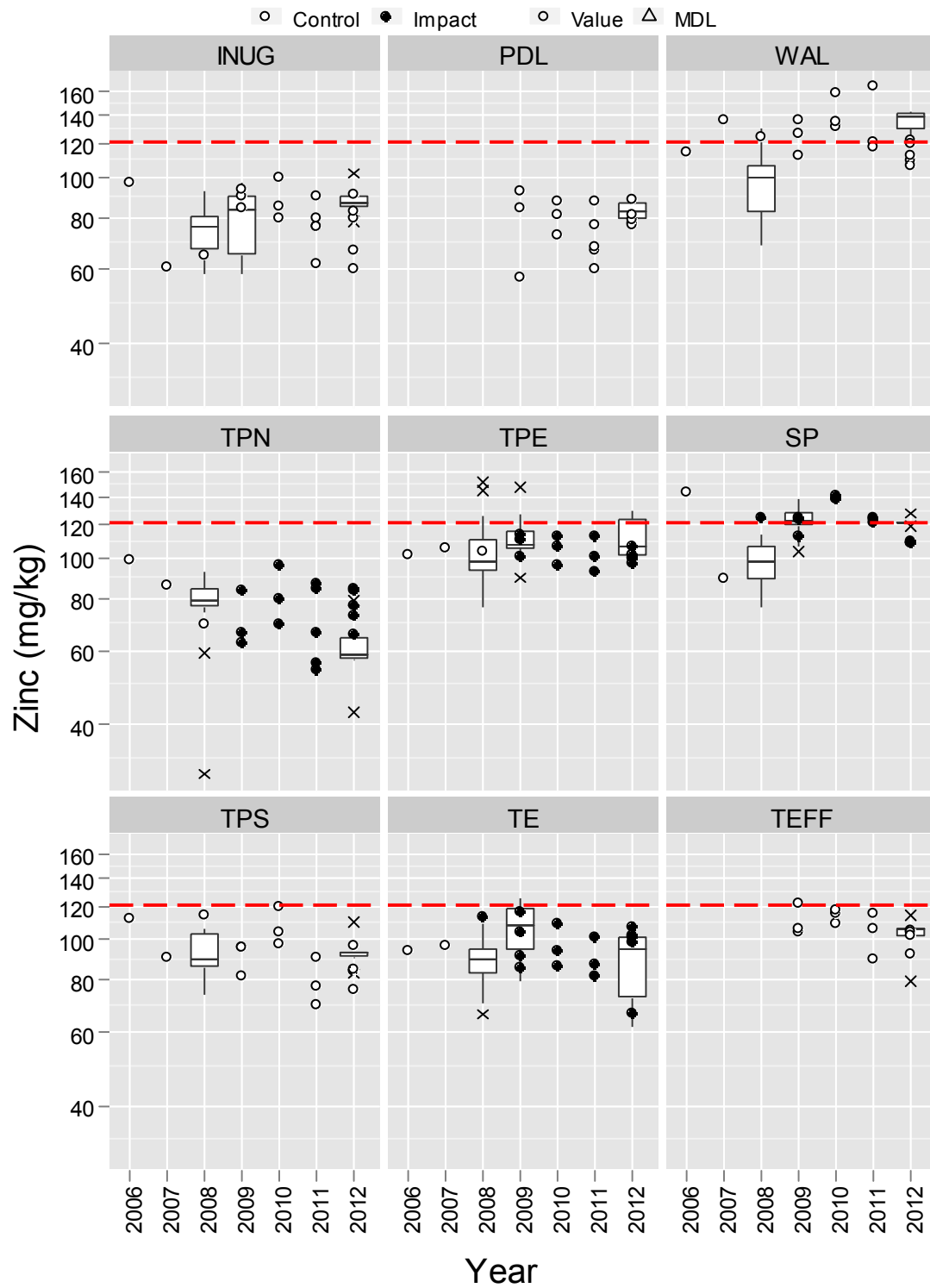


Figure 3.4-10. Sediment grain size composition in sediment samples from Baker Lake since 2008.



Figure 3.4-11. Total Aluminum (mg/kg) in sediment samples from Baker Lake since 2008.

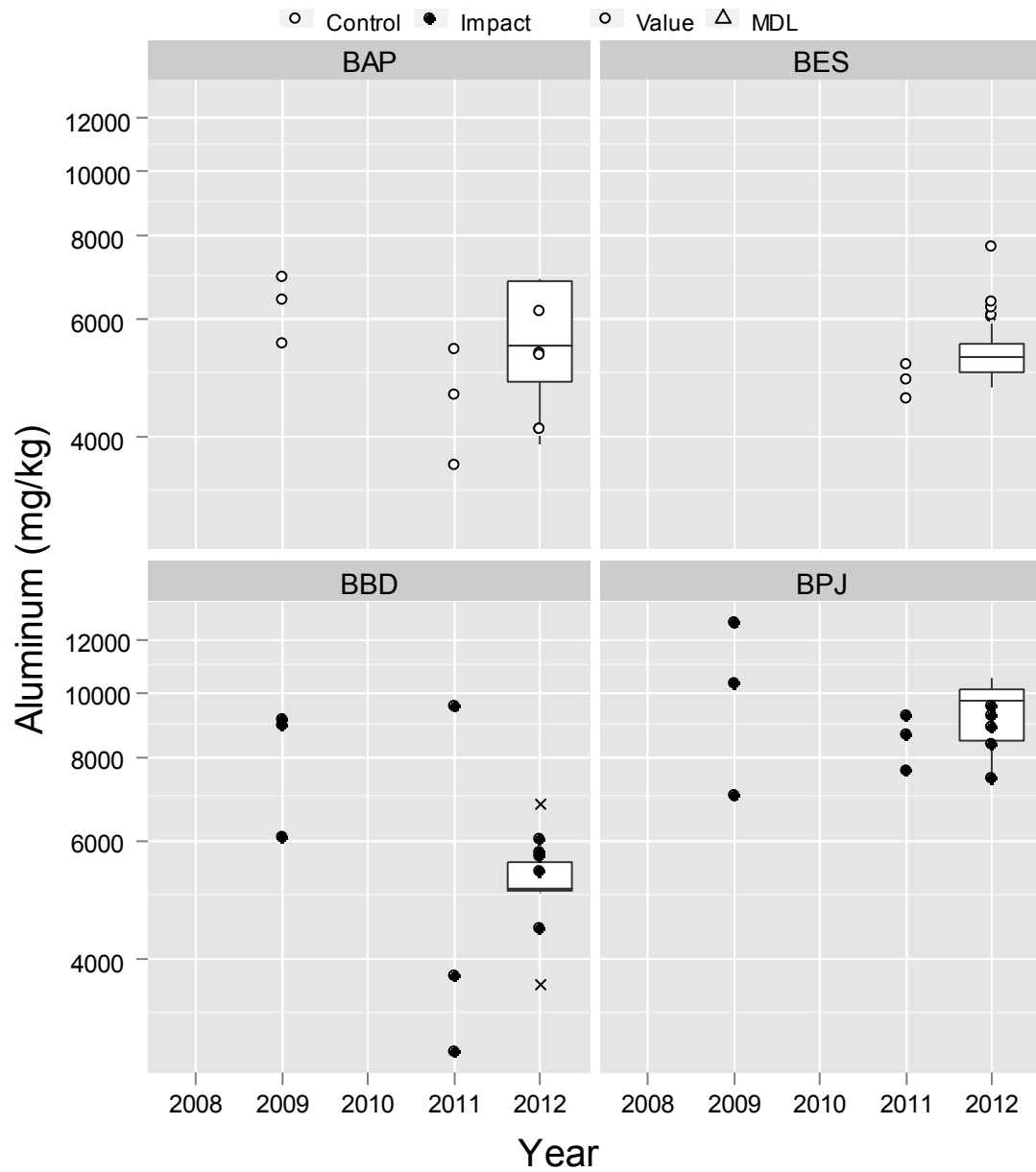


Figure 3.4-12. Total Arsenic (mg/kg) in sediment samples from Baker Lake since 2008.

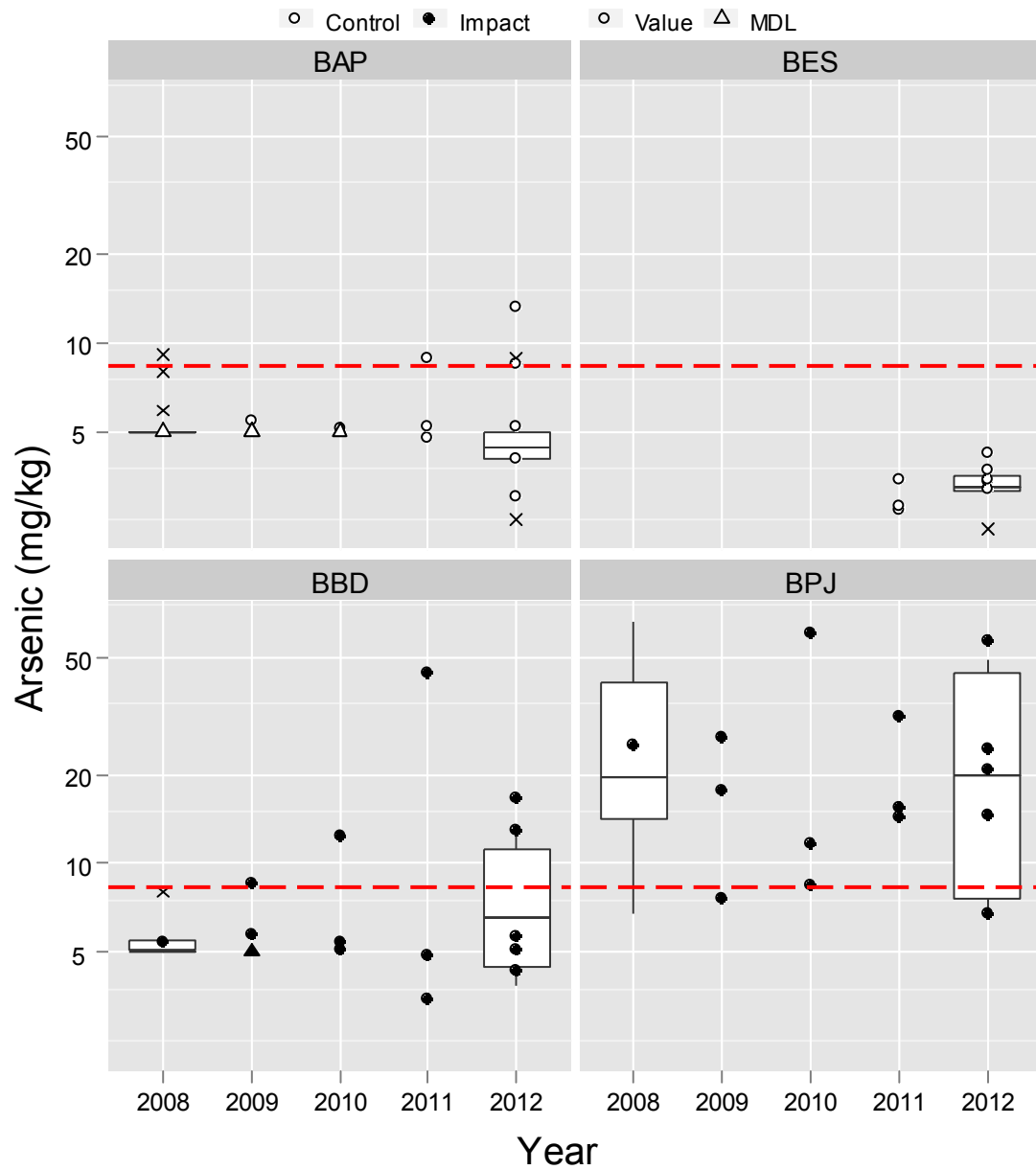


Figure 3.4-13. Total Cadmium (mg/kg) in sediment samples from Baker Lake since 2008.

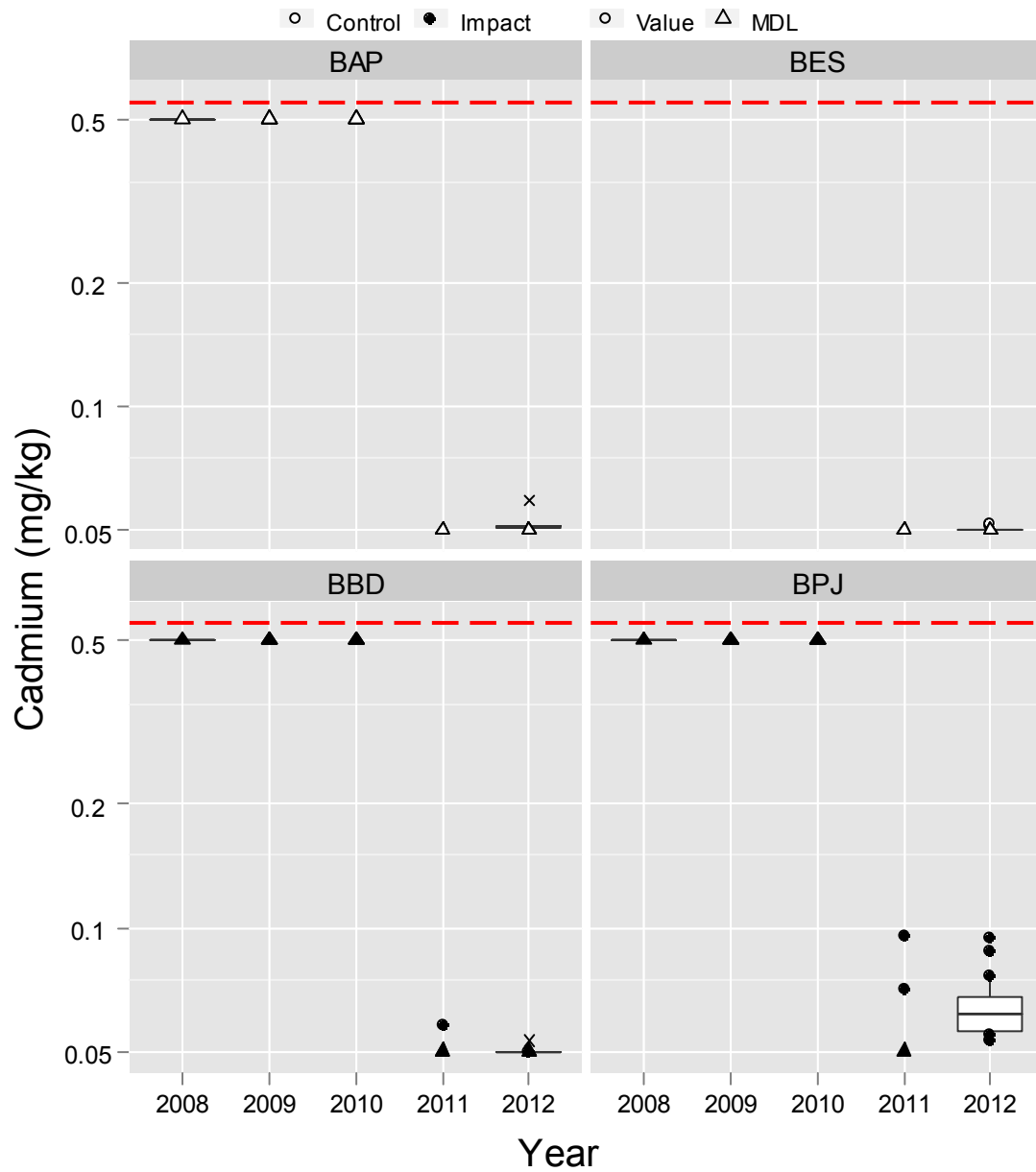


Figure 3.4-14. Total Chromium (mg/kg) in sediment samples from Baker Lake since 2008.

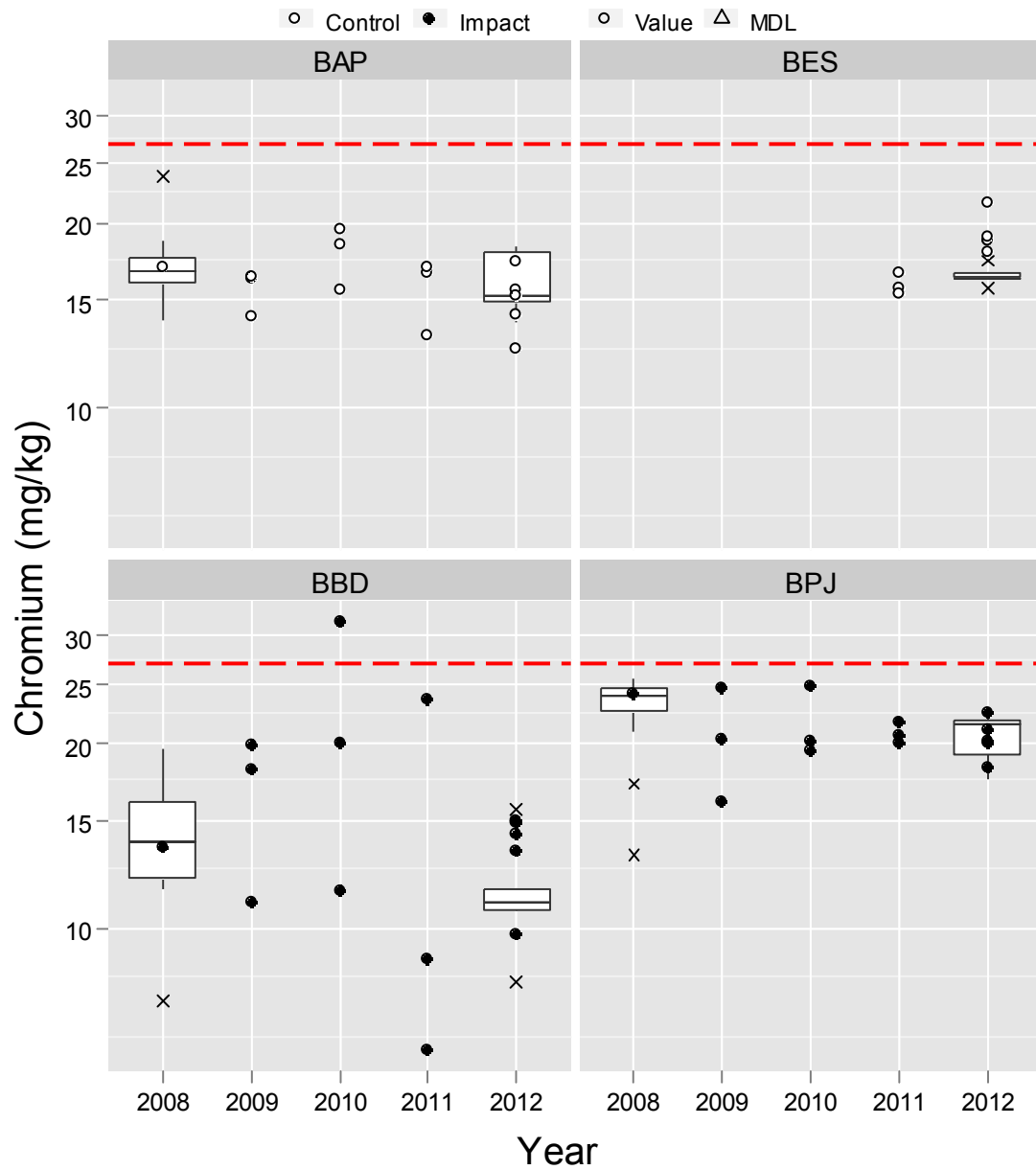


Figure 3.4-15. Total Copper (mg/kg) in sediment samples from Baker Lake since 2008.

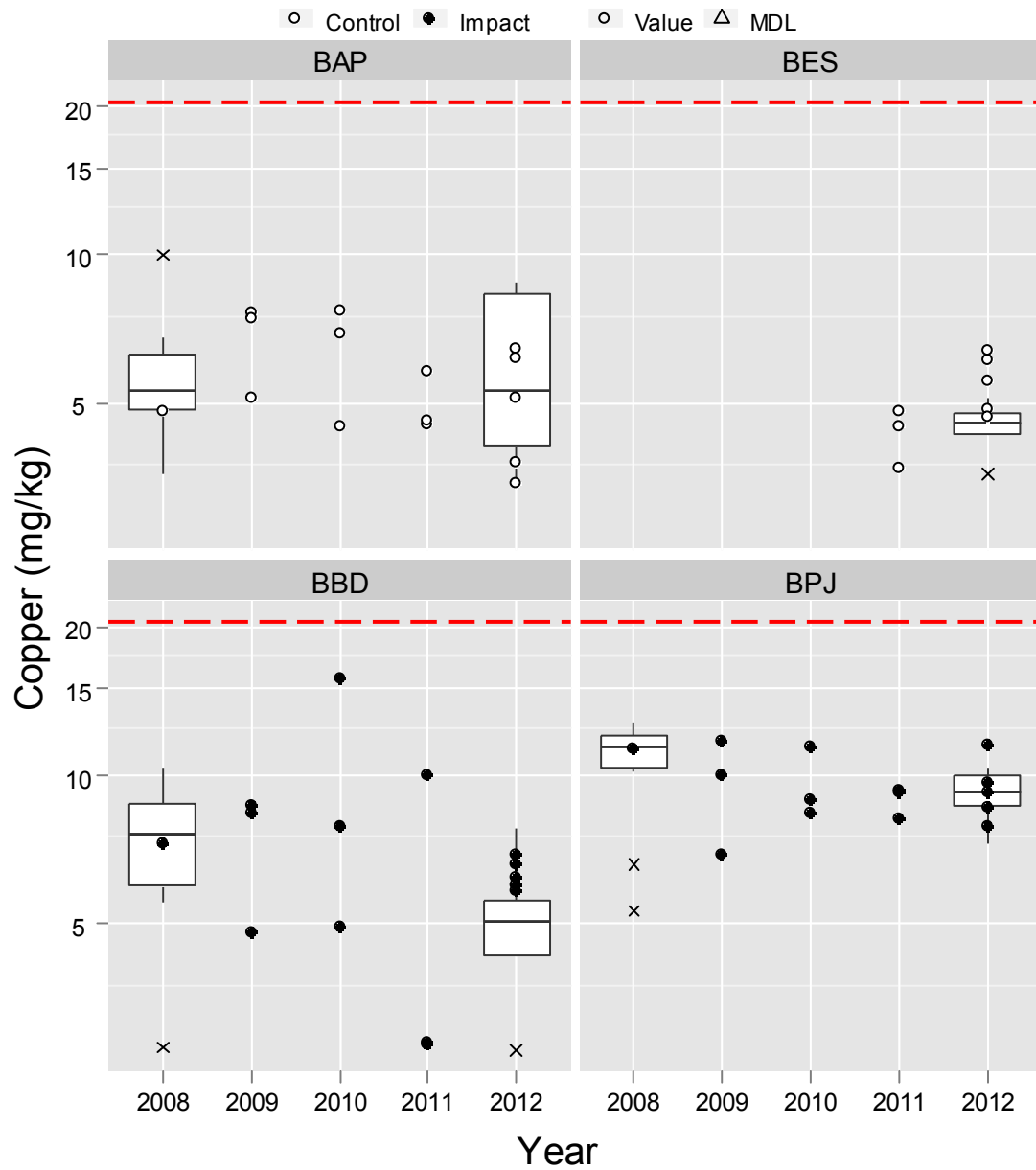


Figure 3.4-16. Total Lead (mg/kg) in sediment samples from Baker Lake since 2008.

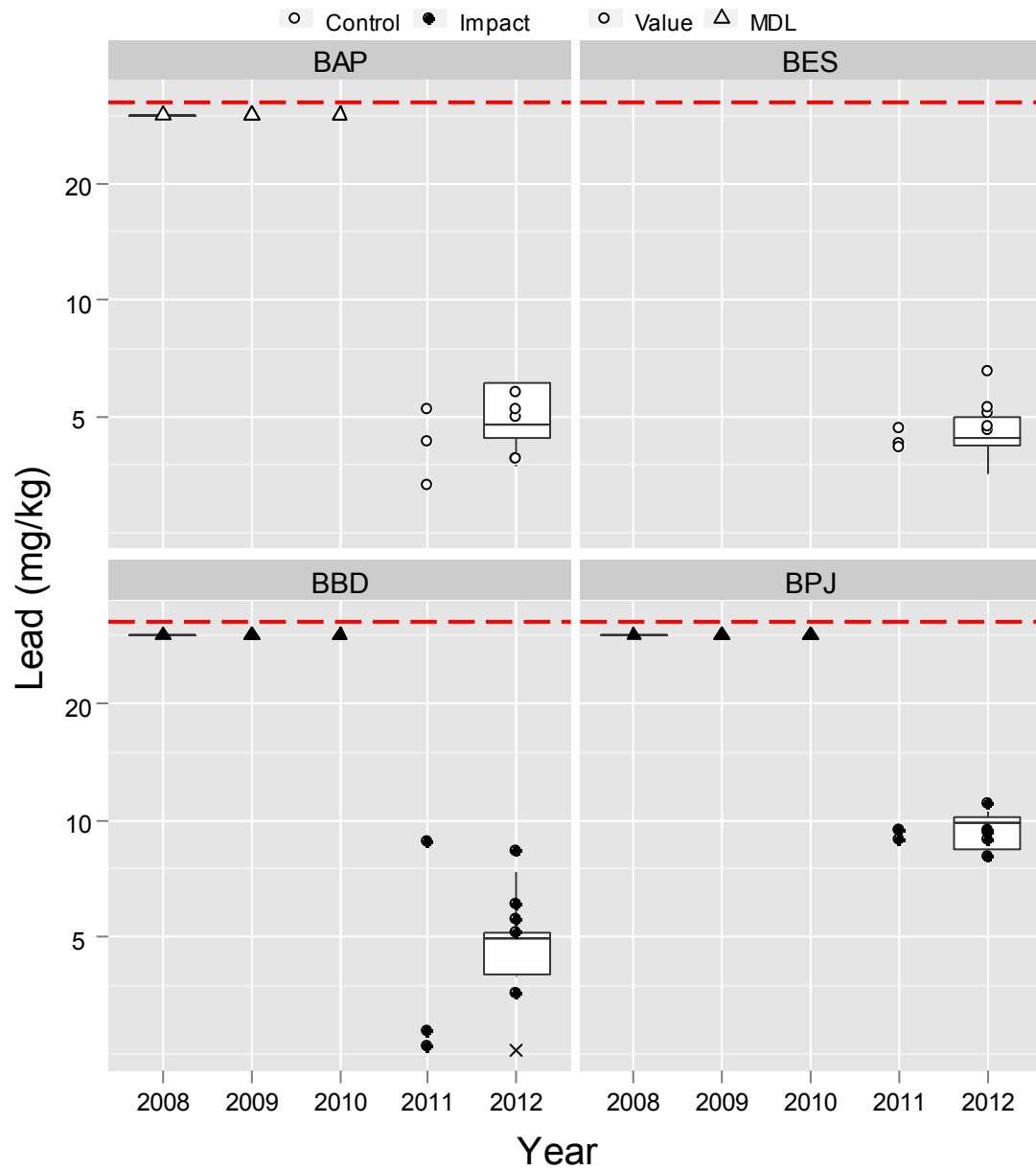


Figure 3.4-17. Total Mercury (mg/kg) in sediment samples from Baker Lake since 2008.

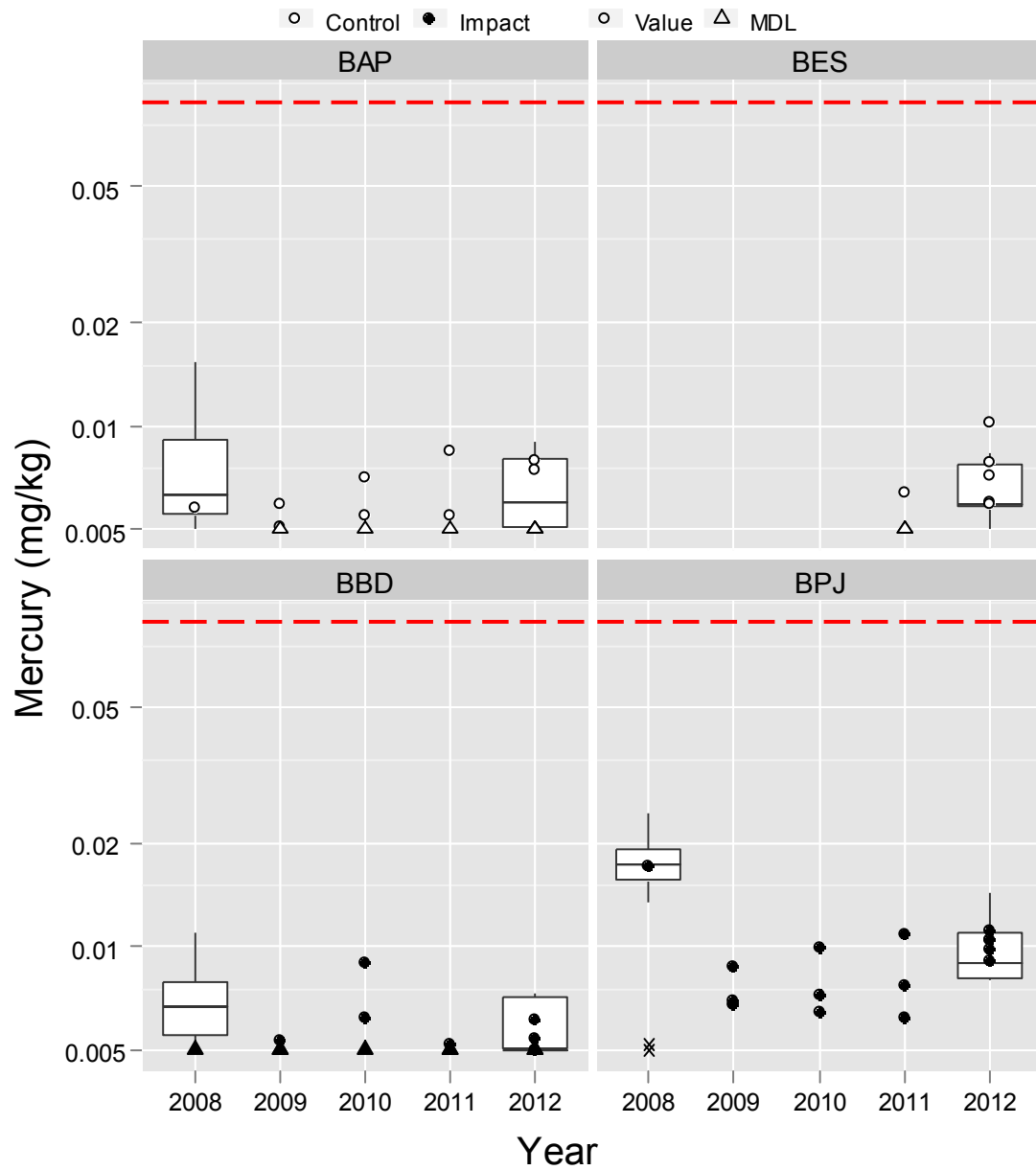
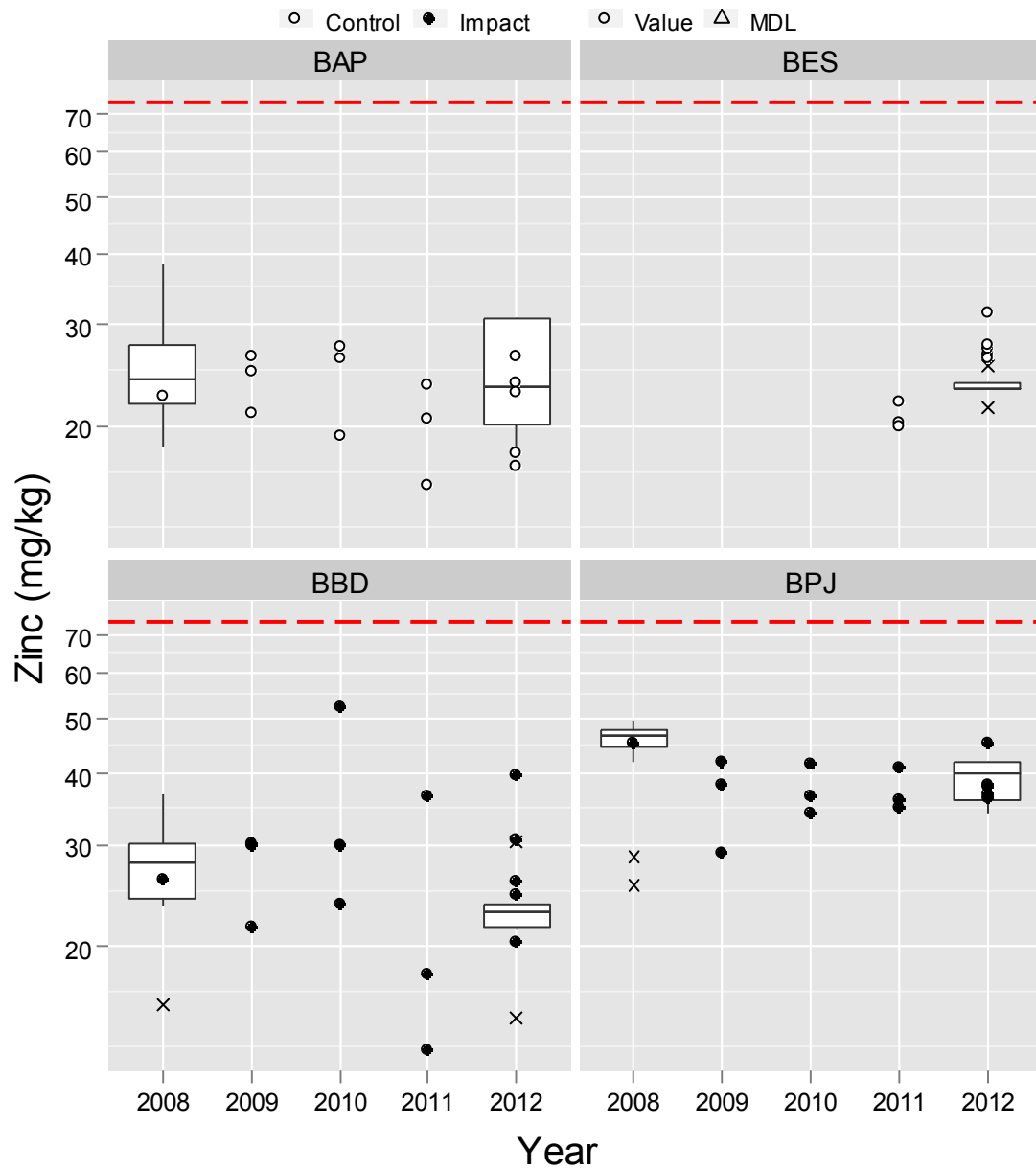


Figure 3.4-18. Total Zinc (mg/kg) in sediment samples from Baker Lake since 2008.



3.5. Phytoplankton

Phytoplankton are microscopic, unicellular, or colonial plant species that are suspended in the water column and contribute to the base of the food web as ‘primary producers’.

These organisms use chlorophyll to convert the sun’s energy to plant tissue.

Phytoplankton are primary producers and are grazed on by herbivorous zooplankton (i.e., free-swimming invertebrates) species throughout the year, but especially during the open water season when primary production within the lake is greatest. There is a large natural seasonal fluctuation in biomass (mg/m^3) and abundance (cells/L) of phytoplankton, especially in Arctic lakes where winters are dark and virtually no production occurs under ice relative to summer, where near 24 hour sunlight prevails and primary production is at its greatest. In general, production starts in lake winter and early spring, utilizing sunlight that penetrates the snow and ice. Maximum production usually occurs in early to mid-summer (July – September) within the upper 10 m of water, where there is the greatest amount of light.

Annual production can vary widely depending on water temperature, mixing, nutrient concentration, amount of sunlight, water clarity, and predation by zooplankton. Estimates of phytoplankton biomass are used as gross indicators of productivity from a “snap-shot” perspective, depending on frequency of sampling. They are only useful to detect long-term trends or gross changes in lake production, such as eutrophication as a result of nutrient additions (e.g., from sewage disposal) or addition of nitrites as a result of the use of explosives, for example.

There are six major taxonomic groups of phytoplankton present in the study lakes, namely blue green algae (Cyanophyta), green algae (Chlorophyta), golden-brown algae (Chrysophyta), Diatom, Cryptophyta and Dinoflagellata (a presence/absence matrix of phytoplankton species for 2012 is presented in **Appendix F**). The diversity in types and sizes of phytoplankton is very large and their abundance is very great, typically exceeding 1 million individuals per litre with a total biomass of approximately 200 mg/m^3 in summer.

3.5.1. Meadowbank Study Lakes

3.5.1.1. General Observations

Chrysophytes (golden-brown algae) are small, usually unicellular phytoplankton that are consistently the most numerous taxonomic group in the Meadowbank area lakes.

Chrysophytes also dominate biomass in all project lakes, typically representing 65% or more of total phytoplankton biomass in summer samples, with smaller proportions (usually <10% each) of the other five major groups. The dominant chrysophyte genera



for the Meadowbank lakes are *Chrysococcus*, *Kephyrion*, *Chrysochromulina*, *Dinobryon* and *Chrysolkos*. Dominant genera for the other groups were *Ankistrodesmus* sp. for chlorophytes, *Planktolyngbya* sp. for cyanophytes, *Cyclotella* sp. for diatoms, *Rhodomonas* sp. and *Cryptomonas* sp. for cryptophytes and *Gymnodinium* sp. for dinoflagellates (Azimuth, 2012a, 2011b, 2010a, 2009c, 2008a, and 2008b).

Diatoms and dinoflagellates (10 – 15% of biomass) are the next most abundant groups with the remaining taxa comprising only small proportions of abundance and biomass in project area lakes. Dinoflagellates are unicellular, flagellated motile algae that are commonly used for biomonitoring because particular species are sensitive to changes in certain water chemistry variables such pH, dissolved organic matter, and temperature. Although diatoms are a diverse and important group, the majority of species are sessile and associated with littoral substrates such as rocks and attached vegetation (Wetzel, 1983). Because of this limitation this group is less useful for biomonitoring.

Mean phytoplankton biomass in the Meadowbank area lakes typically ranges from 100 to 200 mg/m³ during summer with diminishing biomass in fall through winter. This range in biomass is fairly typical for oligotrophic, central Arctic Canadian lakes. For example, some nearby lakes such as Snap Lake (266 mg/m³; De Beers, 2002), Kiggavik lakes (125 mg/m³; McKee et al., 1989), Char, Spring and Saqvaquac lakes, not far from Baker Lake ranged up to 166 mg/m³, 120 mg/m³ and 130 mg/m³ respectively (Kalff et al., 1975; Welch et al., 1989). Major species and biomass of phytoplankton in the Meadowbank study lakes is consistent with dominant and commonly occurring phytoplankton species usually found in oligotrophic lakes with circum-neutral pH and low nutrient concentrations (Wetzel, 1983).

3.5.1.2. Temporal and Spatial Trend Interpretation – General and 2012

As previously discussed, our approach to identify potential mine-related impacts involved visually searching for general temporal-spatial patterns that might be related to mine-related activities (see **Section 1.5** for details). This was augmented by conducting statistical analyses of the 2012 data to test for changes relative to baseline/reference conditions using the BACIP model (see **Section 2.8.3** for details).

One of inherent challenges when dealing with phytoplankton is the large natural variability that can exist within and between sampling events that can limit quantitative statistical analyses from distinguishing patterns. When water is sampled from a single depth and time, and plankton are enumerated from only 10 millilitres of water in order to represent a ‘month’, there are obviously some assumptions made. Nevertheless, given that millions of cells may be present in a single sample representing many taxa and many samples have been collected over the last 10 years, it is possible to distinguish a ‘signal’ out of the ‘noise’.

The primary metrics upon which we based our general assessment were chlorophyll-a concentration (a surrogate for overall primary productivity), total biomass (mg/m³), relative biomass of major taxonomic groups, and species richness or diversity (total # species). We have chosen to examine biomass and not abundance because the two tend to be reasonably well correlated and ultimately, biomass is a much better approximation of actual production or food available to zooplankton. The BACIP statistical testing focused on total biomass and species richness as these reflect ecologically relevant aspects of the phytoplankton community (i.e., total mass of community and community composition, respectively).

The expected response patterns in phytoplankton biomass and species richness is dictated by the nature of the physical and/or chemical changes caused by mine-related activities. For example, dike construction or dewatering may introduce a large amount of sediment into the water column, impair light penetration and may cause a reduction in phytoplankton biomass or impair certain sensitive groups, such as dinoflagellates. The magnitude and extent of the effect is related to the spatial and temporal extent of light extinction in the water column that can partly be overcome by windy conditions that mix the water vertically and expose phytoplankton to sunlight that is more abundant near the surface in turbid conditions.

On the other hand, mining-related inputs can contain substances that could increase phytoplankton biomass and overall primary production, so we are looking for both reductions and increases in phytoplankton-related metrics coinciding with mining activities (i.e., focusing primarily on data for SP, TPE and TPN).

With completion of dike construction in 2010, dewatering discharge (until June 2012) and effluent discharge (starting July 2012) into TPN were the only major activities being conducted that had the potential to seriously impact water clarity (and hence phytoplankton productivity) in 2012. There was also the possibility that other general mine-related activities (e.g., those creating dust emissions) could affect phytoplankton.

One factor to take into account when dealing with phytoplankton data is the high natural variability of control data (i.e., for reference areas and baseline conditions). This potentially confounding effect can make it difficult to identify mining-related influences at impact areas, unless the latter are quite large. Below are observations on the pattern of results for the specific area/years of interest (i.e., based on impact data) relative to the patterns observed for control data. Note that plots for all other phytoplankton metrics are presented in **Appendix G**.

The 2012 density and biomass results for phytoplankton are provided in **Tables 3.5-1 and 2**. The results for the BACIP model statistical tests of the 2012 results against baseline/reference conditions are provided in **Table 3.5-3**; effect sizes of interest are 20% and 50%.

Chlorophyll-a

- Chlorophyll-a concentrations at most reference areas ranged between 0.4 and 0.8 µg/L in spring and summer months and have remained fairly consistent since 2006 (**Figure 3.5-1**). Few monitoring events have occurred outside of open water periods at reference areas.
- Aside from August 2011 data, chlorophyll-a concentrations have been fairly consistent during open water periods hovering around 0.5 µg/L. During 2008 and 2009 dike construction events, chlorophyll-a concentrations appear to have dipped during summer in SP and TPE (2009), but rebounded by September. In August 2011 chlorophyll-a concentrations spiked 2x – 3x above baseline concentrations up to 1.4 to 1.8 µg/L at impact areas TPN, TPE and SP. These spikes were unrelated to dewatering because they occurred simultaneously in SP, TPE and TPS, as well as TPN, coincident with typically low nutrient concentrations in each water body. The 2012 results were similar to past years with no evidence of an increase that would suggest nutrient enrichment and a concomitant increase in phytoplankton biomass.

Total Biomass

- At reference areas, peak summer phytoplankton biomass was approximately 200 mg/m³ at INUG, TEFF, and WAL and a bit higher at PDL, which is consistent with the range in concentrations observed in previous years (**Figure 3.5-2**). Winter under-ice biomass is very low at all locations in all years it has been measured.
- A drop in phytoplankton biomass was seen in August 2008 in SP and to a lesser extent in TE. In September 2009, a slight drop in biomass was also seen in TPE due to Bay-Goose dike construction that was not observed in SP or TE. Similar changes were also observed in the follow-up TSS EAS studies (Azimuth, 2009b, 2010c).
- Seasonal patterns in phytoplankton biomass (low winter, peaking through summer and diminishing in fall) did not appear to be influenced by dewatering of the attenuation pond in SP and the Bay-Goose impoundment as 2010 and 2011, with biomass in TPN reaching typical concentrations of 200 mg/m³. This was also the case for the effluent discharge into TPN in 2012.
- Total biomass in 2012 (**Table 3.5-3**) was generally higher at the NF and MF areas, with statistically significant increases relative to baseline/reference conditions seen at TPN (84%) and TPE (63%).
- The only decrease observed was at the FF area TEFF (-21%), but that change was not statistically significant.

Major Taxa Composition

As a complement to the total biomass plots discussed above, **Figures 3.5-3 and 3.5-4** show stacked bar graphs depicting total biomass and relative biomass broken down by major taxa group. Relative density is presented in **Figure 3.5-4** on a scale of 0 to 100%.

- All areas are dominated by chrysophytes in all open-water months where biomass is in excess of 25 mg/m^3 , a pattern that has been consistent since monitoring began in 2006. Relative abundance of chrysophytes is diminished and other groups are relatively more abundant outside of the spring and summer growing season. Diatoms became relatively more abundant at INUG for example.
- Reductions in chrysophyte abundance and relative abundance was the most noticeable change associated with dike construction (i.e., SP and TE in 2008 and TPE in 2009 and 2010). These changes reversed soon after the sedimentation events cleared up.
- No changes in community composition are apparent in relation to dewatering discharge (2009- June 2012) or effluent discharge (July 2012) into TPN or to other general site-related activities.

Species Richness

- At reference areas, seasonal profiles in species richness were similar in shape to total biomass, with an increase from low diversity (~15-20 species) in under-ice months (when and where measured) to peak diversity (~40 – 45 species) in summer during open water (**Figure 3.5-5**). Seasonal peaks at reference areas do not appear to have changed over time.
- Seasonal trends in species richness at impact areas were generally similar to the reference areas over time. The only apparent influence of the mine occurred August 2008 at SP, when a large drop in richness was observed (down to 16 species) during dike construction; phytoplankton richness had rebounded by the next month. Richness typically increases from <15 species in May to maximum diversity at 40 – 45 species July – September, diminishing in November and December back to May levels.
- In 2012, there was a significant increase in the annual mean species richness at TPN (24%) relative to baseline/reference conditions.

In summary, phytoplankton community metrics were adversely affected for short periods of time in relation to the 2008 East Dike and (to a lesser extent) 2009 Bay-Goose Dike construction events (i.e., likely due to increased TSS concentrations and diminished light penetration during the open water period in SP / TE and TPE / SP, respectively). This caused small and ephermal diminishment of phytoplankton biomass, abundance and richness in SP in 2008, and reduced biomass and cell density in TPE in 2009 that has

been previously documented. Since major dike construction ended in 2010, there have been no changes in phytoplankton community metrics. The only statistically significant changes observed in 2012 was an increase in mean total biomass at the near-field stations TPN and TPE and species richness at TPN. At this stage the cause of the observed increases remains uncertain; monitoring of this trend should continue in 2013.

3.5.2. Baker Lake

3.5.2.1. General Observations

The phytoplankton community of Baker Lake is relatively similar to the Meadowbank Lakes by virtue of the fact that they are situated within roughly the same geographical region. Similar to the study lakes, taxonomic composition and biomass are comparable as chrysophytes (golden-brown algae) have consistently been the numerous taxonomic group in Baker Lake since monitoring began in 2008, with similar dominant taxa (e.g., *Chrysococcus*, *Kephyrion*, *Dinobryon*). However, Cryptophytes and Diatoms were the next most abundant groups in Baker Lake, comprising about 15% of abundance, followed by dinoflagellates. This group was slightly less represented in Baker Lake relative to the study lakes because of the large size of Baker Lake. Given that dinoflagellates tend to be more sessile and associated with hard substrates and shorelines, the lack of this habitat limited their relative abundance and biomass.

Mean summer phytoplankton biomass in Baker Lake was higher than in the Meadowbank lakes ranging from 200 – 400 mg/m³ possibly because of greater nutrient abundance due to large tributary inflow.

3.5.2.2. Temporal and Spatial Trend Interpretation – General and 2012

As discussed in **Section 3.2.2.1**, Baker Lake is a large lake that has multiple confounding influences that affect water chemistry in a way that is impossible to predict or control for including influence of a large nearby tributary stream (Thelon River) that may variably affect sampling areas depending on wind direction, speed and duration. Furthermore, the influence of wind-driven currents and the influence of deep brackish source of water may considerably affect water chemistry parameters and consequently, the phytoplankton community in ways that are far too complex to decipher given the limited monthly sampling schedule.

In addition, no winter/spring sampling has been conducted at Baker Lake areas so interpretations are limited to summer open water period (which does coincide with barge activity). Because of the large size of Baker Lake, it is unlikely that barge traffic (in the absence of a fuel or chemical spill) could influence whole-lake phytoplankton community. While a 200-L fuel spill did occur in 2012 (some of which made its way into

Baker Lake), the spill was contained and no traces were found in follow-up water samples. This is consistent with the lack of apparent effects to the phytoplankton community in Baker Lake, where the 2012 general trends are in-line with those of previous years (**Figures 3.5-6 to 3.5-10**).

The 2012 density and biomass results for phytoplankton are provided in **Tables 3.5-1 and 2**. The results for the BACIP model statistical tests of the 2012 results against baseline/reference conditions are provided in **Table 3.5-4**; effect sizes of interest are 20% and 50%.

Major findings at Baker Lake areas for chlorophyll-a, biomass, species richness and major taxa group composition are as follows:

- Chlorophyll-a concentrations at reference area BAP typically ranges from <1 to 2 µg/L, but was lower in 2012. While concentrations were slightly higher at the impact areas BBD and BPJ, the 2012 results were generally lower than previous years there too (**Figure 3.5-6**).
- Total biomass did not correlate well with chlorophyll-a concentrations, and did not show a depression in 2012. In fact, relative to the previous years and the BAP reference, there was a marginal ($p < 0.059$) increase in biomass (49%) at BBD in 2012 (**Table 3.5-4**). This trend is likely driven by a reduction in biomass at BAP rather than an increase seasonally; timing of peak biomass is variable and occurs in July or August prior to declining in September (**Figure 3.5-7**).
- Species richness was variable at all areas with no apparent pattern within or between years as number of species ranged from 35 – 40 at most areas (**Figure 3.5-8**). Relative to previous years and the BAP reference, there were marginal ($p \sim 0.05$) increases in species richness (9 to 10%) at both BBD and BPJ; similar to total biomass, this relative change seems to be driven more by a reduction at BAP than actual increase at the impact areas.
- The relative proportion of chrysophytes, the dominant taxa group at all areas and years, was highest in July and August, but diminished in importance in September, with diatoms becoming more important, followed by dinoflagellates (**Figure 3.5-7**). There were no apparent differences between BAP and impact areas BBD and BPJ.

Summary

The phytoplankton community of Baker Lake showed minor variation spatially with no meaningful patterns across areas in any year. Regardless of location, patterns of biomass, species richness and taxonomic composition were generally similar within and between years. Differences (relative increases) in total biomass and species richness at impact areas relative to previous years and the BAP reference area appear to be driven by a



decrease in those metrics at BAP in 2012 (i.e., as opposed to a real increase). Given that no major changes in water quality were identified in 2012, the cause of these changes is most likely natural; these trends should be carefully tracked in 2013 to evaluate the persistence of this trend to determine whether this may be related to barge activity.



Table 3.5-1. Phytoplankton density (cells/L) by major taxa group, Meadowbank study lakes and Baker Lake, 2012.

Area-Replicate	Date	Phytoplankton Density (cells/L)							
		Cyanophyte	Chlorophyte	Euglenophyte	Chrysophyte	Diatom	Cryptophyte	Dinoflagellate	Total
Third Portage Lake									
TPE46S	19-Apr-12	1000	177400	0	419028	135748	27222	7192	767590
TPE47S	19-Apr-12	600	102834	0	195230	92496	100	400	391660
TPE48S	08-May-12	3400	145586	0	63828	127656	3646	0	344116
TPE49S	08-May-12	1000	226944	0	70920	99388	1100	0	399352
TPE50S	21-Jul-12	3600	227704	0	3255768	421272	26752	3200	3938296
TPE51S	21-Jul-12	11384	279192	0	3002328	255240	38720	1200	3588064
TPE52S	26-Aug-12	15800	576120	0	2361152	1013344	11184	61072	4038672
TPE53S	26-Aug-12	12000	439024	0	2202304	841328	34136	19568	3548360
TPE54S	14-Sep-12	24400	503880	0	1797000	1366960	9984	4800	3707024
TPE55S	14-Sep-12	79088	589488	0	1675072	1409864	18568	26352	3798432
TPN46S	19-Apr-12	2400	487002	0	198576	175754	1300	500	865532
TPN47S	19-Apr-12	1600	329778	0	152478	117918	400	4146	606320
TPN48S	08-May-12	7046	422074	0	124110	140394	0	100	693724
TPN49S	08-May-12	4746	382968	0	102834	70920	1100	0	562568
TPN50S	22-Jul-12	17968	318896	0	1714192	120344	17968	17768	2207136
TPN51S	22-Jul-12	31936	392136	0	1650136	162448	38120	38320	2313096
TPN52S	26-Aug-12	34352	648560	0	2721352	457192	17968	36136	3915560
TPN53S	26-Aug-12	60288	526832	0	2096144	384752	17968	11184	3097168
TPN54S	19-Sep-12	24968	447608	0	1783432	399520	56488	8784	2720800
TPN55S	19-Sep-12	14368	569136	0	1717376	404504	26952	22552	2754888
TPS33S	25-Jul-12	13584	621040	0	1679272	133512	25352	4800	2477560
TPS34S	25-Jul-12	47904	840944	0	1613416	161448	18768	8584	2691064
TPS35S	27-Aug-12	14600	712816	0	1764080	325680	10784	15184	2843144
TPS36S	27-Aug-12	25768	705832	0	2231640	389936	11384	6200	3370760
TPS37S	19-Sep-12	45920	669512	0	1783832	261624	25552	9384	2795824
TPS38S	19-Sep-12	20568	412288	0	1330840	291160	21568	8584	2085008
Second Portage Lake									
SP46S	19-Apr-12	4900	234036	0	540992	185892	53390	100	1019310
SP47S	19-Apr-12	112880	330178	0	231990	97342	800	400	773590
SP48S	10-May-12	800	88750	0	152478	64128	4346	400	310902
SP49S	10-May-12	2700	163216	0	315694	195030	500	1300	678440
SP50S	20-Jul-12	1200	203152	0	2026688	242472	101408	2200	2577120
SP51S	20-Jul-12	8584	260224	0	2127264	393936	126544	1600	2918152
SP52S	20-Aug-12	15168	511064	0	1745912	208936	92208	16168	2589456
SP53S	20-Aug-12	1000	396920	0	1746112	274592	70456	10584	2499664
SP54S	18-Sep-12	2400	325080	0	1216096	388352	23952	15768	1971648
SP55S	18-Sep-12	1600	287960	0	1144456	221920	16568	16168	1688672
Tehok Lake									
TE46S	19-Apr-12	1800	138294	0	1361418	75866	15592	15684	1608654
TE47S	19-Apr-12	2200	187938	0	974258	52644	47798	32314	1297152
TE48S	11-May-12	2300	283780	0	280634	51044	900	500	619158
TE49S	11-May-12	1200	28368	0	484656	106880	1200	1100	623404
TE50S	28-Jul-12	30936	159648	0	2057424	256240	70056	23952	2598256
TE51S	28-Jul-12	23352	160648	0	2099528	331464	60872	23352	2699216
TE52S	18-Aug-12	7400	346032	0	2309264	246256	109760	31136	3049848
TE53S	18-Aug-12	5200	303928	0	1898976	155064	80824	24152	2468144
TE54S	17-Sep-12	27952	368184	0	2196920	279792	60872	39920	2973640
TE55S	17-Sep-12	26352	294744	0	2126680	212736	87808	37520	2785840
TE56S	5-Dec-12	2400	166032	0	1121504	168632	37720	8784	1505072
TEFF21S	28-Jul-12	4200	176616	0	1896592	370384	51888	15968	2515648
TEFF22S	28-Jul-12	28552	106776	0	2361752	306528	44904	2800	2851312
TEFF23S	18-Aug-12	6600	425256	0	1849688	245656	65256	21952	2614408
TEFF24S	18-Aug-12	121944	403904	0	2070992	172616	72040	23552	2865048
TEFF25S	17-Sep-12	75056	87408	0	1676672	167232	36320	8584	2051272
TEFF26S	16-Sep-12	13600	101776	0	1368560	363000	44504	15568	1907008

Table 3.5-1. Phytoplankton density (cells/L) by major taxa group, Meadowbank study lakes and Baker Lake, 2012.

Area-Replicate	Date	Phytoplankton Density (cells/L)							
		Cyanophyte	Chlorophyte	Euglenophyte	Chrysophyte	Diatom	Cryptophyte	Dinoflagellate	Total
Inuggugayualik Lake									
INUG34S	15-Apr-12	11238	234536	0	127656	42852	500	200	416982
INUG35S	15-Apr-12	25422	262604	0	106480	36260	300	200	431266
INUG36S	09-May-12	700	223798	0	117018	64228	10638	400	416782
INUG37S	09-May-12	300	85804	0	166662	72220	42752	600	368338
INUG38S	25-Jul-12	8584	215536	0	2831312	557784	124728	800	3738744
INUG39S	25-Jul-12	30336	247256	0	2790608	515680	110360	1200	3695440
INUG40S	21-Aug-12	5000	324080	0	2489664	245872	22552	38320	3125488
INUG41S	21-Aug-12	3400	182000	0	1985584	320896	101976	23152	2617008
INUG42S	16-Sep-12	9184	326280	0	2001752	258440	160248	74240	2830144
INUG43S	16-Sep-12	8384	188384	0	1625784	320496	38320	39120	2220488
Wally Lake									
WAL21S	29-Jul-12	21952	161248	0	1517824	81824	60872	1000	1844720
WAL22S	29-Jul-12	7984	280976	0	2034472	140696	120944	9384	2594456
WAL23S	17-Aug-12	36120	389936	0	1617000	95792	182200	1800	2322848
WAL24S	17-Aug-12	57672	218520	0	1746312	134312	160848	52288	2369952
WAL25S	12-Sep-12	64656	348032	0	1077600	399136	202352	15168	2106944
WAL26S	12-Sep-12	43104	210536	0	1070416	224920	166032	8384	1723392
Pipedream Lake									
PDL23S	22-Aug-12	200	280776	0	1612416	352632	44904	9984	2300912
PDL24S	22-Aug-12	100576	316696	0	1339824	346448	36720	7984	2148248
PDL25S	18-Sep-12	400	318296	0	1721176	308728	36920	22552	2408072
PDL26S	18-Sep-12	400	252440	0	1966232	336864	45104	7984	2609024
MEADOWBANK LAKES									
Relative Abundance (%)		0.9	14.9	0.0	68.2	13.0	2.2	0.7	
Baker Lake									
BBD21S	27-Jul-12	0	253840	0	1607448	265200	170832	2000	2299320
BBD22S	27-Jul-12	800	159048	0	1359592	220312	62272	4400	1806424
BBD23S	25-Aug-12	200	618624	0	1910776	223760	83424	8984	2845768
BBD24S	25-Aug-12	200	395120	0	2256608	259784	152064	400	3064176
BBD25S	21-Sep-12	200	654144	0	1551944	150960	178016	8984	2544248
BBD26S	21-Sep-12	0	324880	0	1523208	95920	185600	2800	2132408
BPJ21S	27-Jul-12	800	125728	0	1609032	239752	178616	17968	2171896
BPJ22S	27-Jul-12	800	211536	0	2039472	230000	148680	1400	2631888
BPJ23S	25-Aug-12	7584	467560	0	2773656	185360	211136	21552	3666848
BPJ24S	25-Aug-12	7584	359800	0	2031704	202864	217920	7984	2827856
BPJ25S	21-Sep-12	7384	683680	0	1344208	131056	110760	17968	2295056
BPJ26S	21-Sep-12	21752	604456	7184	1444184	185744	54688	8384	2326392
BAP21S	27-Jul-12	400	43704	0	1017944	111672	38120	1400	1213240
BAP22S	27-Jul-12	1400	64656	0	658744	52736	53088	15768	846392
BAP23S	24-Aug-12	1000	316496	0	2360168	272920	316696	36920	3304200
BAP24S	24-Aug-12	15368	181600	0	1816784	367960	343048	7384	2732144
BAP25S	21-Sep-12	0	467560	0	1638352	101288	161464	600	2369264
BAP26S	21-Sep-12	28736	409888	0	1207512	128624	187200	14768	1976728
BAKER LAKE									
Relative Abundance (%)		0.2	14.1	0.02	70.5	8.3	6.5	0.4	

Table 3.5-2. Phytoplankton biomass (mg/m³) and diversity by major taxa group, Meadowbank study lakes and Baker Lake, 2012.

Area-Replicate	Date	Phytoplankton Biomass (mg/m ³)							# Species	Simpsons Diversity	
		Cyanophyte	Chlorophyte	Euglenophyte	Chrysophyte	Diatom	Cryptophyte	Dinoflagellate			Total
Third Portage Lake											
TPE46S	19-Apr-12	0.4	4.6	0.0	26.2	4.8	3.4	5.0	44	20	0.81
TPE47S	19-Apr-12	0.2	4.7	0.0	12.9	3.1	0.1	3.1	24	15	0.84
TPE48S	08-May-12	1.2	2.7	0.0	4.8	4.8	0.5	0.0	14	13	0.74
TPE49S	08-May-12	0.2	9.6	0.0	9.2	4.8	0.9	0.0	25	12	0.79
TPE50S	21-Jul-12	0.8	14.4	0.0	252.6	25.4	8.1	13.5	315	34	0.60
TPE51S	21-Jul-12	1.8	15.6	0.0	239.5	15.6	5.4	4.3	282	34	0.58
TPE52S	26-Aug-12	3.6	30.1	0.0	223.3	46.6	5.1	60.4	369	36	0.86
TPE53S	26-Aug-12	2.9	21.4	0.0	217.5	32.4	8.4	55.4	338	41	0.85
TPE54S	14-Sep-12	4.0	31.3	0.0	181.0	58.6	4.2	31.7	311	38	0.83
TPE55S	14-Sep-12	5.1	32.4	0.0	176.2	64.8	5.9	39.7	324	40	0.85
TPN46S	19-Apr-12	0.8	19.9	0.0	18.4	9.2	1.0	3.2	52	16	0.83
TPN47S	19-Apr-12	0.6	11.3	0.0	8.9	4.1	0.3	6.4	32	20	0.80
TPN48S	08-May-12	1.3	19.4	0.0	6.2	9.6	0.0	0.1	37	17	0.78
TPN49S	08-May-12	0.4	5.7	0.0	16.1	2.0	1.3	0.0	26	15	0.61
TPN50S	22-Jul-12	2.1	19.2	0.0	152.5	15.7	6.7	26.7	223	37	0.75
TPN51S	22-Jul-12	2.4	22.3	0.0	137.7	16.3	4.6	28.2	211	38	0.77
TPN52S	26-Aug-12	5.2	45.3	0.0	194.9	39.6	4.5	54.7	344	43	0.84
TPN53S	26-Aug-12	6.3	37.4	0.0	207.1	28.7	5.2	38.6	323	42	0.86
TPN54S	19-Sep-12	1.8	22.8	0.0	153.2	26.2	10.6	27.8	242	39	0.89
TPN55S	19-Sep-12	0.4	34.5	0.0	132.0	19.7	8.2	15.6	210	40	0.88
TPS33S	25-Jul-12	2.2	33.1	0.0	119.7	17.1	7.0	40.2	219	41	0.80
TPS34S	25-Jul-12	2.6	44.9	0.0	116.8	16.6	6.6	16.3	204	43	0.82
TPS35S	27-Aug-12	3.5	39.1	0.0	159.5	22.1	4.7	50.3	279	41	0.87
TPS36S	27-Aug-12	3.3	35.3	0.0	193.1	20.8	5.3	33.0	291	41	0.87
TPS37S	19-Sep-12	2.4	33.3	0.0	169.0	21.8	6.6	21.1	254	37	0.89
TPS38S	19-Sep-12	1.2	18.6	0.0	111.7	21.8	9.5	6.2	169	41	0.88
Second Portage Lake											
SP46S	19-Apr-12	1.7	16.7	0.0	28.7	5.5	4.6	0.2	57	26	0.83
SP47S	19-Apr-12	4.1	12.2	0.0	24.6	2.7	0.6	2.4	47	22	0.88
SP48S	10-May-12	0.3	2.3	0.0	10.6	2.4	0.8	0.6	17	18	0.84
SP49S	10-May-12	0.9	8.7	0.0	12.7	6.0	0.4	2.8	31	19	0.80
SP50S	20-Jul-12	0.3	7.3	0.0	182.3	15.3	29.2	18.9	253	40	0.81
SP51S	20-Jul-12	1.3	11.2	0.0	176.5	16.7	23.2	11.8	241	45	0.81
SP52S	20-Aug-12	0.5	16.8	0.0	143.0	8.2	14.9	23.7	207	41	0.87
SP53S	20-Aug-12	0.2	13.7	0.0	115.6	12.4	10.9	28.8	182	41	0.86
SP54S	18-Sep-12	0.5	11.9	0.0	83.6	27.2	3.7	13.3	140	35	0.86
SP55S	18-Sep-12	0.3	8.8	0.0	78.8	22.9	2.6	27.4	141	34	0.85
Tehek Lake											
TE46S	19-Apr-12	0.7	6.2	0.0	76.9	3.4	8.7	14.8	111	29	0.72
TE47S	19-Apr-12	0.8	3.7	0.0	80.1	4.1	6.5	12.9	108	26	0.81
TE48S	11-May-12	0.6	3.1	0.0	35.4	1.9	0.7	1.5	43	22	0.75
TE49S	11-May-12	0.3	1.1	0.0	84.8	4.9	0.9	12.0	104	23	0.83
TE50S	28-Jul-12	1.0	5.7	0.0	157.8	13.2	10.6	18.6	207	40	0.75
TE51S	28-Jul-12	2.6	5.9	0.0	189.6	19.0	7.6	19.3	244	41	0.81
TE52S	18-Aug-12	1.8	9.2	0.0	194.1	15.7	8.9	36.7	266	41	0.89
TE53S	18-Aug-12	1.2	6.4	0.0	170.7	12.7	7.0	27.1	225	42	0.86
TE54S	17-Sep-12	1.5	12.5	0.0	175.1	23.5	6.9	39.2	259	39	0.85
TE55S	17-Sep-12	1.4	10.8	0.0	150.1	11.6	6.2	21.8	202	37	0.84
TE56S	5-Dec-12	0.6	4.3	0.0	52.1	5.2	4.6	6.9	74	24	0.77
TEFF21S	28-Jul-12	1.0	5.9	0.0	166.5	28.5	5.4	11.7	219	35	0.78
TEFF22S	28-Jul-12	3.2	4.5	0.0	175.8	16.7	4.6	10.8	216	37	0.72
TEFF23S	18-Aug-12	1.5	12.0	0.0	168.5	11.6	5.3	12.5	211	39	0.86
TEFF24S	18-Aug-12	3.1	8.1	0.0	121.5	7.3	4.5	28.9	173	38	0.85
TEFF25S	17-Sep-12	2.3	2.8	0.0	172.2	12.8	2.4	13.7	206	41	0.84
TEFF26S	16-Sep-12	2.2	5.7	0.0	117.8	25.2	3.8	21.8	177	34	0.87

Table 3.5-2. Phytoplankton biomass (mg/m³) and diversity by major taxa group, Meadowbank study lakes and Baker Lake, 2012.

Area-Replicate	Date	Phytoplankton Biomass (mg/m ³)							# Species	Simpsons Diversity	
		Cyanophyte	Chlorophyte	Euglenophyte	Chrysophyte	Diatom	Cryptophyte	Dinoflagellate			Total
Inuggugayualik Lake											
INUG34S	15-Apr-12	0.5	2.5	0.0	8.3	1.5	0.4	2.9	16	17	0.66
INUG34SR	15-Apr-12	0.4	2.2	0.0	8.1	1.0	0.4	0.6	13	16	0.61
INUG35S	15-Apr-12	0.8	3.3	0.0	5.4	1.4	0.2	1.8	13	16	0.60
INUG36S	09-May-12	0.2	2.0	0.0	14.6	4.5	0.6	0.6	23	18	0.70
INUG37S	09-May-12	0.1	1.0	0.0	8.4	2.1	2.8	2.4	17	14	0.82
INUG38S	25-Jul-12	0.9	4.9	0.0	223.6	53.2	7.2	6.0	296	39	0.80
INUG39S	25-Jul-12	0.8	9.0	0.0	227.8	54.5	8.1	12.8	313	44	0.71
INUG40S	21-Aug-12	1.2	9.1	0.0	209.7	22.3	2.4	33.3	278	40	0.84
INUG41S	21-Aug-12	1.0	6.6	0.0	138.5	30.3	9.4	22.9	209	45	0.82
INUG42S	16-Sep-12	0.5	8.3	0.0	197.3	21.1	9.7	58.6	295	43	0.87
INUG43S	16-Sep-12	0.3	13.4	0.0	202.8	20.4	4.7	36.8	278	38	0.86
Wally Lake											
WAL21S	29-Jul-12	2.2	6.3	0.0	120.1	7.0	9.6	4.6	150	36	0.82
WAL22S	29-Jul-12	1.0	8.9	0.0	168.4	7.3	16.4	22.8	225	44	0.81
WAL23S	17-Aug-12	1.5	8.3	0.0	134.1	9.8	25.0	16.1	195	40	0.86
WAL24S	17-Aug-12	7.4	8.7	0.0	144.6	17.0	16.6	29.4	224	39	0.84
WAL25S	12-Sep-12	1.6	10.1	0.0	58.2	34.6	12.2	8.0	125	40	0.90
WAL26S	12-Sep-12	1.0	7.8	0.0	78.3	24.0	9.9	10.1	131	38	0.88
Pipedream Lake											
PDL23S	22-Aug-12	0.0	3.5	0.0	163.9	21.1	5.7	32.2	227	33	0.88
PDL24S	22-Aug-12	1.8	3.5	0.0	99.5	26.7	3.1	13.7	148	35	0.87
PDL25S	18-Sep-12	0.1	6.7	0.0	146.8	19.1	3.5	17.6	194	39	0.88
PDL26S	18-Sep-12	0.1	7.7	0.0	113.1	17.5	5.4	6.9	151	37	0.84
MEADOWBANK LAKES											
Relative Biomass (%)		0.9	7.4	0.0	67.9	9.9	3.6	10.4			
Baker Lake											
BBD21S	27-Jul-12	0.0	12.8	0.0	113.1	164.1	26.9	13.7	331	37	0.86
BBD22S	27-Jul-12	0.1	9.9	0.0	121.9	184.5	13.5	19.4	349	38	0.85
BBD23S	25-Aug-12	0.0	20.5	0.0	168.3	167.7	10.0	11.5	378	40	0.86
BBD24S	25-Aug-12	0.0	13.4	0.0	223.1	72.5	11.1	0.9	321	37	0.87
BBD25S	21-Sep-12	0.0	13.9	0.0	102.1	30.9	16.6	9.9	173	41	0.86
BBD26S	41173	0.0	9.7	0.0	126.2	38.4	18.3	19.5	212	41	0.844
BPJ21S	27-Jul-12	0.2	4.3	0.0	185.5	55.1	30.8	25.7	302	41	0.83
BPJ22S	27-Jul-12	0.2	9.1	0.0	143.0	79.8	22.9	11.3	266	36	0.82
BPJ23S	25-Aug-12	0.3	15.5	0.0	198.6	86.9	15.6	7.9	325	39	0.84
BPJ24S	25-Aug-12	0.3	15.6	0.0	219.3	67.0	15.1	8.1	325	40	0.84
BPJ25S	21-Sep-12	0.2	16.5	0.0	76.7	36.8	8.3	18.2	157	40	0.85
BPJ26S	21-Sep-12	0.6	21.7	3.4	108.4	45.2	7.1	9.0	195	44	0.87
BAP21S	27-Jul-12	0.1	2.9	0.0	108.5	124.5	5.5	11.1	253	32	0.84
BAP22S	27-Jul-12	0.3	3.0	0.0	66.6	37.6	9.3	20.0	137	32	0.91
BAP22SR	27-Jul-12	0.4	1.9	0.0	71.3	37.1	7.6	24.8	143	35	0.92
BAP23S	24-Aug-12	0.2	9.6	0.0	194.9	65.4	37.0	16.9	324	37	0.87
BAP24S	24-Aug-12	1.3	10.6	0.0	215.1	83.6	35.8	3.2	350	36	0.84
BAP25S	21-Sep-12	0.0	12.2	0.0	110.3	27.0	20.5	2.4	172	35	0.84
BAP26S	21-Sep-12	0.5	6.5	0.0	88.8	26.4	19.5	6.2	148	40	0.88
BAKER LAKE											
Relative Biomass (%)		0.1	4.3	0.1	54	29.4	7	5			

Table 3.5-3. Results of BACI tests for phytoplankton variables at Meadowbank stations.

Parameter Measured	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Effect size (%)		
							ES	LCI	UCI
Total biomass	TPN	7	5	0.61	0.25	0.038	84	4	224
	TPE	8	5	0.49	0.16	0.011	63	14	133
	SP	6	5	0.28	0.33	0.432	32	-38	181
	TPS	16	3	0.08	0.27	0.760	9	-38	91
	TE	6	5	0.88	0.45	0.084	141	-13	573
	TEFF	9	3	-0.23	0.16	0.179	-21	-45	13
Species	TPN	7	5	0.22	0.06	0.004	24	9	41
	TPE	8	5	-0.03	0.06	0.550	-3	-15	9
	SP	6	5	0.18	0.09	0.086	19	-3	46
	TPS	16	3	0.08	0.08	0.343	8	-9	27
	TE	6	5	0.27	0.13	0.066	30	-2	74
	TEFF	9	3	-0.05	0.06	0.387	-5	-16	8

Notes:

* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = two-tailed test of the null hypothesis of no change or a decrease in mean

ES = estimated effect size (i.e., $100\% \times (\exp[\text{Estimate}] - 1)$);

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Shaded cells indicate negative effect sizes (reductions) of 20% or more

Table 3.5-4. Results of BACI tests for phytoplankton variables at Baker Lake stations.

Parameter Measured	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Effect size (%)		
							ES	LCI	UCI
Total biomass	BBD	11	3	0.4	0.19	0.059	49	-2	127
	BPJ	11	3	0.16	0.18	0.394	18	-21	75
Species	BBD	11	3	0.09	0.05	0.079	10	-1	22
	BPJ	11	3	0.08	0.04	0.064	9	-1	19

Notes:

* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = two-tailed test of the null hypothesis of no change or a decrease in mean

ES = estimated effect size (i.e., $100\% \cdot (\exp[\text{Estimate}] - 1)$);

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Figure 3.5-1. Chlorophyll-a ($\mu\text{g/L}$) in water samples from Meadowbank study lakes since 2006.

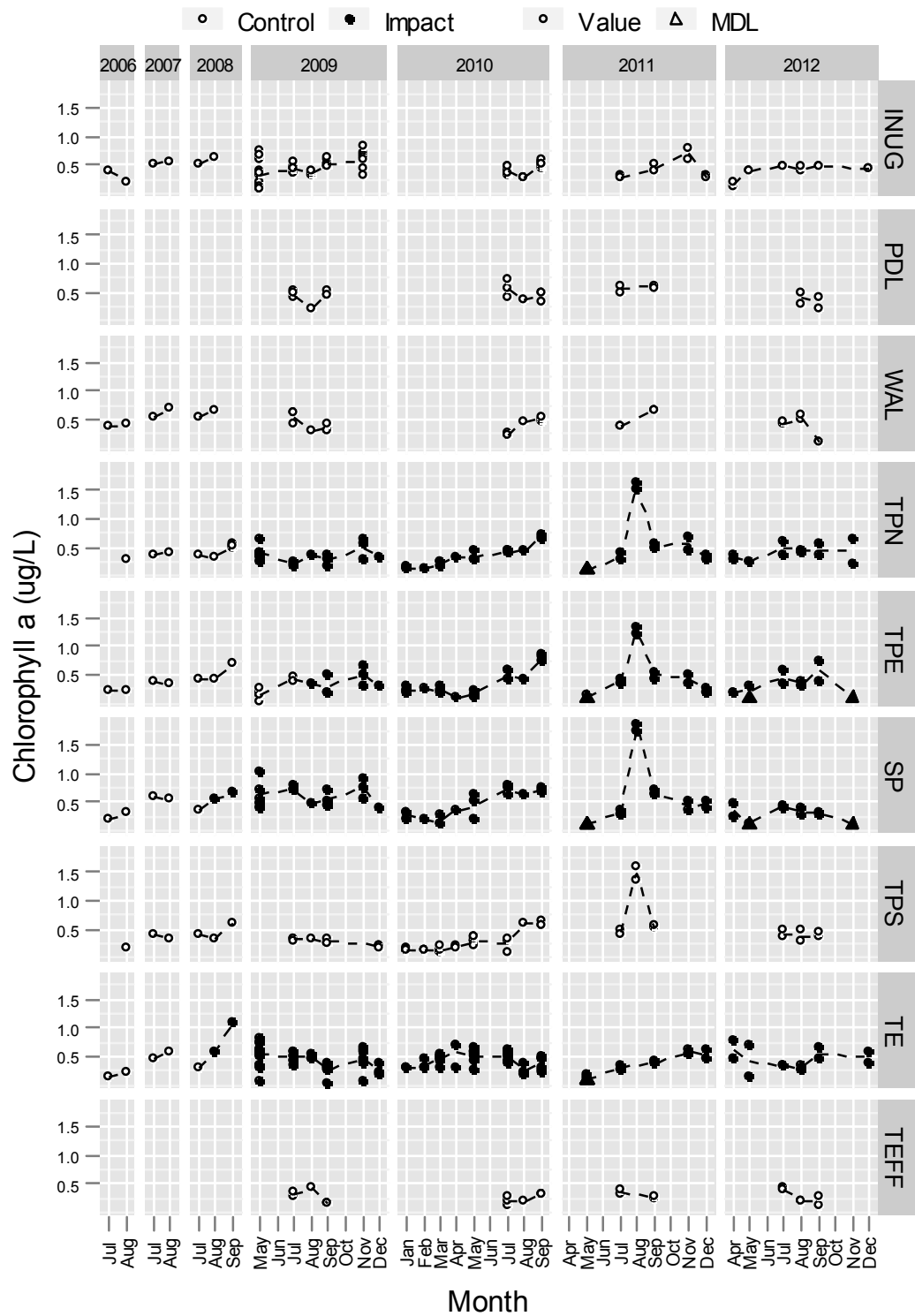


Figure 3.5-2. Total phytoplankton biomass (mg/m³) from Meadowbank study lakes since 2006.

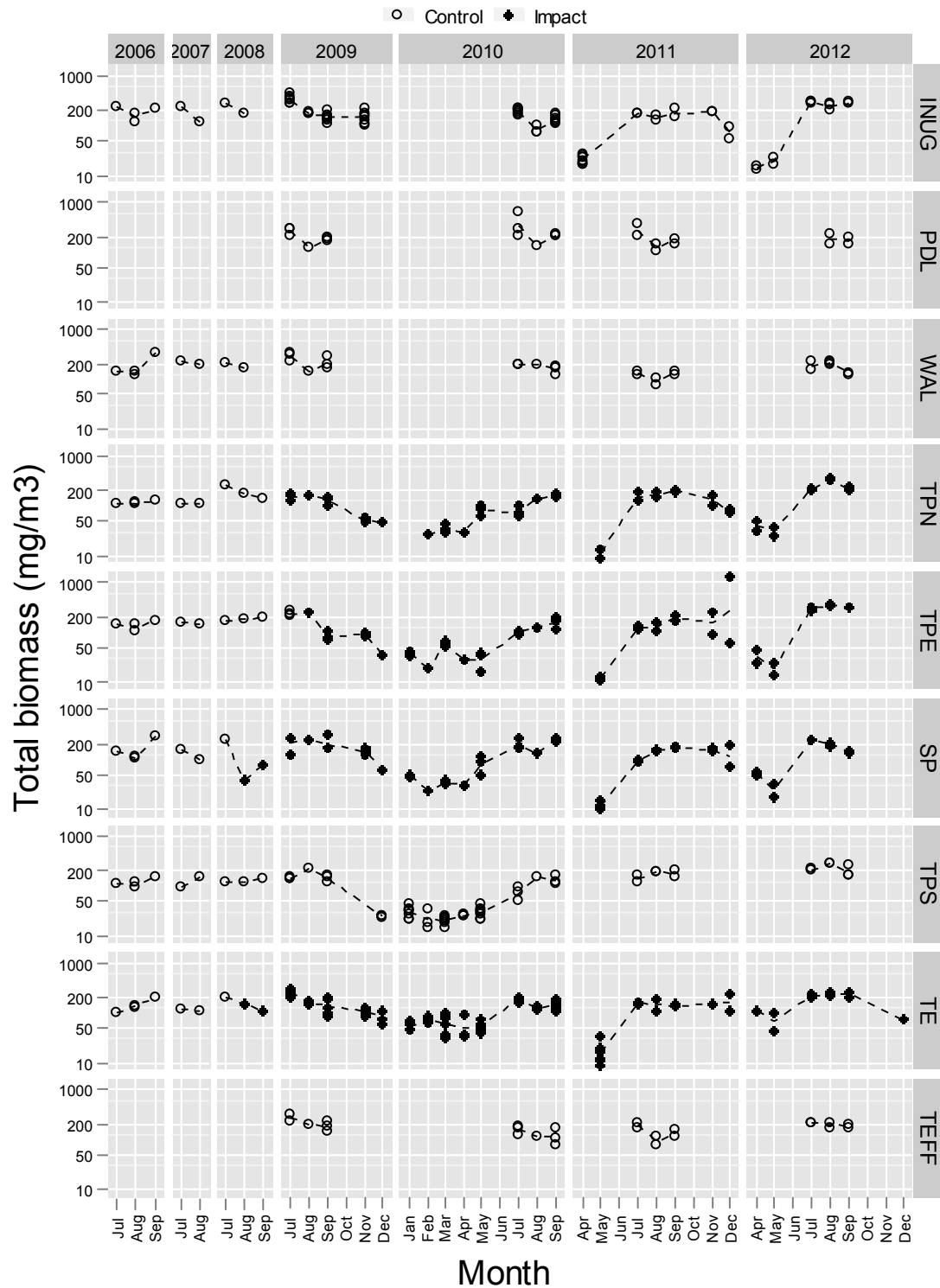


Figure 3.5-3. Phytoplankton biomass (mg/m³) by major taxa group from Meadowbank study lakes since 2006.

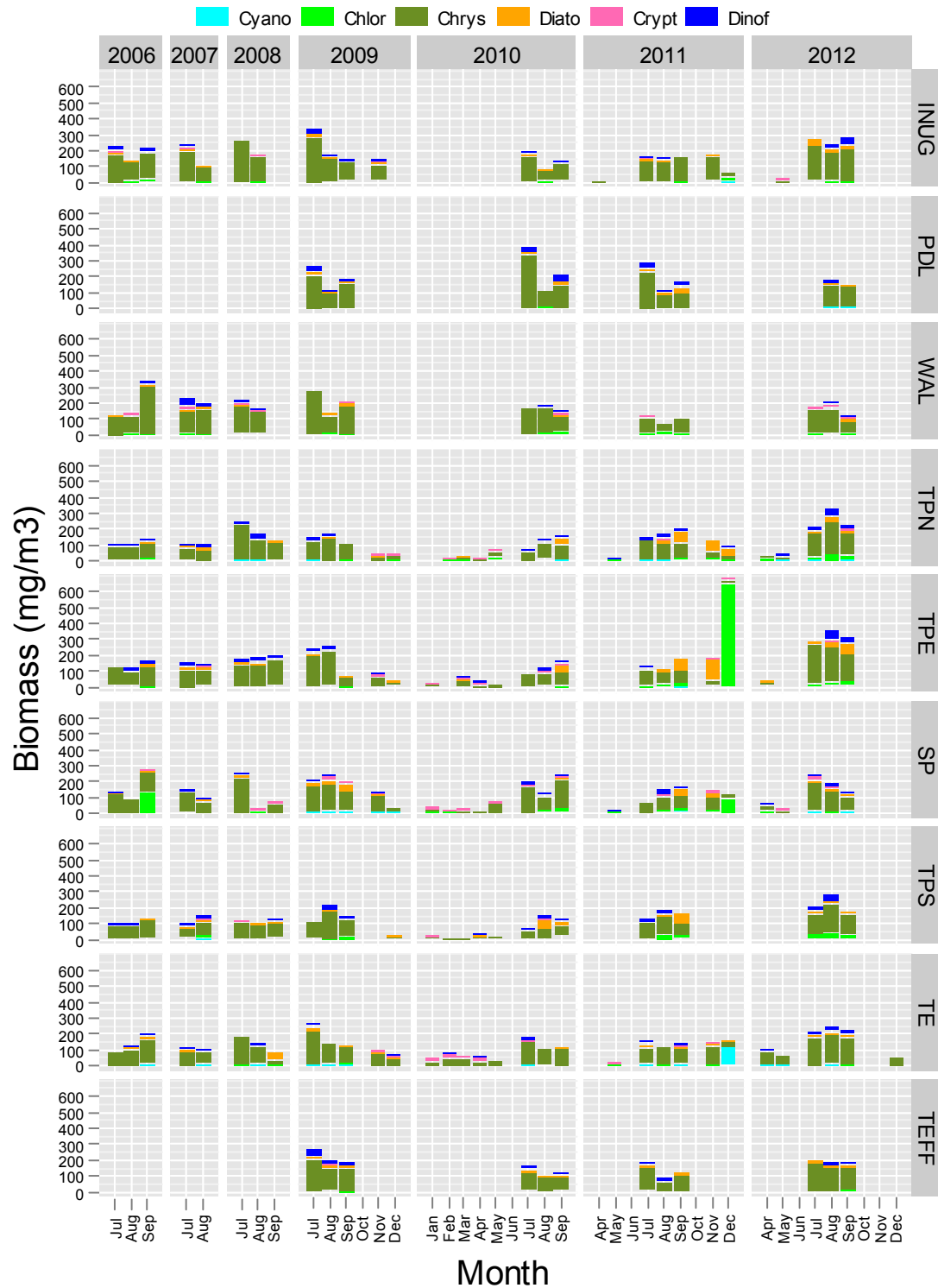


Figure 3.5-4. Phytoplankton relative biomass by major taxa group from Meadowbank study lakes since 2006.

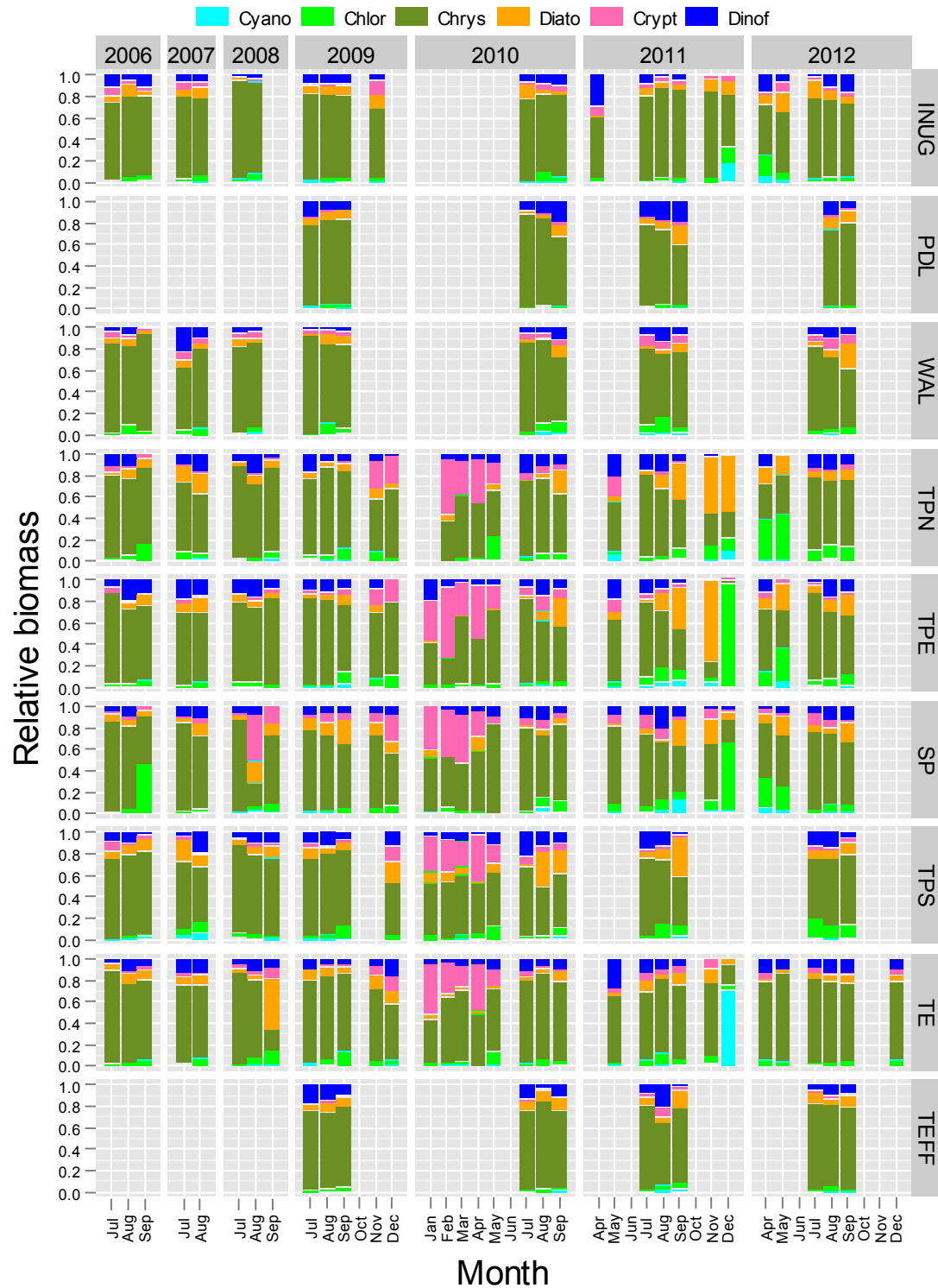


Figure 3.5-5. Phytoplankton species richness from Meadowbank study lakes since 2006.

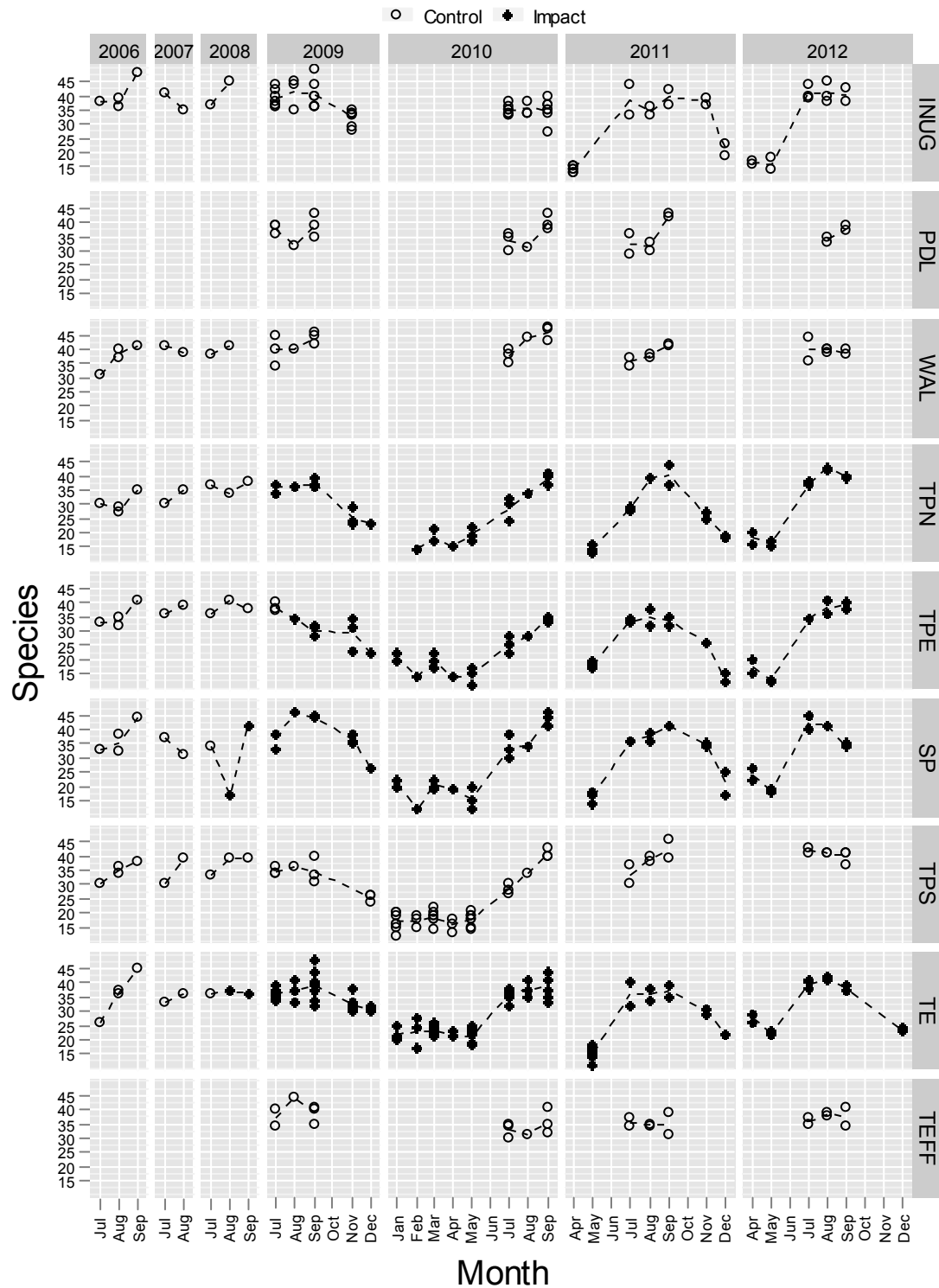


Figure 3.5-6. Chlorophyll-a ($\mu\text{g/L}$) in water samples from Baker Lake since 2008.

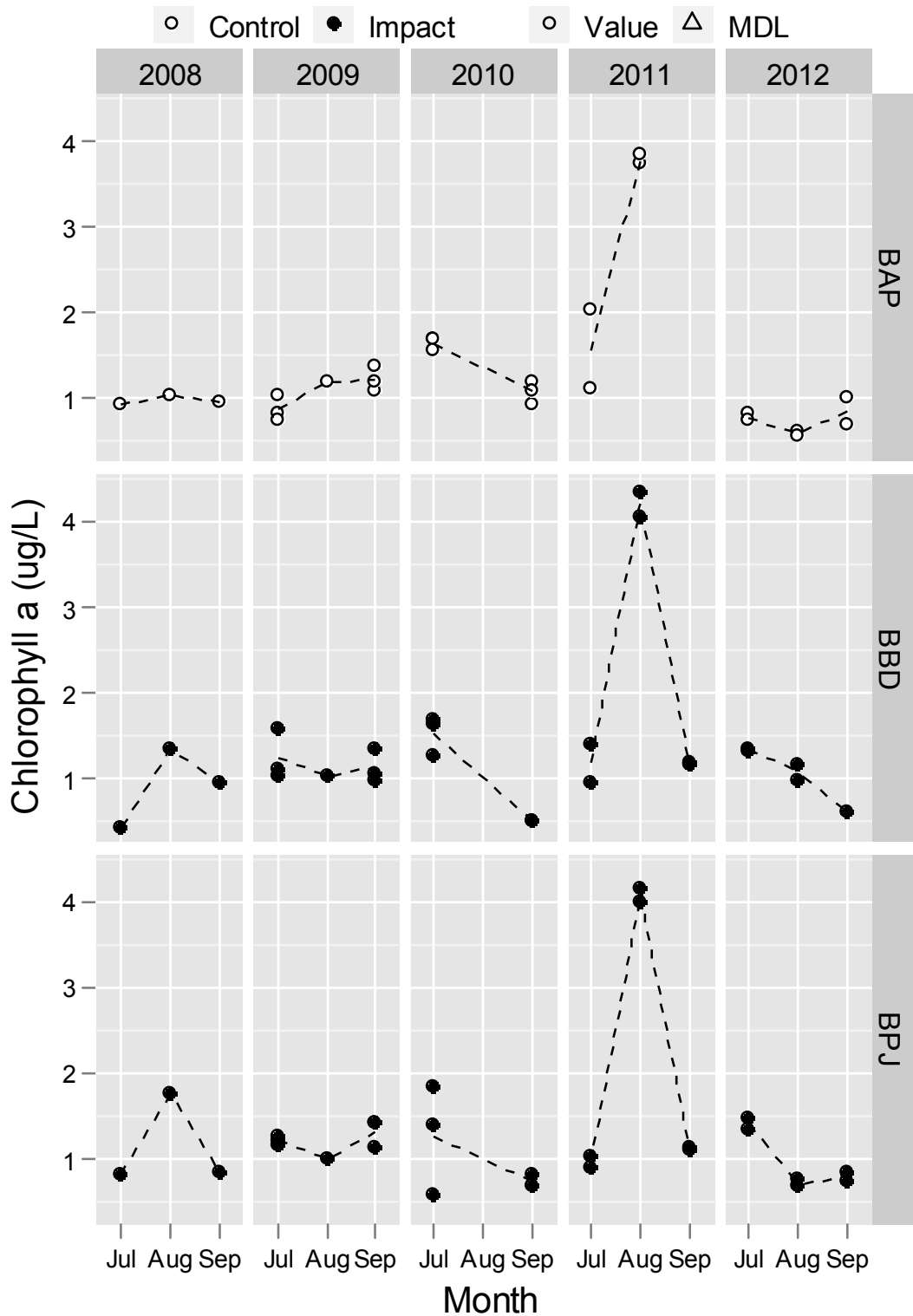


Figure 3.5-7. Total phytoplankton biomass (mg/m³) from Baker Lake since 2008.

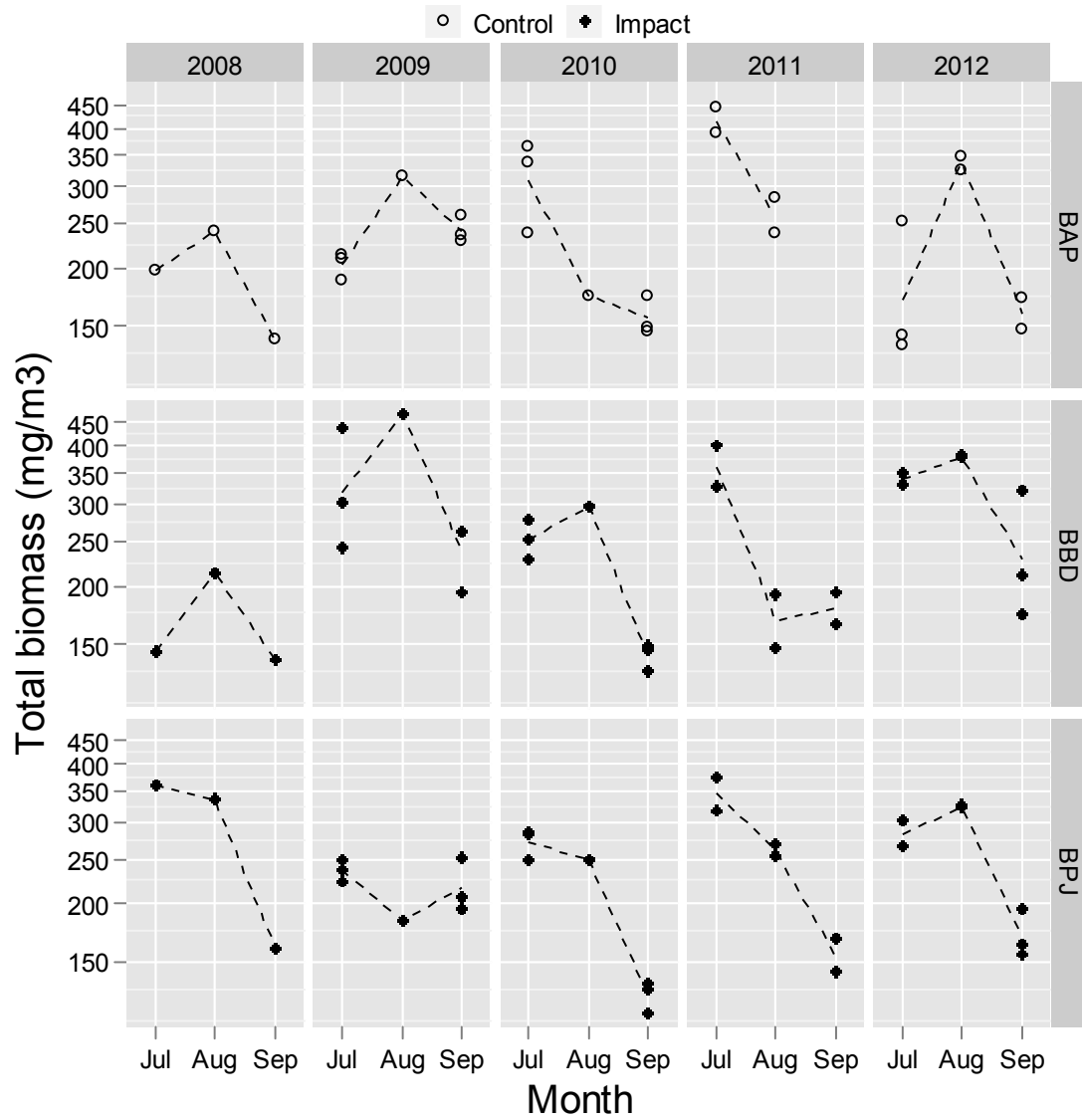


Figure 3.5-8. Phytoplankton biomass (mg/m³) by major taxa group from Baker Lake since 2008.

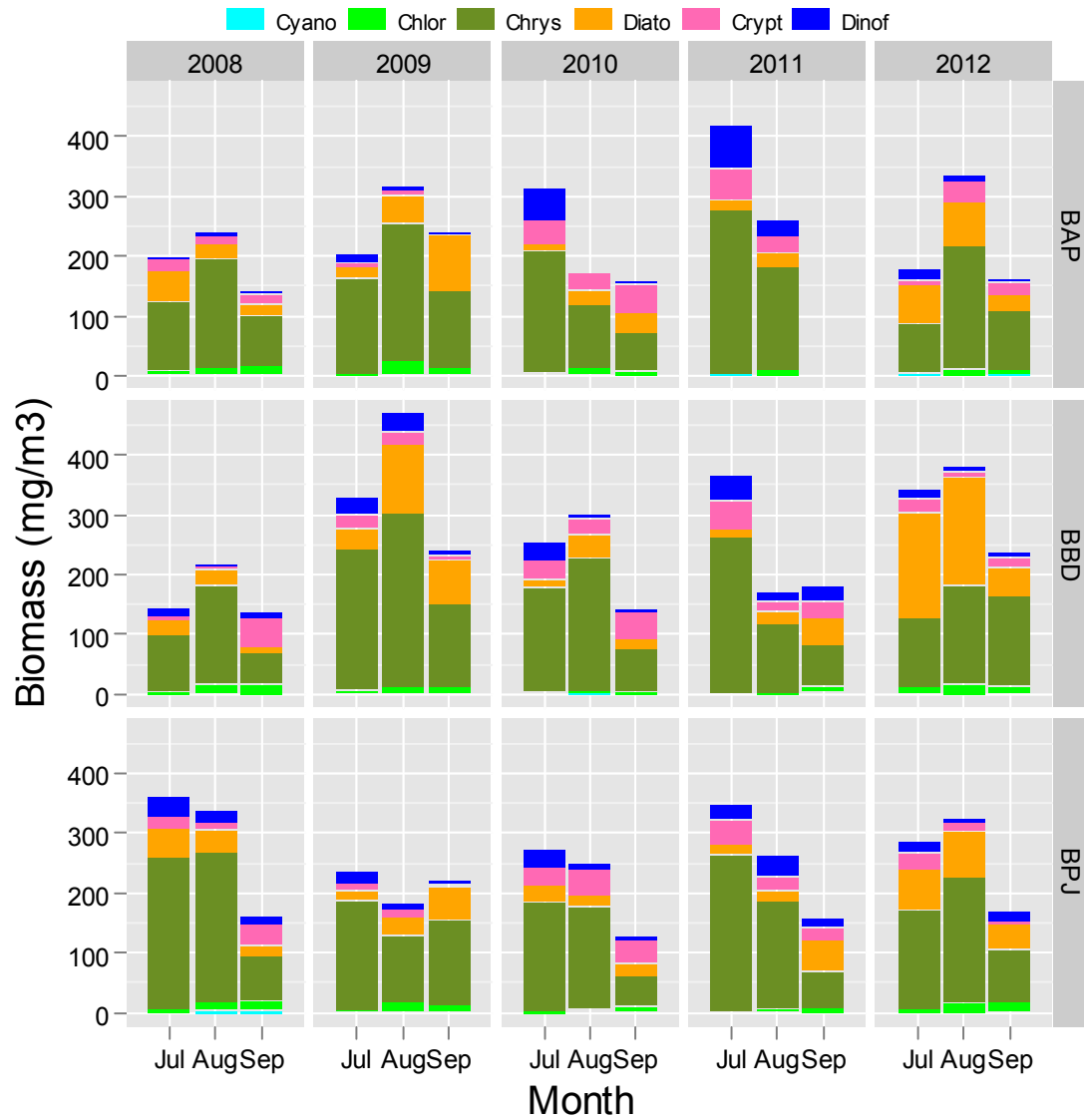


Figure 3.5-9. Phytoplankton relative biomass by major taxa group from Baker Lake since 2008.

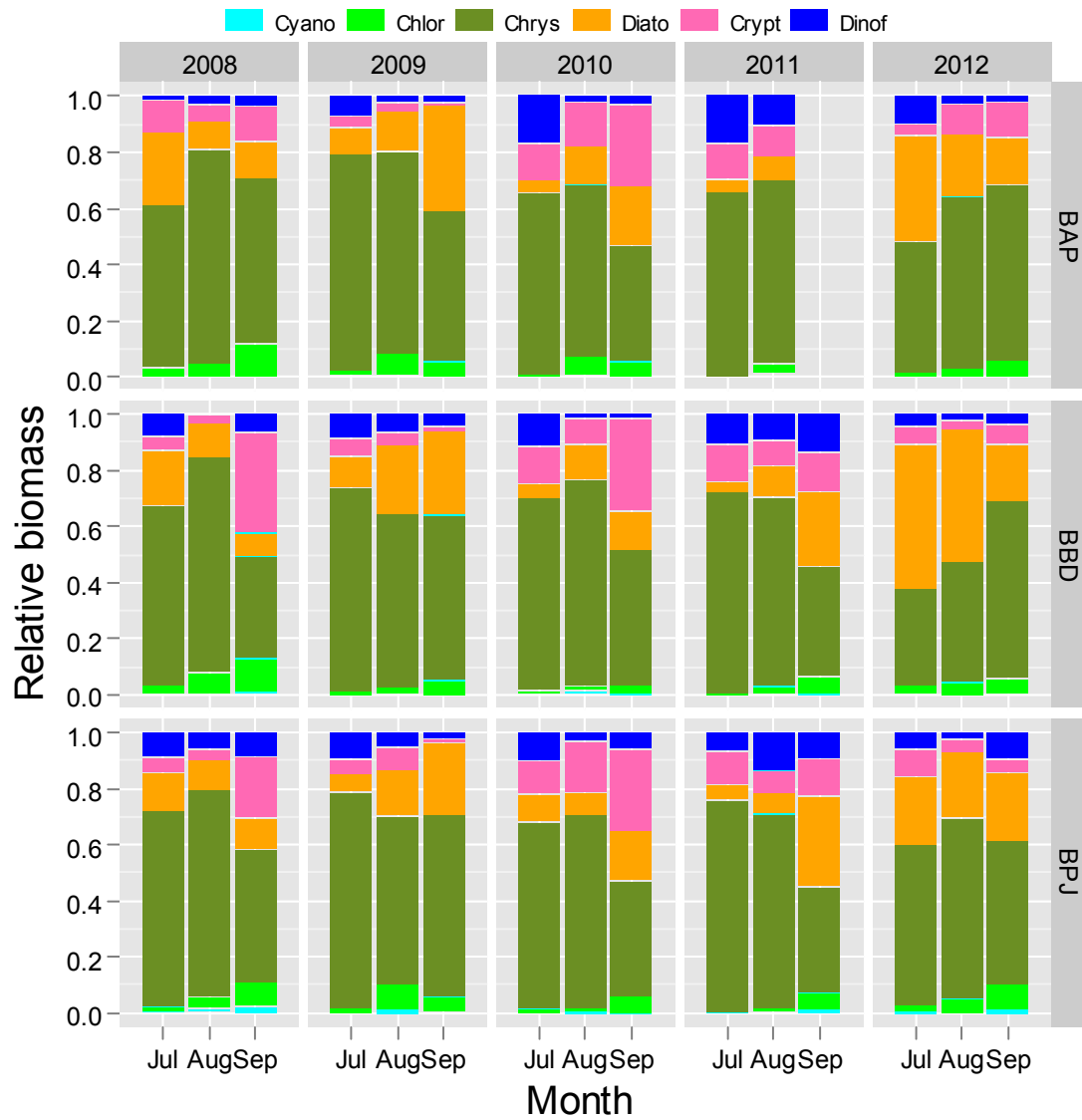
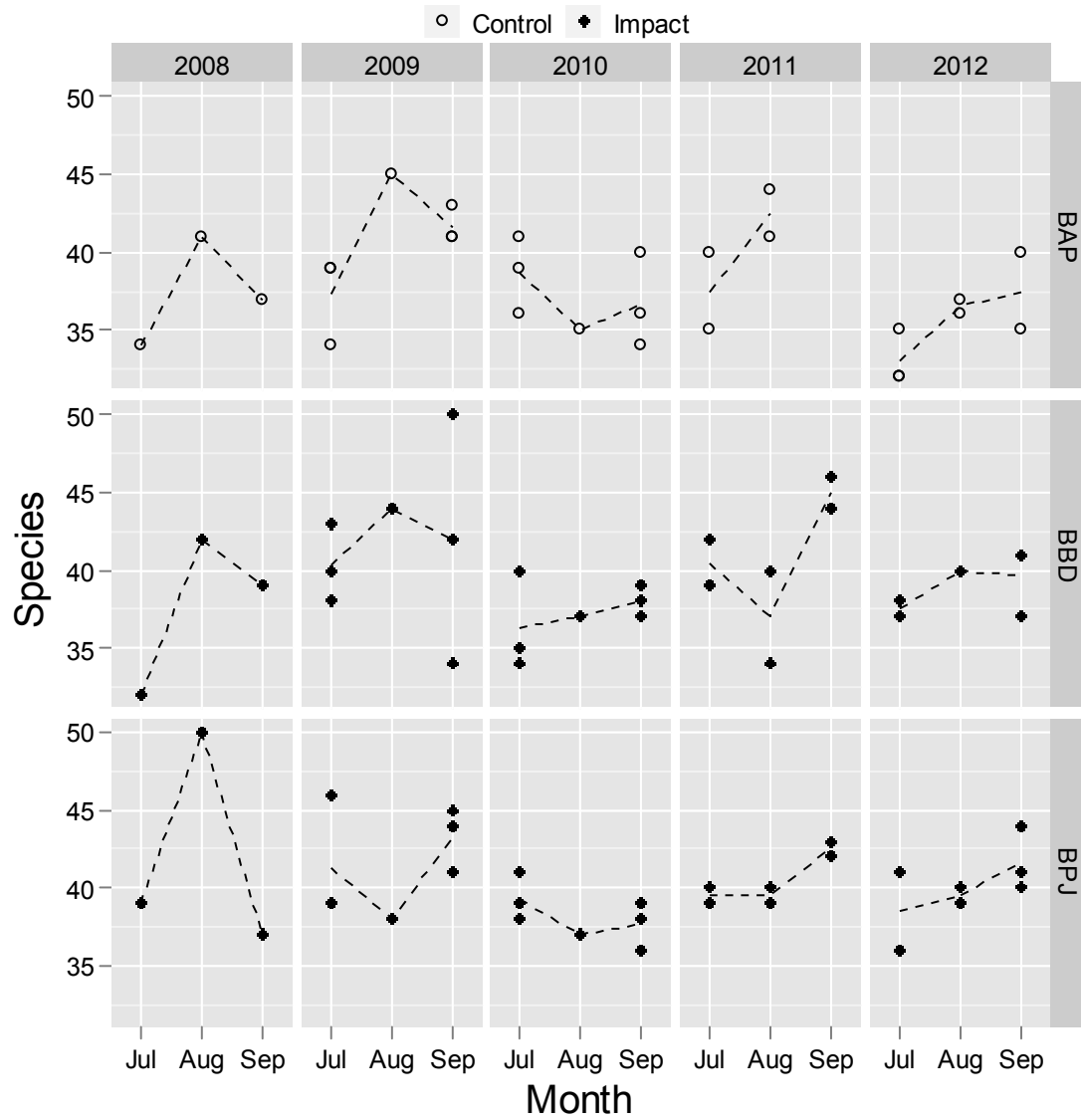


Figure 3.5-10. Phytoplankton species richness from Baker Lake since 2008.



3.6. Benthic Invertebrates

Benthic invertebrates (collectively referred to as “benthos”) are small animals that live on or in the bottom sediments and are an important food source for most fish species, especially young-of-the-year and juvenile lake trout, round whitefish, and Arctic char (Machniak, 1975; Scott and Crossman, 1979).

The abundance and species composition of benthic invertebrates are strongly affected by the following:

- *Water depth* - benthic invertebrates are typically most abundant at depths between approximately 3 m and 12 m. Benthos are less abundant at shallower depths because of ice scouring and coarse grain size. Below a depth of about 12 m, light penetration is much reduced and algal productivity is lower, so abundance and diversity of benthos is similarly reduced. The vast majority of benthic invertebrates in deeper sediments consist of oligochaete worms (true worms) and chironomid (midge) larvae, which live primarily in the sediment (i.e., infauna), as opposed to organisms that live on top of the sediment (epifauna). In shallower sediments (<12 m), the major invertebrate groups consist of aquatic larvae of insects (Class Insecta), especially chironomids (Order Diptera), caddisflies (O. Trichoptera), mayflies (O. Ephemeroptera), and stoneflies (O. Plecoptera). Other major taxa include amphipods (Crustacea; O. Amphipoda), mites (O. Acarina), fingernail clams (Class Bivalvia; *Pisidium* or *Sphaeridae*), harpacticoid copepods (Crustacea; O. Harpacticoida), and tadpole shrimp (O. Notostraca). The CREMP targets depths ranging from 6.5 m to 9.5 m (i.e., $8 \text{ m} \pm 1.5 \text{ m}$) to reduce the influence of depth-related variability on the results.
- *Sediment grain size* – both abundance and richness can vary with substrate coarseness. Substrates in the depth range targeted by the CREMP are typically dominated by silts and clays in the Meadowbank Study Lakes; the Baker Lake sampling areas typically have more sand.
- *Organic carbon content* – The amount of organic carbon, a food source, in the sediment will also influence abundance of benthic infauna that feed on the organic particles. Generally, sediment with a higher proportion of organic material will have greater abundance and diversity of benthos than sediments with small amounts of organic carbon.

Other physical factors, such as water temperature, can influence larval development rates and ultimately timing of hatching for insect larvae. Consequently, even if sampling can be conducted simultaneously in all lakes (which is not practical), differential hatching can lead to a particular species being abundant in one lake, and less abundant in another, because of hatching of larvae into the terrestrial adult. This is partly overcome in the



CREMP by sampling during late fall, after the emergence of most groups, but is still a source of some variability.

This section gives a general description of observations made on abundance and richness of all major taxa¹⁵ (e.g., insects, molluscs, worms) for the Meadowbank Study Lakes and for Baker Lake. The 2012 results are summarized in **Tables 3.6-1 and 3.6-2** (raw data are provided in **Appendix H**) and included in the time series graphs (**Figures 3.6-1 to 3.6-10**) that target the following endpoints (descriptions based on Environment Canada guidance [EEM, 2011]):

- *Total abundance* – the number of individual organisms per m², this metric is a measure of community density.
- *Total richness* – the number of different taxa (identified to the lowest practical taxonomic level, usually species) per grab.
- *Major taxa group abundance* – similar to total abundance, but broken down by major taxa group.
- *Major taxa group relative abundance* – proportional abundance of each major taxa group.
- *Major taxa group richness* – similar to total richness, but broken down by major taxa group.
- *Major taxa group relative richness* – proportional richness of each major taxa group.

Other endpoints that are presented in **Appendix I** but not discussed in detail in the text are:

- *Simpson's Diversity* – takes into account both the abundance patterns and taxa richness of the community based on the proportion of individuals that each taxa contributes to total abundance.
- *Bray-Curtis Index* – a distance coefficient (based on comparison of a site to one or more [pooled] reference sites) that ranges between 0 (both identical) to 1 (completely different). The index measures the percentage of difference between sites.

¹⁵ The abundance of roundworms (Nematoda) and seed shrimp (Ostracoda) is reported (**Appendix H**), but is not included in statistical comparisons of total number of genera, abundance or richness. Because of their small size, they are not consistently retained on a 500- μ m sieve, thus their presence would be confounding if they were used to quantitatively compare abundance estimates among areas.

3.6.1. Meadowbank Study Lakes

3.6.1.1. *General Observations*

General limnology and nutrient status of these lakes are discussed in **Sections 3.2 and 3.3**. Low productivity and low nutrient cycling result in a benthic community characterized by low abundance and relatively low taxa richness. Benthos abundance was typically less than 2,000 organisms/m² and was often less than 1,000 organisms/m² (**Figures 3.6-1 and 3.6-2**). Annual variability was sometimes high, as seen at Wally Lake (WAL; e.g., all years) and the east basin of Third Portage Lake (TPE; e.g., 2006 to 2008). There have also been fairly consistent spatial differences in abundance among lakes (e.g., Second Portage Lake [SP] and Tehek [TE] have generally had lower abundance than the other lakes and WAL higher since baseline monitoring [2006 to 2007]). Taxa richness typically ranged from 8 to 12 for most area-year combinations (**Figures 3.6-4 and 3.6-5**).

Typical of most Arctic lakes, the benthic invertebrate community has been generally dominated by the aquatic larval stages of insects, especially chironomids (Family Chironomidae), both in terms of abundance and taxa richness (**Figures 3.6-2, -3, -5, and -6**). The next most abundant group was typically Mollusca (clams) especially, *Cyclocalyx* / *Neopisidium*, genera of the family Sphaeriidae (fingernail clams). Oligochaete worms were also relatively abundant in the lake sediments; generally, at least one oligochaete taxon was present at most area/year combinations. Epibenthic insects such as mayflies and stoneflies are not common in the project lakes.

3.6.1.2. *Temporal and Spatial Trend Interpretation – General and 2012*

As discussed in **Sections 1.4 and 1.5**, the identification of potential mine-related impacts generally involved visually examining the data for spatial/temporal patterns that matched mine-related events (see **Section 1.4** for details). This was augmented by conducting statistical analyses of the 2012 data to test for changes relative to baseline/reference conditions using the BACI model (see **Section 2.8.4** for details); this included looking at longer-term trends (i.e., two-year and three-year trends). In addition, insights from the statistical analyses included in the 2011 EAS (Azimuth, 2012b), that quantitatively assessed the data from 2006 to 2011, were included where relevant.

The expected response patterns were dictated by the nature of the physical and/or chemical changes caused by mine-related activities. Dike construction, for example, was most likely to cause a physical change from increased sedimentation. The 2010 EAS (Azimuth, 2011a) included toxicity testing to assess the potential for direct toxicity and sequential extraction testing to assess the bioavailability of metals of sediments. All evidence suggested a low likelihood of chemical effects to the benthic community.

Physical changes such as a sedimentation event typically result in a temporally-limited effect to benthic invertebrates from smothering (Matthaei et al., 1996, 1997; Lake et al., 1989). Furthermore, dike construction monitoring results suggest variable degrees of sediment releases during each of the dike construction events (i.e., East Dike 2008 > Bay-Goose Dike 2009 > Bay-Goose Dike 2010; Azimuth, 2009a, 2010b and AEM 2011). Thus, these aspects should be reflected in potential spatial-temporal benthic community response patterns seen in the graphs (or detected during statistical analyses). Specific areas and years of interest (i.e., near-field areas with “impact” status) where mine-related effects should be seen (if they are occurring) are Second Portage Lake (SP in 2008 to 2012), Tehék Lake (mainly 2008 and to a lesser extent 2009 to 2012), east basin of Third Portage Lake (TPE 2009 to 2012), and north basin of Third Portage Lake (TPN 2009 to 2012). Detailed statistical assessment of the 2008 to 2011 data was conducted as part of the 2011 EAS (Azimuth, 2012b). Past years were assessed in the 2011 CREMP report and are only summarized here (i.e., see Azimuth, 2012b for details); the results of the BACI statistical analyses of the 2012 data are reported herein.

Below is a summary of visual observations and some statistical analyses on the pattern of results for the specific area/years of interest relative to patterns observed in the control data. Note that plots for all benthic invertebrate metrics are presented in **Appendix I**.

SP and TE (2008 to 2012)

- These area/year combinations were grouped as SP, which is up-gradient of TE (i.e., they are not independent). Baseline conditions at SP and TE were characterized by lower abundance and diversity than most other lakes.
- The 2008 EAS (Azimuth, 2009b) reported a negative trend (although not statistically significant, but a fairly large effect size was observed) in total abundance at SP that did not extend to TE, which receives water from SP (and also had elevated TSS, but not as high as SP, in 2008) (see **Figures 3.6-1 and 3.6-4**). As seen in **Figures 3.6-2 and 3.6-3**, the only shift in community composition associated with that trend was the loss of one oligochaete taxa.
- Abundance increased at SP in 2009 the year after dike construction, while taxa richness was within the range of baseline observations (although slightly lower based on the mean per year). Given the temporal and spatial pattern of the benthic community data, the potential for this to represent a recovery trend from a sedimentation event was not ruled out.
- The 2010 results further clouded the issue, with both abundance and diversity dropping at SP (although the change was not statistically significant relative to control data [Azimuth, 2012a]) despite no substantial changes to water quality relative to 2009. There was also a general regional drop in abundance and

richness that year (i.e., based on control data). However, results for the 2010 TSS EAS (Azimuth, 2011a), which included better coverage with Second Portage Lake, actually showed no obvious change (unlike the CREMP SP results) between 2009 and 2010 across five sampling areas (despite the general regional drop). Consequently, it was concluded that the 2010 drop at the CREMP SP area was a localized event that was not likely due to the sedimentation event.

- The 2011 results for abundance and richness at SP were both quite a bit higher than in 2010. While taxa richness was at its highest yet, abundance was still slightly lower (but not statistically significant; Azimuth, 2012b) than baseline results for SP (only one replicate sample in **Figure 3.6-1** fell outside the range of baseline values).
- As seen in **Figures 3.6-1 and 3.6-4**, 2012 had the highest mean abundance and richness since 2006. Not surprisingly, the BACI results (**Tables 3.6-3 and 4**) showed no statistically significant changes in total abundance or taxa richness at SP for 2012, 2011-2012 or 2010-2012.
- Overall, while the initial 2008 reduction in benthic community abundance may have been related to the physical effects of the sedimentation event that occurred during East Dike construction, the pattern of results since then (i.e., variability that does not correspond to any known factors) does not appear to be consistent with a recovery or a prolonged impairment of the community. It is possible that the “signal” of the impact is obscured by the “noise” of natural variability; it is also possible that the entire pattern is due to natural variability (i.e., that the initial drop in abundance at SP was natural). Notwithstanding, the 2012 results for SP suggest that the benthic invertebrate community is healthy with a reasonable, but somewhat lower abundance as other project lakes, yet an equivalent species richness.

TPE (2009 to 2011)

- Baseline conditions at TPE were quite variable, with a pronounced spike in abundance and taxa richness in 2008 (**Figures 3.6-1 and 3.6-4**). As seen in **Figures 3.6-2, -3, -5, and -6**, both of the increases were primarily due to insects.
- A large drop in abundance and taxa richness was observed at TPE in 2009 (**Figures 3.6-1 and 3.6-4**), despite sampling taking place very early in the 2009 Bay-Goose Dike sedimentation event (i.e., when TSS concentrations in the water column were above background, but far below peak concentrations). Given the magnitude of change and the relatively low exposure, this would appear to be a reduction after the large peak in 2008.

-
- TPE abundance dropped further in 2010 (i.e., the period after the highest TSS exposure), but so did abundance in many of the lakes and basins away from mining activity that year (Azimuth, 2012b). Again, the change was not statistically significant (as confidence intervals, and thus uncertainty, were high; Azimuth, 2011a).
 - Looking back from 2011 (see **Figures 3.6-2 and 3.6-5**), apart from the peak that occurred in 2008, the patterns in benthic community abundance and richness do not appear to have changed much at all relative to baseline, and do not support the presence of a TSS-related impact at TPE.
 - The 2012 results support the previous statement in that total abundance and taxa richness were the second highest reported since 2006. The BACI results (**Tables 3.6-3 and 4**) showed no statistically significant changes in total abundance or taxa richness at TPE for 2012, 2011-2012 or 2010-2012.

TPN (2009 to 2011)

- Abundance and taxa richness increased in 2009, despite the onset of dewatering activities from the attenuation pond to TPN in spring 2009.
- There was a slight drop in mean abundance in 2010 relative to 2009, however, this was largely due to a single sample with low abundance (**Figure 3.6-1**); the other replicates were all at the higher range of baseline conditions; the change was not statistically significant [Azimuth, 2012b]). Taxa richness increased in 2010 (**Figure 3.6-4**). AEM started monitoring the dewatering effluent and receiving environment in early 2010 as part of the requirements of the Metal Mines Effluent Regulation (MMER).
- There was a more pronounced drop in abundance and taxa richness in 2011 (although neither was statistically significant relative to controls [Azimuth, 2012b]). Mean abundance dropped two-fold (**Figure 3.6-2**) and taxa richness reduced by just over 2 taxa (from about 10.5 in 2010; **Figure 3.6-5**), largely due to a decrease in insects. More detailed analysis conducted as part of the MMER Environmental Effects Monitoring (EEM) study at TPN in 2011 (Azimuth, 2012e) concluded that the observed results were more likely due to differences in physical factors (i.e., coarser substrate) and were not due to dewatering discharge.
- The 2012 results support the previous statement in that total abundance and taxa richness were within the baseline range. The BACI results (**Tables 3.6-3 and 4**) showed no statistically significant changes in total abundance or taxa richness at TPE for 2012, 2011-2012 or 2010-2012.

3.6.2. Baker Lake

3.6.2.1. *General Observations*

The abundance and species composition of benthic invertebrates is strongly affected by a variety of parameters, the most important of which are grain size, water depth and organic content of the sediment. Investigations in the Meadowbank lakes and Baker Lake have attempted to target areas of similar depth and grain size (i.e., dominated by silt/clay with a small [$<5\%$] sand fraction). However, in Baker Lake, sediment grain size has tended to be more variable and less predictable according to depth and grain size at all locations is consistently larger, with a higher sand fraction than observed in Meadowbank lakes. Higher sand content is also typically associated with a lower TOC concentration and a different benthic community. However, this area of Baker Lake appears to be naturally quite sandy, so this represents the ‘typical’ condition and this is what was sampled. For perspective, the reference areas BAP and BES sediment contain about 60 – 70% sand, while the impact areas at BBD (50% sand) and BPJ (10 – 40% sand) have a smaller sand component and relatively more silt-clay.

Similar to Meadowbank study lakes, the Baker Lake benthic community is characterized by relatively low abundance and taxa richness. Benthos abundance was typically around 5,000 organisms/m², which is higher than typical numbers ($\sim 2,000/\text{m}^2$) in Meadowbank (**Figures 3.6-7 and 3.6-8**). Annual variability was sometimes high, as seen for examples at BBD (e.g., from 2008 to 2009). There have also been fairly consistent spatial differences in abundance among areas (e.g., BBD and BPJ have generally had lower abundance than BAP). Taxa richness typically ranged from 6 to 12 in exposure areas and from about 12 to 22 in reference areas (**Figures 3.6-9 and 3.6-10**).

Typical of most Arctic lakes, the benthic invertebrate community has been generally dominated by the aquatic larval stages of insects, especially chironomids (Family Chironomidae), both in terms of abundance and taxa richness (**Figures 3.6-8 and 3.6-10**). The next most abundant group was typically Mollusca (clams) especially, *Cyclocalyx* / *Neopisidium*, genera of the family Sphaeriidae (fingernail clams). Oligochaete worms were also relatively abundant in the lake sediments, possibly because of the sandier grain size sediment; generally, at least one oligochaete taxon was present at most area/year combinations.

3.6.2.2. *Temporal and Spatial Trend Interpretation – General and 2012*

Benthic invertebrates have been collected from Baker Lake annually in August since 2008. Baker Lake was added to the core program to ensure that monitoring was also in place to track activities in that area related primarily to barge traffic and shipping. There

are two near-field impact areas, one targeting the hamlet's barge landing area (BBD) and the other AEM's fuel storage facility (BPJ). The initial (since 2008) reference area (BAP) is several kilometers to the east of the hamlet along the north shore of the lake. A second reference area (BES) was added in 2011 to provide a broader perspective for temporal patterns in benthic community structure.

As discussed in **Sections 1.4 and 1.5**, the identification of potential development-related impacts generally involved visually examining the data for spatial/temporal patterns that matched the timing and location of development activities (see **Section 1.4** for details). This was augmented by conducting statistical analyses of the 2012 data to test for changes relative to baseline/reference conditions using the BACI model (see **Section 2.8.4** for details); this included looking at longer-term trends (i.e., two-year and three-year trends).

Monitoring results to date have been variable across the sites. The initial trends in 2008 and 2009 suggested reductions in benthic community abundance and richness at the NF impact areas, suggesting the possibility of development-related changes to the community. Physical disturbance from prop wash or natural temporal variability are other possible explanations for the observed differences. Given the trends over the last three years, natural variability (both within and among areas) or a combination of natural variability and prop wash seems to be the most plausible explanations. Reasons for this are: (1) no development-related contamination has been identified for water or sediments, (2) barge traffic has been steady over the last three years and (3) data show a reversal of the initial trends in abundance and diversity in 2010 and 2011. Spatial-temporal patterns in the 2012 data were reasonably consistent with the idea that observed trends to date are due to natural variability; the general patterns in abundance and species richness were similar to those seen at the two reference areas (**Figure 3.6-7 and 10**). Furthermore, there were no statistically significant differences in total abundance or total richness when comparing 2012, 2011-2012 and 2010-2012 to previous years using a BACI framework (**Tables 3.6-5 and 6**).

From a taxa composition perspective, the reductions in abundance seen at both reference areas in 2012 (BAP and BES) were largely driven by lower insect abundance, followed by mollusks; a similar pattern in abundance-based compositional changes was seen at impact area BPJ (abundance was not lower in 2012 at BBD) (**Figure 3.6-8 and 9**). Relative to 2011, reductions in taxa richness (at BAP, BBD and BPJ) were also driven by reductions in the number of insect taxa present followed by mollusks (**Figure 3.6-11 and 12**). Invertebrate abundance at all stations in 2012 were at historically low levels for BAP, BES, and BPJ, illustrating the relatively large amount of variability that is likely natural for this relatively dynamic area, influenced by differences in sediment grain size, TOC, inflow/nutrients from the Thelon River and possibly water chemistry associated with the deep slightly brackish volume of water that is sometimes prevalent near shore.

All of these factors may contribute in variable and unknown ways that cannot be quantified.

Overall, it is difficult to attribute any of the observed patterns to development-related activities.

Table 3.6-1. Benthic invertebrate abundance (#/m²) by major taxa group, Meadowbank study lakes and Baker Lake, August 2012.

August 2012.

Area-Replicate	Date	Depth (m)	Total Abundance (#/m ²)				Total
			Oligochaetes	Insects	Molluscs	Other Taxa	
Third Portage Lake							
TPE-1	16-Aug-12	7.7	196	1870	717	65	2848
TPE-2	16-Aug-12	8.4	152	2457	522	65	3196
TPE-3	16-Aug-12	8.2	304	2826	565	22	3717
TPE-4	16-Aug-12	9.5	261	4261	1152	65	5739
TPE-5	16-Aug-12	7.9	65	3326	1239	109	4739
Area Mean			196	2948	839	65	4048
TPN-1	27-Aug-12	7.0	0	761	174	0	935
TPN-2	27-Aug-12	9.0	0	935	174	22	1130
TPN-3	27-Aug-12	9.2	22	1043	174	0	1239
TPN-4	27-Aug-12	8.6	22	1065	304	22	1413
TPN-5	27-Aug-12	8.4	22	783	239	0	1043
Area Mean			13	917	213	9	1152
TPS-1	27-Aug-12	6.9	22	1087	283	22	1413
TPS-2	27-Aug-12	6.7	22	1543	217	0	1783
TPS-3	27-Aug-12	7.3	0	1913	239	0	2152
TPS-4	27-Aug-12	8.1	0	565	391	0	957
TPS-5	27-Aug-12	8.4	413	3783	1000	0	5196
Area Mean			91	1778	426	4	2300
Second Portage Lake							
SP-1	20-Aug-12	8.8	43	522	391	87	1043
SP-2	20-Aug-12	7.5	130	1022	196	0	1348
SP-3	20-Aug-12	7.8	22	522	283	87	913
SP-4	20-Aug-12	8.0	43	957	391	87	1478
SP-5	20-Aug-12	6.5	0	717	391	43	1152
Area Mean			48	748	330	61	1187
Tehek Lake							
TE-1	19-Aug-12	7.2	65	783	174	65	1087
TE-2	19-Aug-12	8.3	43	326	152	65	587
TE-3	19-Aug-12	7.7	65	413	152	65	696
TE-4	19-Aug-12	7.3	43	435	283	43	804
TE-5	19-Aug-12	6.5	22	217	413	0	652
Area Mean			48	435	235	48	765
TEFF-1	18-Aug-12	6.9	0	826	0	0	826
TEFF-2	18-Aug-12	8.2	65	391	348	87	891
TEFF-3	18-Aug-12	6.9	0	957	130	65	1152
TEFF-4	18-Aug-12	7.0	109	609	326	152	1196
TEFF-5	18-Aug-12	7.0	22	283	304	43	652
Area Mean			39	613	222	70	943
Inuggugayualik Lake							
INUG-1	21-Aug-12	6.9	65	370	370	0	804
INUG-2	21-Aug-12	6.8	87	804	413	22	1326
INUG-3	21-Aug-12	7.6	0	435	435	130	1000
INUG-4	21-Aug-12	8.5	43	717	630	43	1435
INUG-5	21-Aug-12	9.2	65	283	304	152	804
Area Mean			52	522	430	70	1074
Wally Lake							
WAL-1	17-Aug-12	8.6	87	6087	522	174	6870
WAL-2	17-Aug-12	7.0	43	587	370	130	1130
WAL-3	17-Aug-12	8.3	0	1783	435	65	2283
WAL-4	17-Aug-12	7.9	22	804	304	0	1130
WAL-5	17-Aug-12	7.2	22	674	413	43	1152
Area Mean			35	1987	409	83	2513

Table 3.6-1. Benthic invertebrate abundance (#/m²) by major taxa group, Meadowbank study lakes and Baker Lake, August 2012.

August 2012.

Area-Replicate	Date	Depth (m)	Total Abundance (#/m ²)				Total
			Oligochaetes	Insects	Molluscs	Other Taxa	
<i>Pipedream Lake</i>							
PDL-1	22-Aug-12	6.5	0	609	174	22	804
PDL-2	22-Aug-12	6.8	0	370	478	22	870
PDL-3	22-Aug-12	6.9	0	674	348	43	1065
PDL-4	22-Aug-12	7.6	43	1239	196	0	1478
PDL-5	22-Aug-12	6.7	0	500	152	22	674
<i>Area Mean</i>			9	678	270	22	978
<i>Baker Lake</i>							
BBD-1	23-Aug-12	8.0	674	2826	761	43	4304
BBD-2	23-Aug-12	9.5	435	2370	1261	43	4109
BBD-3	23-Aug-12	8.2	22	3891	0	0	3913
BBD-4	23-Aug-12	8.2	196	435	0	0	630
BBD-5	23-Aug-12	8.0	304	2652	22	0	2978
<i>Area Mean</i>			326	2435	409	17	3187
BPJ-1	24-Aug-12	7.5	152	652	43	22	870
BPJ-2	24-Aug-12	6.8	0	0	0	0	0
BPJ-3	24-Aug-12	7.8	22	87	0	0	109
BPJ-4	24-Aug-12	7.7	0	261	0	0	261
BPJ-5	24-Aug-12	8.2	22	2761	22	65	2870
<i>Area Mean</i>			39	752	13	17	822
BAP-1	24-Aug-12	7.2	435	1565	370	196	2565
BAP-2	24-Aug-12	7.3	174	283	65	0	522
BAP-3	24-Aug-12	8.9	2152	1935	435	87	4609
BAP-4	24-Aug-12	8.3	2087	1587	261	152	4087
BAP-5	24-Aug-12	8.2	109	652	196	130	1087
<i>Area Mean</i>			991	1204	265	113	2574
BES-1	25-Aug-12	8.0	130	1870	326	217	2543
BES-2	25-Aug-12	7.9	130	1109	239	43	1522
BES-3	25-Aug-12	8.8	22	1478	283	65	1848
BES-4	25-Aug-12	9.2	87	543	43	0	674
BES-5	25-Aug-12	9.1	22	913	87	22	1043
<i>Area Mean</i>			78	1183	196	70	1526

Table 3.6-2. Benthic invertebrate richness (# taxa) by major taxa group, Meadowbank study lakes and Baker Lake, August 2012.

August 2012.

Area-Replicate	Date	Total Richness (# taxa)				Total
		Oligochaetes	Insects	Molluscs	Other Taxa	
Third Portage Lake						
TPE-1	16-Aug-12	2	8	1	1	12
TPE-2	16-Aug-12	2	8	1	1	12
TPE-3	16-Aug-12	2	12	1	1	16
TPE-4	16-Aug-12	1	9	1	1	12
TPE-5	16-Aug-12	2	7	1	1	11
	Area Mean	2	9	1	1	13
TPN-1	27-Aug-12	0	7	1	0	8
TPN-2	27-Aug-12	0	7	1	1	9
TPN-3	27-Aug-12	1	8	1	0	10
TPN-4	27-Aug-12	1	10	1	1	13
TPN-5	27-Aug-12	1	9	1	0	11
	Area Mean	1	8	1	0	10
TPS-1	27-Aug-12	0	7	1	1	9
TPS-2	27-Aug-12	1	10	1	0	12
TPS-3	27-Aug-12	0	11	1	0	12
TPS-4	27-Aug-12	0	6	1	0	7
TPS-5	27-Aug-12	2	8	1	0	11
	Area Mean	1	8	1	0	10
Second Portage Lake						
SP-1	20-Aug-12	1	9	1	1	12
SP-2	20-Aug-12	2	12	1	0	15
SP-3	20-Aug-12	1	8	1	1	11
SP-4	20-Aug-12	1	8	2	1	12
SP-5	20-Aug-12	0	10	2	1	13
	Area Mean	1	9	1	1	13
Tehek Lake						
TE-1	19-Aug-12	1	7	1	1	10
TE-2	19-Aug-12	1	5	1	1	8
TE-3	19-Aug-12	2	7	2	1	12
TE-4	19-Aug-12	1	3	2	1	7
TE-5	19-Aug-12	0	4	1	0	5
	Area Mean	1	5	1	1	8
TEFF-1	18-Aug-12	0	5	0	0	5
TEFF-2	18-Aug-12	1	8	1	1	11
TEFF-3	18-Aug-12	0	6	1	1	8
TEFF-4	18-Aug-12	2	7	1	1	11
TEFF-5	18-Aug-12	1	5	1	1	8
	Area Mean	1	6	1	1	9
Inuggugayualik Lake						
INUG-1	21-Aug-12	2	4	2	0	8
INUG-2	21-Aug-12	2	10	2	1	15
INUG-3	21-Aug-12	0	6	2	1	9
INUG-4	21-Aug-12	1	6	2	2	11
INUG-5	21-Aug-12	1	6	1	3	11
	Area Mean	1	6	2	1	11
Wally Lake						
WAL-1	17-Aug-12	1	11	2	2	16
WAL-2	17-Aug-12	1	6	2	2	11
WAL-3	17-Aug-12	0	10	2	2	14
WAL-4	17-Aug-12	1	5	3	0	9
WAL-5	17-Aug-12	1	5	2	1	9
	Area Mean	1	7	2	1	12

Table 3.6-2. Benthic invertebrate richness (# taxa) by major taxa group, Meadowbank study lakes and Baker Lake, August 2012.

August 2012.

Area-Replicate	Date	Total Richness (# taxa)				Total
		Oligochaetes	Insects	Molluscs	Other Taxa	
<i>Pipedream Lake</i>						
PDL-1	22-Aug-12	0	8	1	1	10
PDL-2	22-Aug-12	0	6	1	1	8
PDL-3	22-Aug-12	0	5	1	1	7
PDL-4	22-Aug-12	1	5	1	0	7
PDL-5	22-Aug-12	0	6	1	1	8
	<i>Area Mean</i>	<i>0</i>	<i>6</i>	<i>1</i>	<i>1</i>	<i>8</i>
<i>Baker Lake</i>						
BBD-1	23-Aug-12	2	10	1	1	14
BBD-2	23-Aug-12	1	12	2	1	16
BBD-3	23-Aug-12	1	8	0	0	9
BBD-4	23-Aug-12	1	2	0	0	3
BBD-5	23-Aug-12	2	6	1	0	9
	<i>Area Mean</i>	<i>1</i>	<i>8</i>	<i>1</i>	<i>0</i>	<i>10</i>
BPJ-1	24-Aug-12	1	8	1	1	11
BPJ-2	24-Aug-12	0	0	0	0	0
BPJ-3	24-Aug-12	1	2	0	0	3
BPJ-4	24-Aug-12	0	6	0	0	6
BPJ-5	24-Aug-12	1	8	1	1	11
	<i>Area Mean</i>	<i>1</i>	<i>5</i>	<i>0</i>	<i>0</i>	<i>6</i>
BAP-1	24-Aug-12	3	12	1	1	17
BAP-2	24-Aug-12	1	7	1	0	9
BAP-3	24-Aug-12	3	12	1	2	18
BAP-4	24-Aug-12	4	11	2	1	18
BAP-5	24-Aug-12	1	7	1	1	10
	<i>Area Mean</i>	<i>2</i>	<i>10</i>	<i>1</i>	<i>1</i>	<i>14</i>
BES-1	25-Aug-12	3	12	1	1	17
BES-2	25-Aug-12	2	13	1	1	17
BES-3	25-Aug-12	1	13	1	1	16
BES-4	25-Aug-12	2	7	1	0	10
BES-5	25-Aug-12	1	12	1	1	15
	<i>Area Mean</i>	<i>2</i>	<i>11</i>	<i>1</i>	<i>1</i>	<i>15</i>

Table 3.6-3. Results of BACI tests for benthic invertebrate abundance at Meadowbank stations.

After Period	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Effect size (%)		
							ES	LCI	UCI
2012	TPN	2	1	0.13	0.47	0.59	14	-100	41951
	TPE	3	1	0.2	0.67	0.61	23	-93	2062
	SP	2	1	0.27	0.25	0.76	31	-94	2993
	TPS	6	1	0.29	0.38	0.76	33	-50	256
	TE	2	1	-0.38	0.23	0.17	-31	-96	1176
	TEFF	3	1	-0.14	0.41	0.38	-13	-85	407
2011-12	TPN	2	2	-0.2	0.5	0.36	-18	-90	592
	TPE	3	2	-0.16	0.51	0.38	-15	-83	334
	SP	2	2	-0.01	0.31	0.49	-1	-74	271
	TPS	5	2	-0.05	0.3	0.43	-5	-56	105
	TE	2	2	-0.32	0.27	0.18	-28	-77	131
	TEFF	2	2	-0.45	0.23	0.09	-36	-76	70
2010-12	TPN	2	3	0.04	0.44	0.54	4	-74	319
	TPE	3	3	-0.29	0.42	0.26	-25	-76	139
	SP	2	3	-0.27	0.41	0.28	-24	-80	184
	TPS	4	3	0.09	0.28	0.62	9	-46	122
	TE	2	3	-0.28	0.26	0.19	-24	-67	76
	TEFF	1	3	-0.12	0.39	0.39	-11	-84	383

Notes:* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the "before" period

n(A) = number of months in the "after" period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = one-tailed test of the null hypothesis of no change or a decrease in mean

ES = estimated effect size (i.e., $100\% * (\exp[\text{Estimate}] - 1)$);

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Shaded cells indicate negative effect sizes (reductions) of 20% or more

Table 3.6-4. Results of BACI tests for benthic invertebrate species richness at Meadowbank stations.

After Period	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Effect size (%)		
							ES	LCI	UCI
2012	TPN	2	1	0.36	0.24	0.81	43	-93	2976
	TPE	3	1	0.24	0.15	0.88	27	-33	140
	SP	2	1	0.54	0.19	0.89	72	-85	1842
	TPS	6	1	0.12	0.19	0.73	13	-30	84
	TE	2	1	0.15	0.24	0.68	16	-94	2269
	TEFF	3	1	-0.18	0.32	0.31	-17	-79	223
2011-12	TPN	2	2	0.24	0.19	0.83	27	-44	189
	TPE	3	2	0.1	0.14	0.73	10	-30	75
	SP	2	2	0.44	0.17	0.94	55	-24	216
	TPS	5	2	0	0.15	0.49	0	-32	46
	TE	2	2	0	0.2	0.5	0	-58	138
	TEFF	2	2	-0.22	0.25	0.23	-20	-72	129
2010-12	TPN	2	3	0.37	0.18	0.93	45	-19	161
	TPE	3	3	0.15	0.12	0.85	16	-18	64
	SP	2	3	0.2	0.36	0.69	22	-61	286
	TPS	4	3	0.07	0.14	0.68	7	-25	52
	TE	2	3	0.03	0.21	0.55	3	-47	100
	TEFF	1	3	0.2	0.23	0.76	22	-55	226

Notes:

* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = one-tailed test of the null hypothesis of no change or a decrease in mean

ES = estimated effect size (i.e., $100\% * (\exp[\text{Estimate}] - 1)$);

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Shaded cells indicate negative effect sizes (reductions) of 20% or more

Table 3.6-5. Results of BACI tests for benthic invertebrate abundance at Baker Lake stations.

After Period	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Effect size (%)		
							ES	LCI	UCI
2012	BBD	4	1	1.61	1.48	0.82	400	-95	55209
	BPJ	4	1	0.31	1.28	0.59	37	-98	7820.4
2011-12	BBD	3	2	1.19	1.2	0.8	229	-93	15102
	BPJ	3	2	0.02	1.24	0.51	2	-98	5118
2010-12	BBD	2	3	0.55	1.28	0.65	73	-97	10100
	BPJ	2	3	-0.89	1.12	0.24	-59	-99	1372

Notes:

* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = one-tailed test of the null hypothesis of no change or a decrease in mean

ES = estimated effect size (i.e., $100\% * (\exp[\text{Estimate}] - 1)$);

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Shaded cells indicate negative effect sizes (reductions) of 20% or more

Table 3.6-6. Results of BACI tests for benthic invertebrate species richness at Baker Lake stations.

After Period	Test Station	n(B)	n(A)	Estimate	SE	P-value*	Effect size (%)		
							ES	LCI	UCI
2012	BBD	4	1	0.28	0.47	0.70	32	-71	497
	BPJ	4	1	0.11	0.55	0.57	11	-81	536
2011-12	BBD	3	2	0.34	0.38	0.78	41	-58	371
	BPJ	3	2	0.06	0.44	0.55	6	-74	328
2010-12	BBD	2	3	0.29	0.36	0.76	34	-58	322
	BPJ	2	3	-0.33	0.4	0.24	-28	-80	157

Notes:

* **Bolded value** is significant result statistically

Test station = station compared to control (INUG)

n(B) = number of months in the “before” period

n(A) = number of months in the “after” period (i.e., in 2012)

Estimate = BACI model estimate of the 2012 change in mean for log-transformed data

SE = standard error of the estimate

P-value = one-tailed test of the null hypothesis of no change or a decrease in mean

ES = estimated effect size (i.e., $100\% \times (\exp[\text{Estimate}] - 1)$);

LCI = lower 95% confidence interval

UCI = upper 95% confidence interval

Shaded cells indicate negative effect sizes (reductions) of 20% or more

Figure 3.6-1. Benthic invertebrate total abundance ($\#/m^2$) from Meadowbank study lakes since 2006.

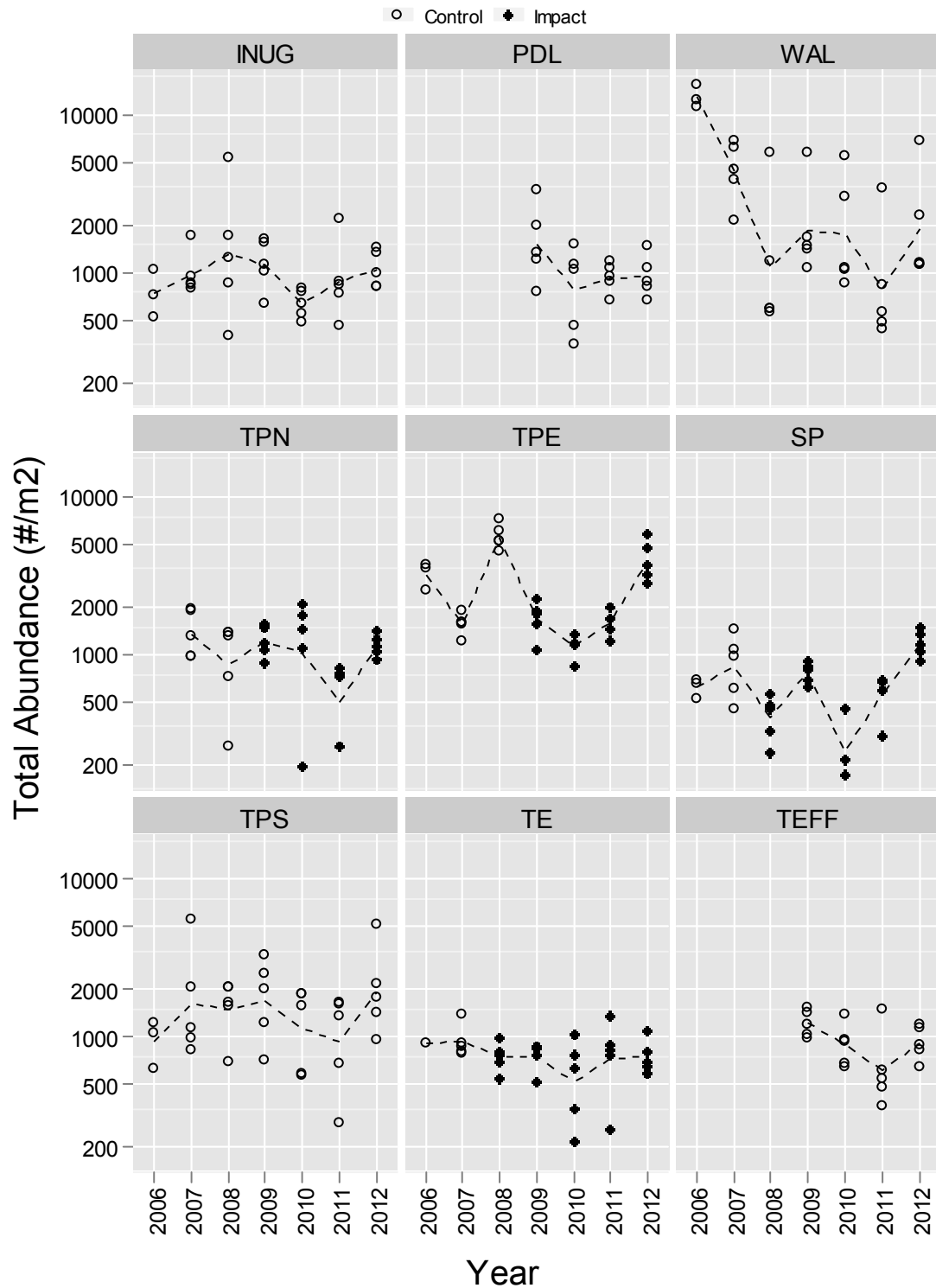


Figure 3.6-2. Benthic invertebrate abundance (#/m²) by major taxa group from Meadowbank study lakes since 2006.

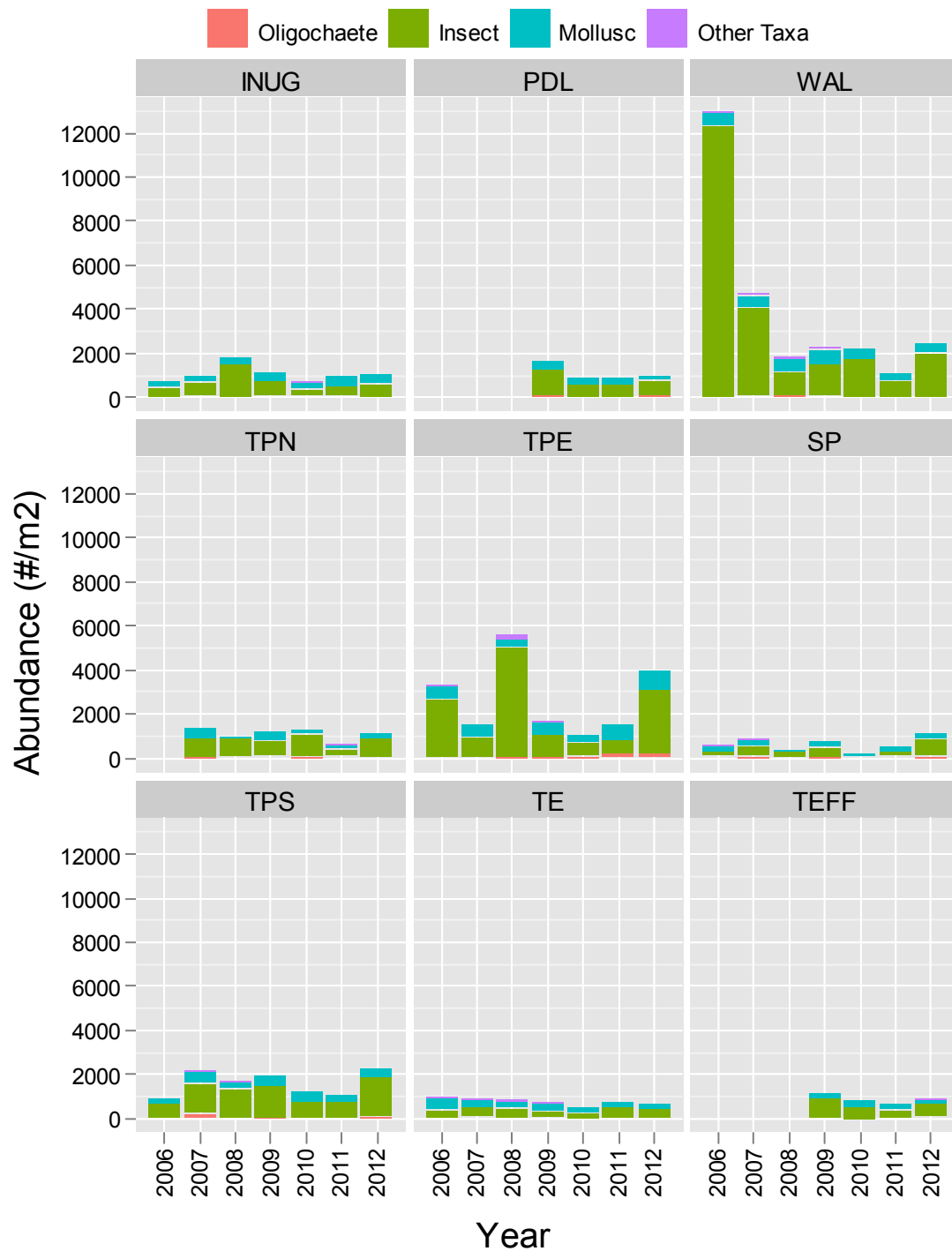


Figure 3.6-3. Benthic invertebrate relative abundance by major taxa group from Meadowbank study lakes since 2006.

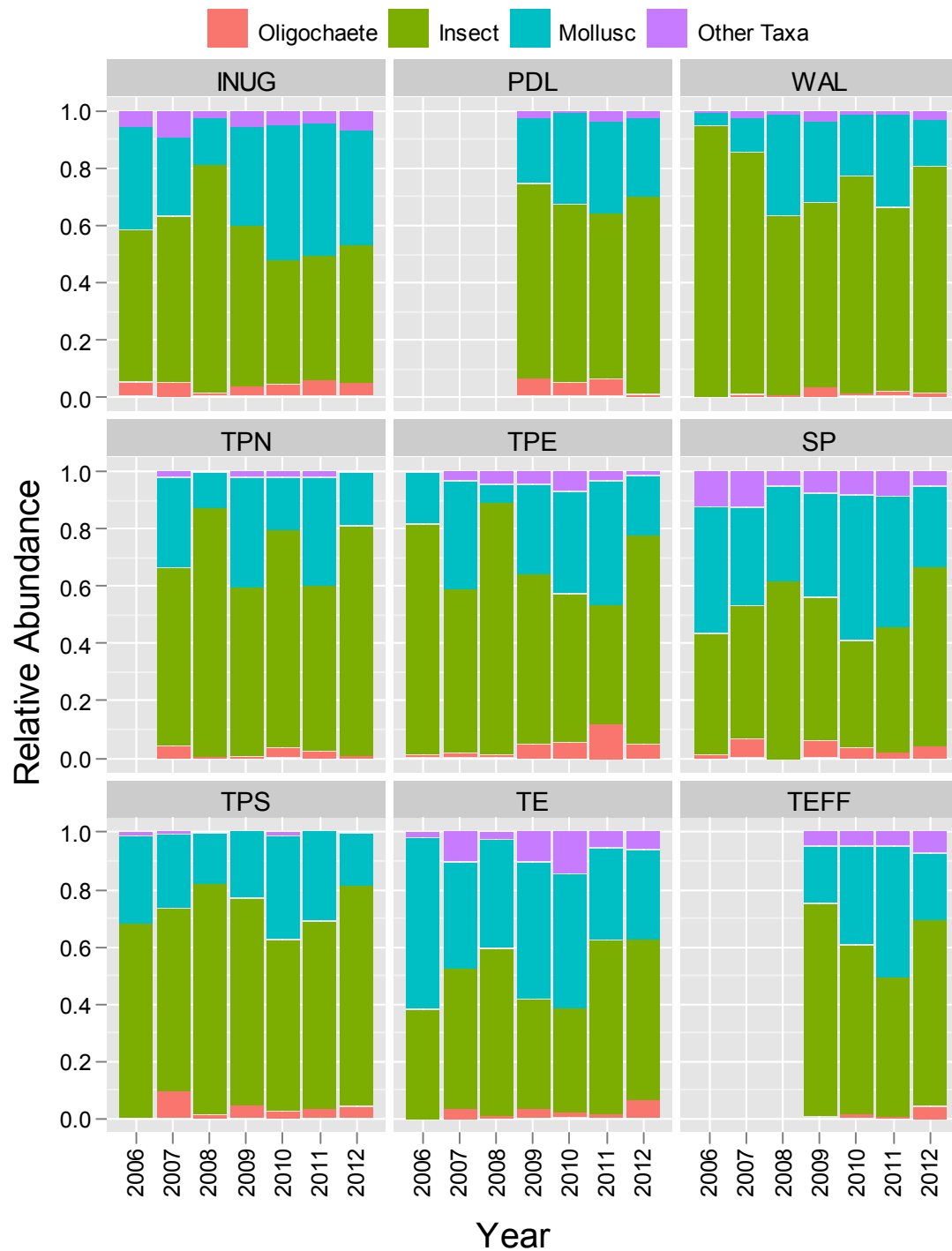


Figure 3.6-4. Benthic invertebrate total richness (# taxa) from Meadowbank study lakes since 2006.

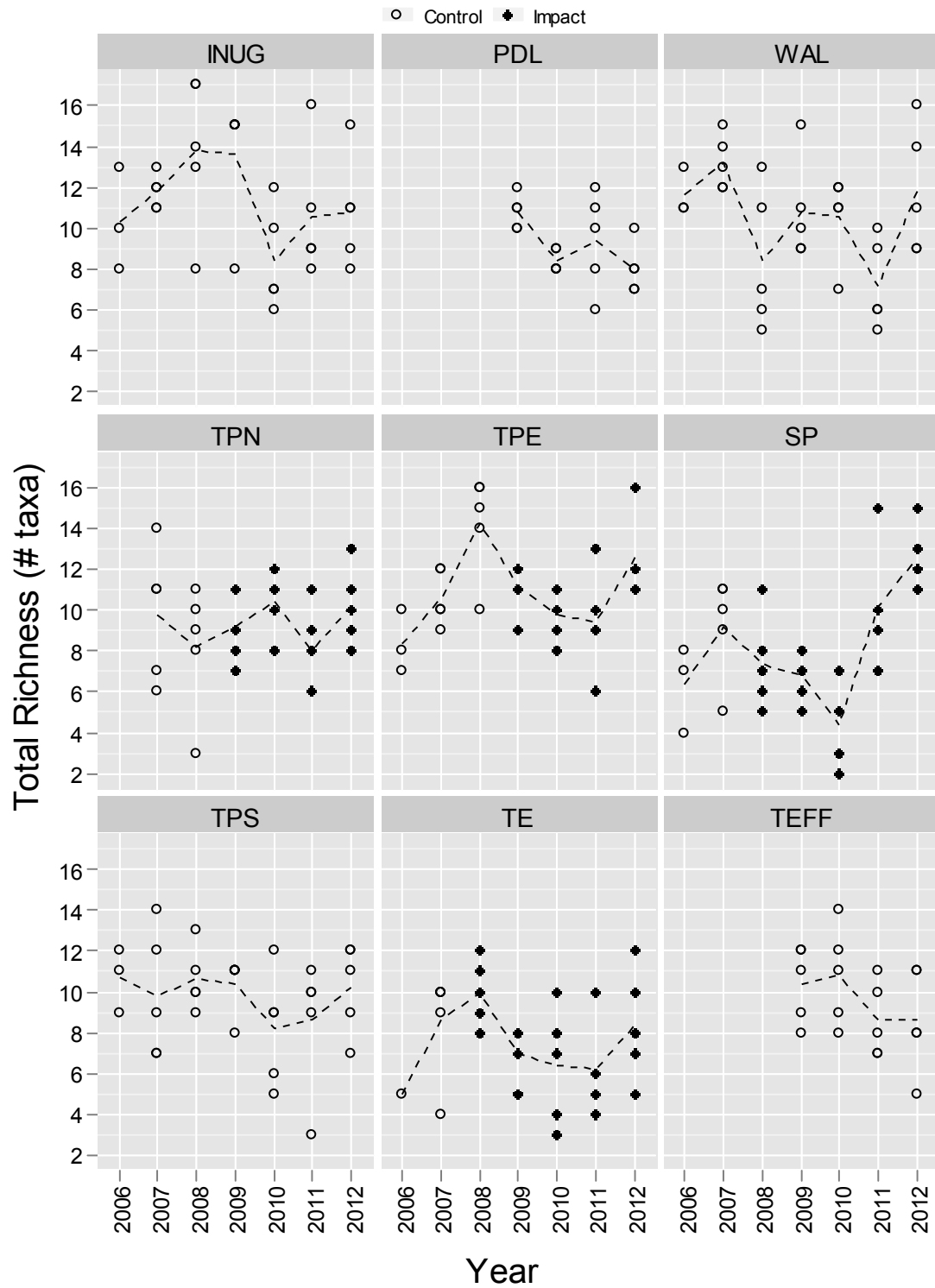


Figure 3.6-5. Benthic invertebrate richness (# taxa) by major taxa group from Meadowbank study lakes since 2006.

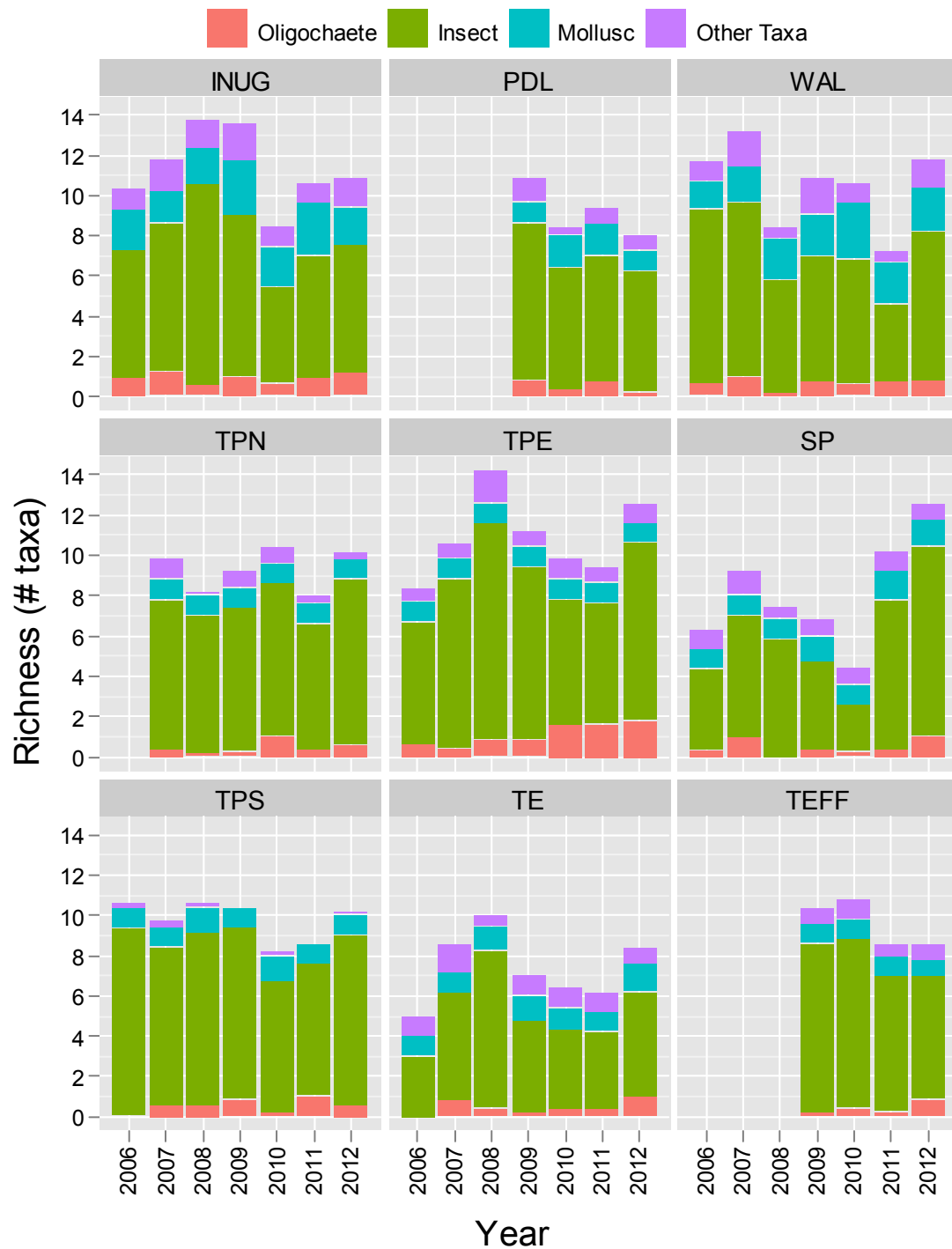


Figure 3.6-6. Benthic invertebrate relative richness by major taxa group from Meadowbank study lakes since 2006.

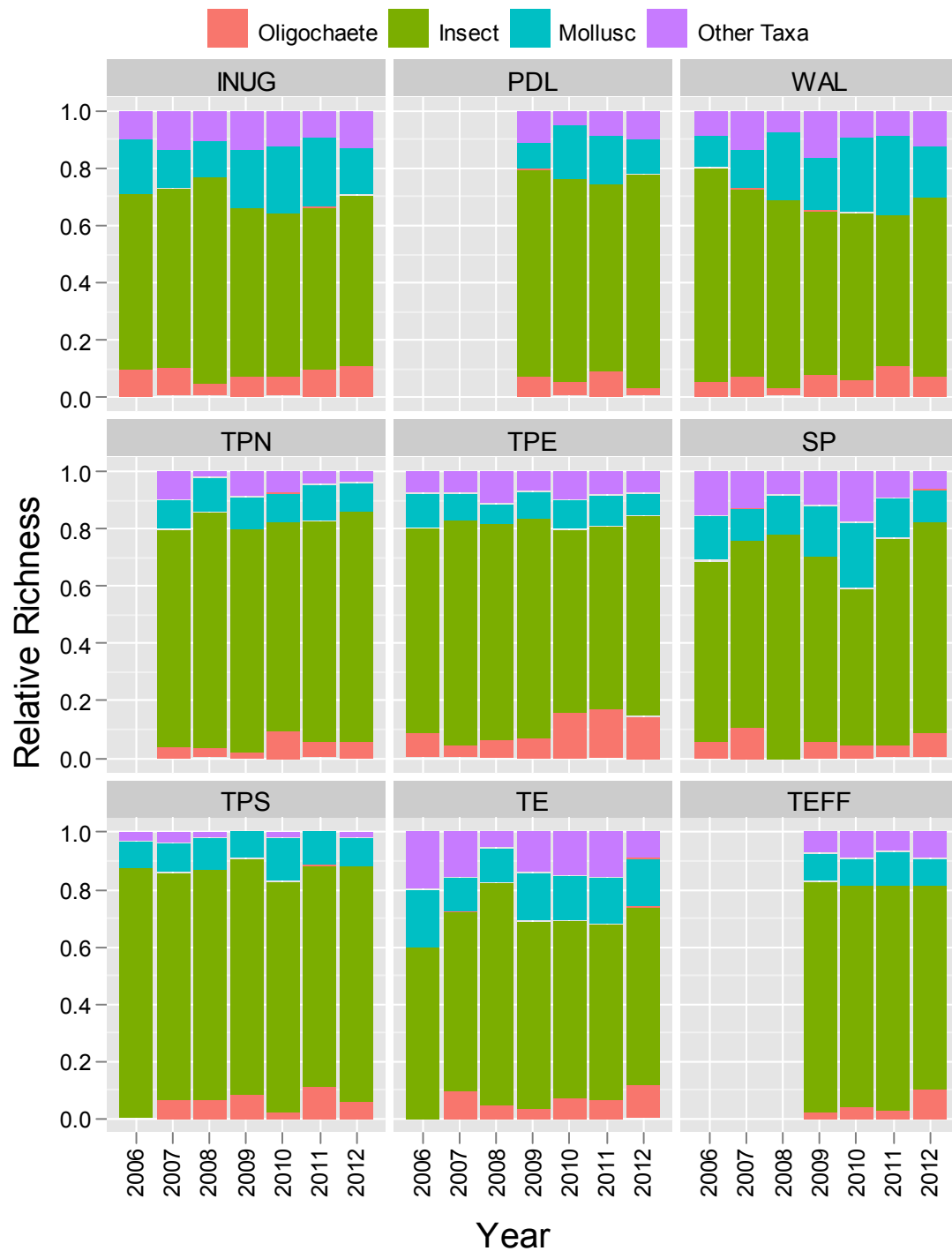
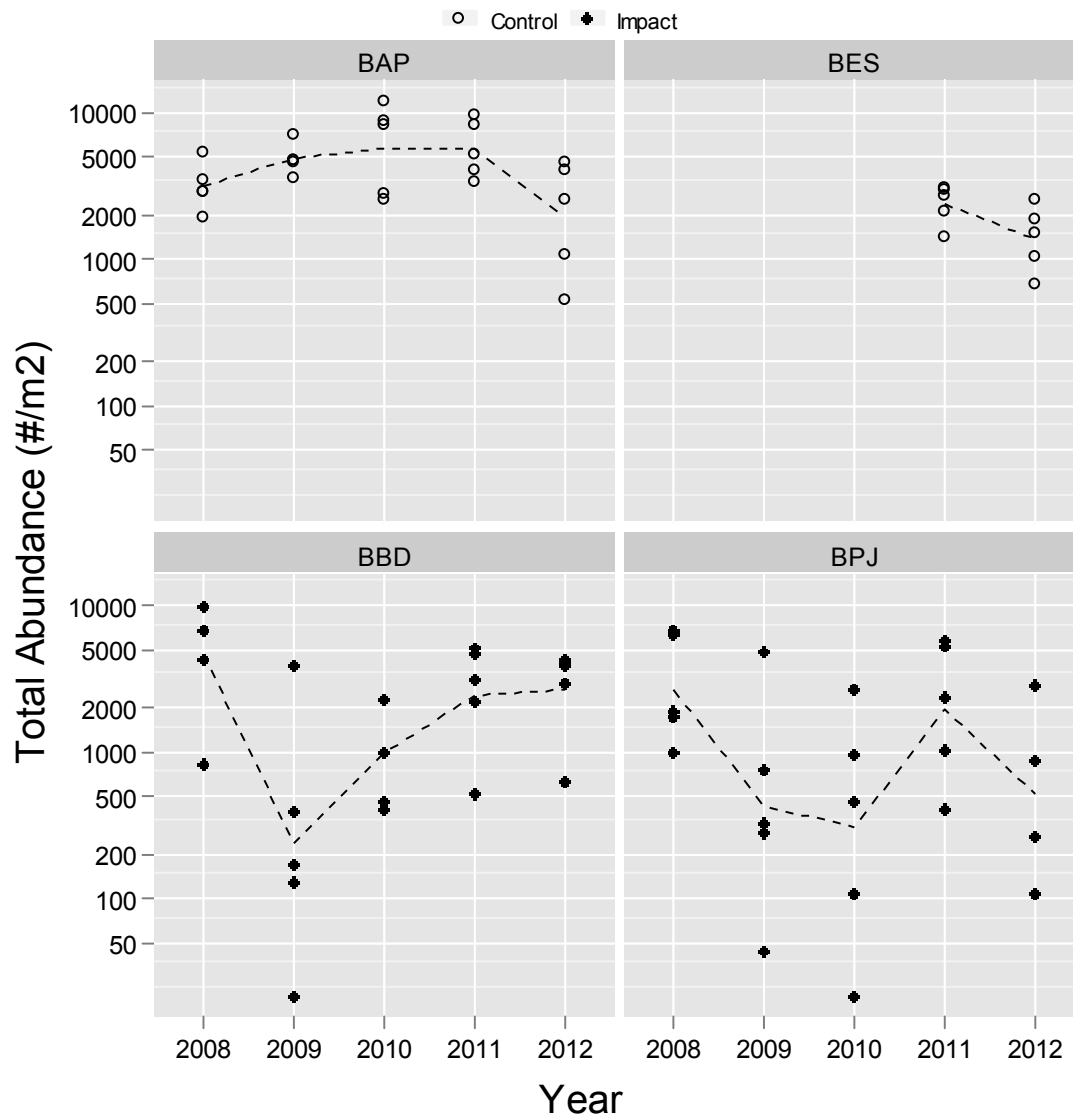


Figure 3.6-7. Benthic invertebrate total abundance ($\#/m^2$) from Baker Lake since 2008.



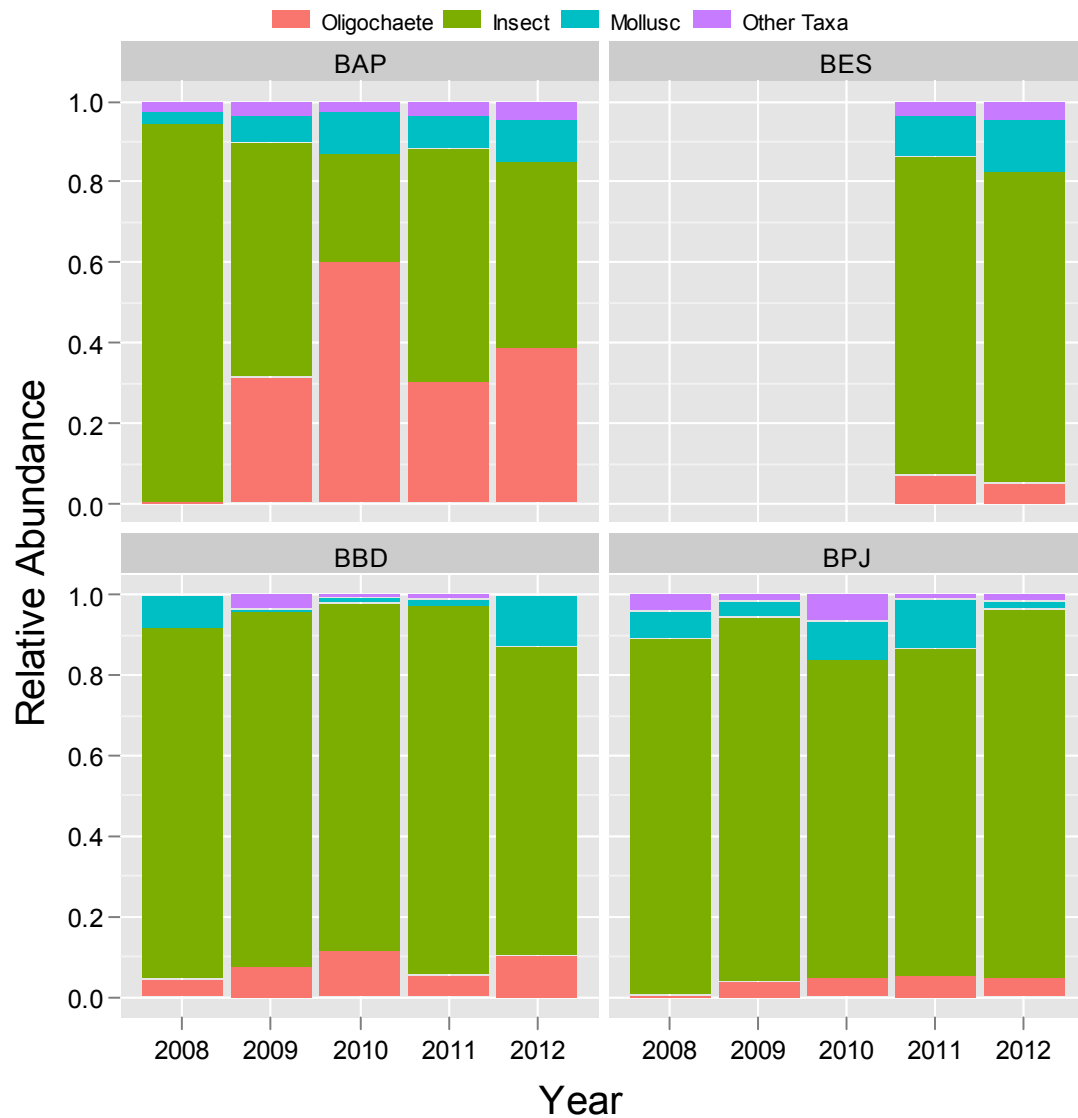
*One BPJ sample out of five was removed from analysis in 2012 due to the absence of benthic invertebrates in the sample. Results for this sample can be viewed in **Tables 3.6-1 and 3.6-2**.

Figure 3.6-8. Benthic invertebrate abundance (#/m²) by major taxa group from Baker Lake since 2008.



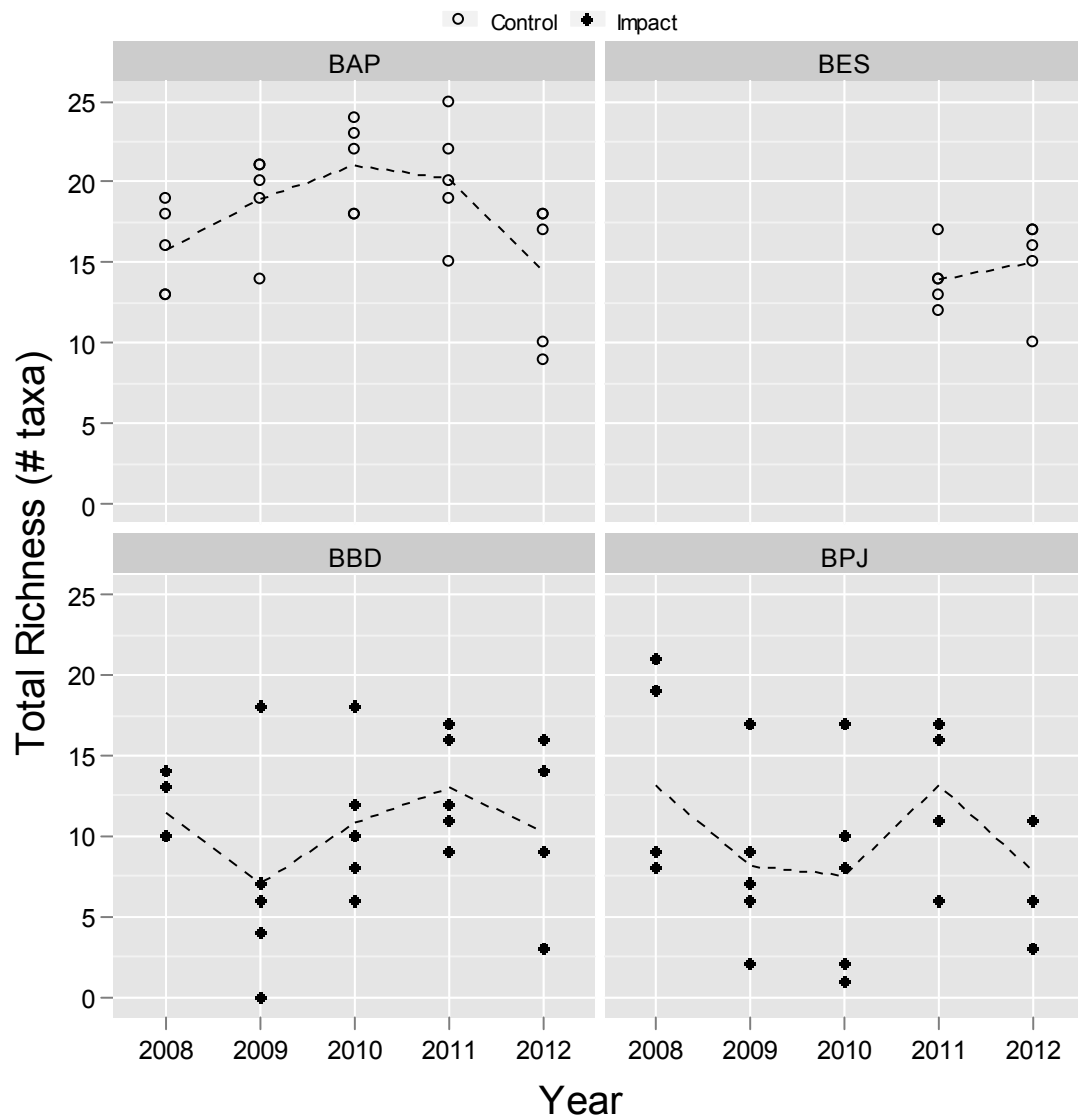
*One BPJ sample out of five was removed from analysis in 2012 due to the absence of benthic invertebrates in the sample. Results for this sample can be viewed in **Tables 3.6-1 and 3.6-2**.

Figure 3.6-9. Benthic Invertebrate relative richness by major taxa group from Baker Lake since 2008.



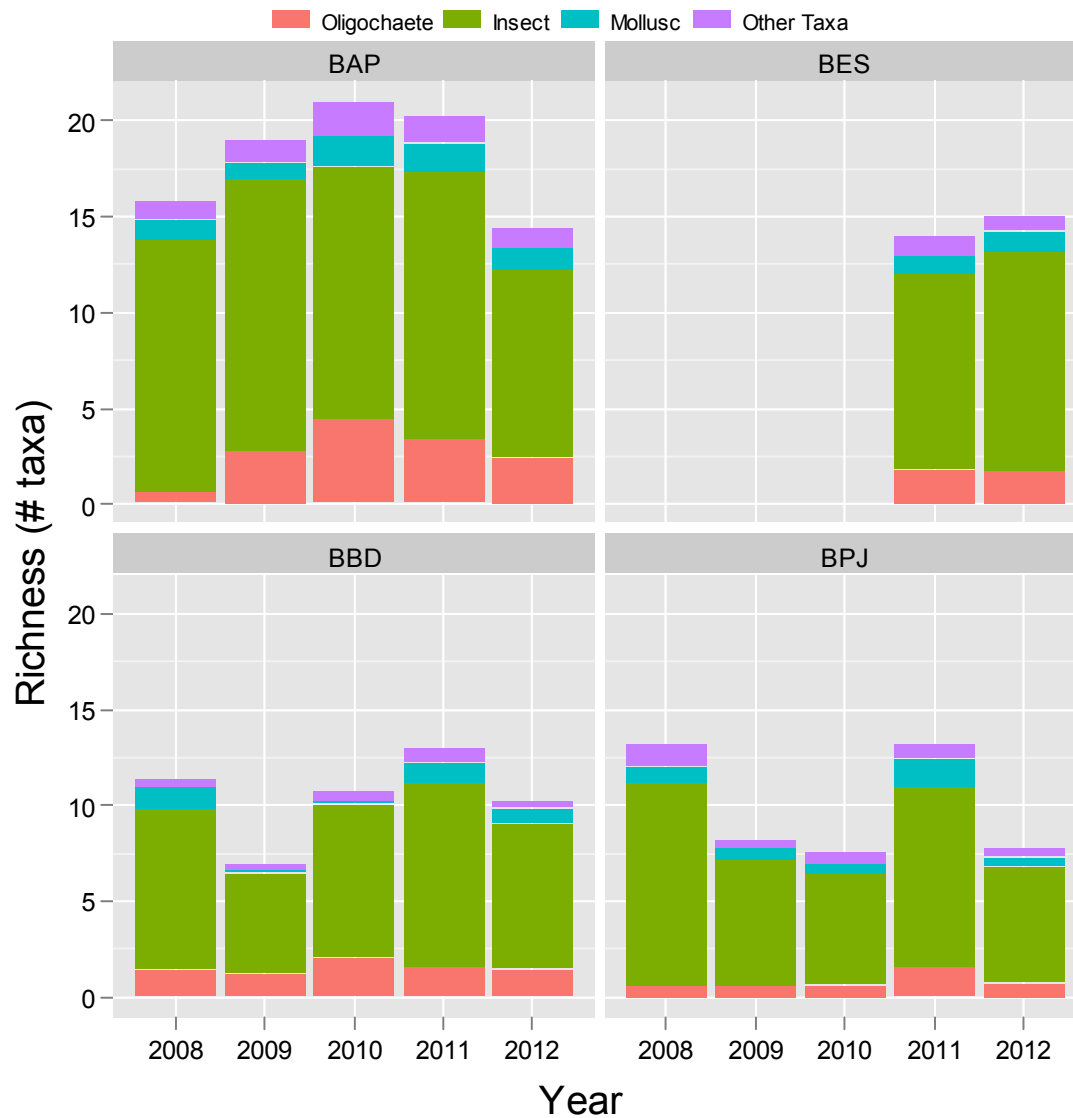
*One BPJ sample out of five was removed from analysis in 2012 due to the absence of benthic invertebrates in the sample. Results for this sample can be viewed in **Tables 3.6-1 and 3.6-2**.

Figure 3.6-10. Benthic invertebrate total richness (# taxa) from Baker Lake since 2008.



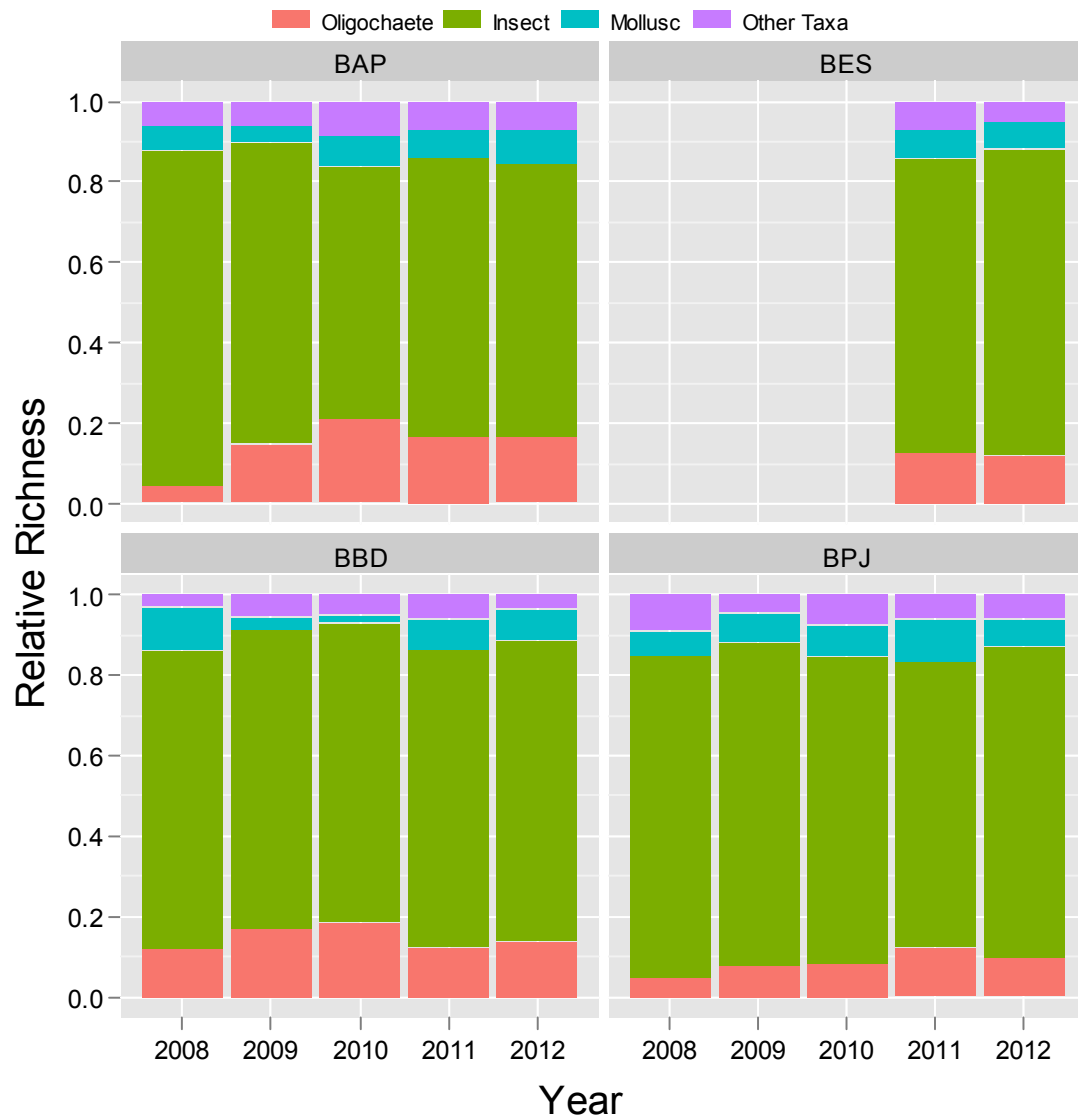
*One BPJ sample out of five was removed from analysis in 2012 due to the absence of benthic invertebrates in the sample. Results for this sample can be viewed in **Tables 3.6-1 and 3.6-2**.

Figure 3.6-11. Benthic invertebrate richness (# taxa) by major taxa group from Baker Lake since 2008.



*One BPJ sample out of five was removed from analysis in 2012 due to the absence of benthic invertebrates in the sample. Results for this sample can be viewed in **Tables 3.6-1 and 3.6-2**.

Figure 3.6-12. Benthic invertebrate relative richness by major taxa group from Baker Lake since 2008.



*One BPJ sample out of five was removed from analysis in 2012 due to the absence of benthic invertebrates in the sample. Results for this sample can be viewed in **Tables 3.6-1 and 3.6-2**.

4. SUMMARY AND IMPLICATIONS FOR MANAGEMENT

The approach for CREMP data interpretation changed substantially in 2011 to focus on identifying temporal and spatial trends in the data related to mining activity. This report carries that perspective further in 2012, with the introduction of quantitative decision criteria (i.e., early warning “triggers” and action “thresholds”) to facilitate objective decision-making.

4.1. Meadowbank Study Lakes

Since 2008, major mine-related activities with the potential to directly affect aquatic receiving environments included dike construction (East Dike and Bay-Goose Dike), dewatering (impoundments created by both dikes) and effluent discharge, which all have clear temporal/spatial signatures (e.g., changes in Second Portage Lake in August 2008 associated with the onset of East Dike construction). Other general mining-related activities (e.g., most on-site activities like rock crushing, blasting, ore and waste hauling, etc. that can result in dust emissions) had more indirect and less obvious temporal/spatial patterns.

While this trend assessment approach highlights all changes that have occurred since mine construction started in 2008, it is important to note that numerous and more detailed investigations have already been implemented to address potential adverse effects related to the two most significant mining-related activities: dike construction (i.e., the four-year TSS EAS [Azimuth, 2012b]) and dewatering (i.e., MMER Environmental Effects Monitoring [implemented in 2011; Azimuth, 2012e]). The only mine-related activities undertaken in 2012 with point-source discharges to the receiving environment were effluent discharges to TPN. Consequently, the ultimate focus of this section is to identify any outstanding issues that may have arisen as a result of the 2012 investigation that warrant either: (a) continued trend monitoring in 2012 (i.e., to follow low magnitude or weak trends), or (b) being followed-up with more detailed quantitative assessment in 2012 (e.g., a targeted study to address a potential concern with a potential intervention or change, if warranted). An overview of key results is provided in **Table 4.2-1**.

4.1.1. Limnology

Monthly/annual profiles at control areas (INUG, PDL, WAL) had similar patterns to those seen at impact areas (TPN, SP, TPE), with no evidence of temperature or oxygen differences among lakes that were related to mining activities. There were consistent inter-lake differences in 2012, as in previous years as water temperatures in large, deep basin lakes (TPS, TPN, TEFF) were 2 – 3°C colder than shallow basin lakes (WAL, SP, INUG). Overall, vertical temperature and oxygen profiles among near-field, mid-field and reference lakes in 2012 were consistent with what has been observed in the past. SP



and to a lesser extent TPE have become smaller in size and volume and on average, may experience slightly greater maximum summer temperatures in future years. Otherwise, no changes have been observed and none are expected.

From a management perspective, apart from continued monitoring of surface water temperatures (as already done in the CREMP) at SP and TPE, no further follow-up actions are required.

4.1.2. Water Chemistry

Construction of the East Dike in SP (2008) and Bay-Goose Dike in TPE (2009 – 2010) introduced large amounts of sediment into the water column of these lake basins and downstream into TE and were the subject of targeted investigations (see Azimuth EAS reports; Azimuth, 2009b, 2010c, 2011a, and 2012b) to assess the potential ecological consequences of these sedimentation events. Although TSS, some nutrients (nitrate, phosphorus) and metals (Al, Cr, Cu, Fe, Mn, Ni, Ti) were significantly elevated above background (with some exceeding CCME guidelines) during the event, baseline conditions were observed in the spring immediately following the activity. No lingering effects of dike construction related changes to water quality at impact areas have been observed since the winter following the activity (i.e., 2009 in SP and 2011 in TPE).

Effluent discharges to TPN were the only mine-related activities resulting in point-source discharges to the receiving environment in 2012. Total suspended solids and metals concentrations in discharge waters were low (AEM, 2013). Combined with low discharge volume and loading, receiving environment at TPN (and TPS and TPE) in 2012 continued to demonstrate high water quality. TSS concentrations were all < 1 mg/L and metals were generally below their triggers and threshold values. The 2011 EEM study targeting the dewatering discharge into TPN found no effluent-related effects to benthic invertebrates or fish (Azimuth, 2012e).

There were some apparent mine-related changes to discrete parameters identified in the 2012 data at one or more near-field (NF) areas. Conductivity (SP only), sulphate (TPN, TPS, TPE, TE) and TDS (SP) were all above their respective trigger values, with statistically significant changes at one or more NF areas relative to baseline/reference conditions. TOC and strontium were also above their trigger values with statistically significant changes at one of more areas relative to baseline/reference conditions, however both were likely due to uncertain trigger values (i.e., that should be revised for 2013) and not mine influence. It is important to note that none of these trigger values were derived from or exceeded effects-based thresholds (e.g., CCME water quality criteria) and none of the 2012 concentrations or measures would suggest any risk to aquatic life in any of the project lakes.

Overall, while there are several parameters that require continued trend monitoring in 2012, but there were no changes apparent in 2012 that warrant follow-up management actions.

4.1.3. Sediment and Coring Chemistry

CREMP sediment chemistry monitoring includes both grab and core samples. Grab samples, while providing sediment chemistry context for historical deposition patterns, are not ideal for assessing possible subtle changes over time. Consequently, the trend assessment relied primarily on the complete sets of sediment core samples collected in 2012 and in 2008 (i.e., baseline prior to the onset of East Dike construction).

Statistical analyses of the 2012 sediment core data relative to the 2008 baseline data identified zinc as the only metal at SP with statistically-significant temporal changes exceeding the site-specific triggers. There is some uncertainty as to whether the results are due to sedimentation that occurred during dike construction or to spatial heterogeneity (i.e., as similar “elevations” were seen for other metal/area combinations outside the influence of mining).

Notwithstanding, concerns regarding potential metals toxicity in SP related to dike construction were directly tested in 2010 using sediment toxicity tests and sequential extraction analysis (Azimuth, 2011a). Results of amphipod (*Hyaella azteca*) and midge (*Chironomus tentans*) survival and growth endpoints in bioassays showed that surface sediments collected from within or adjacent to the East Dike construction zone (i.e., the zone delineated by the turbidity barriers) were not toxic relative to local reference sediment. The sequential extraction results showed that most of the metals in the sediment are associated with the residual matrix fraction, which is not considered bioavailable. Consequently, the 2010 EAS concluded that metals toxicity is not likely an issue in Second Portage Lake following East Dike construction (Azimuth, 2011a).

Thus, there are no follow-up actions related to sediment at this time. Future sediment core sampling is planned to match the timing of MMER EEM field studies, with the next one in 2014 then, as required, every three years thereafter.

4.1.4. Phytoplankton

There are considerable challenges when interpreting long-term phytoplankton data. Natural variability of the phytoplankton community is inherently high because of intra and inter-annual differences in temperature, productivity, vertical mixing, time of year of sampling, ‘snap-shot’ perspective on community structure and other factors. Variability is sufficiently high that only gross basin-level effects might be detected, following large changes in water chemistry that would be detected more quickly and easily. The most likely long-term change would be an increase in biomass of phytoplankton, due to nutrient enrichment in these very nutrient poor lakes. In the short-term, documented



reductions in phytoplankton biomass and a lesser extent cell density occurred in SP and TE were evident and attributable to 2008 East Dike construction and in TPE and to 2009/10 Bay-Goose dike construction as a result of increased turbidity and reduced light penetration. In 2012, results showed statistically significant increases in total phytoplankton biomass at NF stations TPN and TPE and taxa richness at TPN, relative to baseline/reference conditions. It is unclear at this time whether this increased productivity is mine-related or due to natural variability (e.g., lake effect).

Trends in phytoplankton community metrics should be watched closely in 2013 to see if this pattern continues.

4.1.5. Benthic Invertebrates

As described above, detailed targeted studies have already been implemented to assess potential effects to the benthic invertebrate community from dike construction (EAS studies; summarized in Azimuth, 2012b) and dewatering (MMER EEM study; Azimuth, 2012c) activities. Here is an overview of the status of the benthic community for each near-field impact area:

- *SP (2008 – 2012)* – While the initial 2008 reduction in benthic community abundance may have been related to the physical effects of the sedimentation event that occurred during East Dike construction, the pattern of results since then (i.e., variability that does not correspond to any known factors) does not appear to be consistent with a recovery or a prolonged impairment of the community. It is possible that the “signal” of the impact was obscured by the “noise” of natural variability; it is also possible that the entire pattern was due to natural variability (i.e., that the initial drop in abundance at SP was natural). Notwithstanding, the 2012 results for SP suggest that the benthic invertebrate community is healthy relative to baseline/reference conditions.
- *TPE (2009 – 2012)* – Benthic community metrics for this basin have been quite variable over the years. The apparent reduction observed in 2009 was pronounced because the previous year, 2008 (the final baseline year for TPE) had the highest abundance and diversity measured to date. While these metrics continued to drop in 2010 and 2011, this pattern appeared to be regional (e.g., possibly related to climate or some other factor), as reference area lakes showed similar patterns. In 2012, there was a large (but not statistically significant) increase in abundance and diversity in TPE (i.e., second highest year since 2006), again suggesting a healthy benthic invertebrate community.
- *TPN (2009 – 2012)* – Benthic community metrics have been fairly consistent at TPN over the years, despite point source discharges (dewatering [until June 2012] and effluent [starting July 2012]). The main exception was 2011, when total

abundance and total richness were lower than in previous years. However, the MMER EEM study conducted that year (Azimuth, 2012e) found that the changes were most likely related to natural causes rather than to exposure.

Based on the 2012 data, there are currently no evidence for changes in benthic community abundance or structure that appears related to mining activities. From a management perspective, no specific follow-up action is required. .

4.2. Baker Lake

Apart from local infrastructure (e.g., fuel storage and lay-down area), mine-related activities in Baker Lake are primarily limited to barge traffic, which has increased substantially (but is now stable) over the years and is limited to the open water season (i.e., as timing relies on clear passage through Hudson Bay and Chesterfield Inlet to allow barges onto Baker Lake). One 200-L spill occurred in 2012 during fuel transfer, but no organic parameters were detected in Baker Lake sediment samples collected 2 weeks following the spill. No other spills of fuels, hydrocarbons or any other materials have occurred in the vicinity of the barge dock area (BBD) and jetty (BPJ) as a result of shipping of materials to the mine or bulk fuel storage facility. Thus, potential impacts to receiving environment would likely be restricted to localized physical disturbance of the bottom as a result of prop wash. In addition, given the size of Baker Lake and the lack of large point source discharges associated with local mining-related infrastructure, it would be unlikely to see changes to limnological profiles (temperature, oxygen, pH, conductivity) or other water chemistry parameters.

In 2011 an additional reference area for sediment chemistry and benthic invertebrate community was added at BES (about 4 km east of BPJ).

A targeted limnological study was conducted in 2012 to learn more about the competing influences of Thelon River (low dissolved ions) and deep Baker Lake (slightly brackish) water. Deep limnological profiling conducted along a transect parallel to shore improved our understanding and interpretation of the nature of local limnology and its potential effects to temperature, salinity and certain chemical parameters (salts, nutrients, TDS) in near-shore waters at different time periods.

Overall, there were no apparent mining-related changes to the aquatic receiving environment of Baker Lake in 2012, so no management actions are required for 2013.

Table 4.2-1. Summary of key findings from the 2012 CREMP, Meadowbank Mine.

Variable Type & Variable	Magnitude ¹	Spatial Scale ²	Causation ³	Reversibility ⁴	Uncertainty ⁵	Comments
Exposure - Limnology						
Oxygen	○	n/a	n/a	n/a	?	
Temperature	○	n/a	n/a	n/a	?	
Conductivity	○	n/a	n/a	n/a	?	
Exposure - Water Chemistry						
Conventionals	●	Large	High	High	?	Sulphate (TPN,TPS,TPE,TE), conductivity (SP) and TDS (SP); concentrations suggest low potential for adverse effects.
Nutrients	○	n/a	n/a	n/a	?	TOC "elevated" but threshold needs revision
Total Metals	○	n/a	n/a	n/a	?	Strontium "elevated" but threshold needs
Dissolved Metals	○	n/a	n/a	n/a	?	Strontium "elevated" but threshold needs
Total Suspended Solids	○	n/a	n/a	n/a	?	
Exposure - Sediment Chemistry						
Physical	○	n/a	n/a	n/a	?	
Total Metals	●	Moderate	Moderate	Moderate	??	Elevated zinc at SP; not bioavailable & not toxic.
Organics	○	n/a	n/a	n/a	?	
Effects - Phytoplankton						
Chlorophyll-a	○	n/a	n/a	n/a	?	
Total Biomass	●	Large	Low-Mod	High	???	>50% higher at TPN/TPE (possible lake effect)
Species Richness	●	Mod-Large	Low-Mod	High	???	>20% higher at TPN (possible lake effect)
Effects - Benthic Invertebrates						
Total Abundance	○	n/a	n/a	n/a	?	
Total Richness	○	n/a	n/a	n/a	?	

NOTES:

¹ Magnitude Ratings (narrative in brackets used in the absence of specific triggers/thresholds):

- no exceedances of triggers or thresholds (or no apparent changes from baseline of concern)
- early warning trigger exceeded (or change from baseline warranting concern)
- threshold exceeded (or change from baseline exceeding magnitude of concern)

² Spatial Scale Ratings:

- n/a – no magnitude of effect, therefore not evaluated
- Small – localized scale
- Moderate – sub-basin to basin scale
- Large – basin to whole lake scale

³ Causation Ratings:

- n/a – no magnitude of effect, therefore not evaluated
- Low – no evidence for a mine-related source
- Moderate – some likelihood of a mine-related source
- High – the source of the problem is very likely to be mine-related

⁴ Reversibility Ratings:

- n/a – no magnitude of effect, therefore not evaluated
- Low – largely irreversible (e.g., decades +)
- Moderate – slowly reversible (e.g., years to decades)
- High – rapidly reversible (e.g., months to years)

⁵ Uncertainty Ratings:

- ? – low uncertainty
- ?? – moderate uncertainty
- ??? – high uncertainty

5. MONITORING COMPONENTS FOR 2013

5.1. Overview

As discussed in **Section 1**, the rationale, framework, strategy, methods, and scope of receiving environment (now referred to as *Core Receiving Environment Monitoring Program* or “CREMP”) monitoring for the Meadowbank Mine were documented in the 2005 AEMP (AEMP, 2005). The CREMP has been implemented every year since 2006, with some modifications (e.g., lake sampling area additions, parameter deletions/additions, sampling frequency and intensity) to improve the program or to comply with regulatory requirements. In 2011, an update report was submitted to document changes to the program made since the 2005 AEMP and present details on sampling and analysis (Azimuth, 2010g). AEM commissioned Azimuth to begin a thorough review of the historical data to ensure that the CREMP design would be able to detect potential mine-related impacts and would address most the requirements of the NWB A License. The 2012 CREMP design report (Azimuth 2012d) details the latest CREMP monitoring program which ensures adequate detection of mine-related impacts (in a timely manner) as part of AEM’s integrated adaptive management framework. The current program for 2013 is summarized in **Table 5.1-1**.

Table 5.1-1. Monitoring components planned for 2013 CREMP*.

Project Lake	Area ID	Through-Ice						Open-Water			Through-Ice		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Third Portage	TPE	Limno ¹	Limno ¹	Limno ¹	Limno Water Phyto	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno ¹
	TPN	Limno ¹	Limno ¹	Limno ¹	Limno Water Phyto	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno ¹
	TPS	Limno ¹	Limno ¹	Limno ¹			Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe		Limno ¹
Second Portage	SP	Limno ¹	Limno ¹	Limno ¹	Limno Water Phyto	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno ¹
Tehek	TE				Limno Water Phyto	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe	Limno Water Phyto	
Tehek	TEFF						Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe		
Inuggayualik	INUG				Limno Water Phyto	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe	Limno Water Phyto	
Wally	WAL				Limno Water Phyto	Limno Water Phyto	Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe	Limno Water Phyto	
Pipedream	PDL						Ice not safe	Limno Water Phyto	Limno Water Phyto Sed Benthos	Limno Water Phyto	Ice not safe		



Project Lake	Area ID	Through-Ice						Open-Water			Through-Ice		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Baker Lake	BBD						Ice not safe	Limno ² Water Phyto	Limno ² Water Phyto Sed Benthos	Limno ² Water Phyto	Ice not safe		
	BPJ						Ice not safe	Limno ² Water Phyto	Limno ² Water Phyto Sed Benthos	Limno ² Water Phyto	Ice not safe		
	BAP						Ice not safe	Limno ² Water Phyto	Limno ² Water Phyto Sed Benthos	Limno ² Water Phyto	Ice not safe		
	BES						Ice not safe	Limno ²	Limno ² Sed Benthos	Limno ²	Ice not safe		

Notes:

Limno: 2 depth profiles for 6 (or 3) events per year.

Limno¹: 1 depth profile for 4 events per year; water chemistry will also be collected if profiling shows unusual results.

Limno²: 2 depth profiles for 3 events per year; also including deeper profiles to investigate potential marine influence.

Water: 2 replicate samples from 3m depth; same locations as limno.

Phyto: 2 replicate samples from 3m depth; same locations as limno.

Sed: 5 replicates for physical; 1 composite for organics

Benthos: 5 replicate samples (2 grab composite/sample); same locations as sediment.

* Zooplankton sampling has been dropped for 2013.



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APPENDICES



APPENDIX A

STANDARD OPERATING PROCEDURE (SOP) FOR CREMP WATER & PHYTOPLANKTON SAMPLING



Standard Operating Procedure Meadowbank Project Lakes & Baker Lake CREMP Water & Phytoplankton Sampling <u>2012</u>

GENERAL:

Project Coordinator:

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In case of **emergency**, contact Gary Mann (Azimuth telephone number 604-730-1220 or cell phone 604-908-0601).

LOCATION AND TIMING FOR FIELD ACTIVITIES:

Twelve (12) sampling stations have been chosen for water quality monitoring in the Meadowbank project lakes and Baker Lake:

- Third Portage Lake – North Basin (TPN)
- Third Portage Lake – East Basin (TPE)
- Second Portage Lake (SP)
- Tehek Lake (TE)
- Inuggugayualik Lake (INUG)

- Tehek Lake – Far-field (TEFF)
- Third Portage Lake – South Basin (TPS)
- Wally Lake (WAL)
- Pipedream Lake (PDL)

- Baker Lake – Barge Dock (BBD)
- Baker Lake – Proposed Jetty (BPJ)
- Baker Lake – Akilahaarjuk Point (BAP)

Water sampling activities are scheduled roughly once a month for 6 months, including winter ice sampling. The first 5 stations listed above are sampled through the ice in April, May, and November. All of the above stations are sampled during open water in July, August, and September. Sampling will not be conducted in June and October because of thin ice conditions. Check the monthly water sampling schedule to confirm which samples are to be collected where, BEFORE going into the field.

All samples are now collected from **3 m below the water surface**, which is indicated by “-S” at the end of the sample ID (S=Surface). **Two** target sample locations for each station listed above have been

randomly pre-determined and recorded in MapSource and in the hand-held GPS units (NAD 83). Confirm before going into the field.

MONTHLY CREMP WATER CHEMISTRY & PHYTOPLANKTON SAMPLING:

1. Prior to leaving camp gather the appropriate type and number of sampling vessels and acid vials for preservation. Prepare appropriate labels for containers, affix them to the appropriate bottle (see below), and wrap label with packing tape. Use the following information:

- Azimuth company name
- Station abbreviation (e.g. TPE-36-S, INUG-24-S)
- Date of sample collection
- Parameters to be measured from individual bottle (TOC, total metals, etc.)

2. Gather **field collection materials:**

In the boat:

- Field collection data forms, pencils, waterproof markers & clipboard
- GPS unit, batteries
- Water pump & 12V battery
- Tubing (4 meter length and 1 meter length) & weight (& extra C-clamps and cable ties)
- In-line filter and a spare
- YSI meter, batteries
- Secchi disk
- Hand held pH meter, batteries
- Depth meter, batteries
- Rope
- Sampling gloves
- Field sample bottles & preservatives (per sample):
 - ▶ 2 – 1 L plastic (TSS-low and Conventional)
 - ▶ 2 – 250 mL amber glass (TKN, Ammonia)
 - ▶ 2 – 125 mL amber glass (TOC & DOC)
 - ▶ 4 – 250 mL plastic (total & dissolved metals, total & dissolved Hg)
 - ▶ 1 – 50 mL vial for phytoplankton
 - ▶ 2 vials sulfuric acid
 - ▶ 2 vials hydrochloric acid
 - ▶ 4 vials nitric acid
 - ▶ 1 syringe & magnesium carbonate slurry
 - ▶ 1 syringe & Lugol's solution
- Extra sample bottles in case of breakage or loss
- QA/QC field duplicate sampling containers & preservatives (same as above).
- Take one set of Travel Blank bottles into the field and transport and treat as other samples. Note that the Travel Blank bottles are not to be opened and no preservatives added.

In camp:

- Hand pump, filters, tweezers, and tinfoil for chlorophyll-a
- De-ionized water for rinsing equipment and collected field equipment blank
- Coolers (for storing and shipping samples)
- Ice packs (for shipping samples to laboratories)
- Address labels for coolers
- Chain-of-custody forms
- Large Ziploc bags (for sending chain-of-custody form in cooler)
- Packing tape (for affixing labels to sampling containers & sealing cooler)

The following table lists the specific bottles to be filled, parameters to be measured and preservatives required for each. Affix the labels to the sampling containers and then prior to shipping, wrap packing tape around the labels to ensure a waterproof seal.

Jar Type	Label as:	Filter in the field?	Preservation / Storage	Collect parameter for:			Lab-prepared for:
				Lake Station	Field DUP	Equipment Blank	Travel Blank
1L plastic	Conventional	no	none / refrigerate	yes	yes	yes	yes
1L plastic	TSS-low	no	none / refrigerate	yes	yes	yes	yes
250 mL plastic	Nutrients	no	1 vial sulfuric acid / refrigerate	yes	yes	yes	yes
250 mL plastic	TKN	no	1 vial sulfuric acid / refrigerate	yes	yes	yes	yes
100 mL amber glass	TOC	no	1 vial hydrochloric acid / refrigerate	yes	yes	yes	yes
100 mL amber glass	DOC	yes	1 vial hydrochloric acid / refrigerate	yes	yes	yes	yes
250 mL plastic	Total Metals	no	1 vial nitric acid / refrigerate	yes	yes	yes	yes
250 mL plastic	Dissolved Metals	yes	1 vial nitric acid / refrigerate	yes	yes	yes	yes
250 mL plastic	Total Mercury (Hg)	no	1 vial nitric acid /refrigerate	yes	yes	yes	yes
250 mL plastic	Dissolved Mercury (Hg)	yes	1 vial nitric acid / refrigerate	yes	yes	yes	yes
Filter (500mL water)	Chlorophyll-a	yes	wrap in tinfoil / freeze	yes	yes	no	no
50 mL glass vial	Phytoplankton	no	3-4 drops of Lugol's solution	yes	yes	no	no
Total <u>samples</u> for July:				24	3	2	2
Total <u>samples</u> for August:				24	3	2	2
Total <u>samples</u> for September:				24	3	2	2

3. For **QAQC** purposes three kinds of samples are required:

Field duplicate: All parameters measured in the original sample are measured in the field duplicate. The sampling station is selected at random and labeled as station CREMP [month] DUP-1, -2, -3, -4, etc. Prepare the QAQC labels and affix to the sampling containers, as described in step 2.

Travel blank: These are to be carried into the field and treated like the other sampling vessels except that the bottles are not to be opened or anything added to them. Ship back to the lab, each set with different shipment.

Equipment blank: To collect an equipment blank, set up the water sampling equipment as if a routine sample was to be collected except that the incurrent and excurrent hoses are placed into the same opening of a container (find an empty and CLEAN container, large enough for >2L; pour 2 x 1L containers of **de-ionized water sent from ALS laboratories** into the clean container). Pump for 2 minutes (just like in the field) to flush site water from the equipment (also attach the filter to flush for 30 seconds). Using 1 x 10L jug of DI water from ALS, flush and discard 2L (this time excurrent hose is placed in sink or empty bucket) and then use the remaining 8L fill all bottles listed in the above table (except for chlorophyll and phytoplankton). Preserve and treat as other samples, including filtering where necessary. Label as station CREMP [month] EB-1, -2, -3, -4, etc.

4. Before and during sampling fill in the requested information on the field data form; complete one field data form in its entirety for each sampling station and sampling event. Forms are made of waterproof paper; print all information on the form using a lead pencil or a write-in-the-rain pen.
5. With the aid of a GPS unit, navigate the boat to the sampling station using the UTM coordinates (in NAD 83) provided. Approach the station from downstream of the wind direction. In windy conditions, anchor the boat upstream of the station and drift back; it is not necessary to anchor the boat in calm conditions providing the boat remains in the same position. Do not allow the anchor to drag through the sampling station. Record the **UTM coordinates** on the field data form.
6. Measure **water depth** at the sampling station using the 'Hawkeye' hand-held depth meter (or transom-mounted lowrance). Hold the meter in the water, facing the lake bottom, until the meter measures the depth. Record this information on the field data form. If you are in water that is too shallow (i.e., **must have at least 5 meters depth**), move to deeper water near the assigned station.
7. Measure the light attenuation at the sampling station using the **Secchi disk**. Lower the disk into the water, on the shady side of the boat, so that you can no longer see it. Slowly raise the disk to the point that you can see it and measure this depth using the markings on the disk rope.
8. Measure the pH of the water at the sampling station using the **pH meter** (unless the YSI includes this parameter). Hold the probe portion of the meter in the lake until the meter measures the pH. Record this information on the field data form.
9. Calibrate the YSI probe prior to going into the field; confirm elevation (m) of sampling environment. Check the DO calibration (adjust barometric pressure based on airport data) but also check the DO membrane (it may need to be replaced). At Meadowbank DO readings should be about 8 – 12mg/L; if meter is reading much lower/higher than this, membrane likely needs to be replaced. Keep a calibration log which includes date and time, type of calibration, results, and troubleshooting.

10. Lower the **YSI probe** into the lake to just below the water surface level. Measure the temperature (°C), specific conductance (i.e., temperature corrected) (uS/cm) and dissolved oxygen concentration (mg/L) in the water and record on the field data form. Lower the meter to a depth of 1 m and record the field measurements. Allow the concentrations on the meter to stabilize for 10 to 15 seconds before recording the concentrations. Continue recording the field measurements at **1 m depth intervals** until you reach the whole metre mark above the lake bottom (i.e. if the lake depth is 9.3 meters, record field measurements up to a depth of 9 meters).
11. Set up the **water pump** in the boat; attach the tubing to the pump using the C-clamps and attach the 12-V battery. Attach the 4 meter length of tubing to the intake valve, and the 1 meter length to the output valve. Attach the plastic coated ball weight to the end of the 4 meter length of tubing. Lower the 4 meter length of tubing into the water to **3 meters depth** and place the 1 meter length of tubing over the edge of the boat. Run the pump for **2 minutes** to flush the sampling device.
12. For each sampling station, **fill** the required **pre-labeled sampling containers** with water from the 1 meter length of tubing.
13. Dissolved metals and dissolved organic carbon samples are to be collected with an in-line high capacity filter with 0.45 um pore size. After all unfiltered samples have been collected, disconnect the battery from the pump and fix the filter onto the end of the discharge hose. Re-connect the pump and allow the water to discharge and flush through the filter for 15 – 20 seconds. Direct filtered water into the DOC and dissolved metals (and dissolved Hg) bottles. Flow from the hose can be controlled by pinching the incurrent end of the tube (**not the excurrent**). Once filtered samples have been collected remove the filter and place into a plastic or zip-loc bag for re-use. In the Meadowbank environment where the amount of suspended solids is typically low, filters can be re-used for up to 10 samples. Remember to use the same filter when collecting equipment blank samples, not a new filter.
14. **Add the specified preservatives** to the appropriate sampling containers (according to the information on the labels and table in step 2), seal and mix thoroughly by turning upside down and then upright a number of times.
15. To collect a phytoplankton sample, add site water from appropriate depth (i.e., 3 m) into the 50 mL vial provided. Make sure that site information is appropriately labeled on the jar. In the field or the lab, add a few drops of Lugol's solution to the sample so that it has the color of weak tea.
16. Back in the office, to process the chlorophyll-a sample, use the hand-held pump apparatus and filters. Using the tweezers, place an ashless filter paper on the screen in the water filter apparatus, then screw the two sections together and attach the hand-held vacuum pump. **Filter 500 mL of water** through the water filter apparatus. After filtering remove the filter with clean tweezers, place on a piece of tin foil and double wrap. With a sharpie pen, write the appropriate sampling information on a label and stick to the tin foil. Place the folded tinfoil in the pre-labeled Ziploc bag and put into the **freezer**. Mark on the field collection data sheet the volume of water filtered.
17. Until ready for shipping, the water samples are stored **chilled** in a refrigerator in camp, if space is available. The filter for chlorophyll-a analysis must be **frozen**; store this bag in a deep freezer in the

camp. Bottles should be put in plastic bubble bags prior to storage on ice to protect the labels from water damage. The phytoplankton samples are stored at **room temperature**.

18. If this sampling station is selected as the QAQC **field duplicate**, collect a second set of water samples, fill the pre-labeled sampling containers, including the phytoplankton vial (repeat step 11-15) and collect a second filtered chlorophyll-a sample (step 16). Record which sampling station the QAQC samples are collected from on the appropriate field data form.

19. Fill out a **chain-of-custody** form for the water samples and filters being sent to **ALS Environmental**. The COC form must be completed carefully and in its entirety to ensure proper analysis. This includes listing all of the specific conventional parameters (see table in step 2), Azimuth and ALS contact names, and checking off all of the specific boxes for requested analyses. The ALS laboratory quote number must be printed on the COC form to ensure proper billing.

A **digital COC** form is most commonly used; this form can be filled out in advance to ensure accuracy and efficiency and amended in the field as required. Note that using a digital copy of the COC requires printing 2 copies of the document in the field (one for the laboratory, one for Azimuth). Any questions regarding the COC form should be directed to the Azimuth project coordinator – Maggie McConnell. Put the completed COC form in a sealed ziploc plastic bag in a cooler with the water samples.

20. Fill out a **chain-of-custody** form for the phytoplankton samples being sent to **Plankton R Us Inc.**, Winnipeg, MB. Complete all of the required fields and then put the form in a sealed ziploc plastic bag in the cooler with the phytoplankton samples.

PACKAGING & SHIPPING SAMPLES:

1. Ensure all **water samples** are **sealed** securely. Prior to shipping, it is advisable to wrap the label of each sample bottle with clear tape to make sure that the label does not come off during shipping and handling. Dry the water bottle and wrap with tape. **Pack** water sampling containers upright in coolers with ice packs, and packing material, to ensure samples do not spill or break during transport. (Ideal storage and transport temperature is 4°C).
2. Ensure the COC form is enclosed and then seal the cooler(s). **Label the cooler(s)** with the following address:
ALS Environmental
Unit 12, 1329 Niakwa Road East
Winnipeg, MB
R2J 3T4
Tel: 204-255-9721
Attn: Judy Dalmaijer
3. Ensure **phytoplankton samples** are **sealed** securely and **pack** in a cooler with packing material to ensure samples do not break during transport. It is not necessary to keep samples cool.

4. Ensure the COC form is enclosed and then seal the cooler. **Label the cooler** with the following address:

Plankton R Us Inc.
Dave Findlay
39 Alburg Drive
Winnipeg, MB
R2N 1M1
Tel: 204-254-7952

5. **Ship** the water **samples** to ALS Environmental as quickly as possible. Ship the phytoplankton samples to Dave Findlay at the end of each month or event.
6. Send completed **COC forms** and **field data forms** to Azimuth Consulting Group, attention the project coordinator – Maggie McConnell.

APPENDIX B

STANDARD OPERATING PROCEDURE (SOP) FOR CREMP BENTHOS & SEDIMENT SAMPLING



Standard Operating Procedure Meadowbank Project Lakes & Baker Lake CREMP Benthos & Sediment Sampling <u>2012</u>

GENERAL:

Project Coordinator:

Maggie McConnell
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Email: mmcconnell@azimuthgroup.ca

In case of **emergency**, contact Gary Mann (Azimuth telephone number 604-730-1220 or cell phone 604-908-0601).

LOCATION AND TIMING FOR FIELD ACTIVITIES:

Twelve (12) sampling stations have been chosen for benthos and sediment quality monitoring in the Meadowbank project lakes. These stations (with their corresponding abbreviation) are:

- Third Portage Lake – North Basin (TPN)
- Third Portage Lake – East Basin (TPE)
- Second Portage Lake (SP)
- Tehek Lake (TE)
- Inuggugayualik Lake (INUG)

- Tehek Lake – Far-field (TEFF)
- Third Portage Lake – South Basin (TPS)
- Wally Lake (WAL)
- Pipedream Lake (PDL)

- Baker Lake – Barge Dock (BBD)
- Baker Lake – Proposed Jetty (BPJ)
- Baker Lake – Akilahaarjuk Point (BAP)
- Baker Lake – East Shore (BES)

Field activities are scheduled for once per year, in **mid/late August**. The **target water depth** at each sampling station is approximately **8 meters +/- 1.5 m**.

BENTHOS & SEDIMENT CHEMISTRY SAMPLING:

1. Gather **field collection materials**:

In the boat:

- Field collection data forms, waterproof paper, pencils, waterproof markers & clipboard

- GPS unit, batteries
- Depth meter, batteries
- pH meter, batteries
- Rope
- Petite Ponar grab and rope
- 500 micron sieve bag
- 3 stainless steel bowls
- 2 stainless steel spoons
- Liquinox detergent and dish cleaning brush
- Plastic squirt bottle
- Sampling gloves
- Safety glasses
- Field sample jars & preservatives (per sampling station):
 - ▶ 11 – 125 mL glass jars (sediment samples : 2 jars for 5 reps; 1 jar for composite)
 - ▶ 5 – 500 mL plastic jars (benthos: 1 jar for each rep)
- QA/QC field duplicate sediment jars
- Ashless filter paper & tweezers; 1-125 mL glass jar

In camp:

- Formalin (10% of pure Formaldehyde)
- Labels for sampling containers
- Coolers, action packers (for storing and shipping samples)
- Ice packs (for shipping sediment samples to lab)
- Address labels for coolers
- Chain-of-custody forms
- Large Ziploc bags (for sending chain-of-custody form in coolers)
- Electrical tape (for sealing benthos jars)
- Packing tape (for affixing labels to sediment sample containers & sealing coolers)

2. Before going into the field, **label the lids** of all sampling containers using a permanent waterproof marker. After sampling, prepare appropriate labels for containers and affix them when bottles are dry enough to stick to. Use the following information:

- Azimuth company name
- Station abbreviation (e.g. TPE-1, INUG-3)
- Date of sample collection
- Parameters to be measured from individual jar (5 x 125 mL – total metals, pH, moisture; 5 x 125 mL – grain size (PSA), TOC; 1 x 125 mL – PAHs, LEPHs & HEPHs, Mineral Oil & Grease.

Affix the labels to the sediment jars and then wrap packing tape around the labels to ensure a waterproof seal.

For the **benthos containers**, print the following information directly onto both the jar and jar lid using a permanent waterproof marker:

- Azimuth company name
- Station abbreviation (e.g. TPE, INUG) and replicate number (e.g. TPE-1, TPE-2); there are a total of 5 replicates per sampling station
- Date of sample collection

Prepare **internal labels** for each of the benthos containers. On a small piece of waterproof paper, write, using a lead pencil, the station abbreviation and replicate number (e.g. TPE-1). If no

waterproof paper is available, use regular paper. Store the labels in their corresponding sampling container.

3. For **QAQC** purposes, sediment samples are collected in duplicate from 8 replicate station every sampling event (DUP + Swipe). All parameters measured in the original sample are measured in the field duplicate. The sampling station is selected randomly from the 65 replicate stations, and labeled as station DUP (or Swipe). Prepare the QAQC labels and affix to the sediment jars, as described in step 2. And label one new 125 mL glass jars with the Azimuth company name, date, QAQC filter and total metals for each swipe sample.
4. A 100% formalin solution is equivalent to a solution of 37% formaldehyde. The **target formalin concentration** in each of the sampling containers is 10%. A neutral buffered formalin solution is achieved by adding a sufficient amount of calcium carbonate powder or pellets to render the solution pH neutral (pH = 7.0). Borax powder may be substituted for calcium carbonate powder if necessary.

Transport Canada allows the free transport of formalin at concentrations less than 25% formaldehyde. Consequently, the formalin transported up to Meadowbank will be diluted in half (18.5% formaldehyde / 50% formalin solution).

To **prepare** the **neutral buffered formalin**, add a small amount of calcium carbonate powder or pellets to the 50% formalin solution, seal the container and shake until mixed. Check the pH of the solution using the pH pen. Continue adding the powder/pellets until the pH of the solution reaches approximately 7.0. Store at room temperature until ready to use. Only prepare the required volume of neutral buffered formalin for that sampling event. Buffered formalin will not store for long periods of time.

Follow all **safety precautions** when preparing the formalin solution. Formalin is a carcinogen and irritant. Wear sampling gloves and safety glasses when mixing the solution and prepare the solution in a well ventilated area.

5. Before and during the benthos and sediment sampling fill in the requested information on the **field data form**; complete one field data form in its entirety for each sampling station and sampling event. Forms are made of waterproof paper; **print** all information on the form using a **lead pencil** or write-in-the-rain pen.
6. With the aid of a GPS unit, **navigate the boat** to the sampling station using the UTM coordinates (in NAD 83) provided. Approach the station from downstream of the wind direction. In windy conditions, anchor the boat upstream of the station and drift back; it is not necessary to anchor the boat in calm conditions providing the boat remains within a 50 meter radius of the position. Do not allow the anchor to drag through the sampling station. Record the UTM coordinates on the field data form.
7. Measure the **water depth** at the sampling station. It is recommended to use a transom mounted sonar to first “view” each rep location looking for a smooth, relatively flat lake bottom. Record the depth information on the field data form. Ensure sample depth is within the target (8 meters +/- 1.5 m).

8. Begin collecting the benthos samples. Collecting the sediment first would disturb the benthic community.
9. Ensure the rope is securely attached to the **Ponar**. Rinse the Ponar grab, 3 stainless steel bowls and a spoon with lake water. **Wash** each of these items with liquinox soap by scrubbing with the dish cleaning brush and then thoroughly rinse with lake water. Put aside two stainless steel bowls and spoon until later (step 18) and ready the largest stainless bowl for the Ponar.
10. Lower the **Ponar** to within 1 meter of the bottom of the lake. Lower the Ponar very slowly over the last meter and allow the rope to go slack. Raise the Ponar to the edge of the boat and check the grab for **acceptability**. The grab is acceptable if the sample:
 - does not contain large foreign objects;
 - has adequate penetration depth (i.e., 10-15 centimeters though in some locations if the substrate is particularly hard it may be necessary to accept smaller grabs);
 - is not overfilled (sediment surface must not be touching the top of the Ponar, though in reality there will be occasions when the Ponar is full, careful judgment is required to determine if the grab is too full);
 - did not leak (there is overlying water present in Ponar); and
 - is undisturbed (sediment surface relatively flat).Once the grab is deemed acceptable, open the Ponar jaws and drop the sample into the large stainless steel bowl. Rinse the ponar with squirt bottles to make sure all of the material is in the bowl. Gently pour the contents of the bowl into the 500 micron sieve bag.
11. **Sieve the sample** in the lake water until only the benthic organisms and coarse materials remain. Care must be taken to ensure the benthic organisms are not damaged or crushed. Do not disturb the sample to the point that it is splashing out of the sieve. Do not forcibly push materials through the sieve; gently massage apart any small clay balls. Rinse off any pieces of larger plant material or rocks in the sample and discard.
12. **Flush the remaining sample** in the bottom of the sieve into the pre-labeled plastic sampling container (i.e. station-1 jar). A plastic squirt bottle filled with lake water is useful for this purpose.
13. **Repeat steps 10-12**, flushing the sample into the same pre-labeled plastic sampling container (i.e., station-1 jar). Ensure the sample is collected in an area not previously disturbed by the Ponar. The two independent grabs (per replicate) are composited to increase the surface area sampled.
14. **Rinse the sieve** bag to clear out any debris in the screen. To rinse, hold the sieve upside down and raise and lower the sieve into the water.
15. Refer to step 18. At this point while you are still at the first rep you can also collect the Ponar grabs for the sediment chemistry composite.
16. **Repeat steps 10-14** four more times; there must be a separation of **20 meters** or more from other replicate stations. Prior to collecting the next REP, clean ponar and both bowls with liquinox and scrub brush, rinse with lake water. Record the depth and GPS coordinates of each replicate station on the field data form. Put the samples from each replicate in pre-labeled station replicate jars 2 through 5. In total, 10 Ponar grabs will be collected for benthos collection, two grabs per replicate.

17. Ensure internal labels are in each sample container. Shake the formalin to ensure all of the calcium carbonate powder is in solution. **Add** a sufficient volume of **formalin** to each sampling container to make a corresponding formalin solution of approximately 10%. Volumes of formalin are added by 'eye' (for a 10% solution, a ratio of 4 parts water and 1 part 50% formalin solution). Overall, there must be enough liquid in the jar to cover the entire sample. Seal the sample container securely and gently roll the container to mix the sample and formalin solution. Do not shake the sample container; this will crush the benthic organisms inside.
18. Begin collecting the sediment samples. Lower the **Ponar** to within 1 meter of the bottom of the lake, in an area not previously disturbed by the Ponar. Lower the Ponar very slowly over the last meter and allow the rope to go slack. Raise the Ponar to the edge of the boat and check the grab for **acceptability** (see step 10 for criteria).
19. Once the grab is deemed acceptable, open the top of the Ponar and remove any overlying water. Using the pre-cleaned stainless steel spoon, scoop out the **top 3-5 centimeters** of **sediment** and place in the pre-cleaned stainless steel bowl. Empty the remainder of the grab sample into a bucket in the boat, not directly into the lake, to ensure the area is not disturbed.
20. **Repeat steps 18 and 19** one more time, placing the sediment into the bowl with the other sediment sample(s).
21. **Homogenize** the sediment samples in the stainless steel bowl (by stirring with the spoon) until the sediment is thoroughly mixed. Scoop the sediment into pre-labeled sediment sampling containers. **Fill the jars** to the top and seal securely.
22. Add one level-scoop of sediment from the sediment chemistry bowl to the last, clean, stainless bowl. This process is completed at each rep until there are 5 good scoops (one from each rep) in the "composite" bowl. Homogenize thoroughly and fill 1 x 125 mL jar for analysis (LEPHs&HEPHs, MOG, and PAHS). Be sure label ID includes "COMP" (e.g., TPE-COMP).
23. If this station is selected as the QAQC **field duplicate**, using the tweezers and a set of clean sampling gloves, **swipe** the stainless steel bowl and spoon with one piece of ashless **filter paper** (or a "ghost wipe") and store in the pre-labeled 125 mL glass jar. Collect the duplicate sediment sample from the same sediment collected in steps 18-20. Fill the sampling containers labeled as station DUP. Record that the QAQC samples were collected from this sampling station on the field data form.
24. **Complete** the **field data form**, including a description of the sediment (grain size, consistency, colour, presence of biota, sheen, unusual appearance) and the sampling effort (equipment failure, control of vertical descent of sampler) required to collect the benthos and sediment samples.
25. **Rinse** out the Ponar, stainless steel bowl and spoon with lake water. Dump the sediment and water from the plastic bin into the lake.
26. Until ready for shipping, store the sediment samples and QAQC filter paper **chilled** (on ice) in a cooler or in a refrigerator in camp, if space is available. The sediment sampling containers may be put in plastic bags prior to storage on ice to further protect the labels from water damage. Benthos samples are stored in a cooler or action packer at **room temperature**.

27. Fill out a **chain-of-custody** form for the sediment samples being sent to **ALS Environmental**. The COC form must be completed carefully and in its entirety to ensure proper analysis. This includes listing all of the specific parameters to be analyzed (see step 2), Azimuth and ALS contact names, and checking off all of the specific boxes for requested analyses. The ALS laboratory quote number must be printed on the COC form to ensure proper billing.

A **digital COC** form is most commonly used; this form can be filled out in advance to ensure accuracy and efficiency and amended in the field as required. However, using a digital copy of the COC requires printing 2 copies of the document in the field (one for the laboratory, one for Azimuth). Any questions regarding the COC form should be directed to the Azimuth project coordinator – Maggie McConnell. Put the completed COC form in a sealed ziploc plastic bag in the cooler with the samples.

28. Fill out a **chain-of-custody** form for the benthos samples being sent to **Zaranko Environmental Assessment Services (ZEAS)**. Complete all of the required fields and then put the form in a sealed ziploc plastic bag in the cooler with the benthos samples.

PACKAGING & SHIPPING SAMPLES:

1. Ensure all **sediment samples** are **sealed** securely. **Pack** sediment sampling containers upright in a cooler with ice packs, and packing material, to ensure containers do not break during transport. (Ideal storage and transport temperature is 4°C).
2. Ensure the COC form is enclosed and then seal the cooler(s). **Label the cooler(s)** with the following address:

ALS Environmental
101-8081 Lougheed Hwy.
Burnaby, BC, Canada
V5A 1W9
Tel: 604-253-4188
Attention: Brent Mack

3. Ensure **benthos samples** are **sealed** securely. Wrap electrical tape around the edge of the lids to ensure a tight seal. **Pack** benthos sampling containers upright in a cooler or action packer; ensure the cooler/action packer is well packed so the jars are not able to move around.
4. Ensure the COC form is enclosed and then seal the cooler(s). **Label the cooler(s)** with the following address:

Zaranko Environmental Assessment Services (ZEAS)
36 McCutcheon Avenue
P.O. Box 1045
Nobleton, ON
L0G 1N0
Tel: 905-859-7976

5. **Ship** the sediment **samples** to ALS Environmental as quickly as possible. Ship the benthos samples to ZEAS when convenient. Coordinate shipping with the camp manager.

6. Send completed **COC forms** and **field data forms** to **Azimuth** Consulting Group, attention the project coordinator – Maggie McConnell.

APPENDIX C

STANDARD OPERATING PROCEDURE (SOP) FOR CREMP SEDIMENT CORE SAMPLING





Technical Memorandum

Date: July, 2012

To:

cc:

From:

RE: Meadowbank Mine: CREMP Sediment Coring Terms of Reference

This technical memorandum lays out the terms of reference for 2012 sediment coring.

Objective:

The main objectives for 2012 are:

1. Characterization of spatial variability in sediment chemistry – Previous sediment sampling of the Meadowbank project lakes was conducted to characterize baseline conditions within discrete areas of the near-field, far-field and reference CREMP stations. This information will help determine the needs of future sampling events (e.g., sample size needed to detect specified effect size with known statistical power) to allow detection of potential mine-related changes to surface sediment chemistry.
2. Define very near-surface chemistry – Coring, unlike traditional tools such as a Petit Ponar, allows for precise and small depth ranges to be sampled. The corer will be used to sample the top 1.0 cm of sediment to define near-surface chemistry.

Sediment Coring Program:

An average top 1.5cm of sediment chemistry at all CREMP stations will be characterized using sediment cores. Note that this complements, rather than replaces, the grab samples (top 3 to 5 cm) collected synoptically with benthic community samples in late August. This is in addition to the traditional composite sample using the petite Ponar grab. Ten (10) independent cores are to be collected from each of the stations. Cores will be collected within a 250 m radius around the center of each sampling area. The intent is to collect cores over a wide area, targeting depths of 6.5-9.5 m to match benthos sampling within the basin being sampled. The protocol for collecting sediment cores is as follows:

1. Core sampling is conducted prior to benthic sampling and will most often be paired with benthic sampling reps. Consideration can be given to identifying core sample locations prior to field collections.

2. If conditions are windy, anchor the boat. If calm, anchoring is not necessary. Survey the area to be sampled with the sonar to determine bottom type.
3. Deploy the corer from the boat and try to ensure that the core barrel is perpendicular with the surface before penetration. Depending on results, the corer can free-fall from 1 m above the surface. Avoid sampling over steep gradient slopes or over coarse grain substrate.
4. When the boat is anchored, deploy the corer from the boat and lower it when the boat has reached its furthest point in its swing to the right. This will be an odd numbered core. For the second core wait until the boat swings to the left, check the GPS to make sure this is around 5 m from the first core. This core will be an even numbered core. Cores can be taken from new locations each time and do not need to be at the exact same location as the other benthos work.
5. Raise the core to just below the water surface and cap prior to bringing above the water to ensure sediment is not lost out the bottom.
6. Check to make sure that the surface of the core is intact and is not mixed or disturbed and that the overlying water is clear. Record water depth and UTM location (NAD 83) of all successful core samples.
7. Process the core on the boat. Decant overlying water and collect only the top 1.5 cm of sediment.
8. Place the entire 1.5 cm slice into a 125 mL glass jar. Discard the remaining core sample.
9. Label the jars as per CREMP protocol (e.g., TE-x) but with a suffix indicating a core sample (e.g., TE-SC-01 to TE-SC-10).
10. Fill in the data sheet and record any observations about the core sample such as presence of varves, distinct changes in color, grain size, or any other unusual features.
11. Repeat the procedure above until all 10 core samples have been collected, randomly covering the general area depicted on the map.
12. Randomly from one of the 10 coring locations, take a duplicate core (independent deployment of corer) for QAQC purposes.
13. All core samples are to be analysed for total metals, pH and total organic carbon. Fill in CoCs as necessary.
14. Hold on ice or in the refrigerator until shipping to ALS, Vancouver.

APPENDIX D

LETTER OF APOLOGY FROM ALS WINNIPEG FOR CHANGES TO PHOSPHORUS DETECTION LIMITS WITHOUT NOTICE





February 1st 2013

Azimuth Consulting Group Inc.
218-2902 West Broadway
Vancouver, BC V6K 2G8

ATTENTION: Gary Mann

Dear Gary,

RE: Phosphorus Detection Limit Change

The purpose of this letter is to address a miscommunication regarding a change in the detection limit for Phosphorus which impacted samples submitted since April 2012.

ALS Limits of Reporting (LORs) are established using rigorous experimental and statistical procedures that begin with the determination of the Method Detection Limit (MDL) at 99% confidence. The MDL takes into account several factors, including long term Method Blanks, low level Sample Duplicates, and low-level Spiked Samples. However, the MDL is based on "typical" sample types in the absence of sample-specific problems, and doesn't apply in all circumstances.

ALS has therefore adopted a conservative approach to detection limits. Our goal is to minimize false positives, because we recognize that any false positive results can be damaging for our clients. Where possible, we establish LORs at levels well above the statistical MDL. This improves the accuracy and precision of results near the detection limit, and reduces the chance of false positives due to sample-specific issues.

ALS has reevaluated its detection limits as a result of this approach, and in this case, the originally quoted Phosphorus detection limit was raised from 0.003 mg/L to 0.01 mg/L in April 2012. A revised package was provided at this time; however the specific changes made were not highlighted.

ALS realizes the importance of meeting regulatory requirements. A Corrective Action Plan has been initiated to ensure that we prevent this type of miscommunication from recurring. Should any detection limits change in the future, your Account Manager will contact you and an appropriate action will be agreed upon that will meet your testing needs.

Be assured that ALS takes such issues seriously. On behalf of ALS I sincerely apologize for any inconvenience this miscommunication may have caused.

Yours sincerely,

Barb Bayer
Lab Manager, ALS Environmental (Winnipeg)

ADDRESS 1329 Niakwa Road East Unit 12, Winnipeg Manitoba R2J 3T4 Canada | PHONE +1 204 255 9720 | FAX +1 204 255 9721
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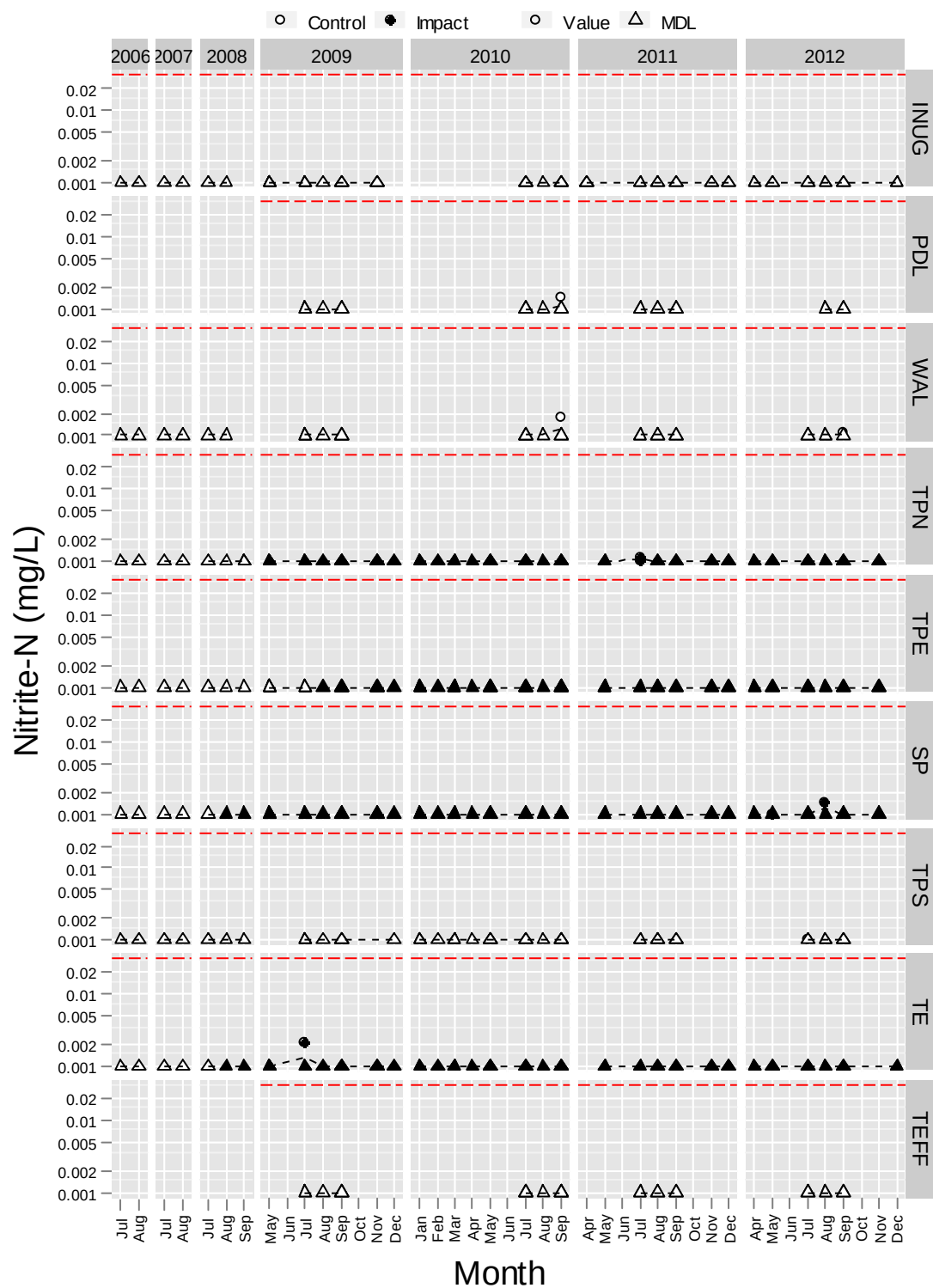
APPENDIX E

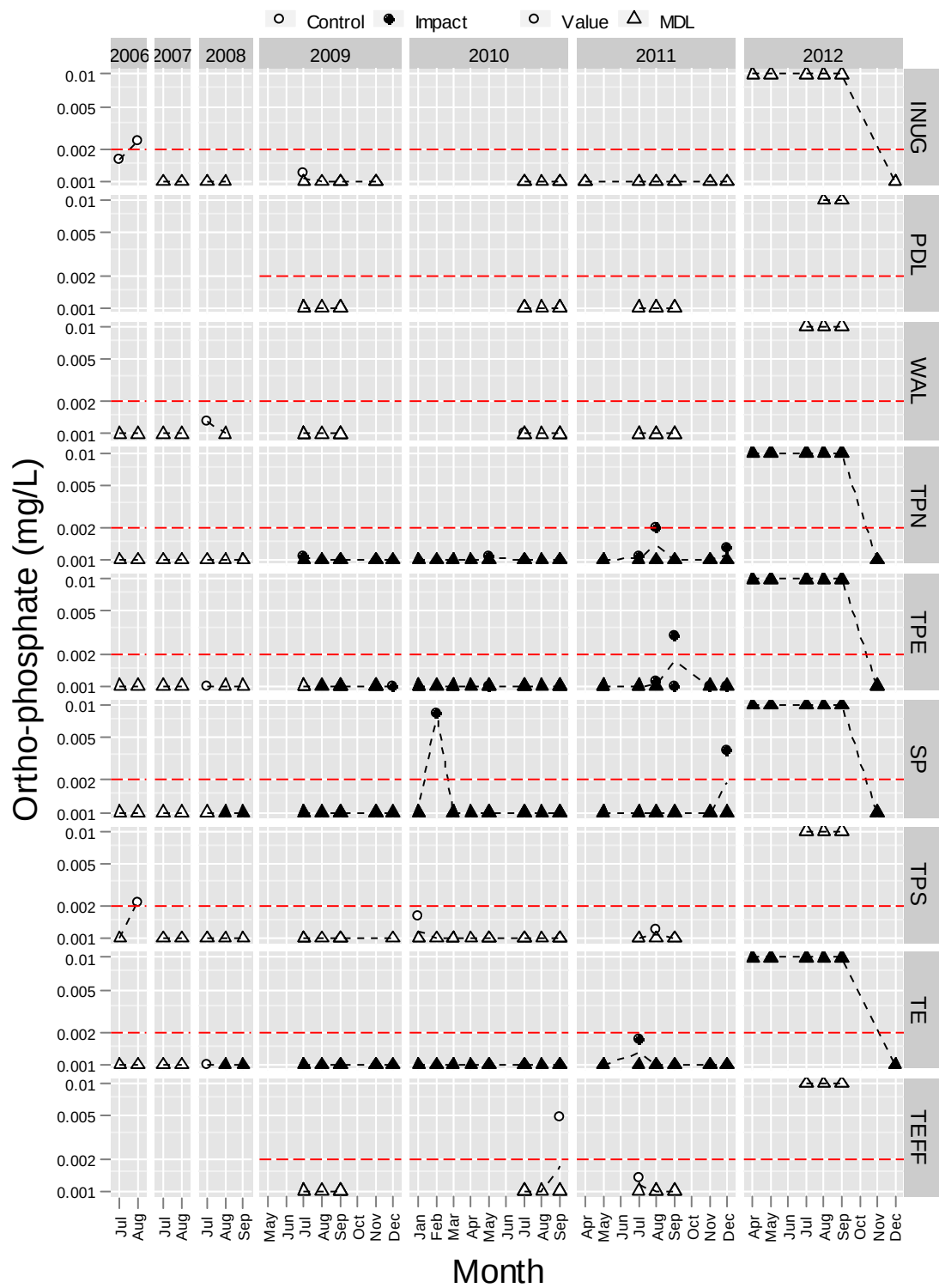
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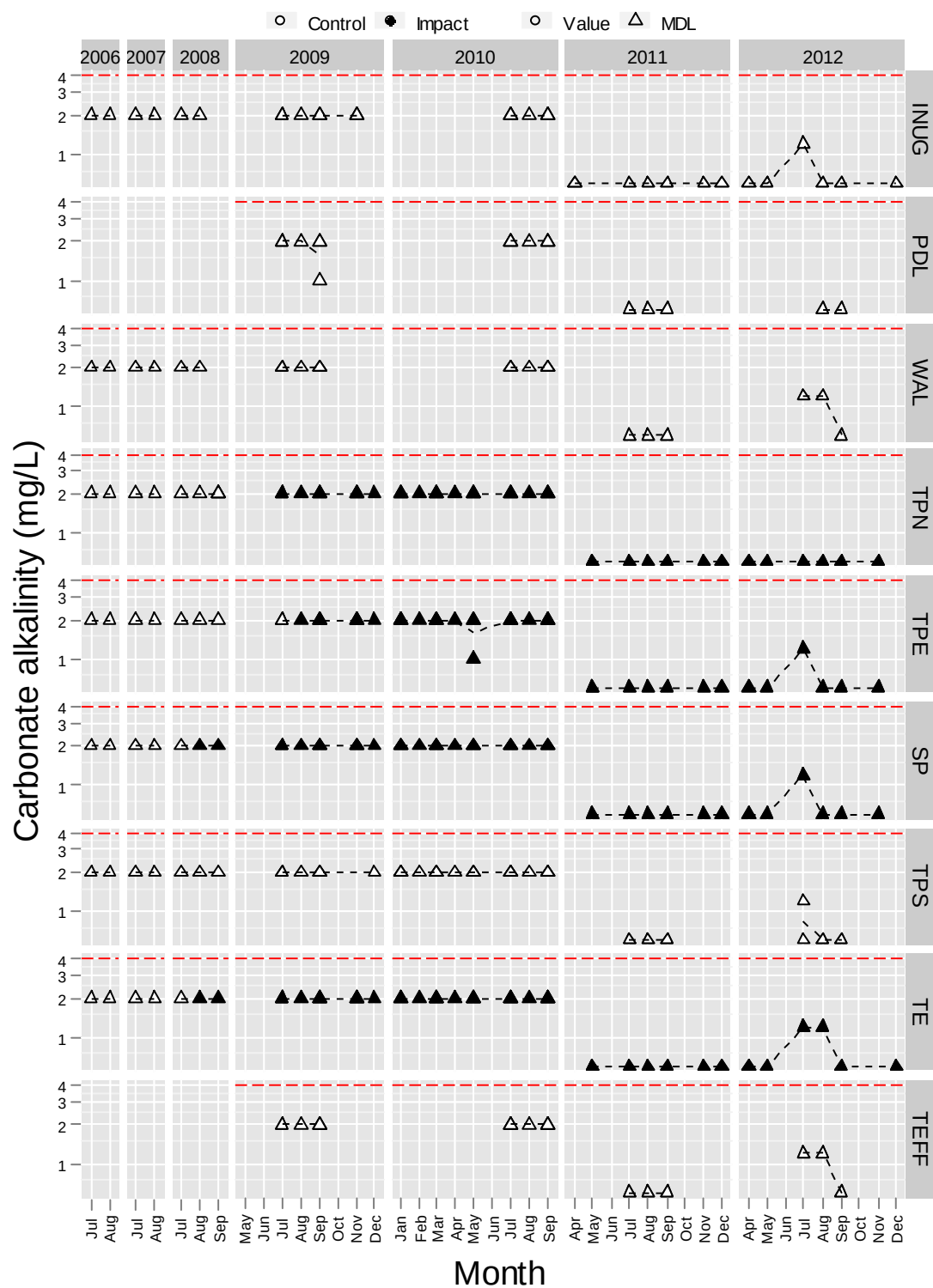


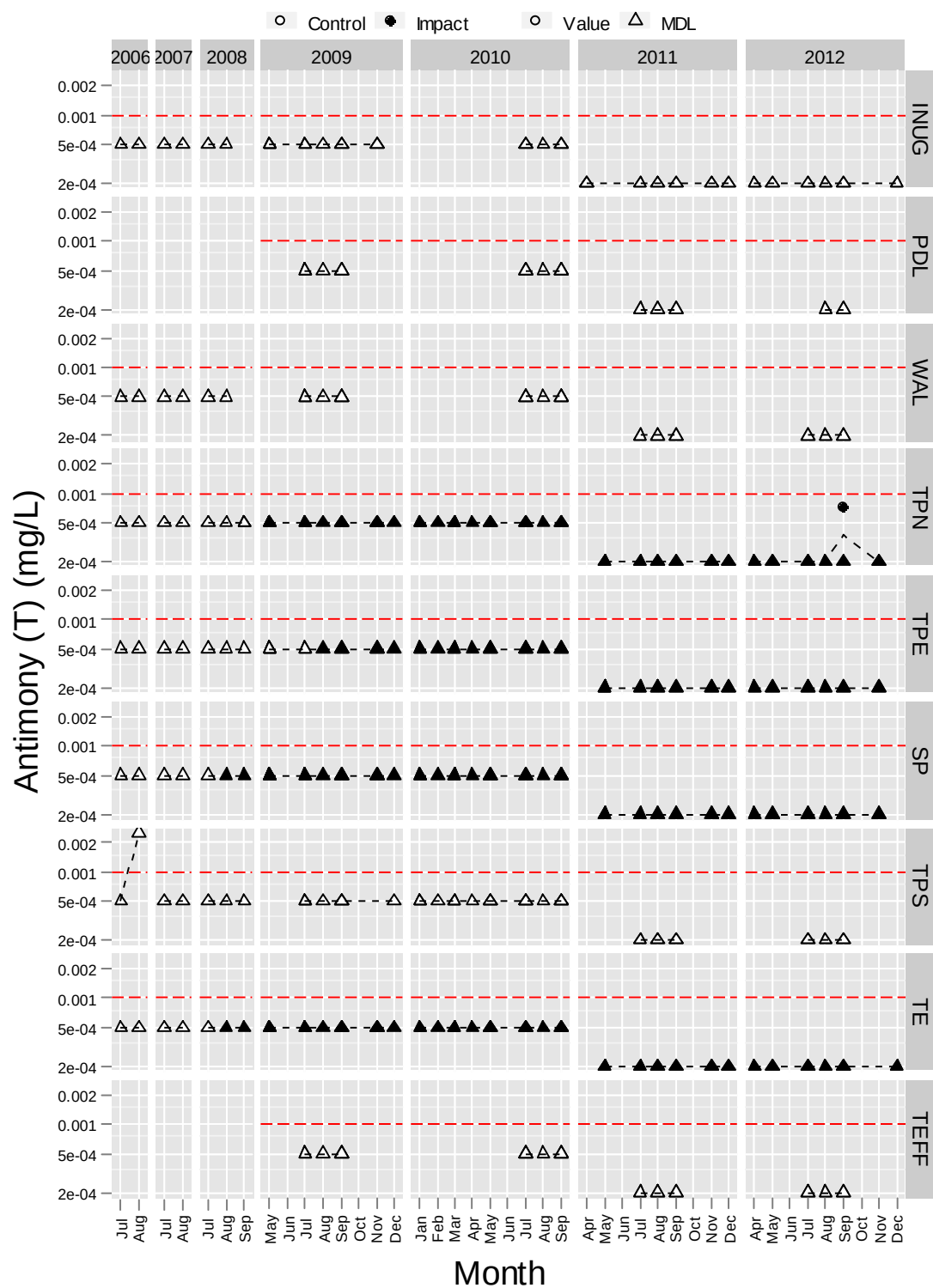
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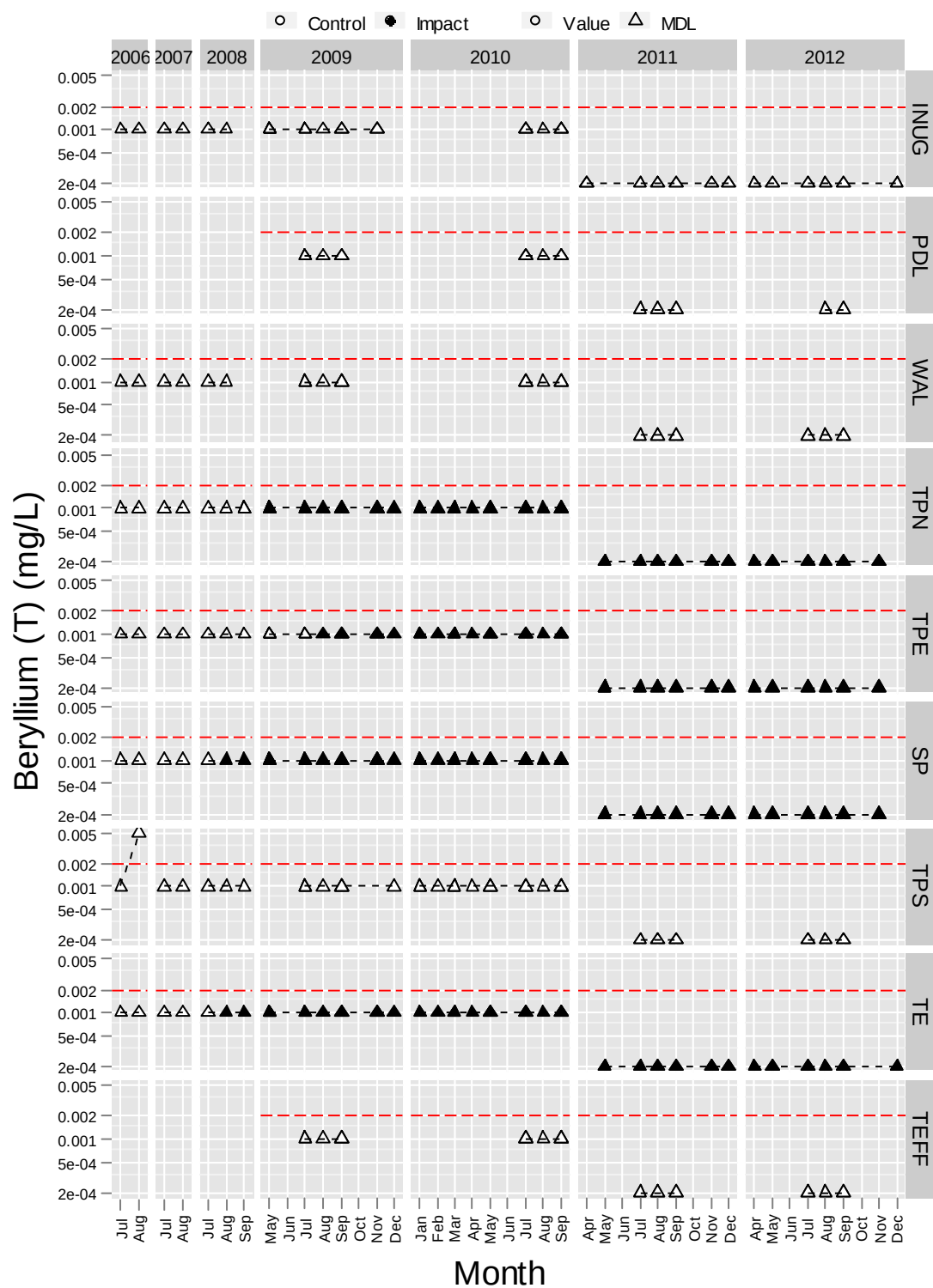
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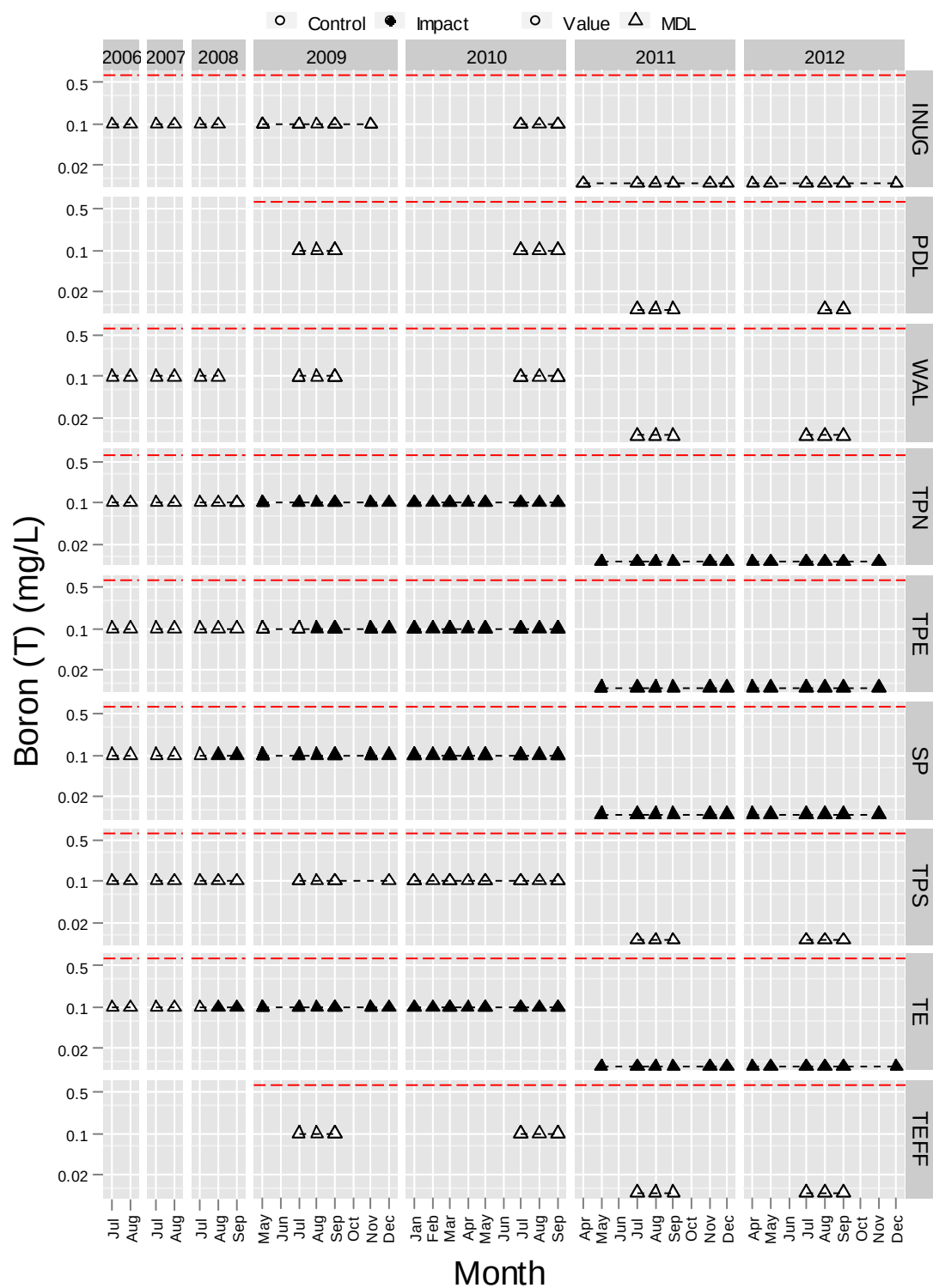


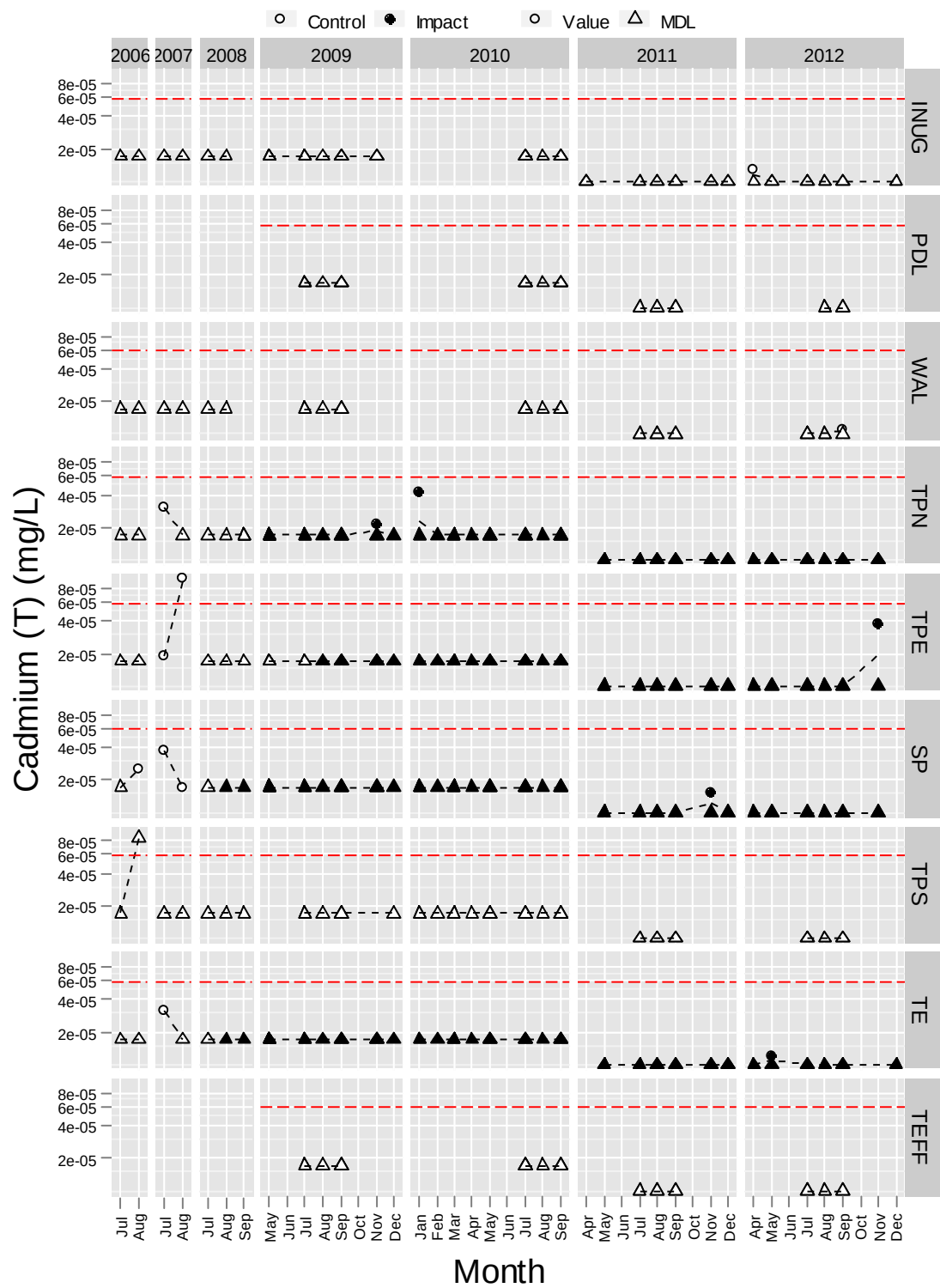


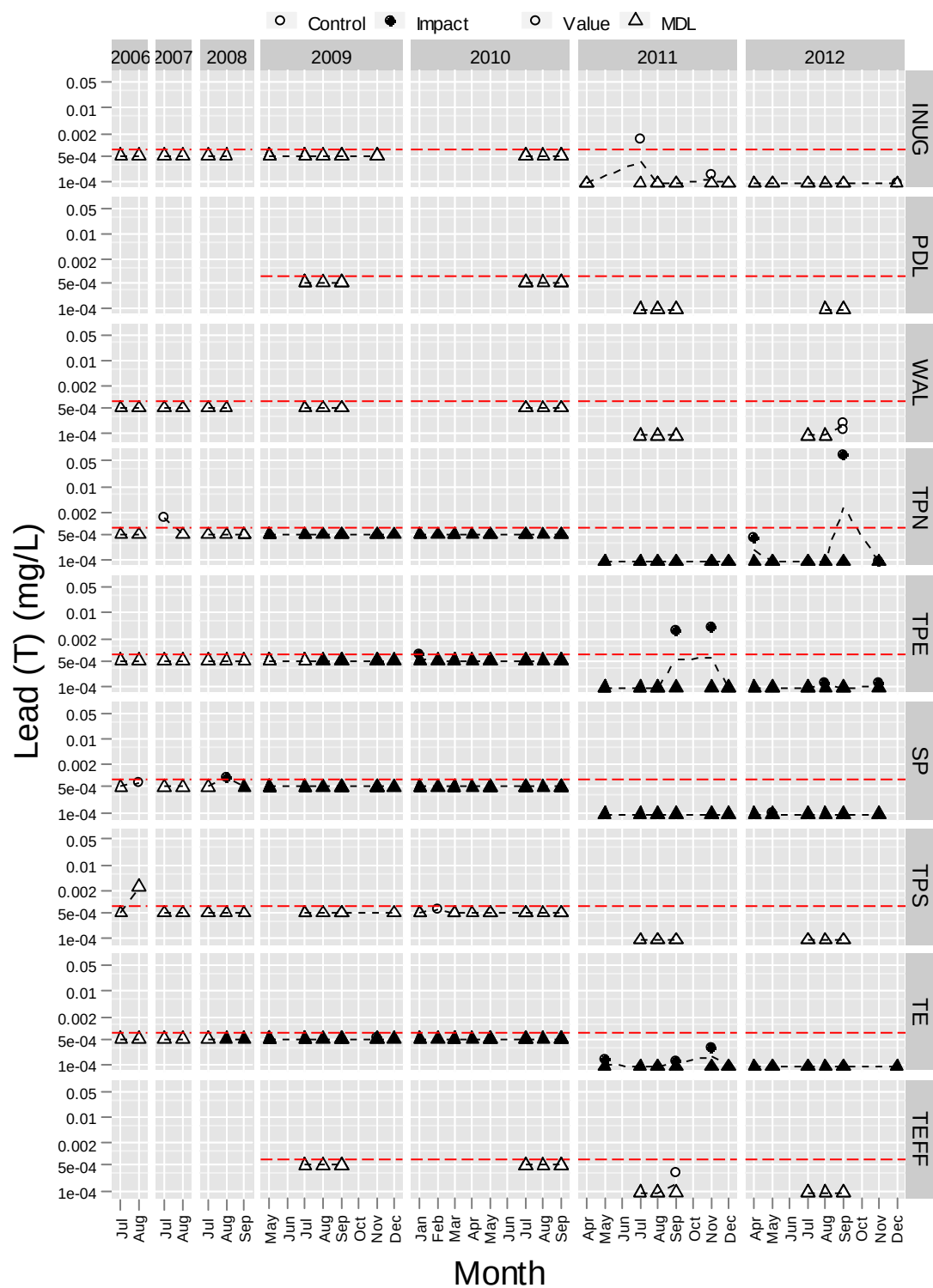


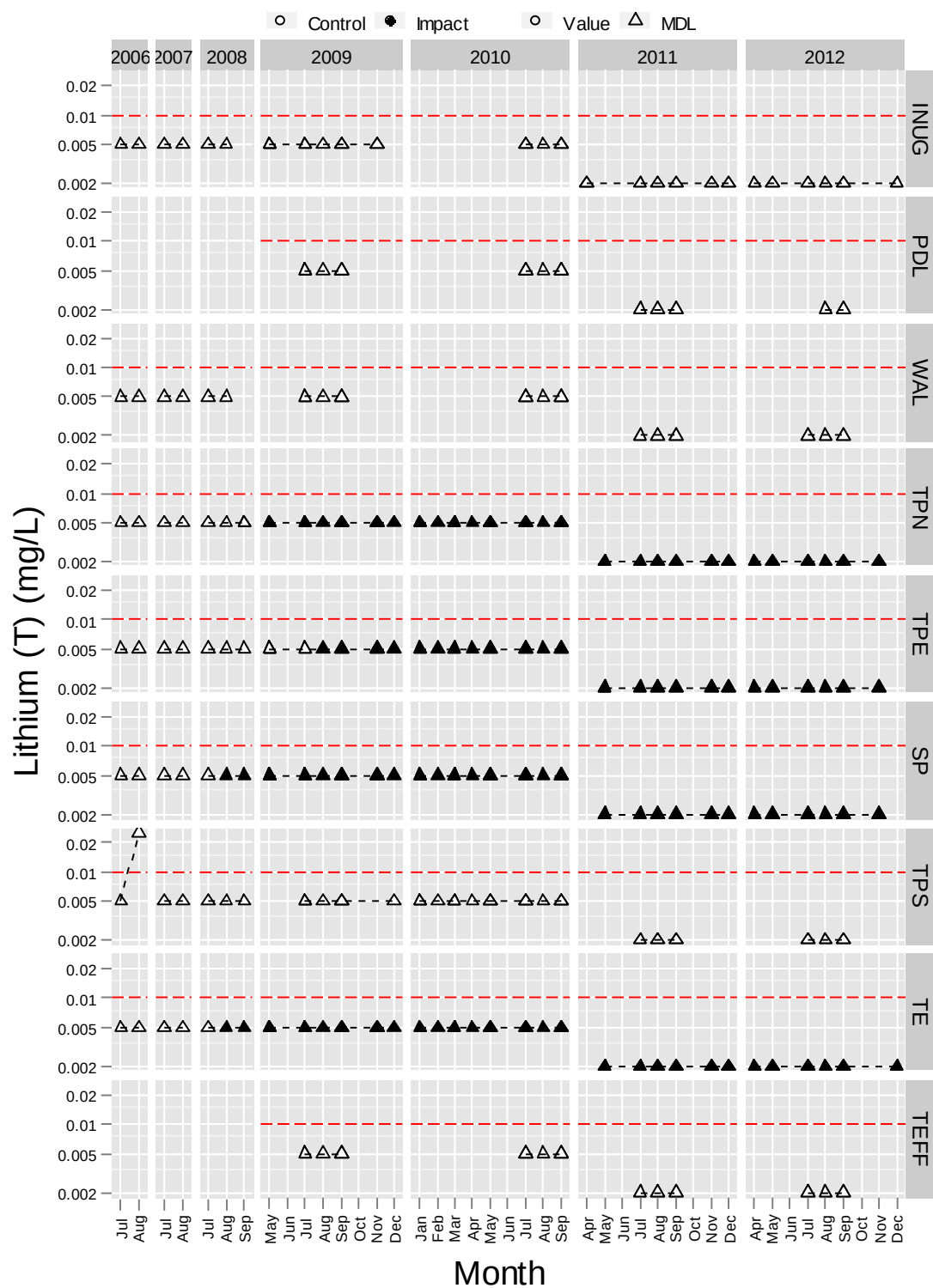


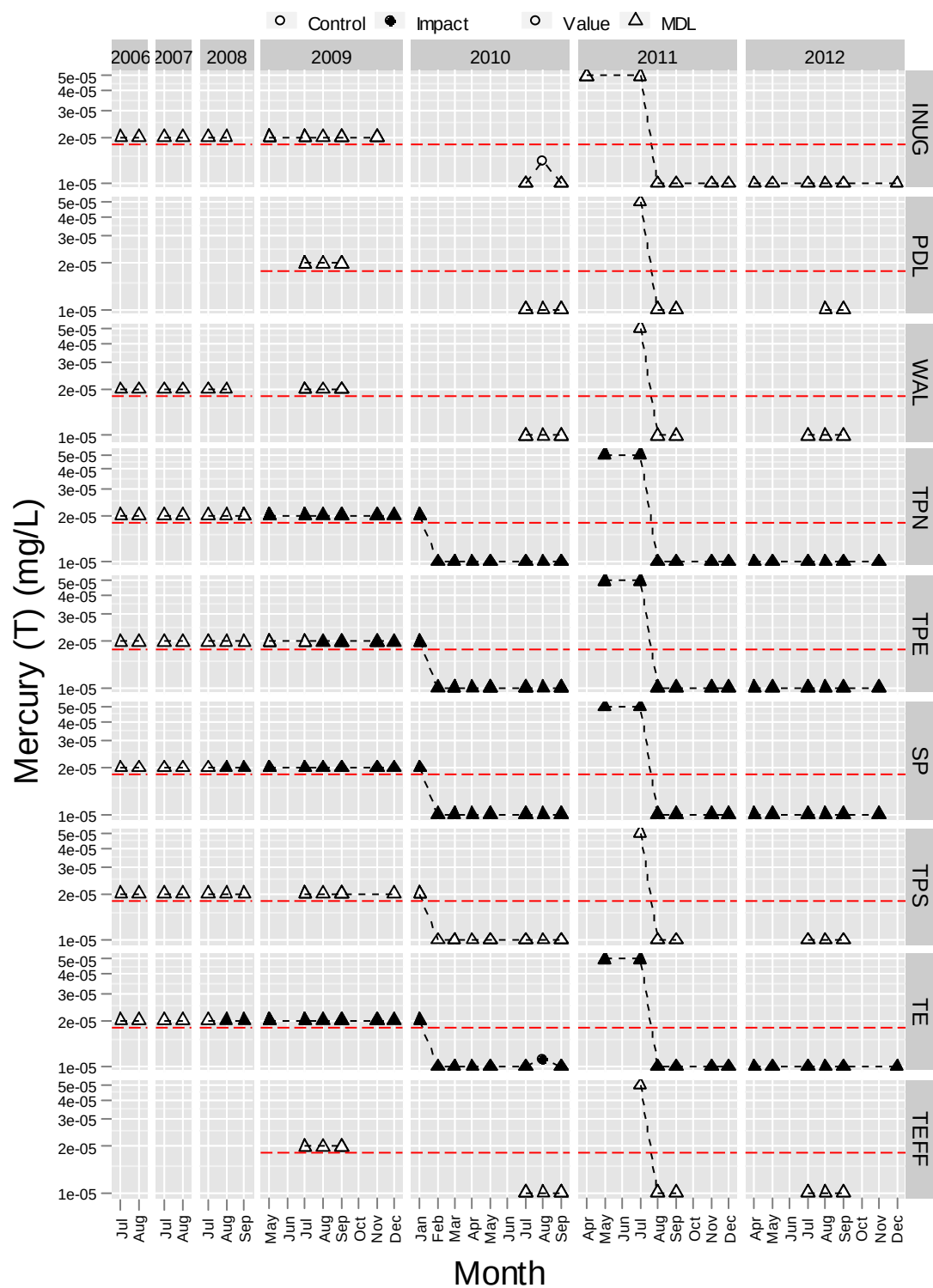


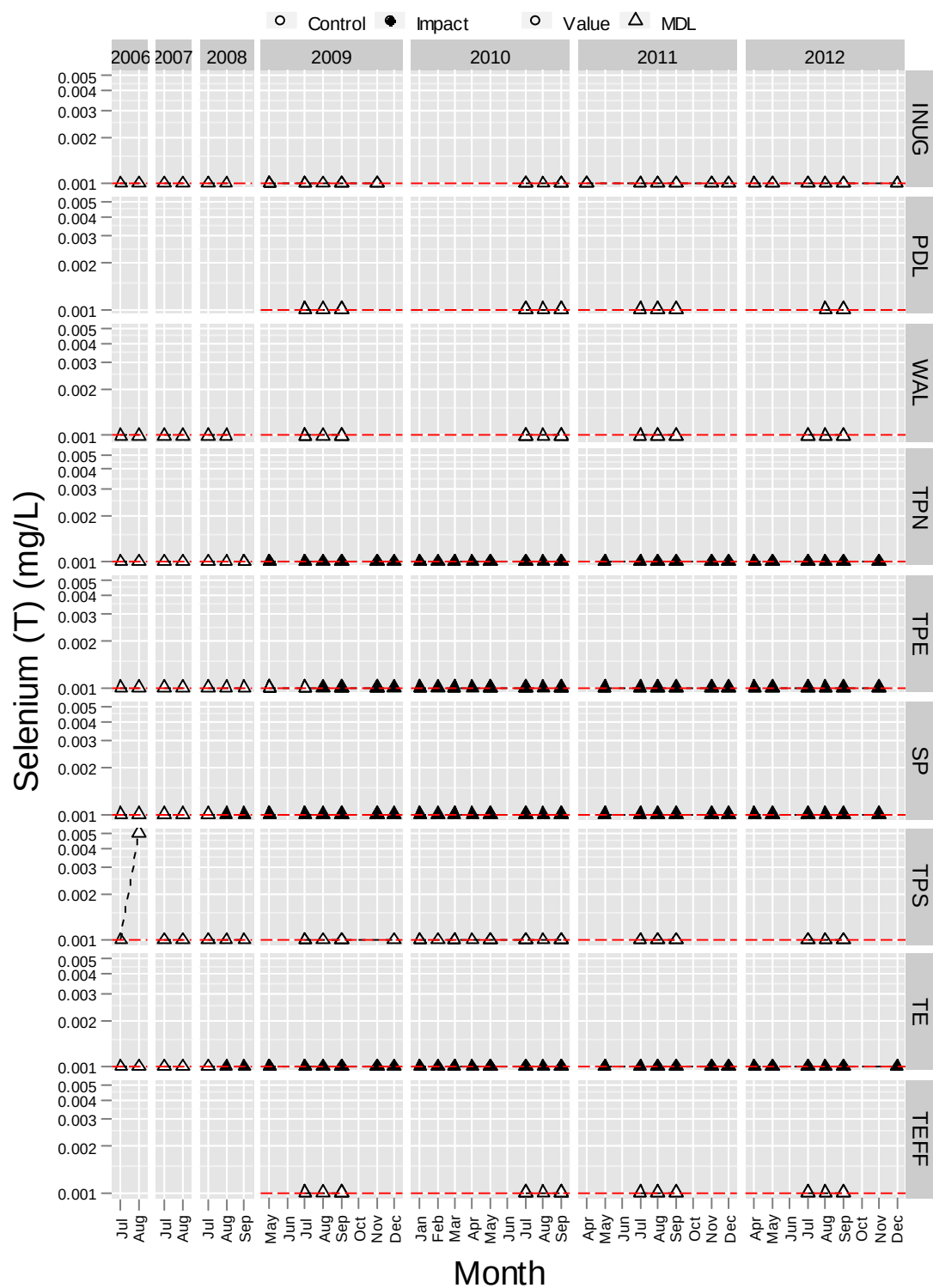


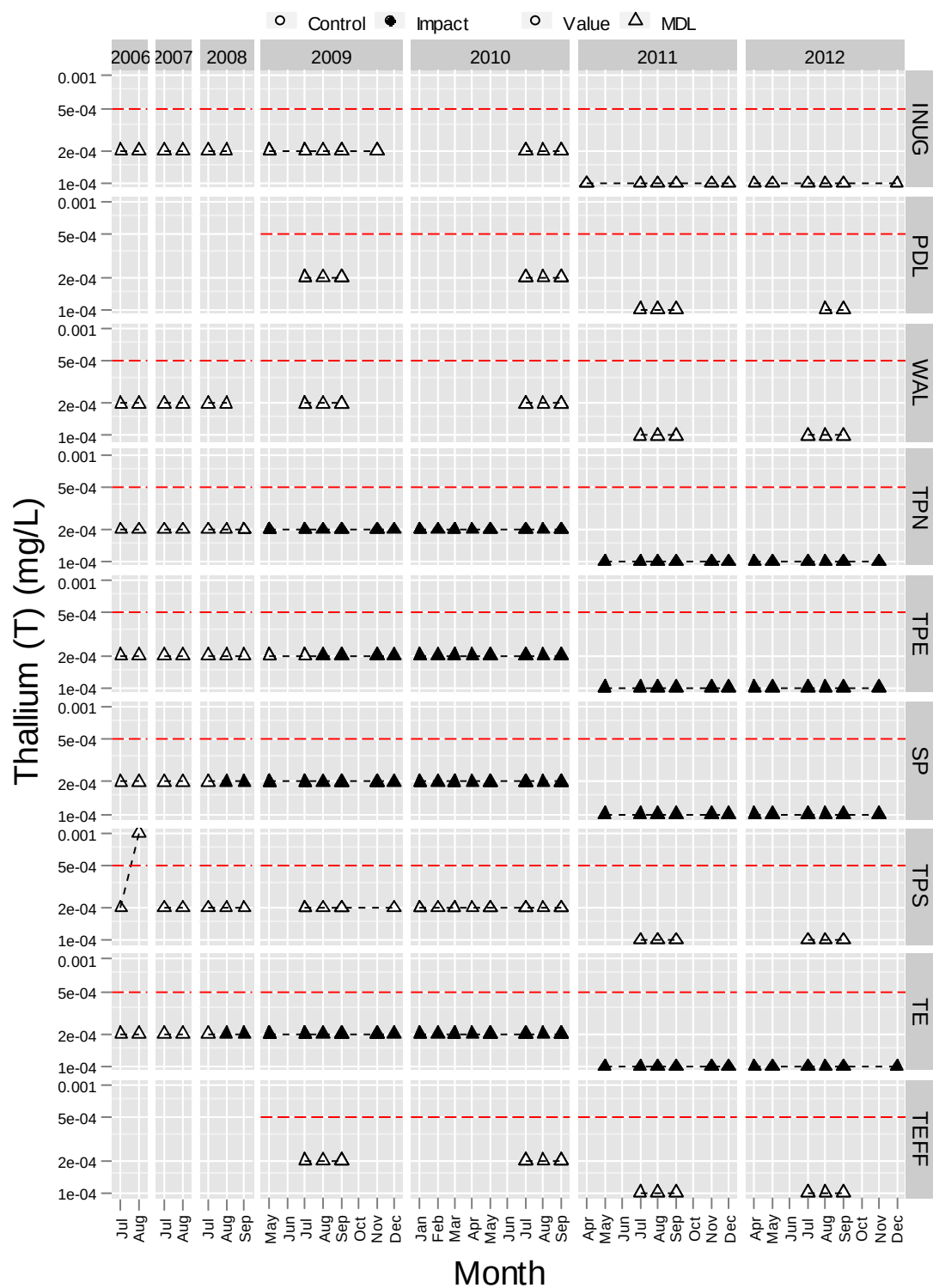


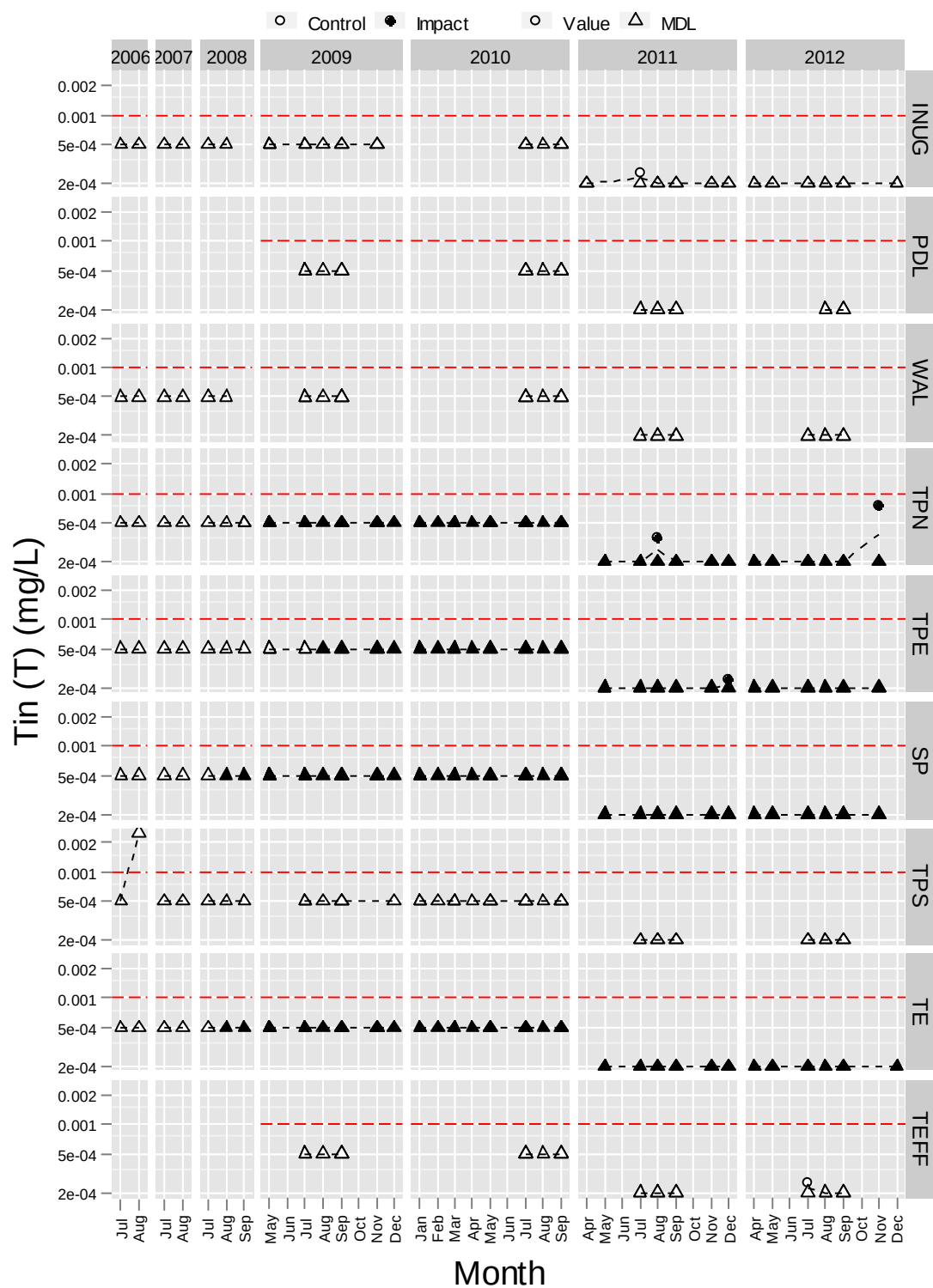


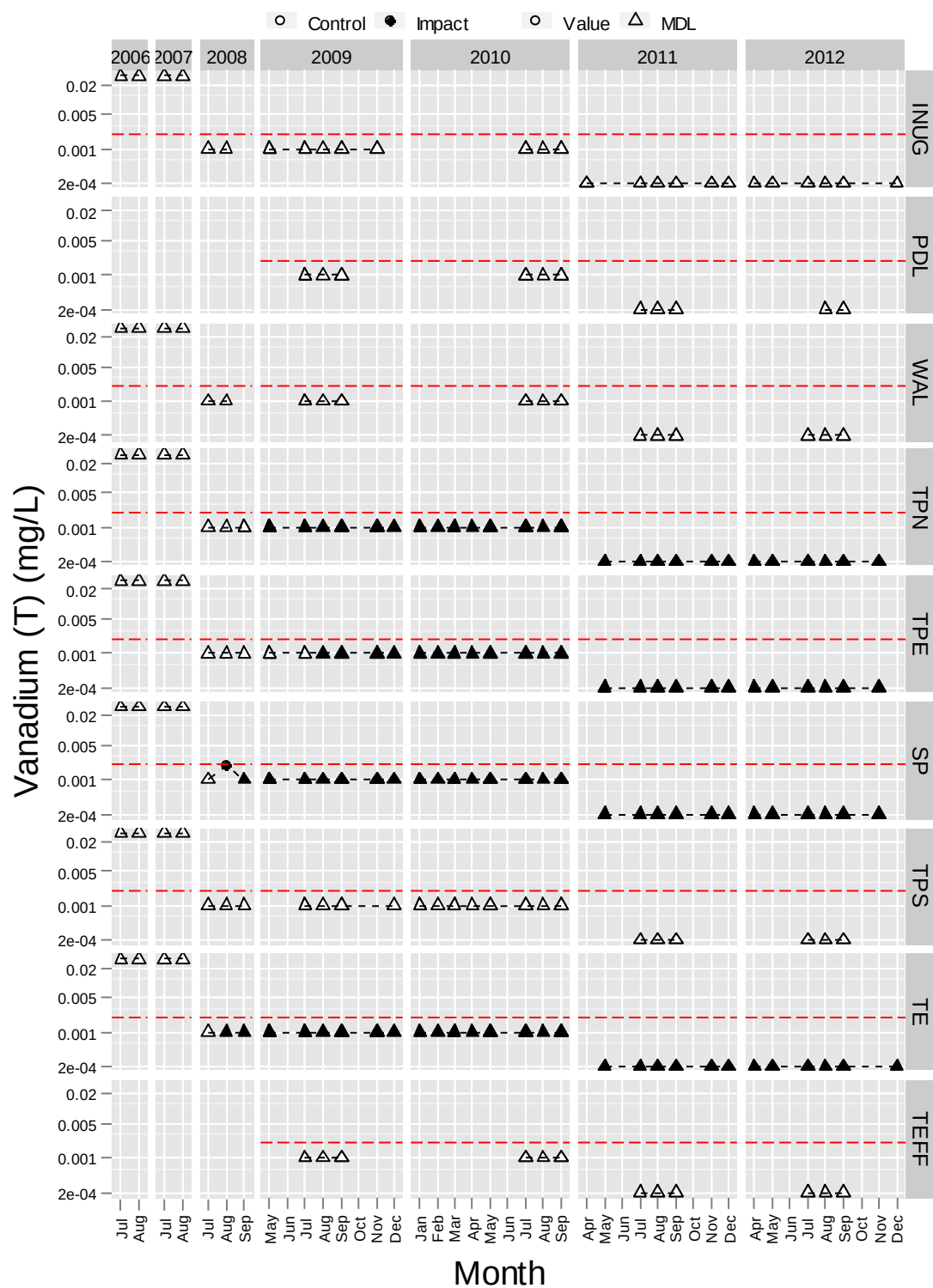


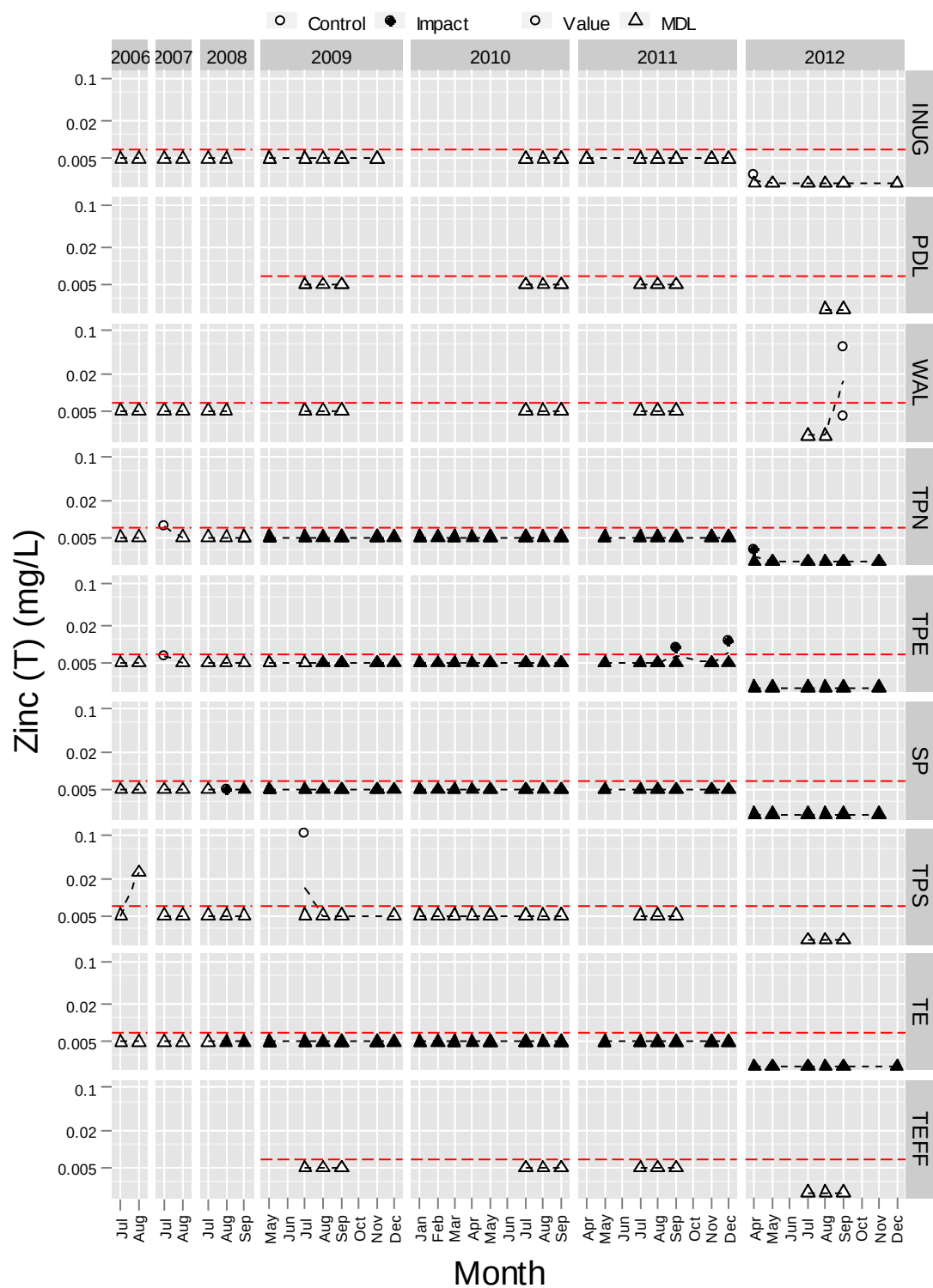


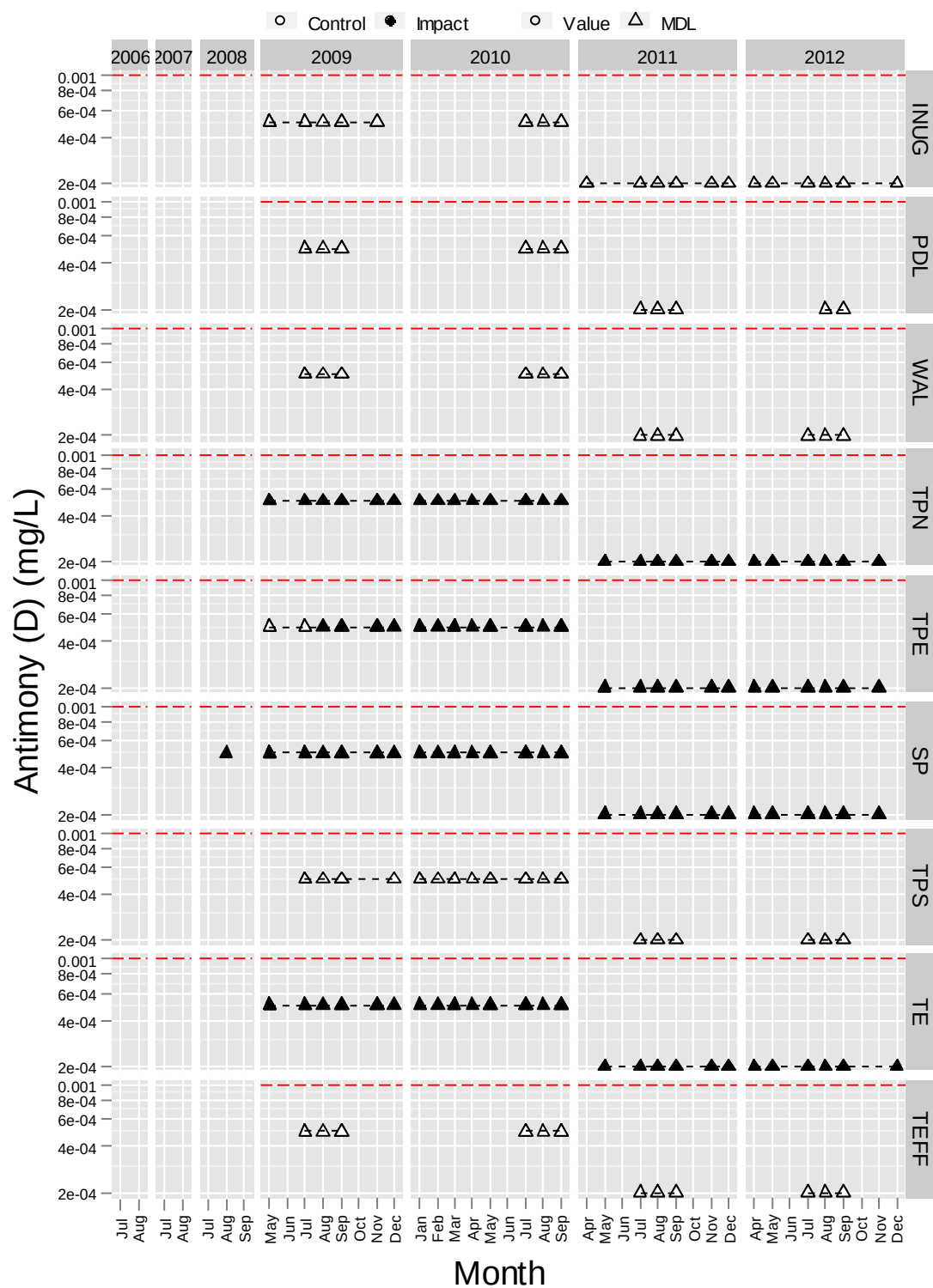


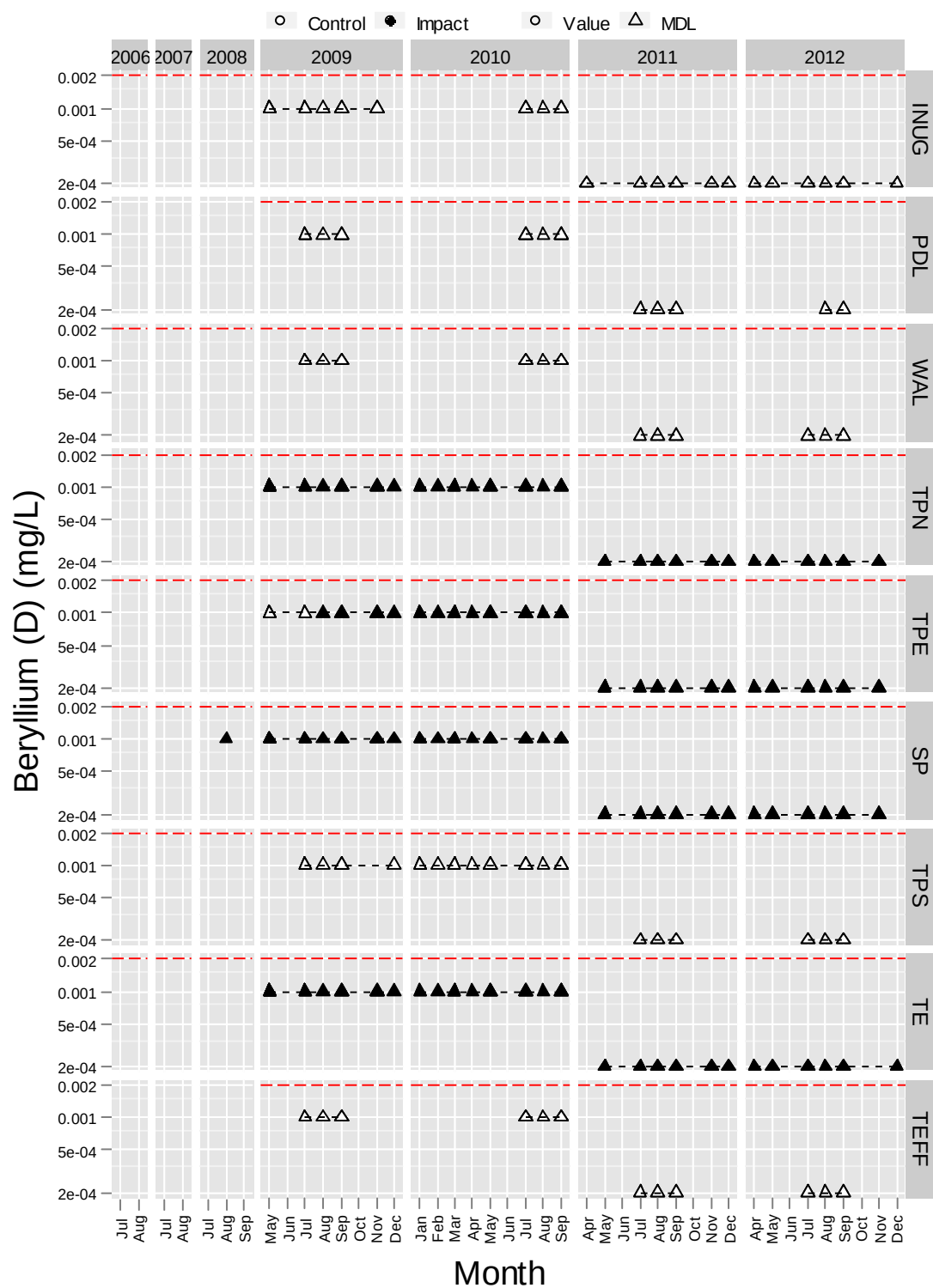


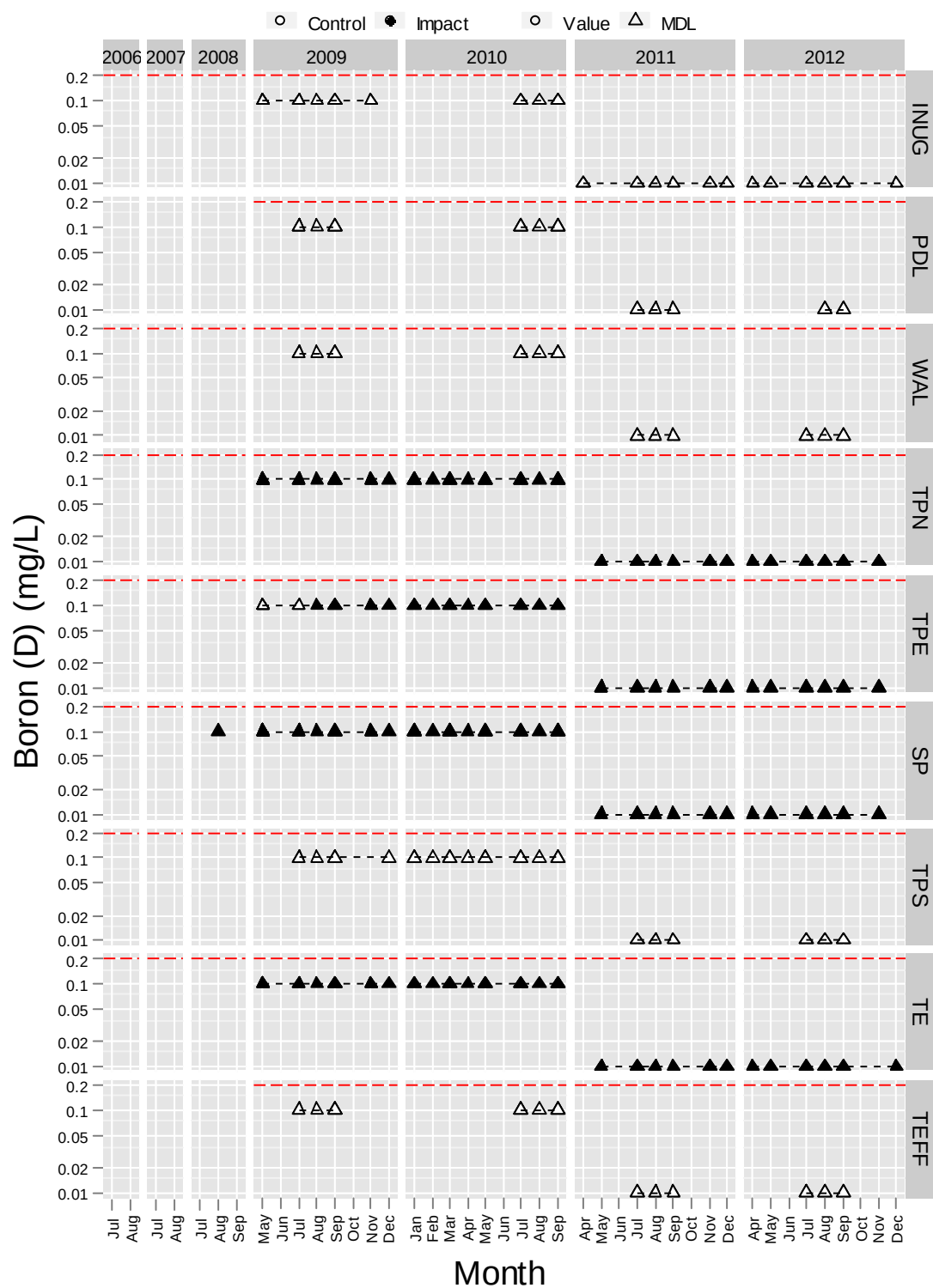


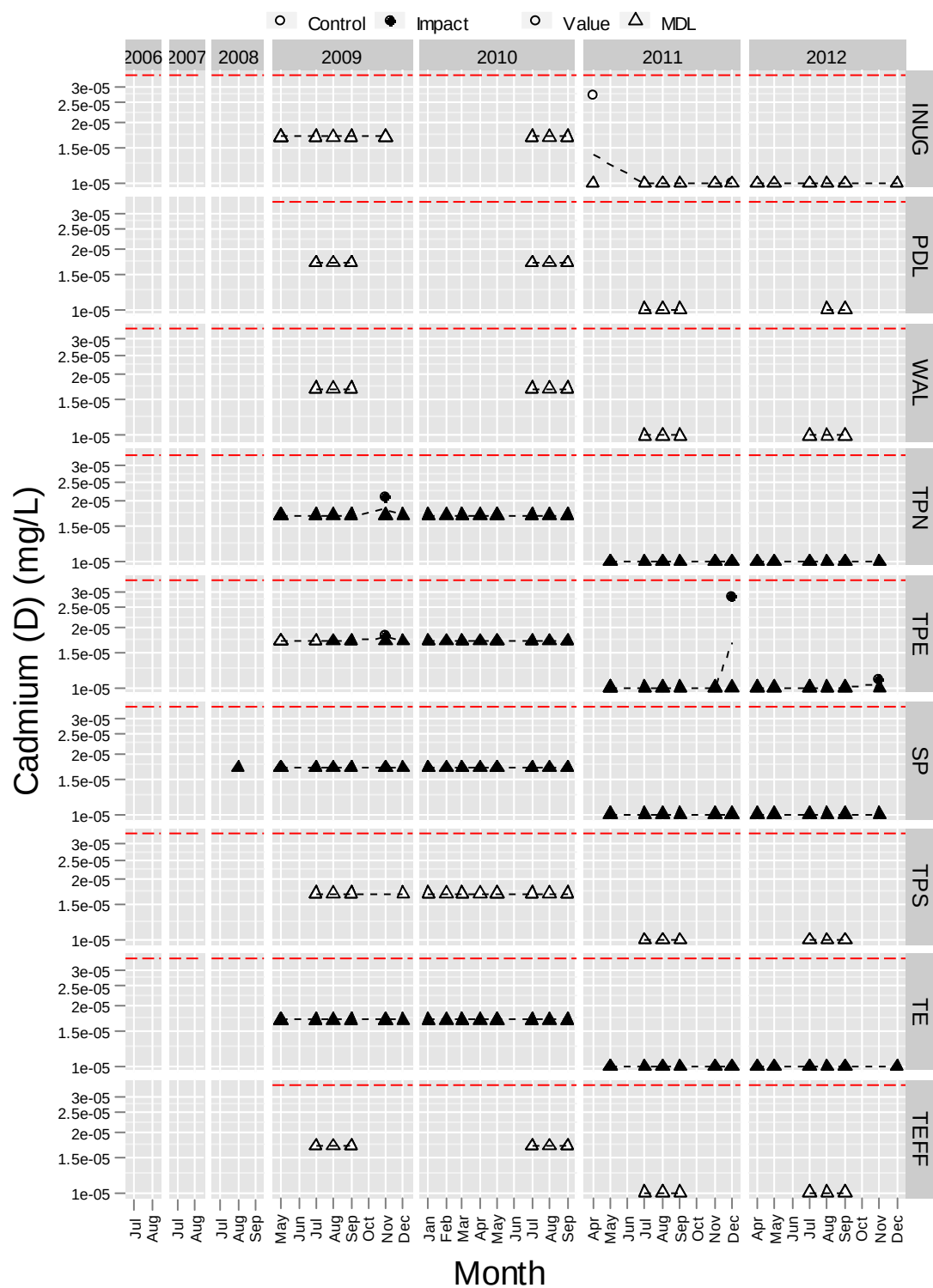


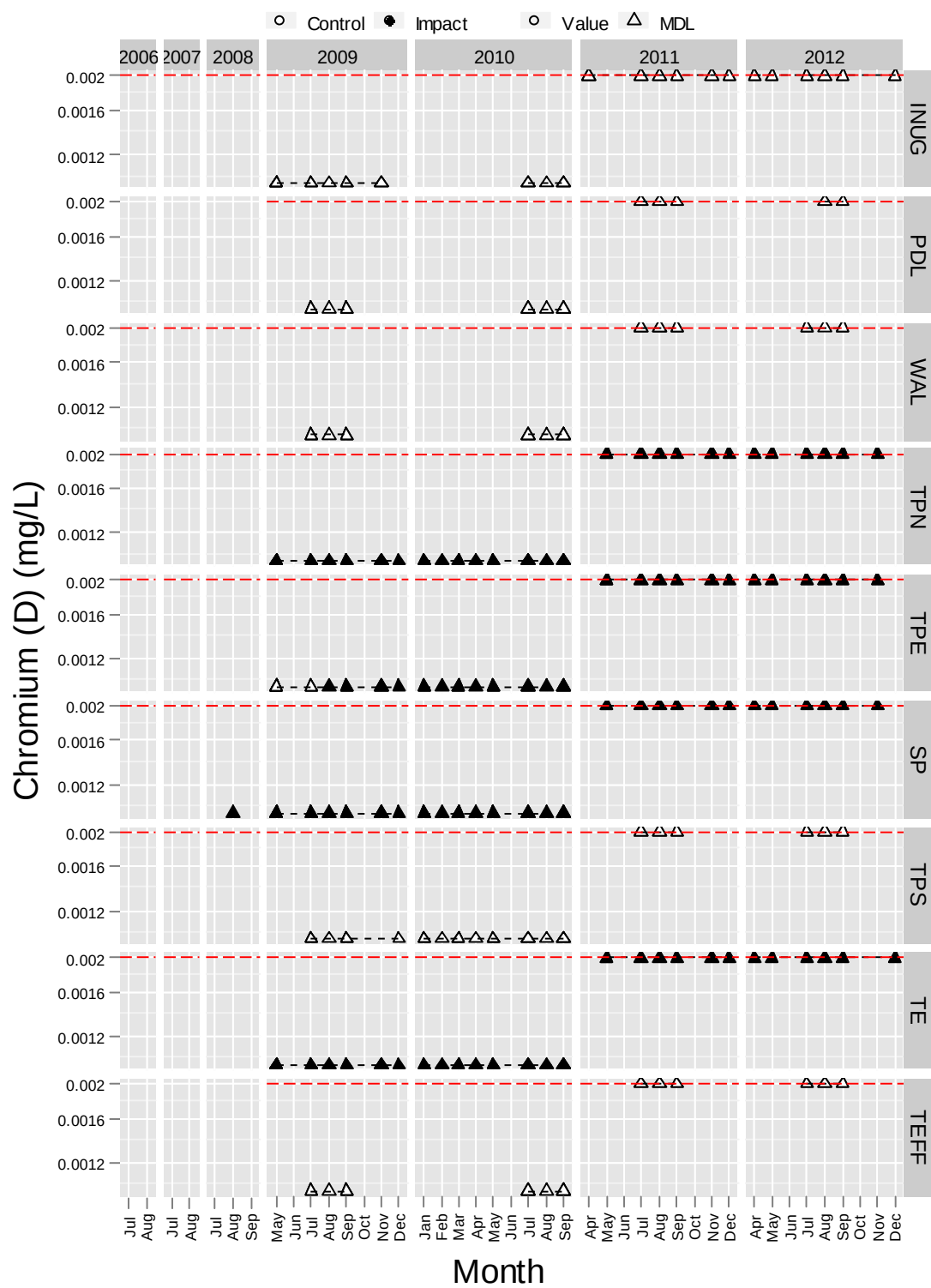


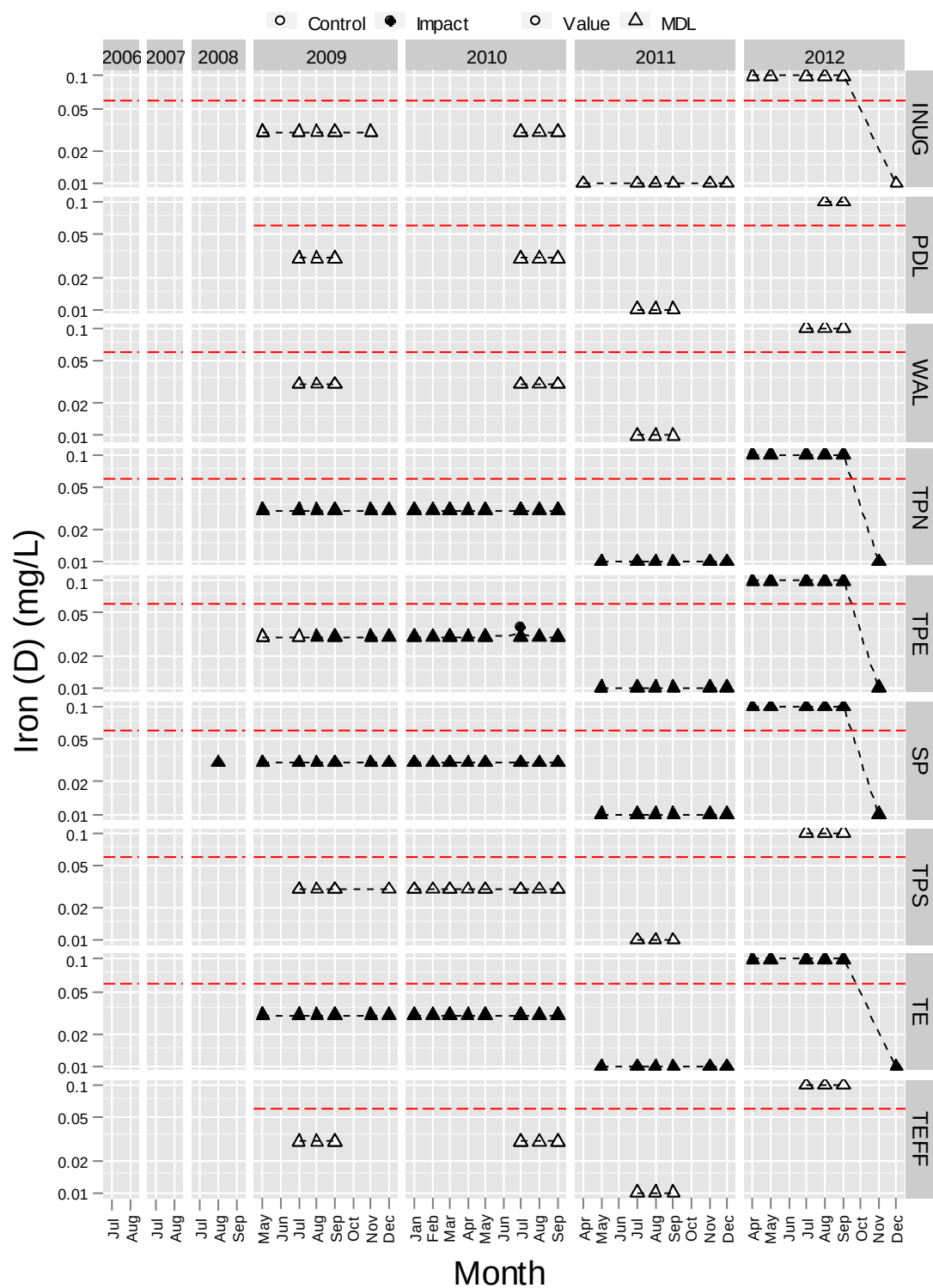


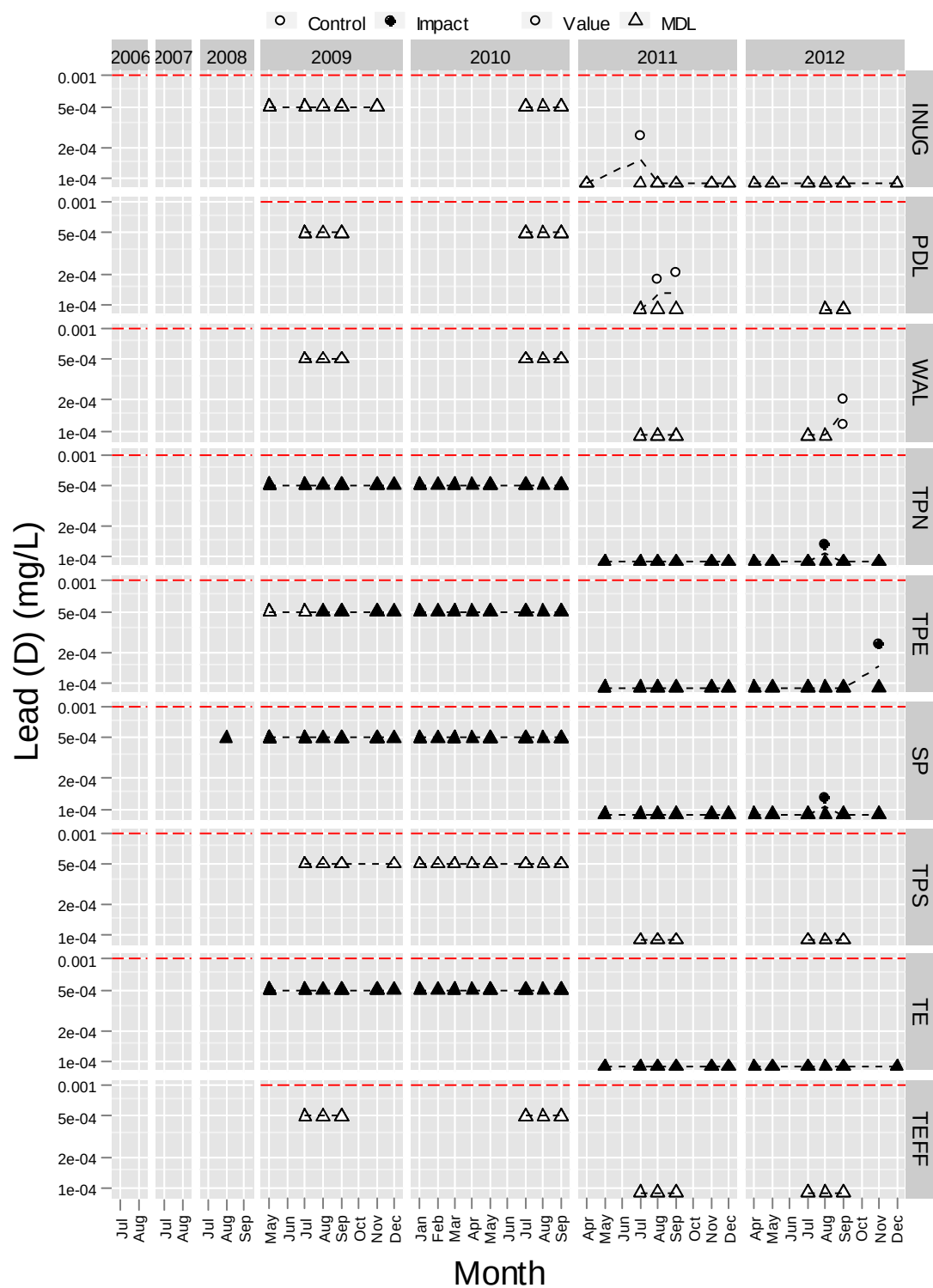


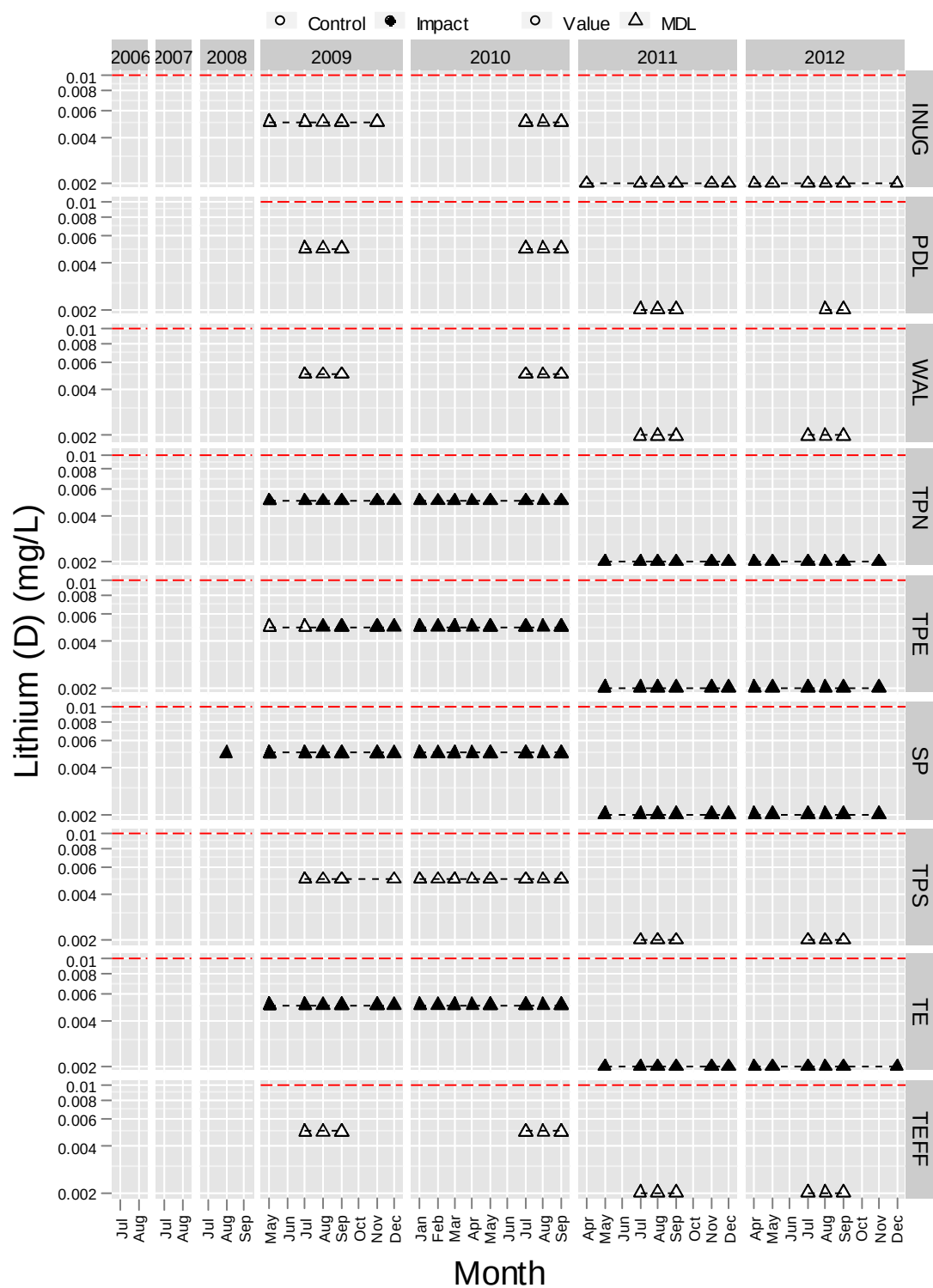


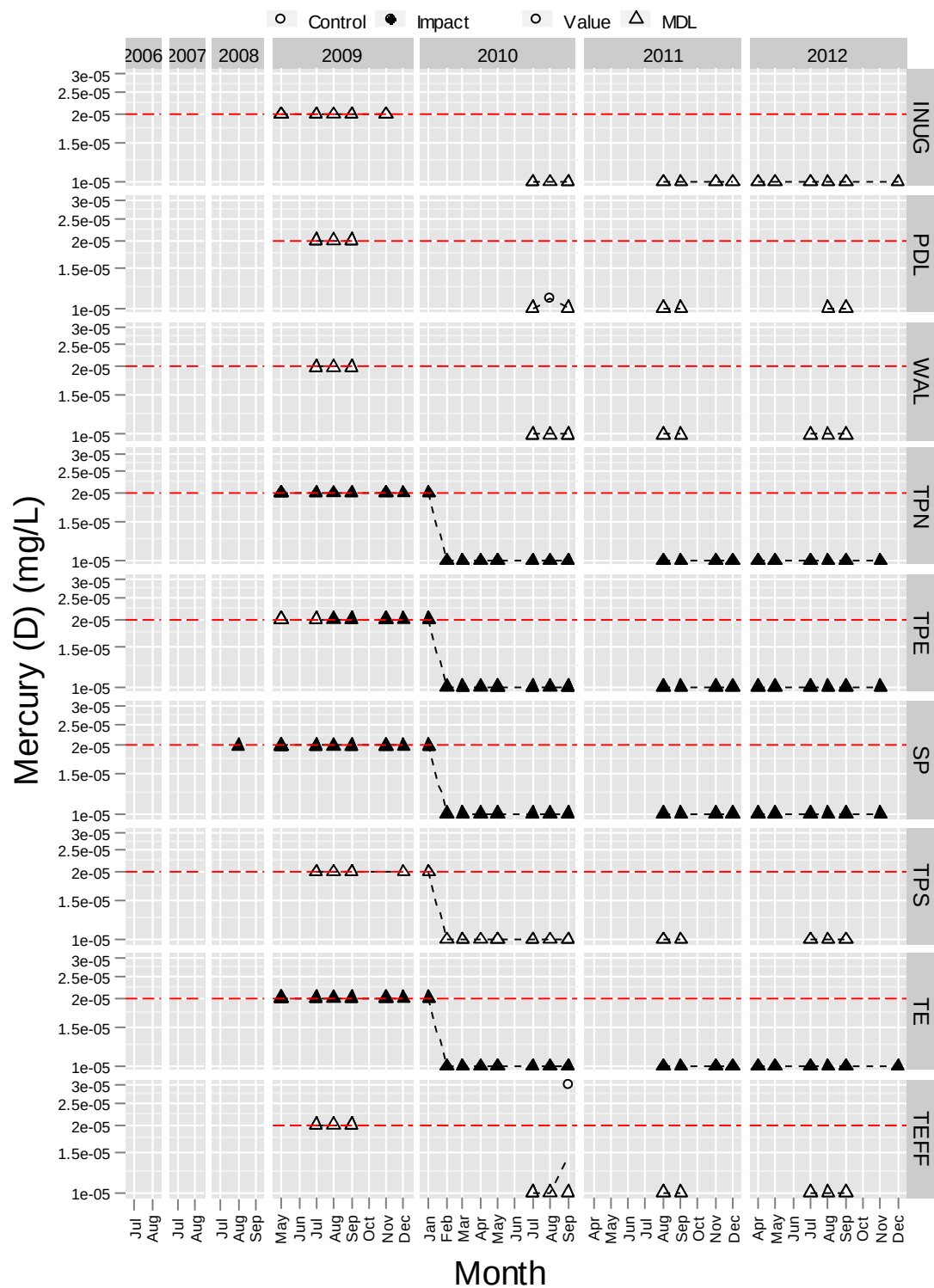


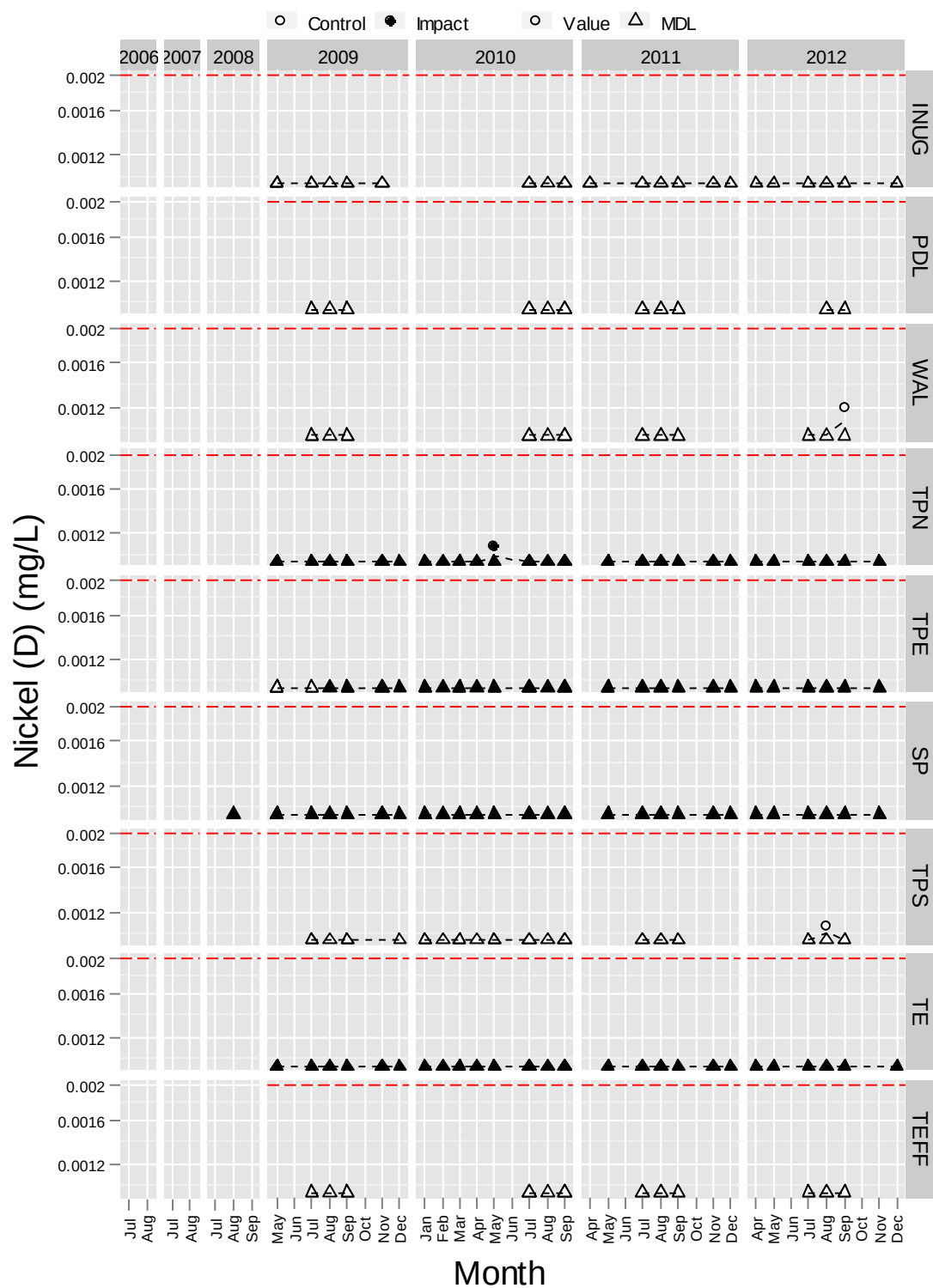


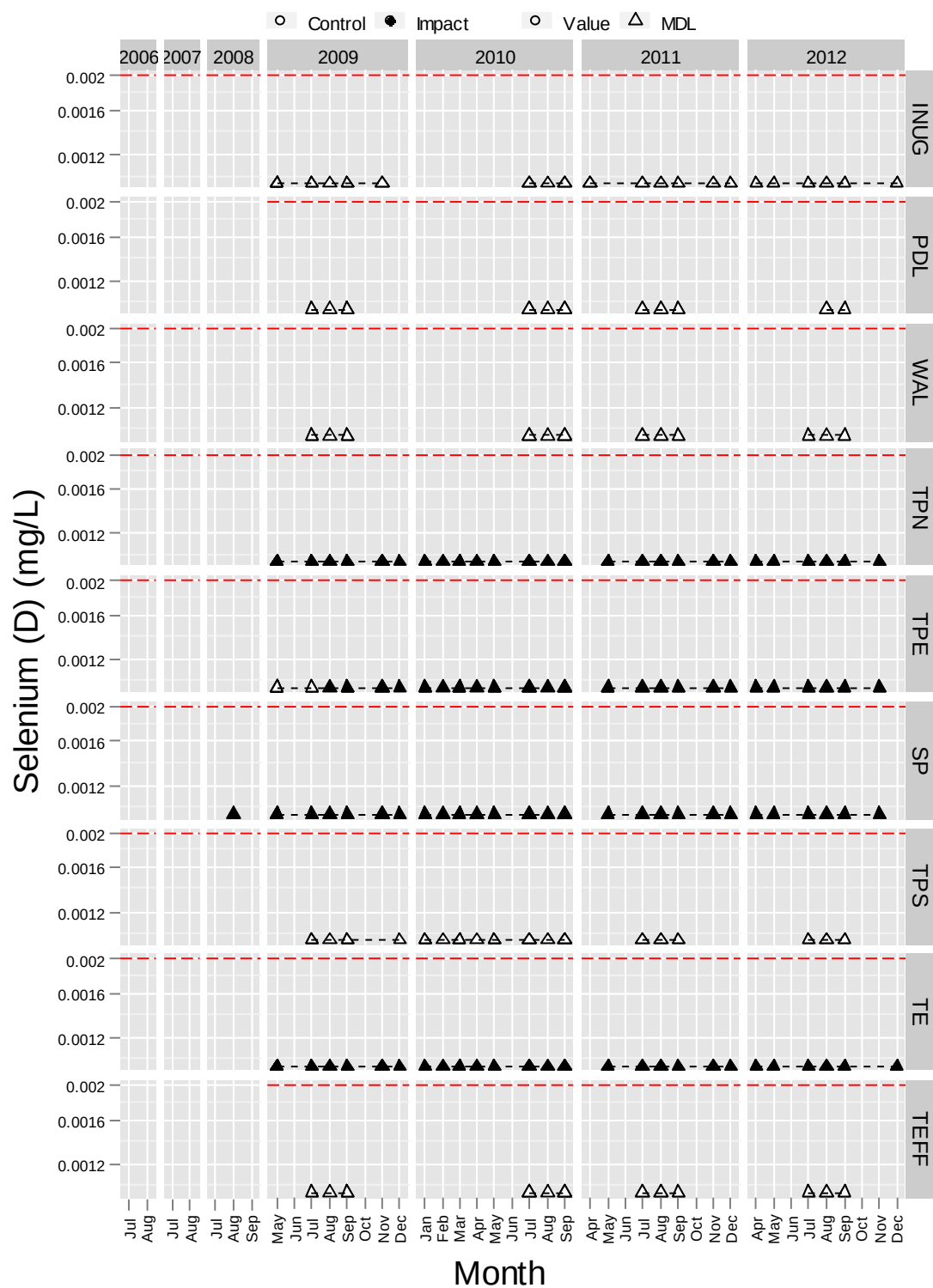


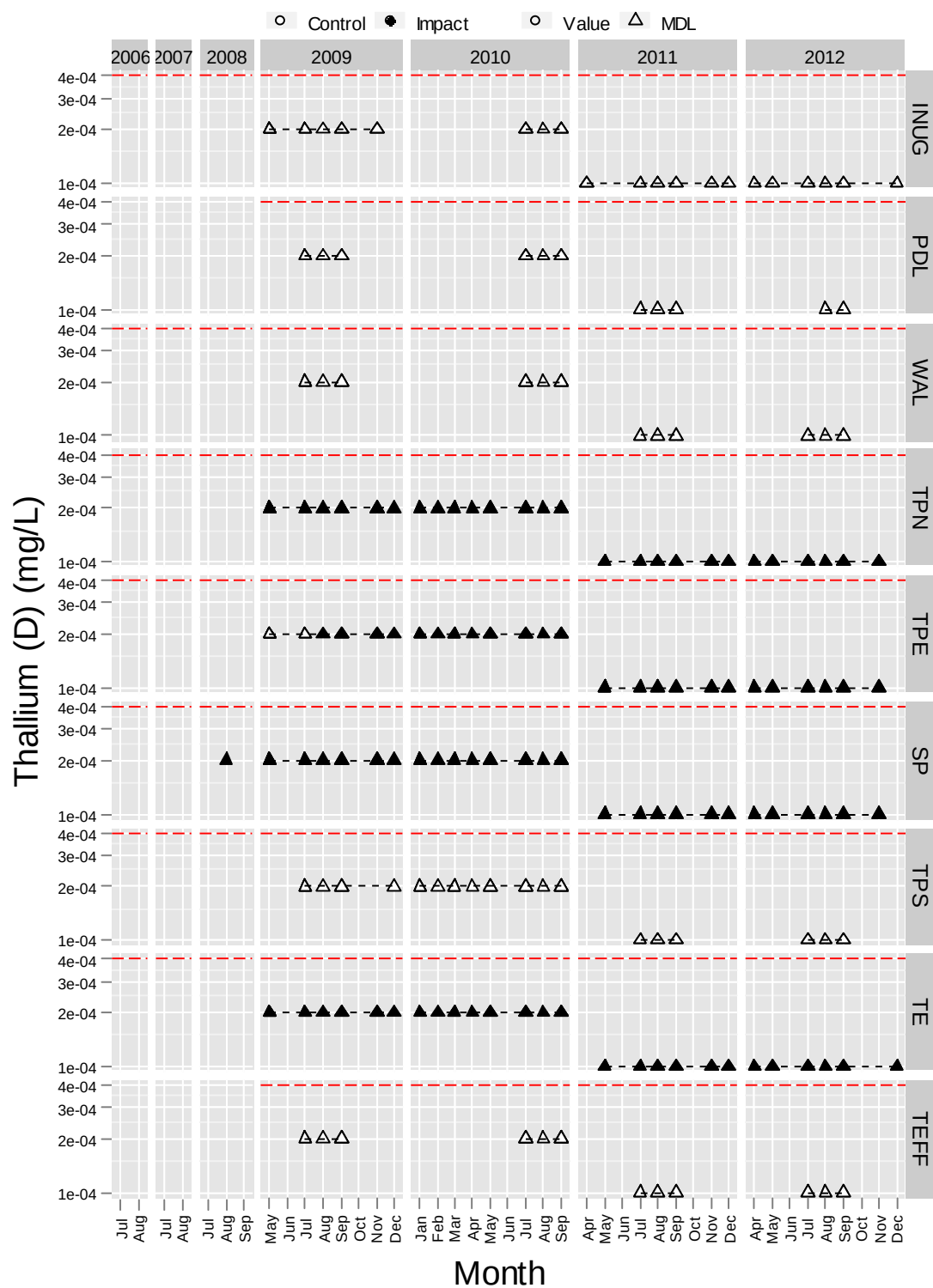


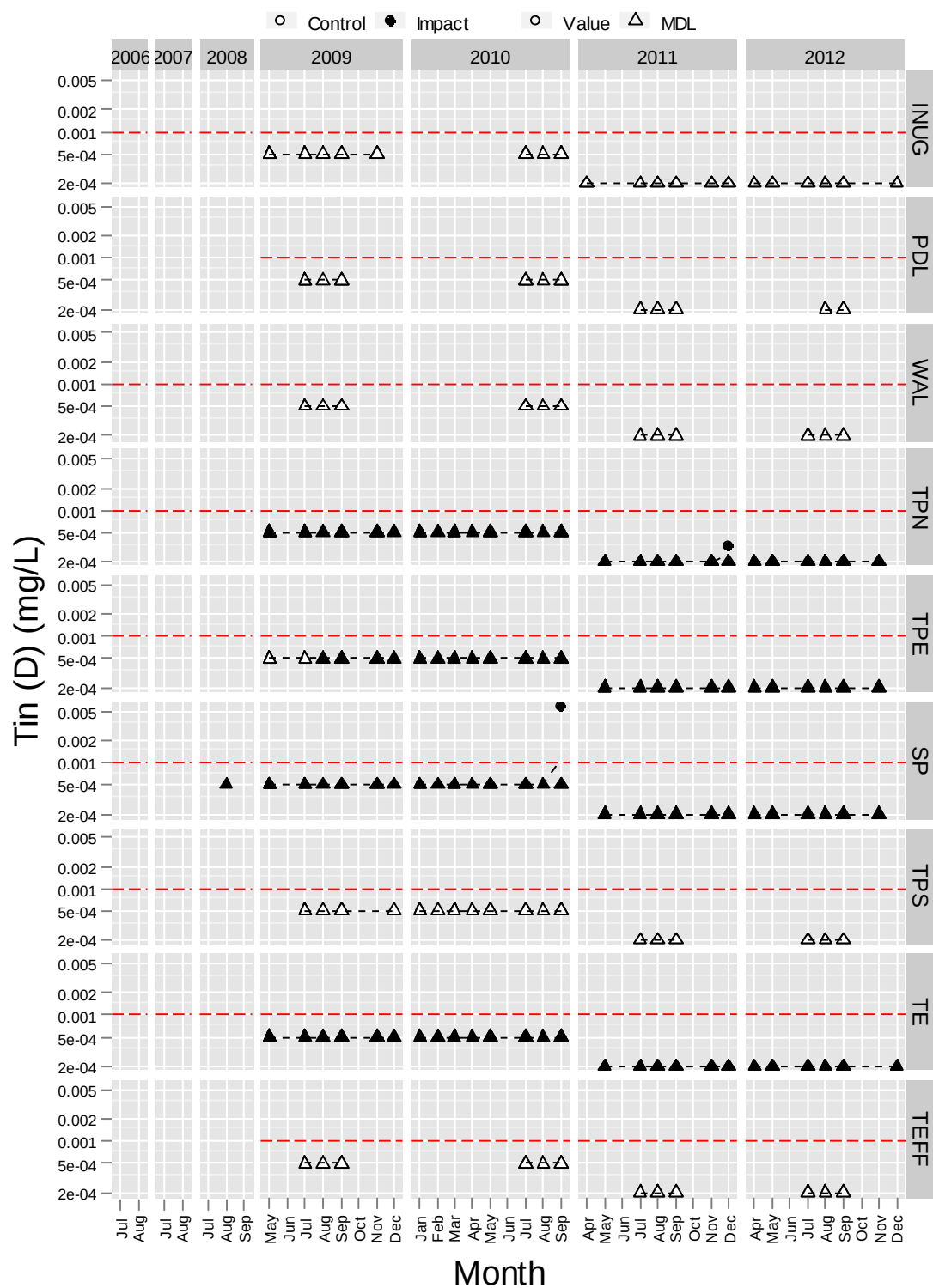


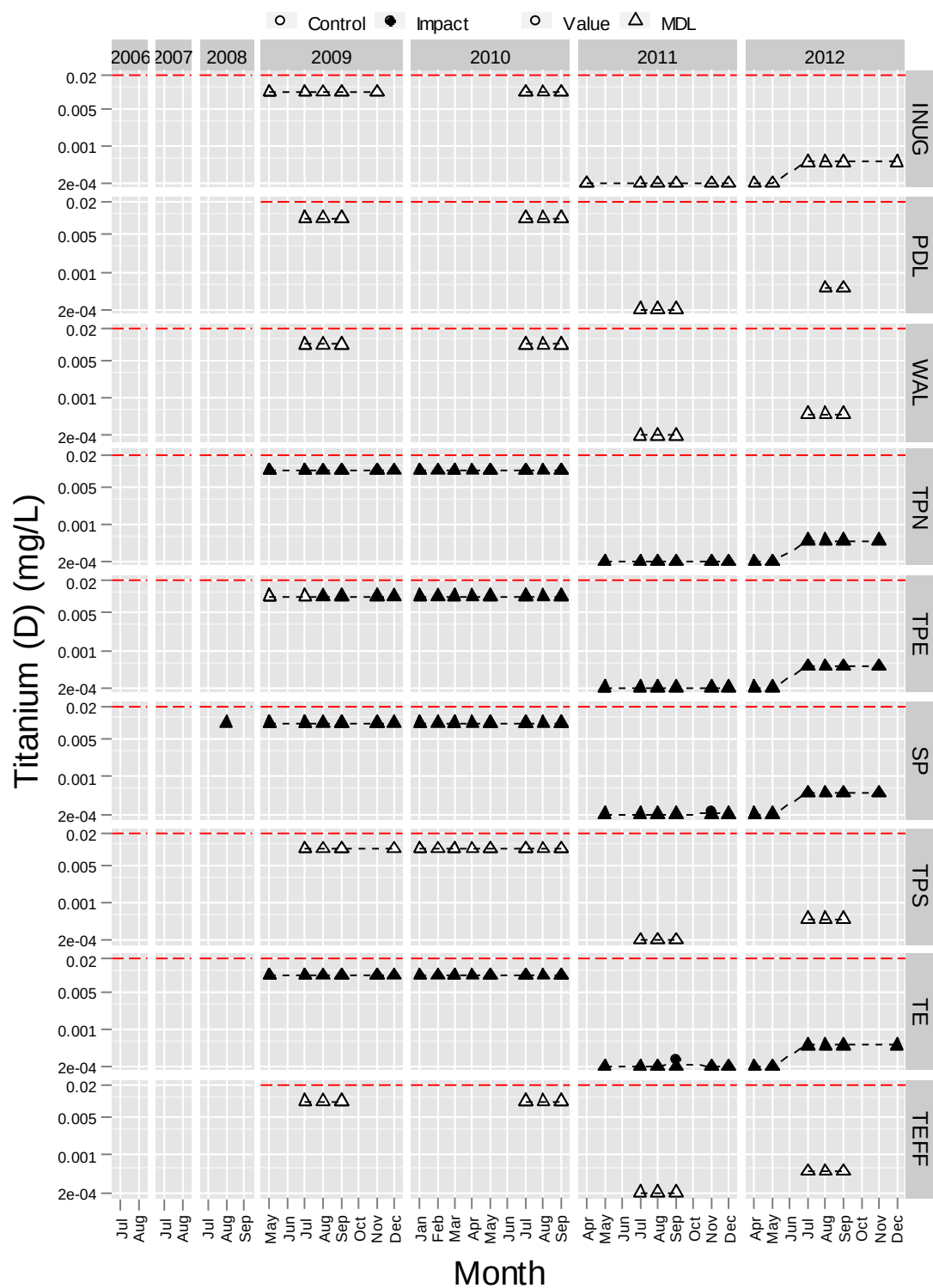


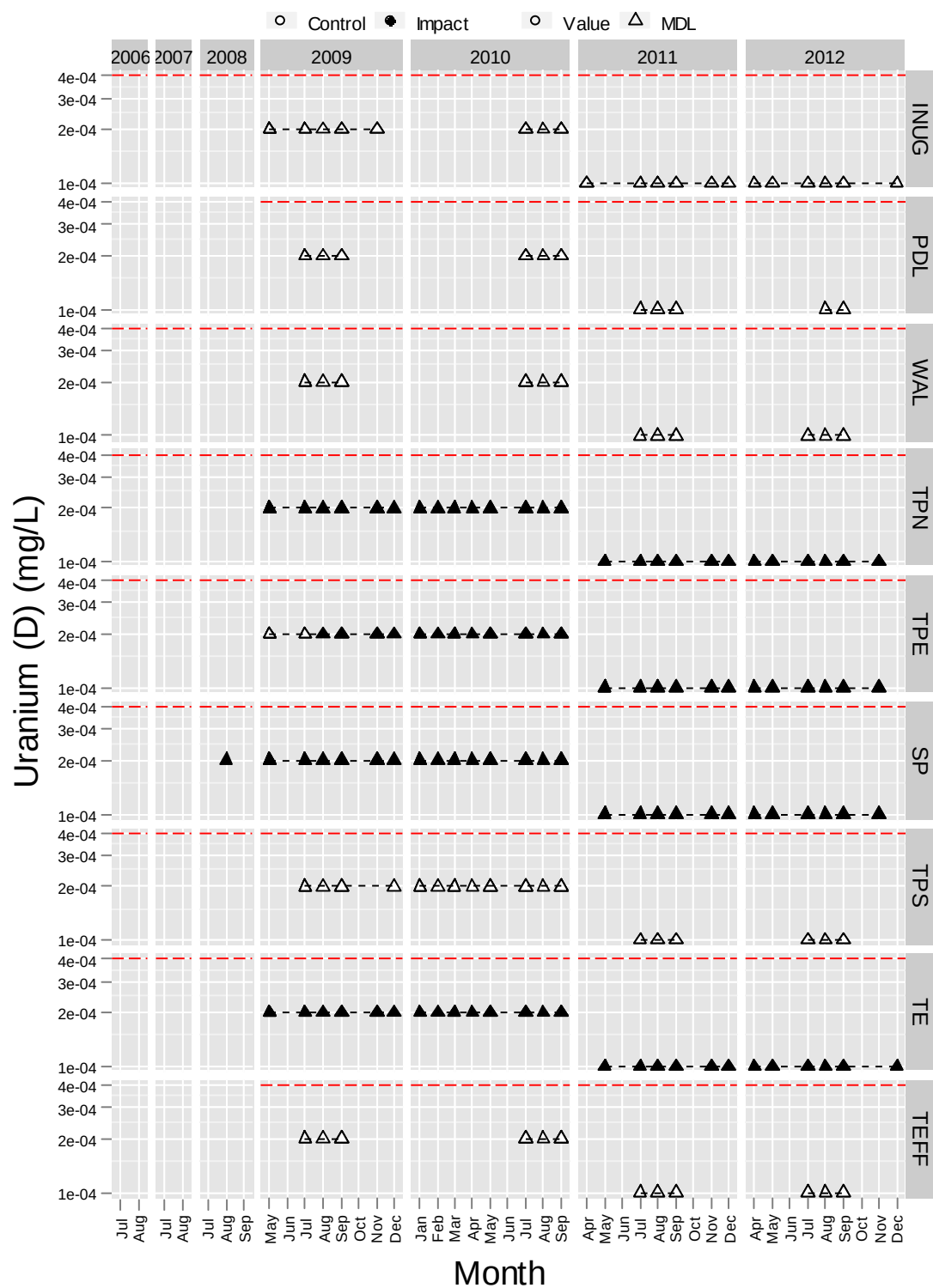


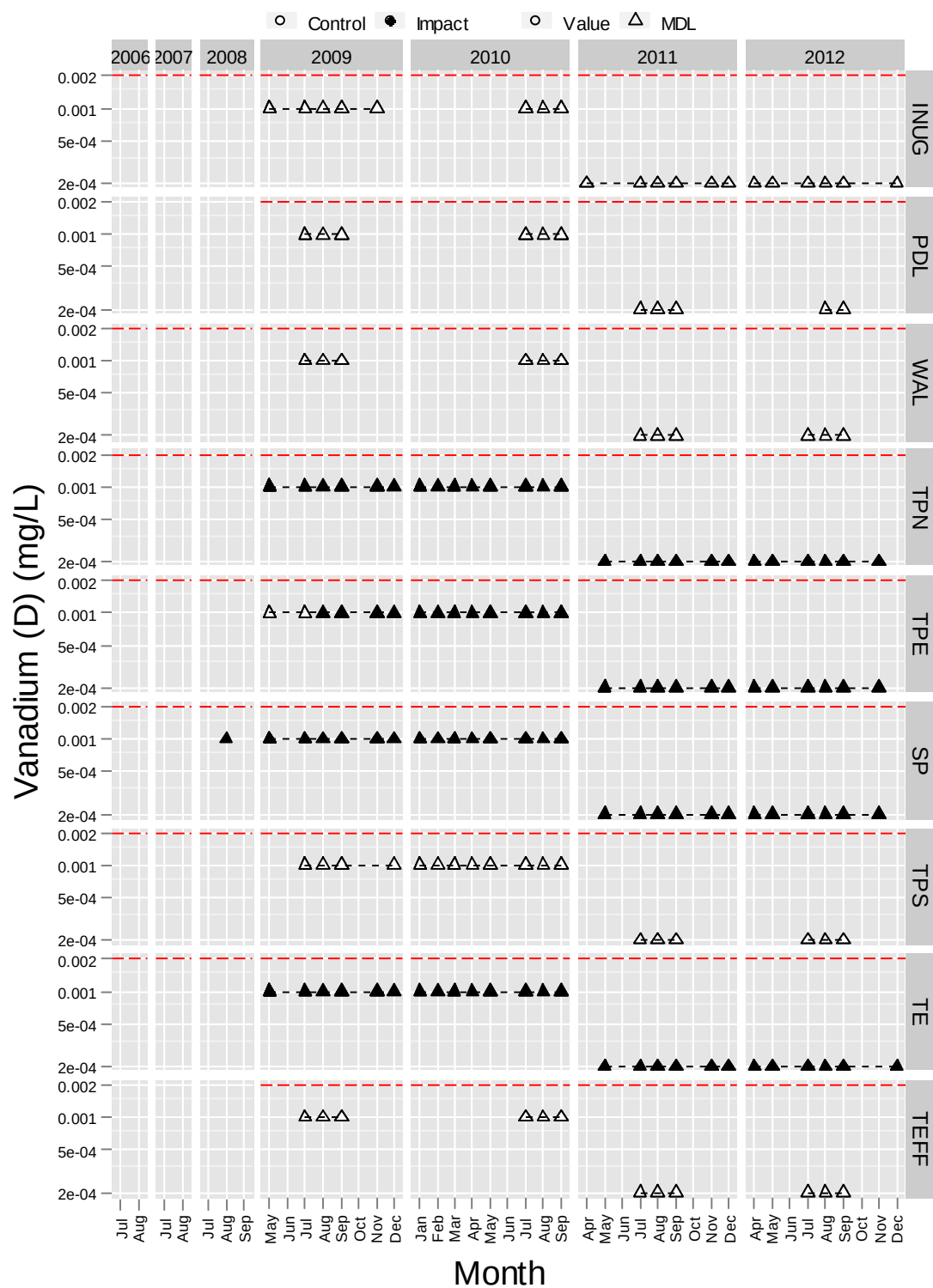


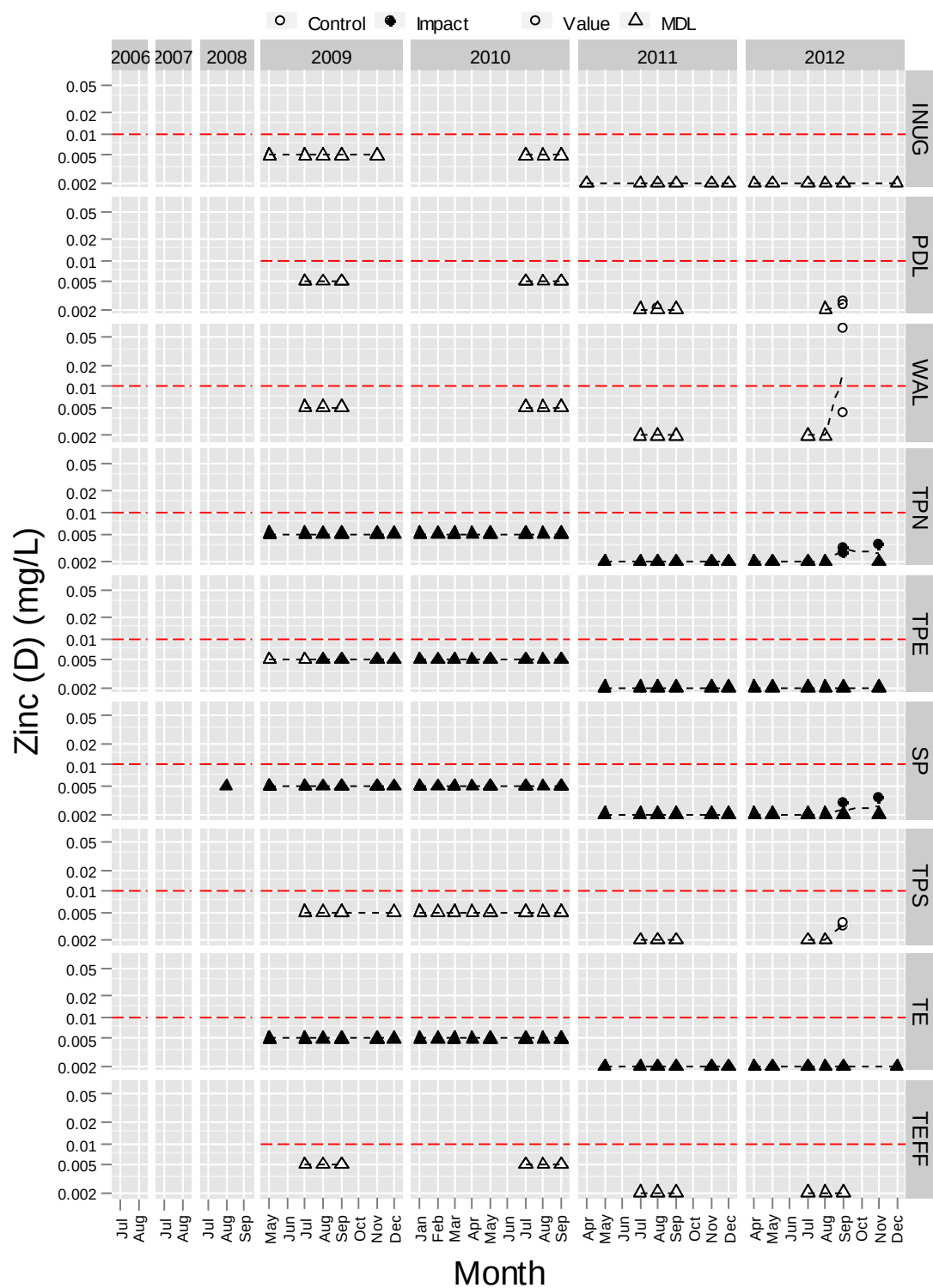




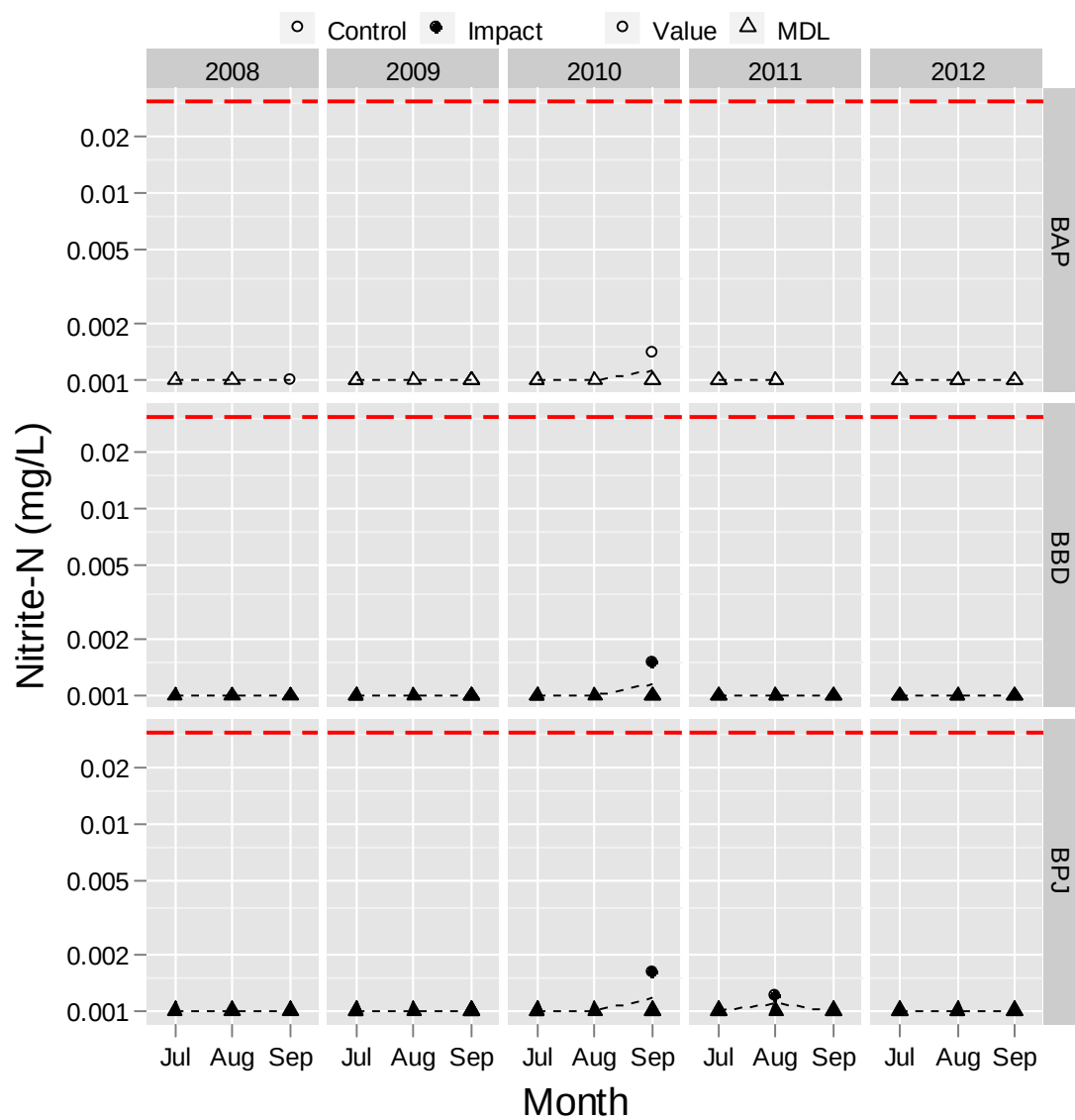


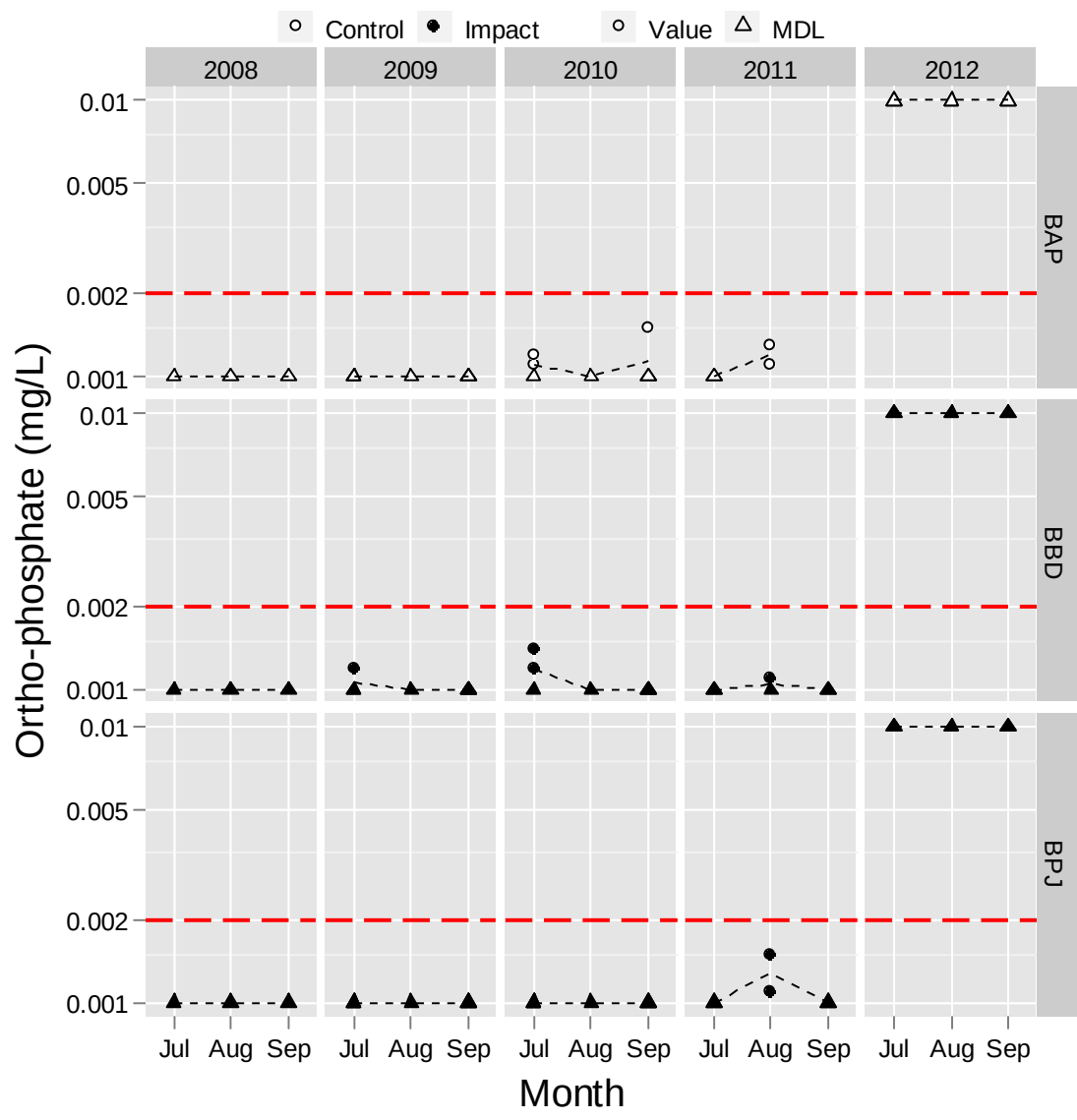


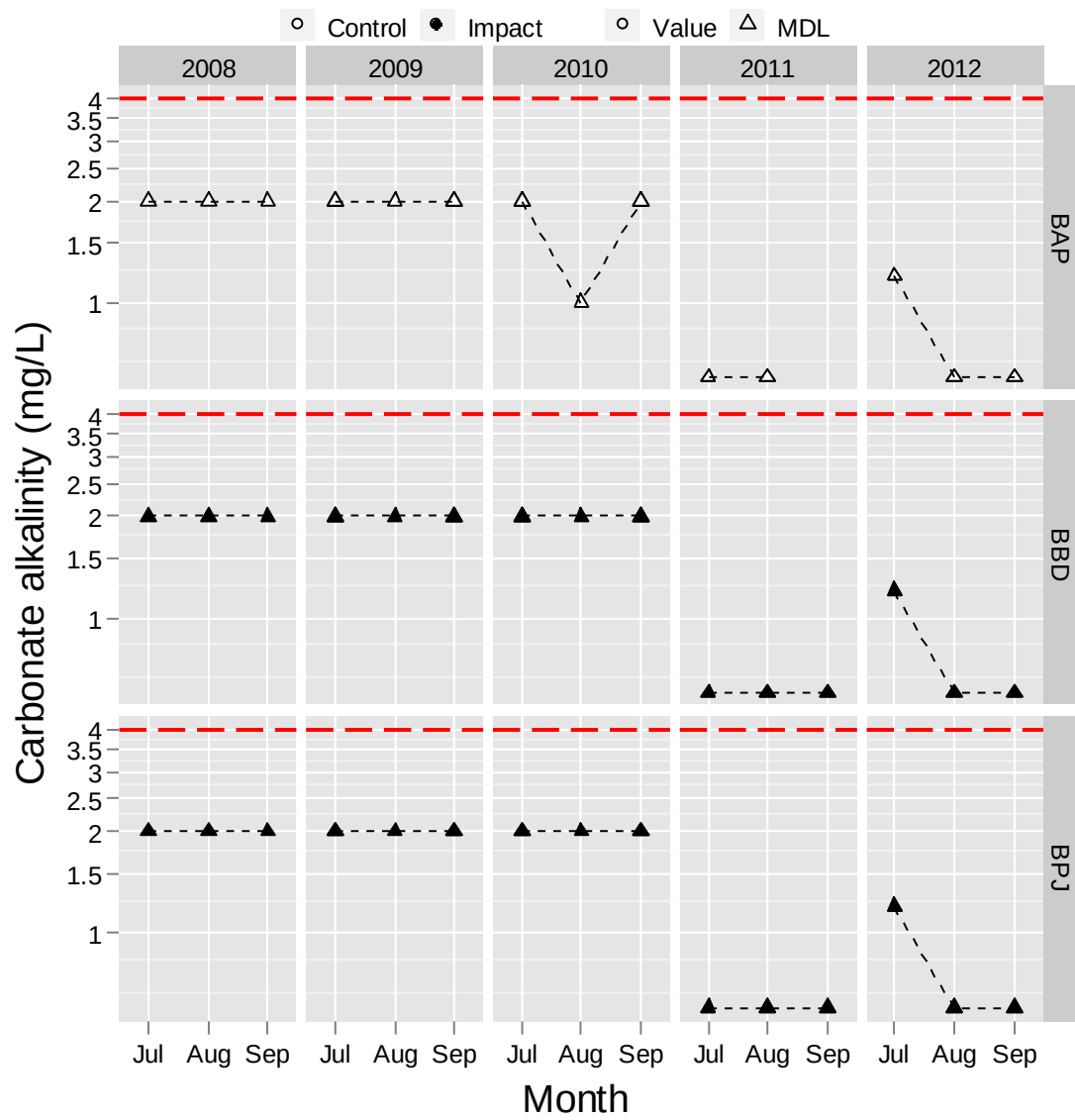


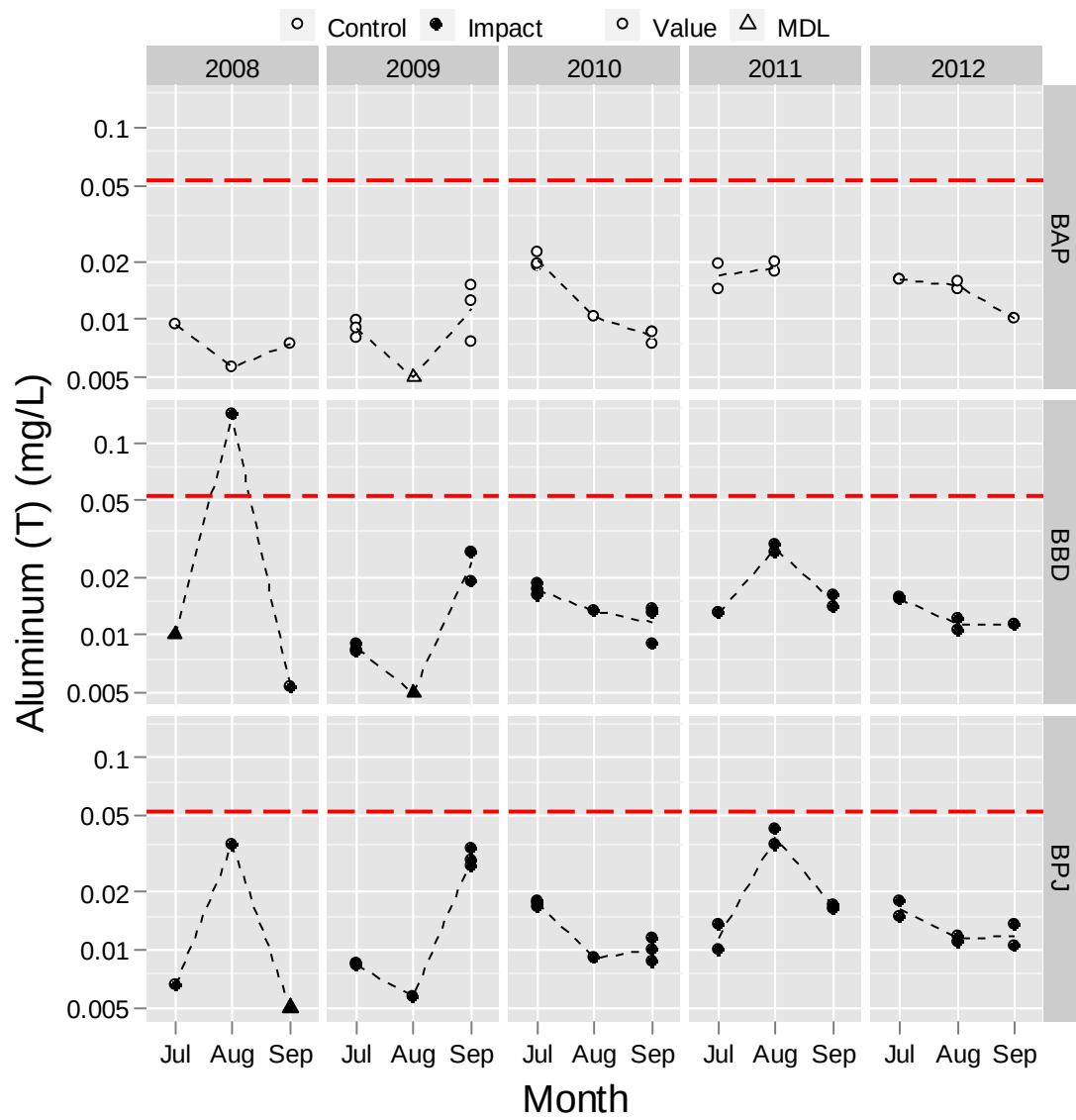


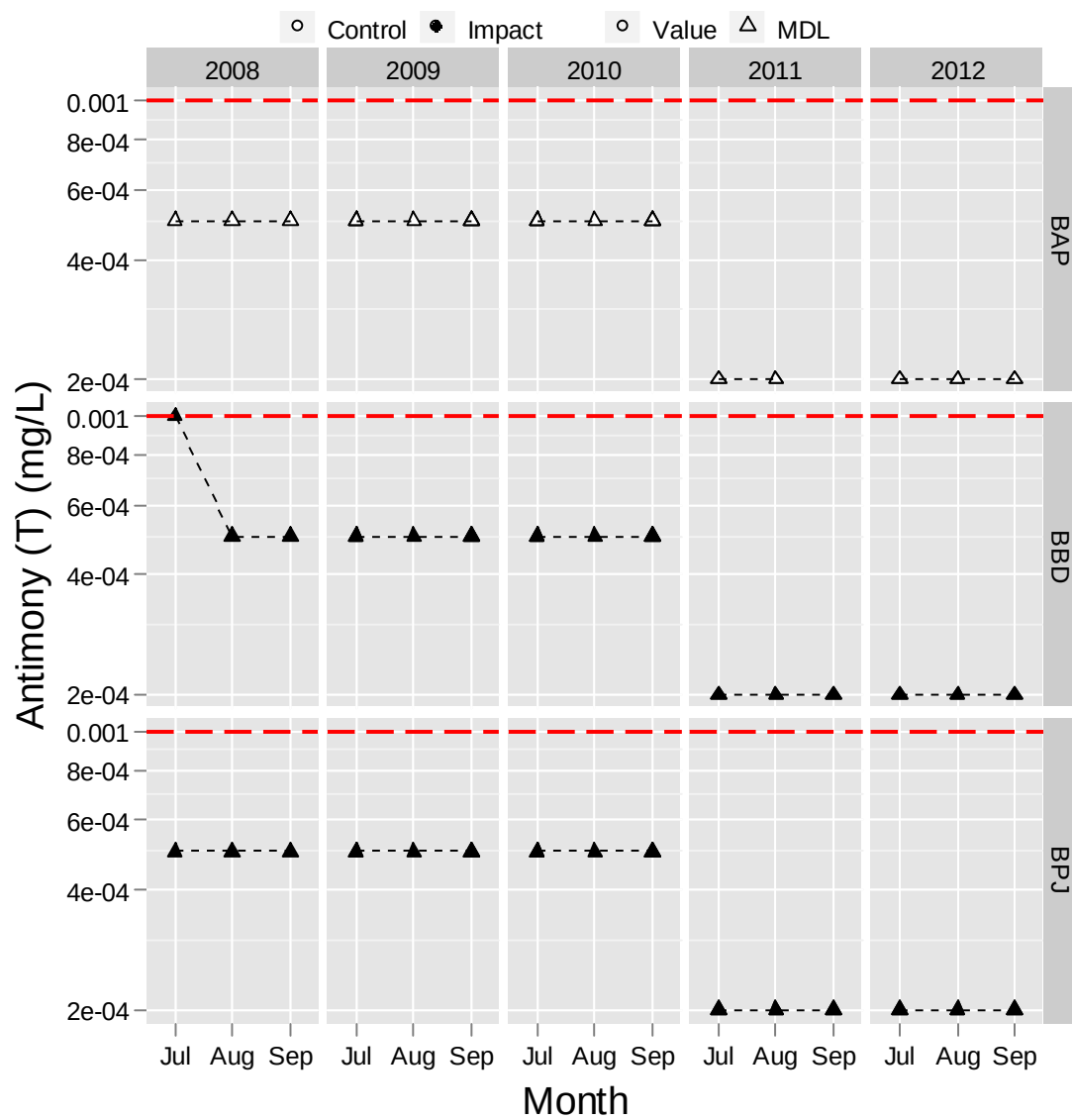
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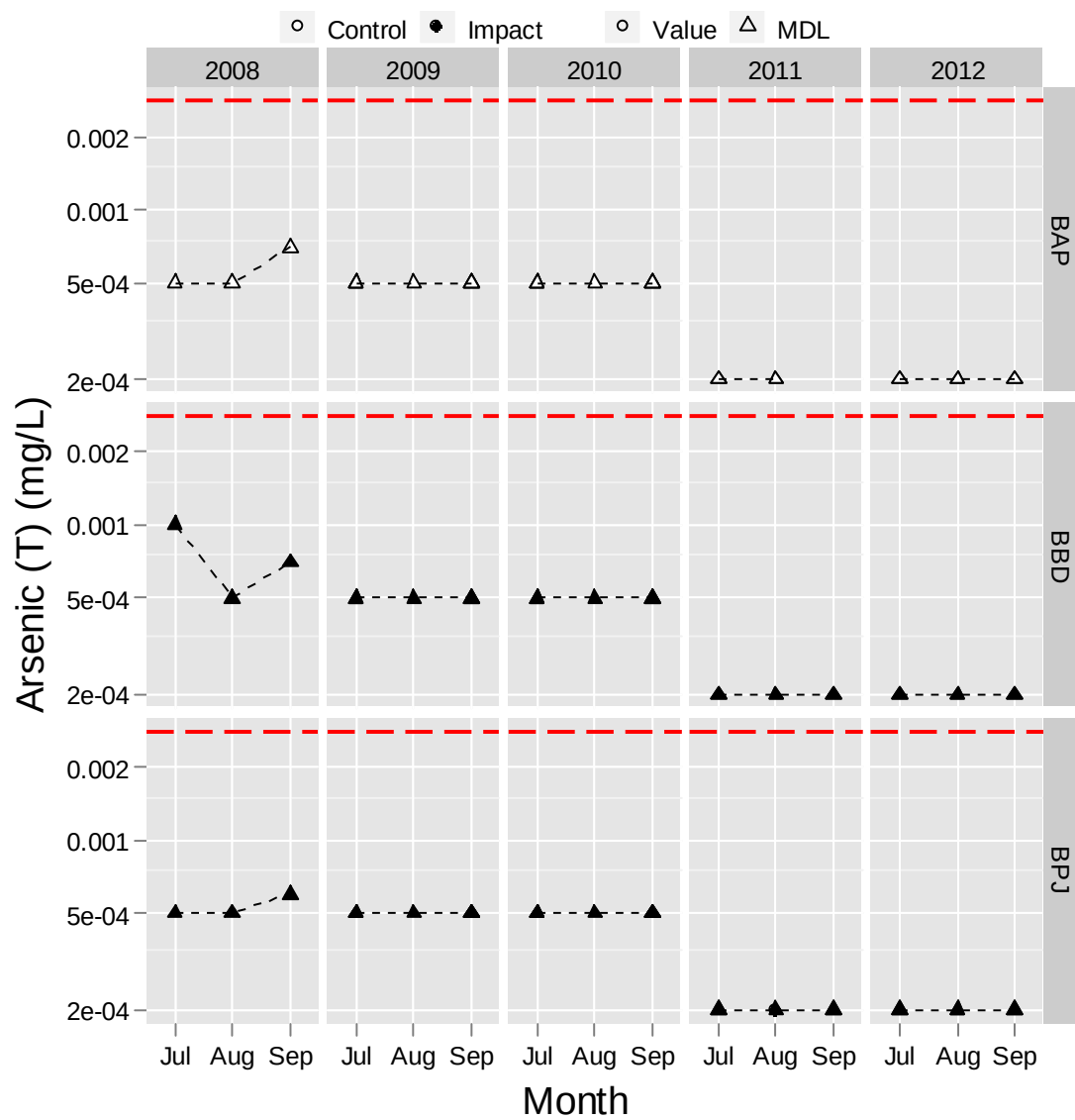


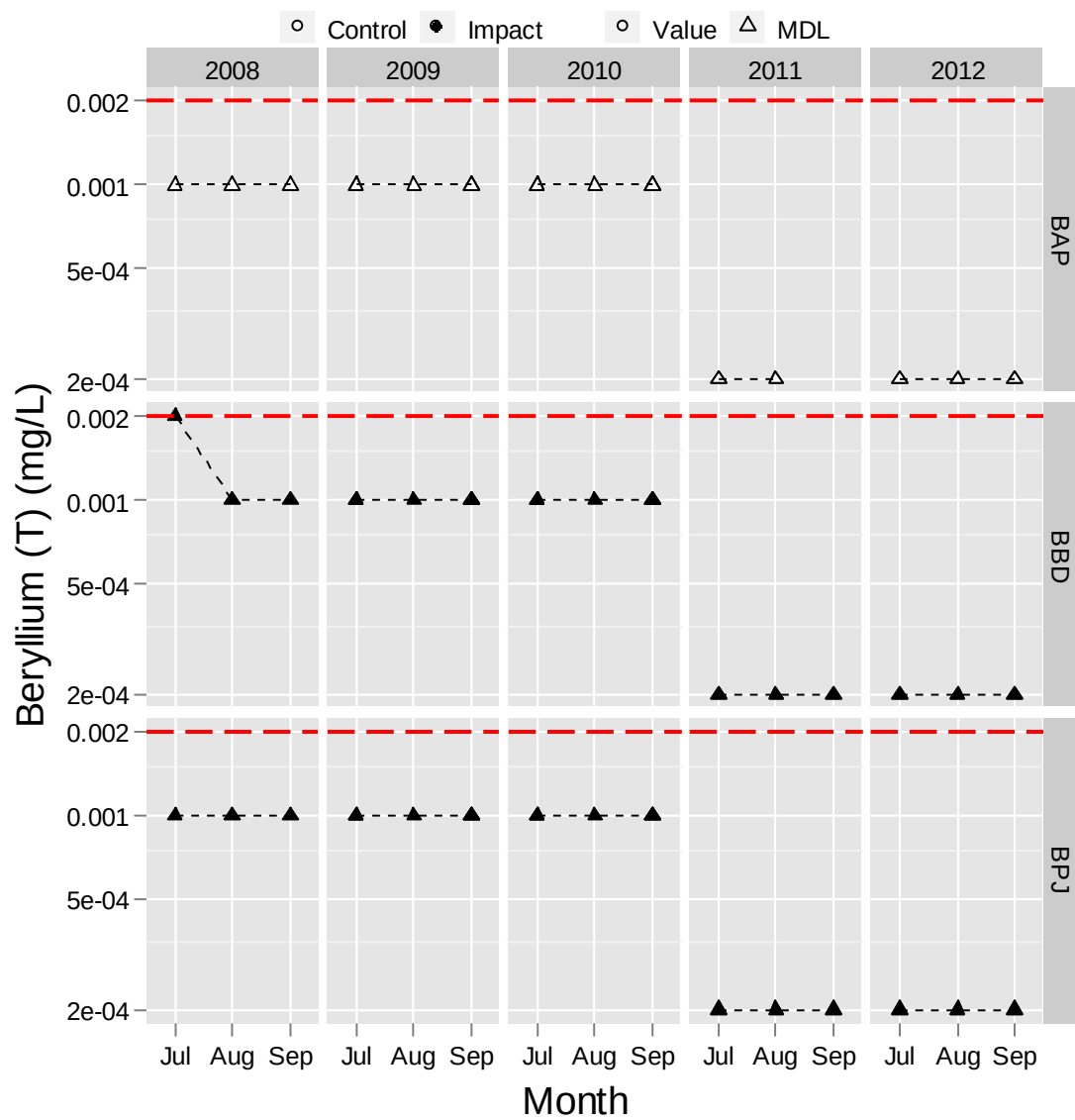


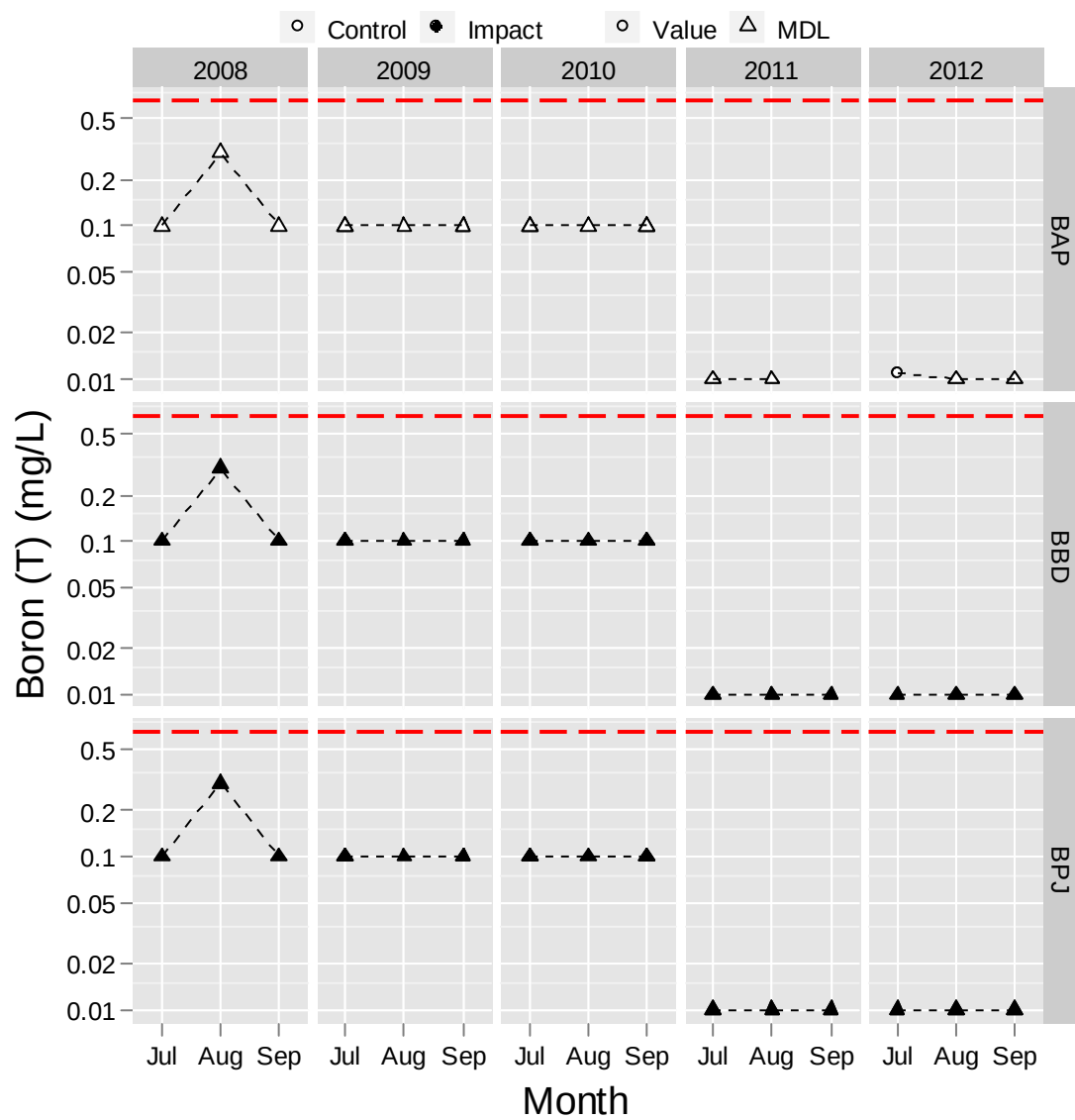


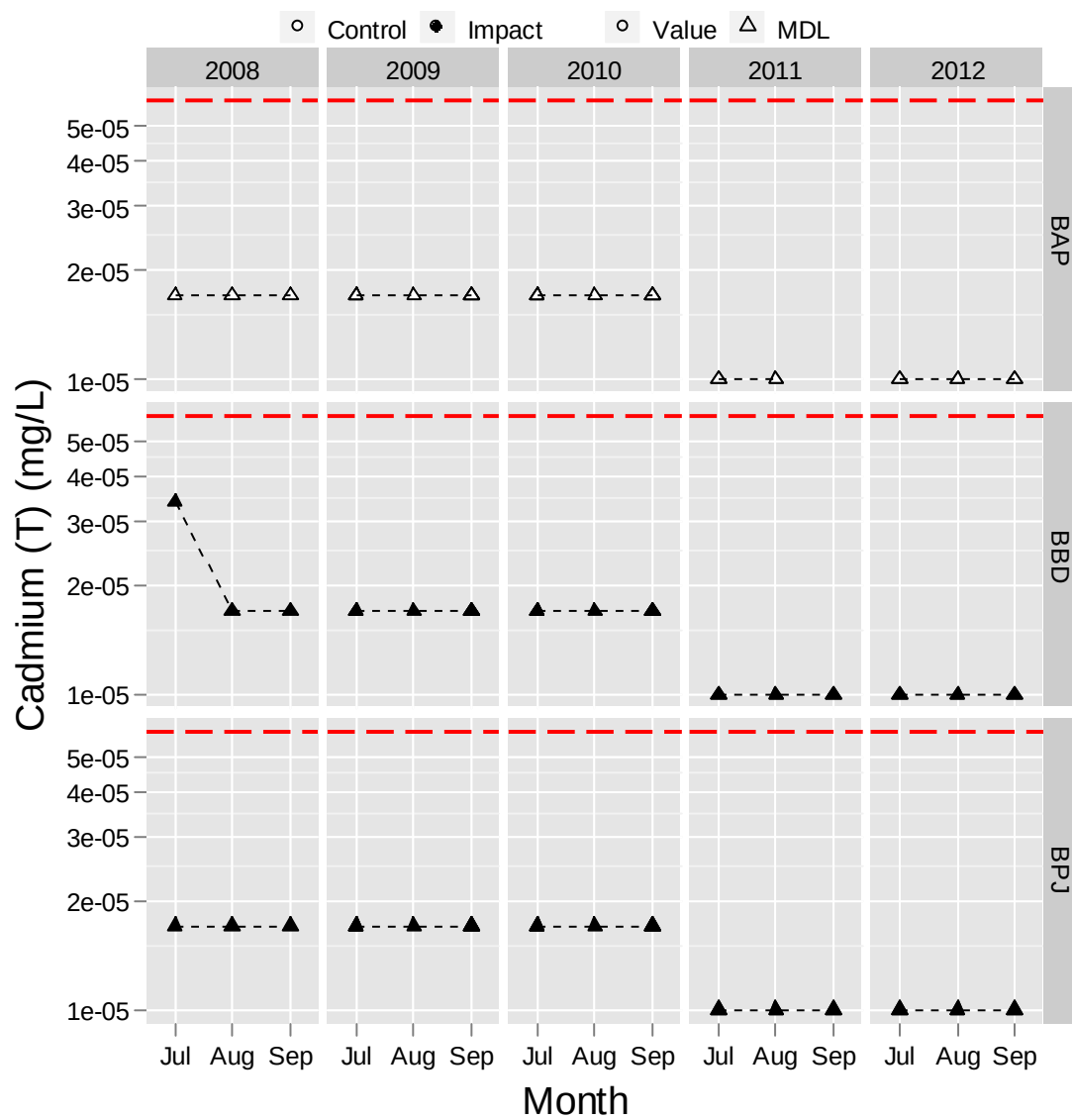


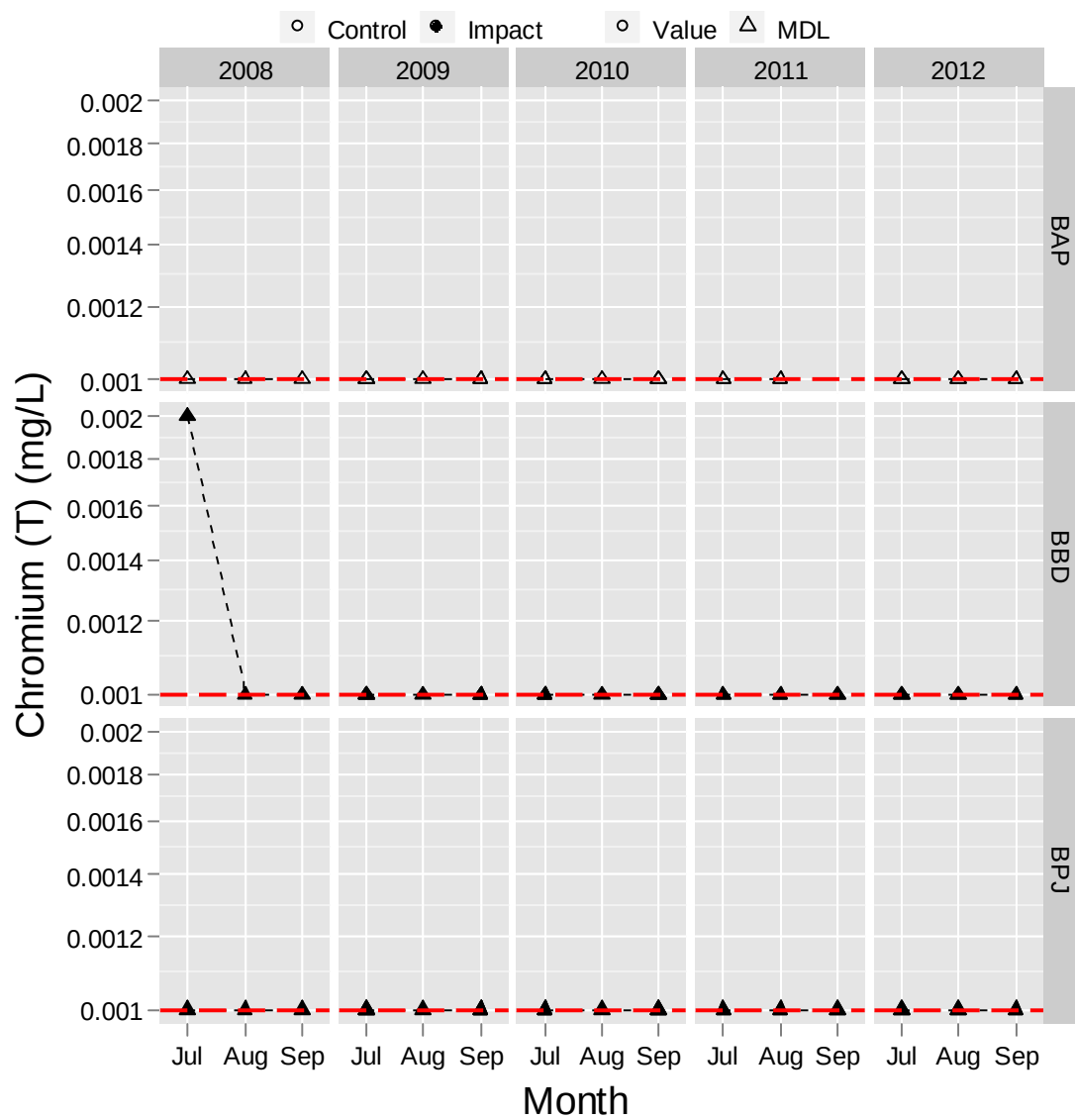


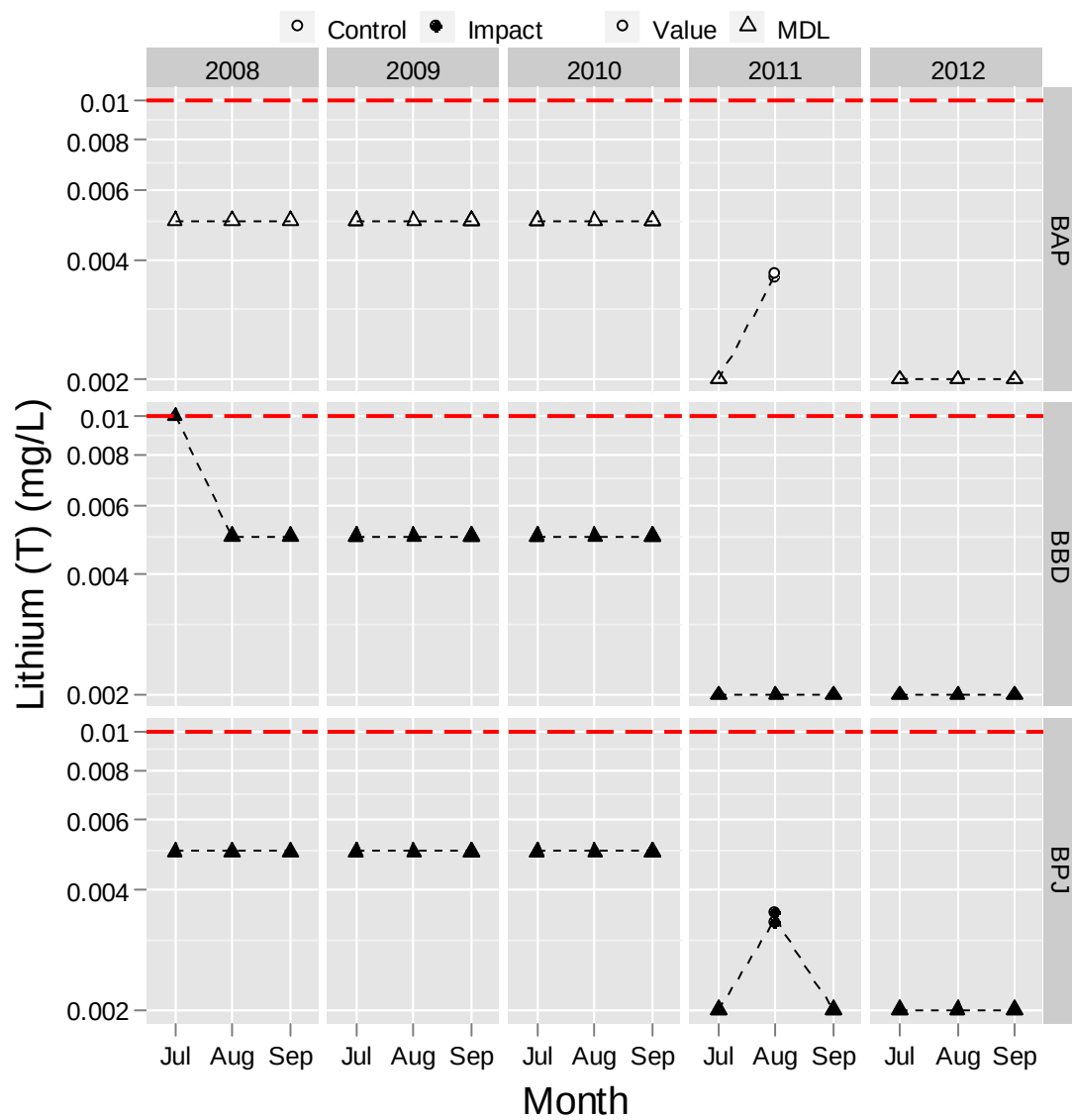


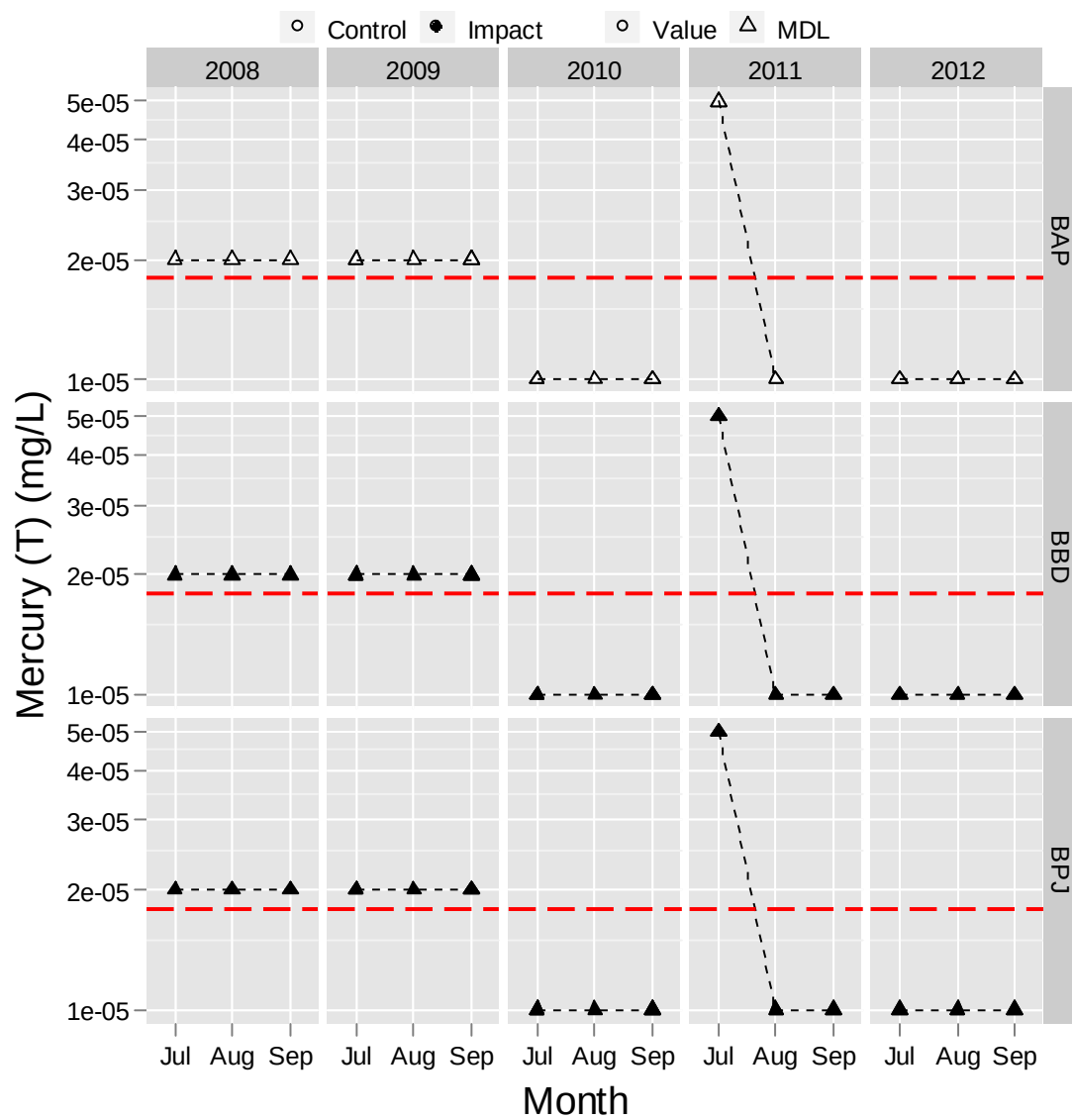


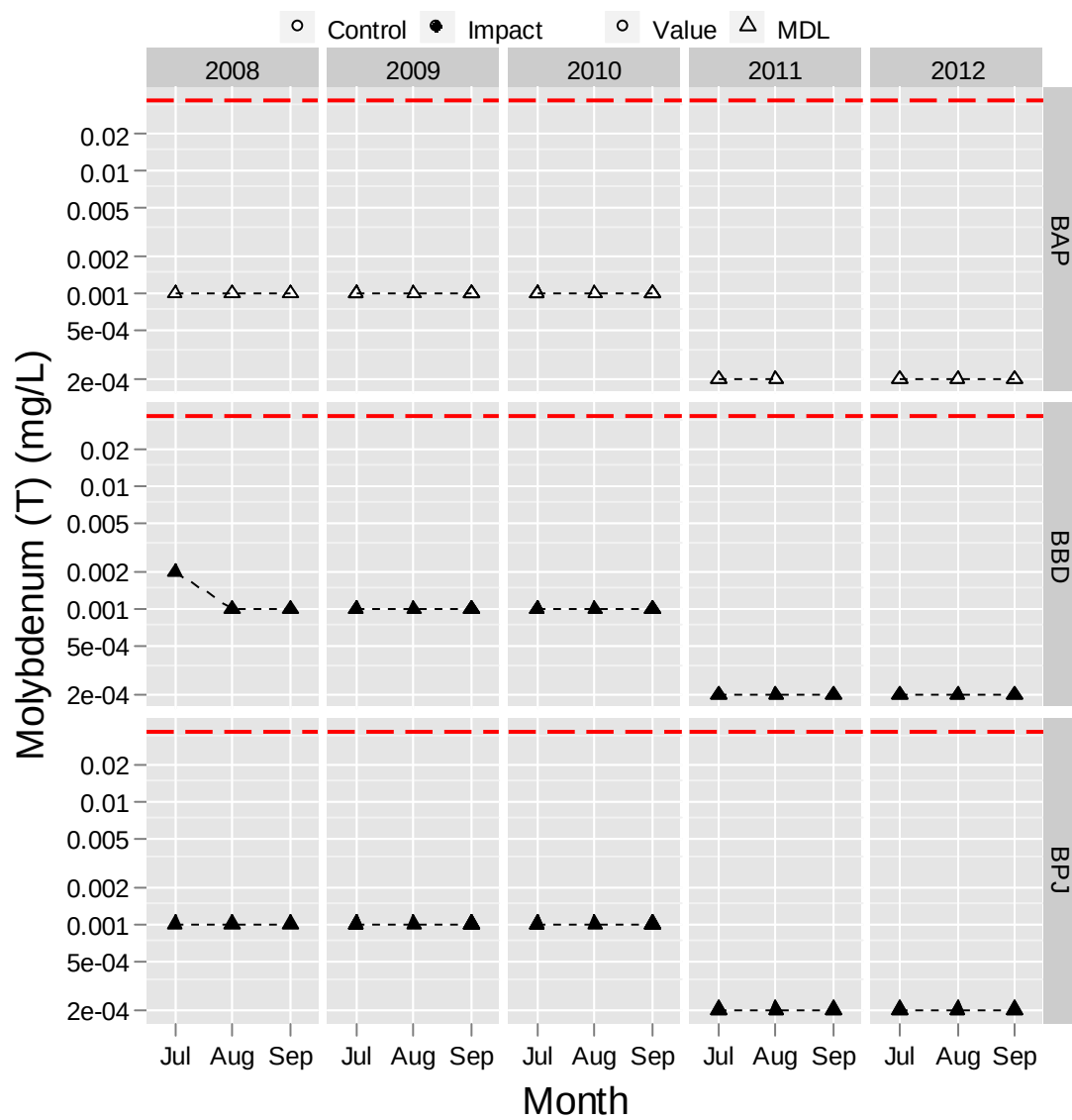


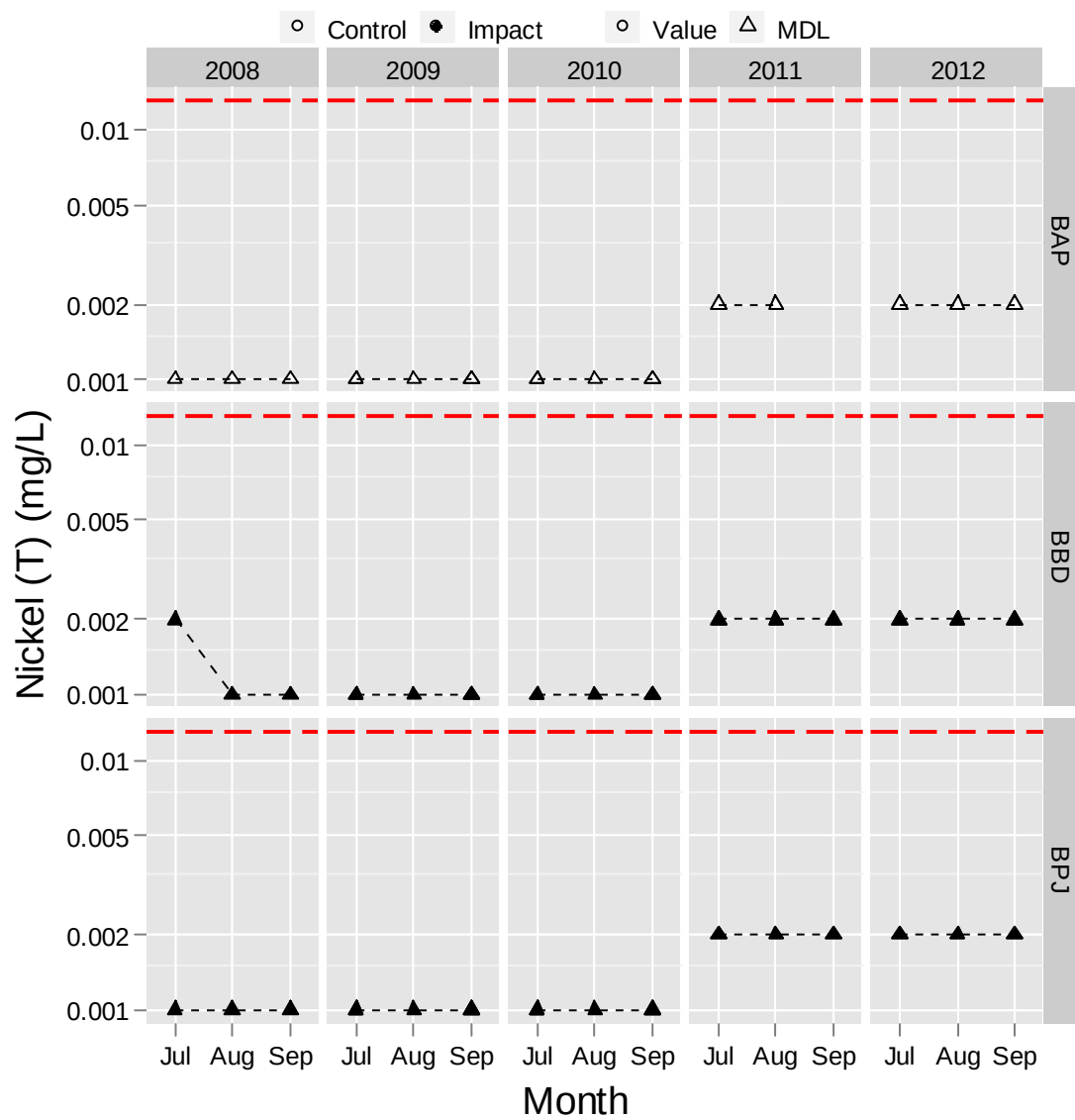


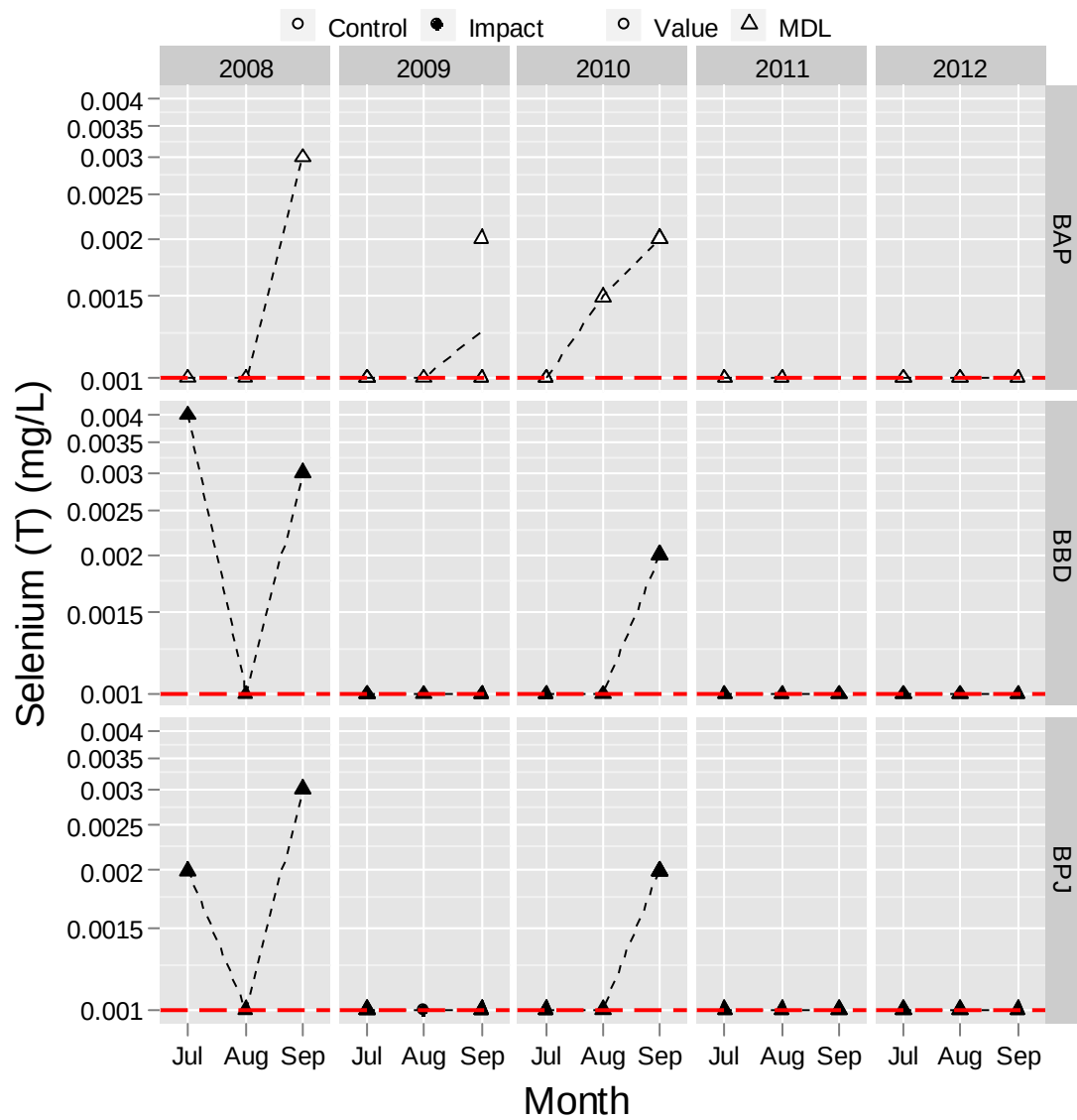


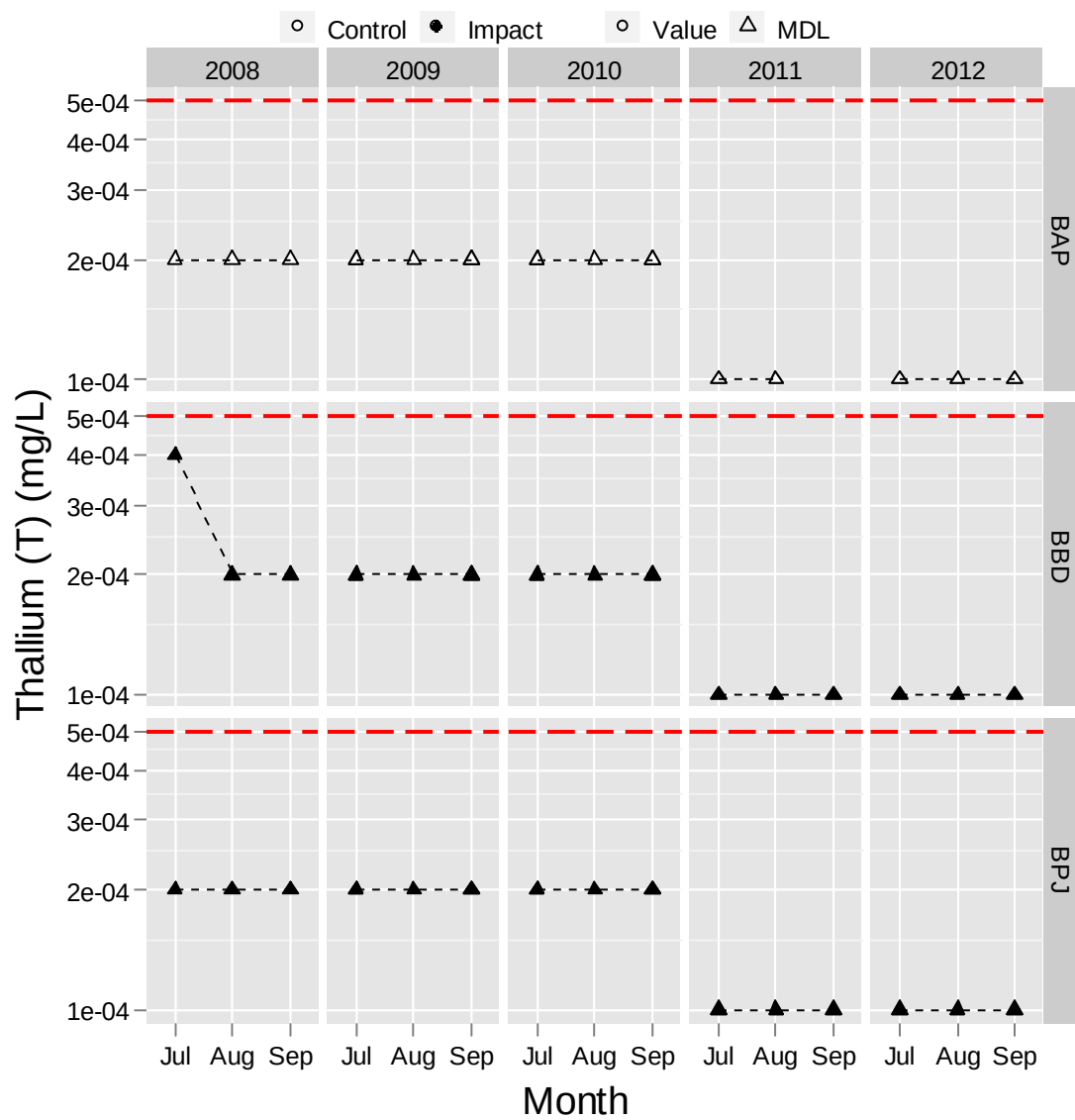


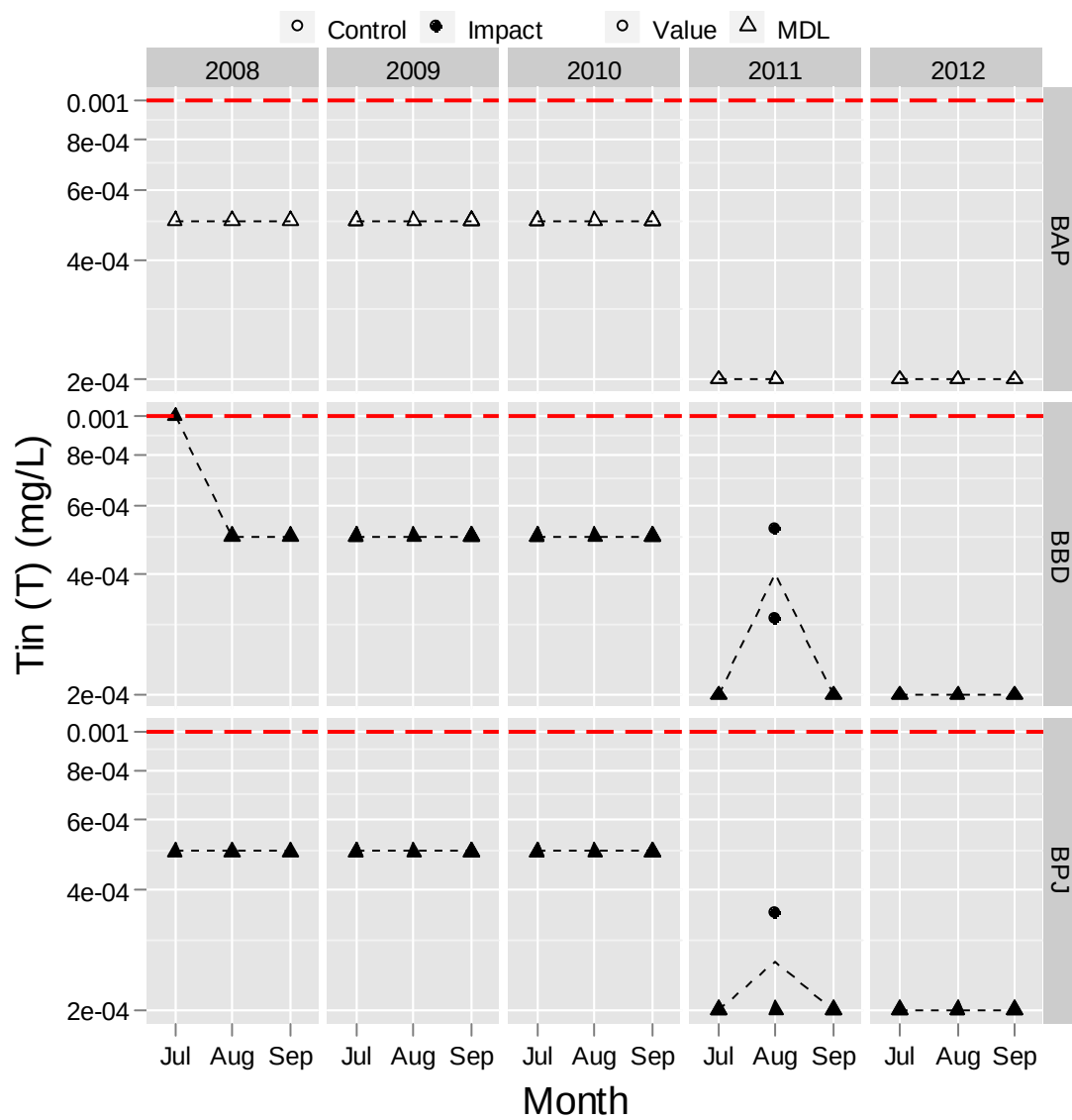


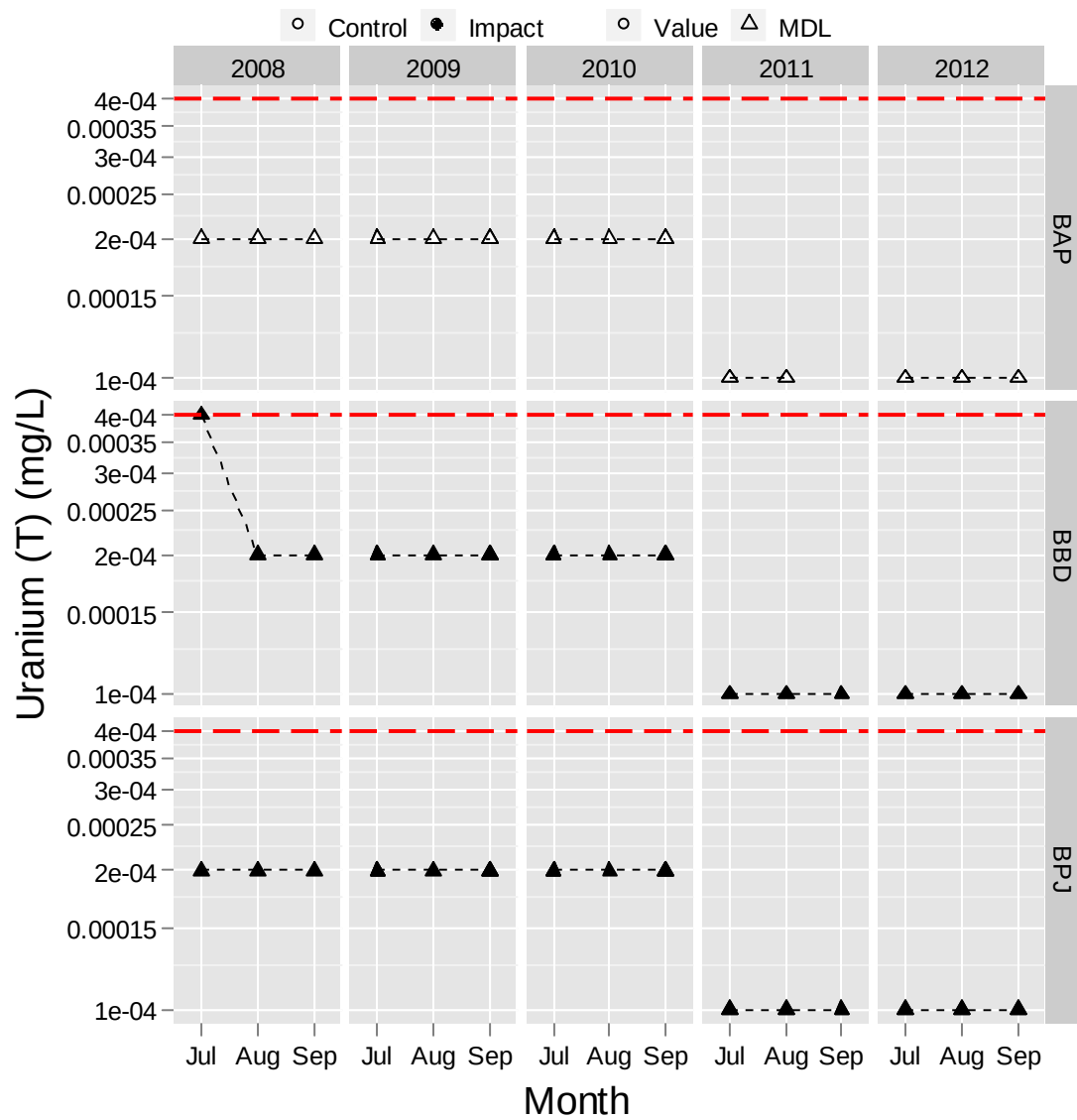


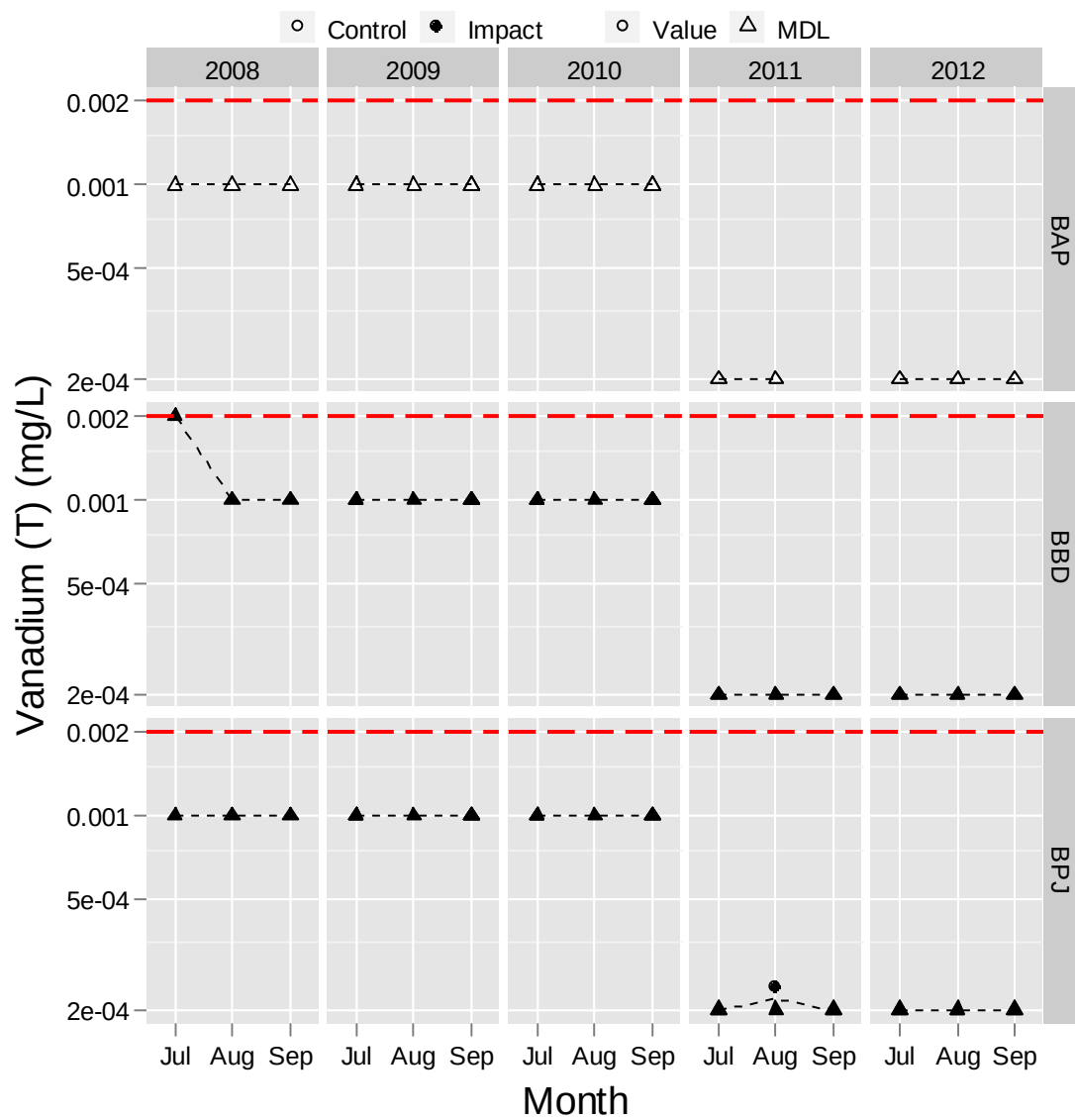


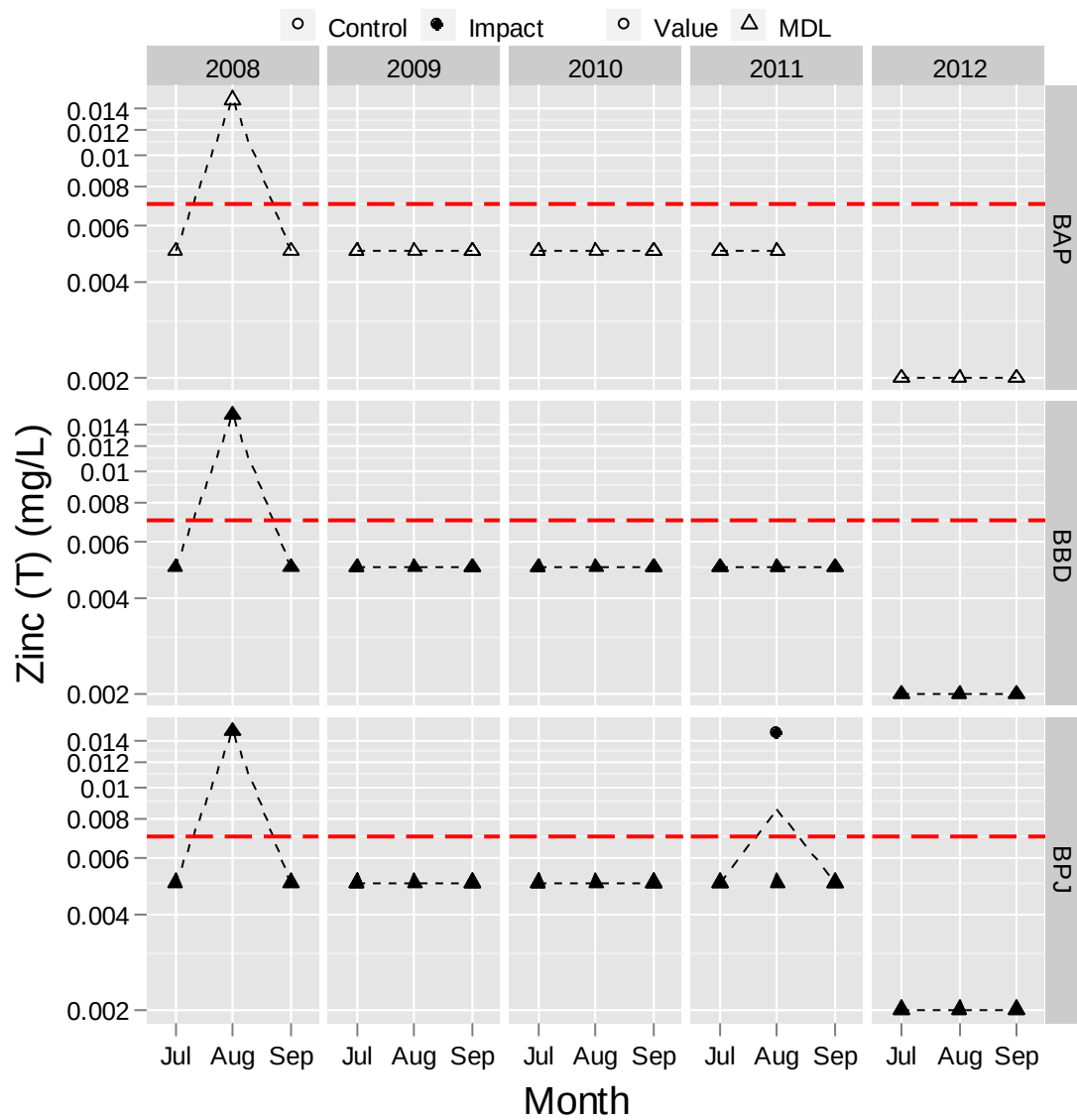


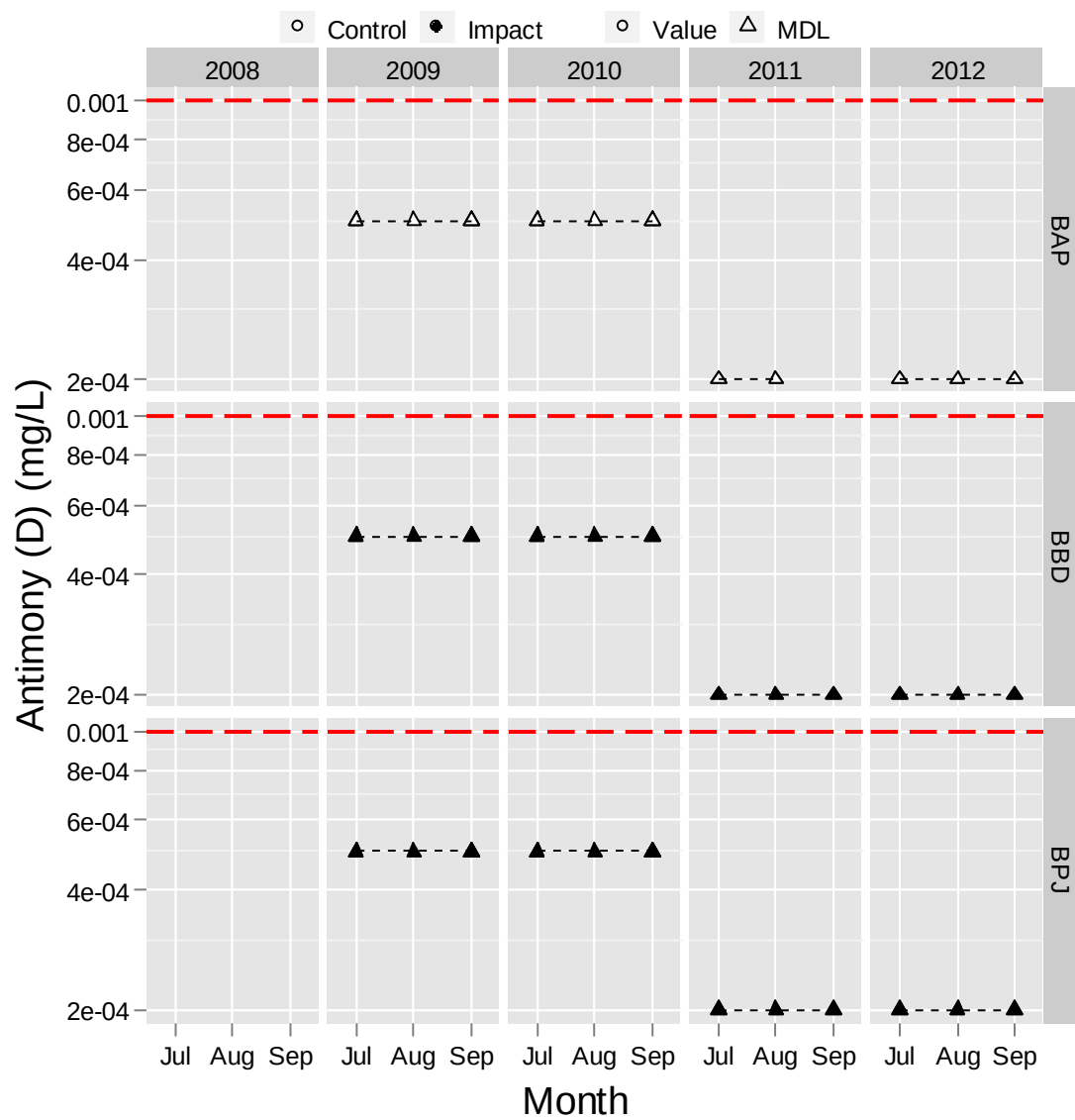


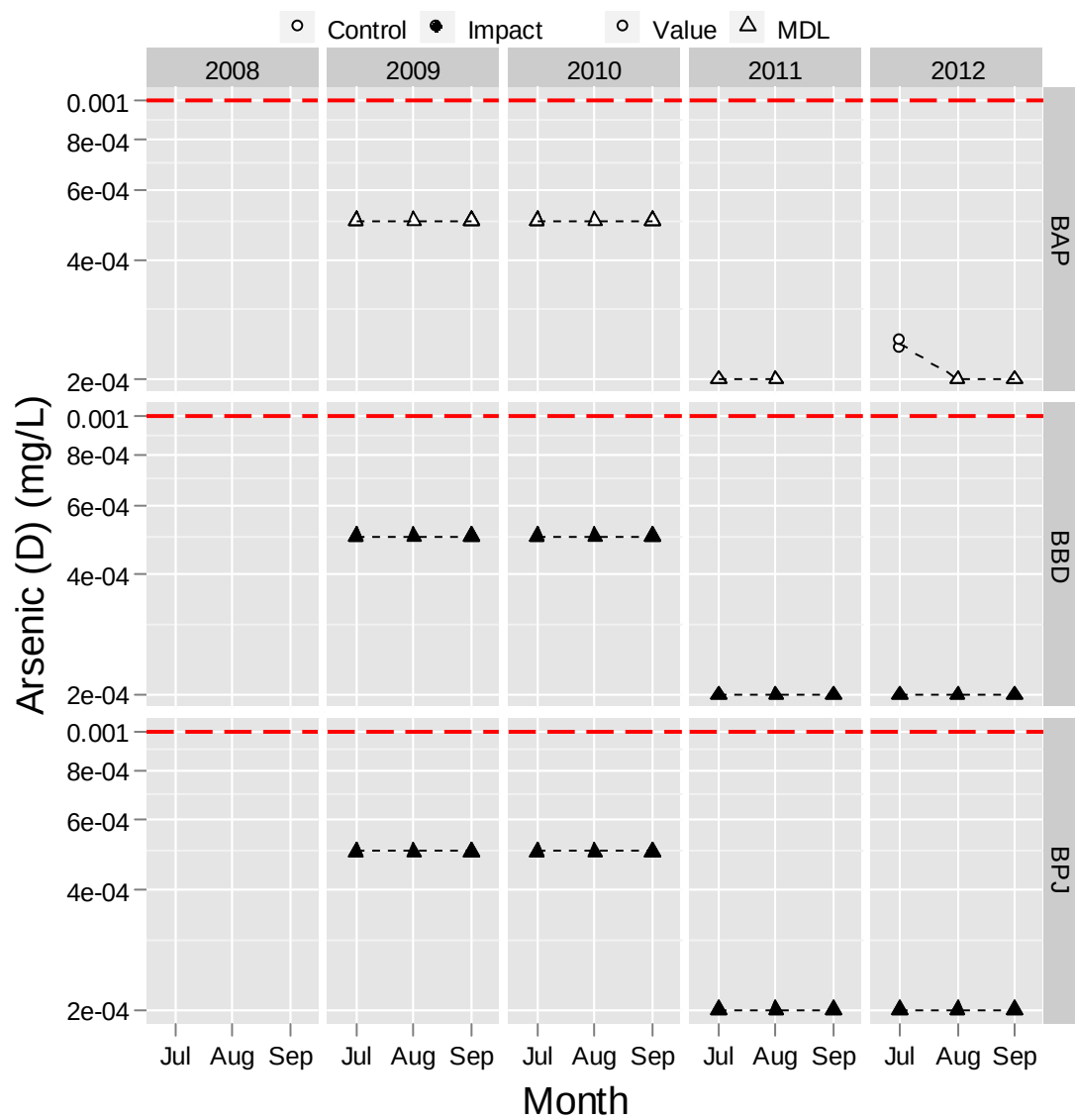


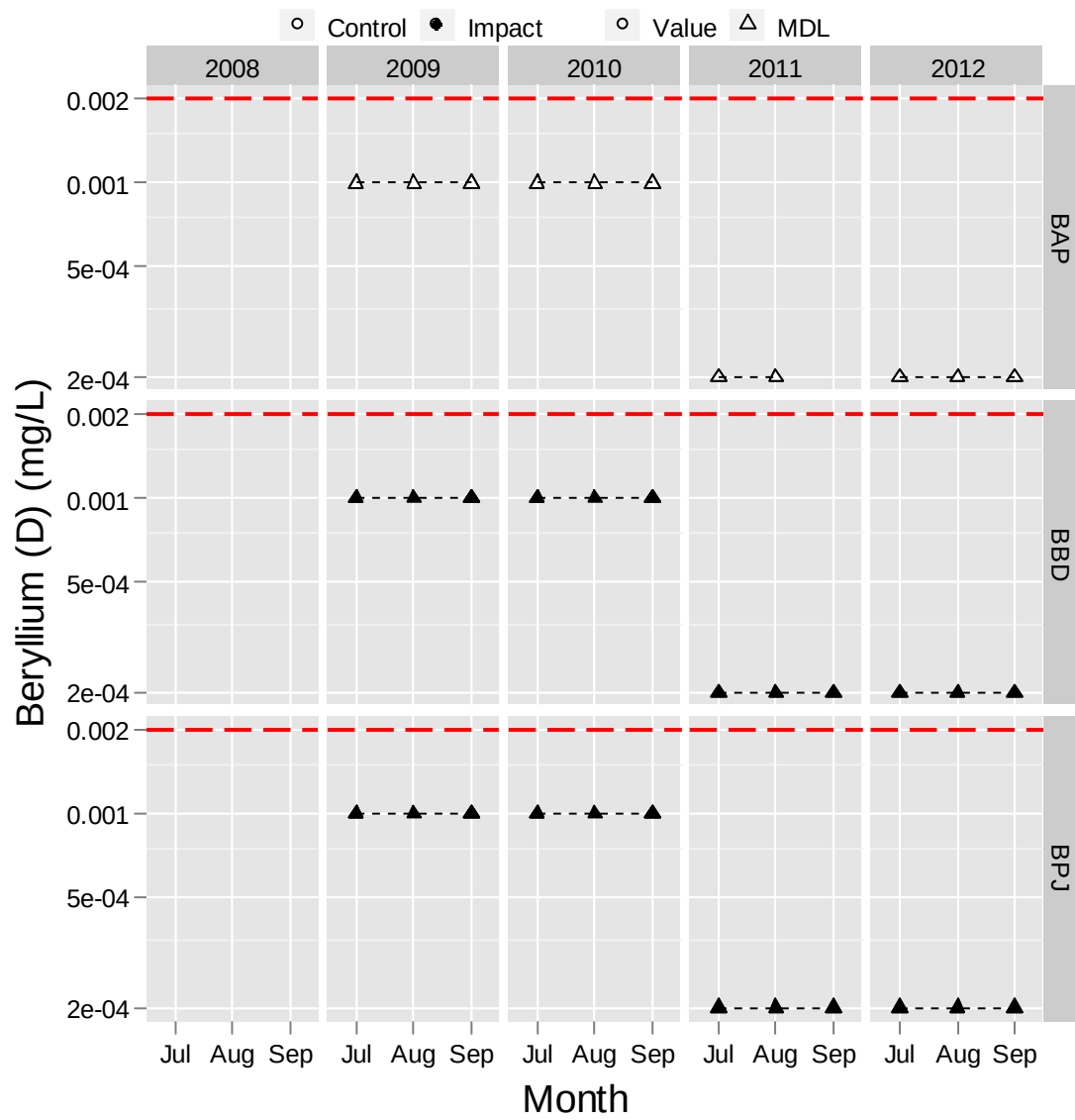


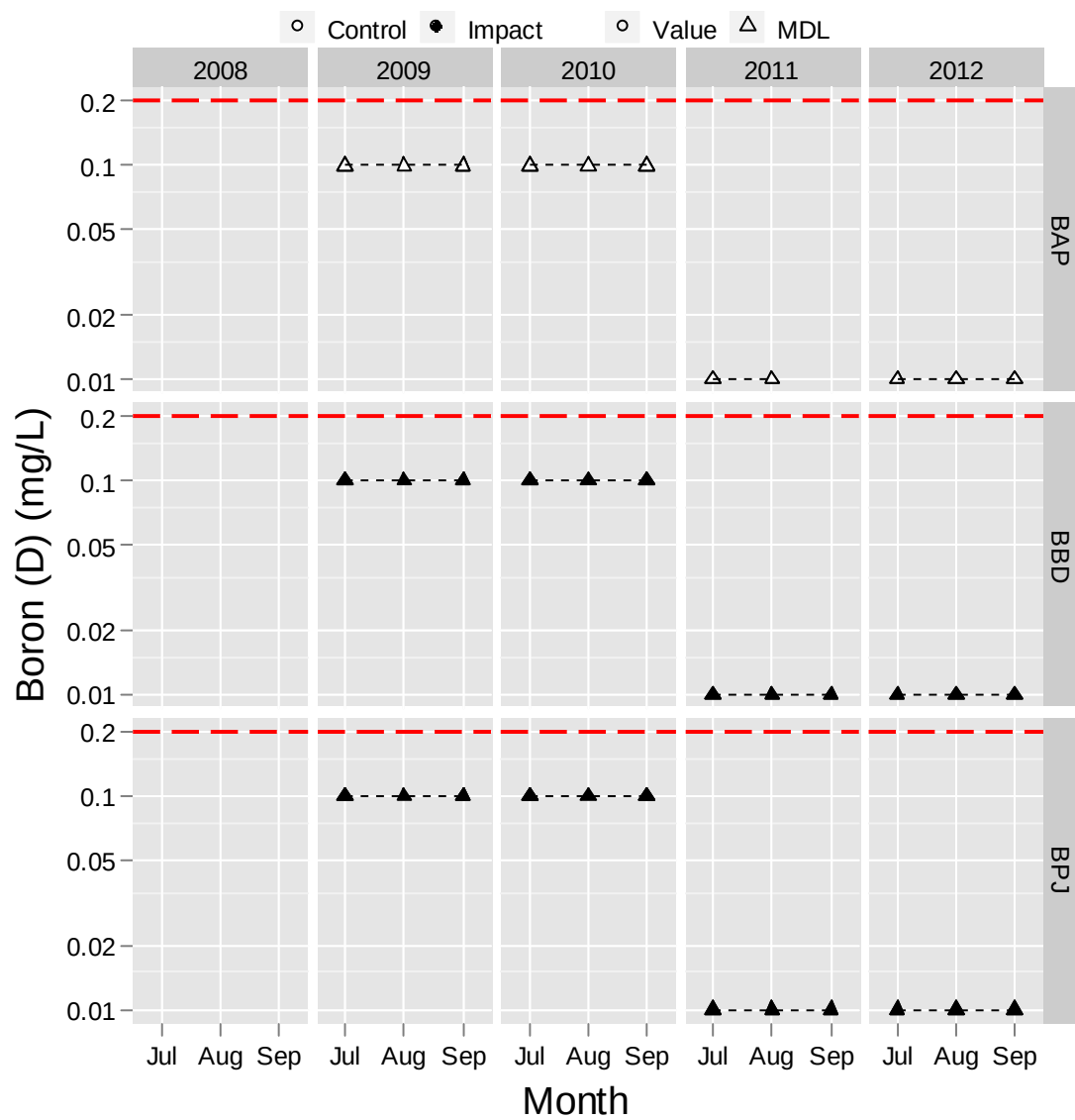


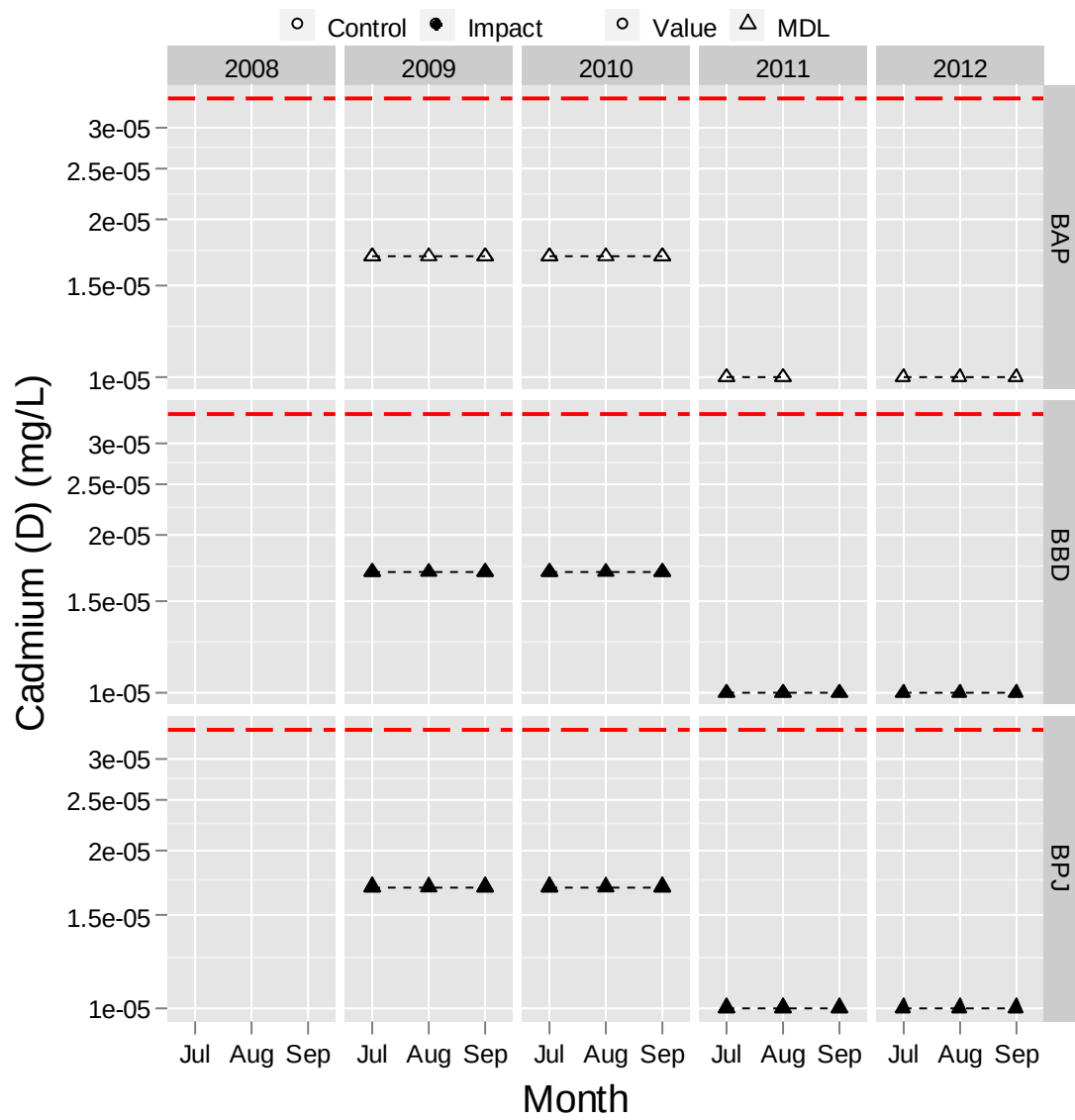


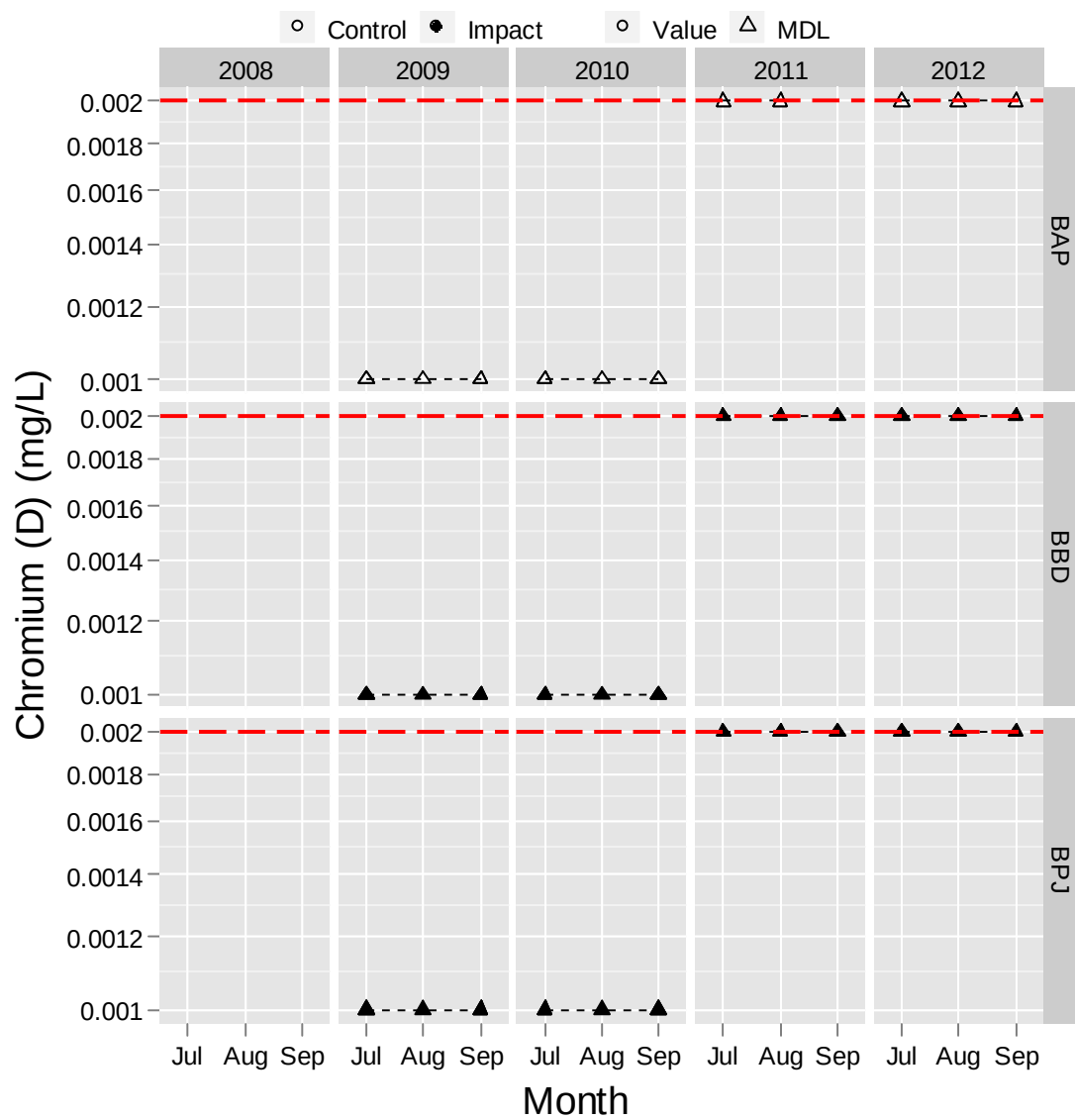


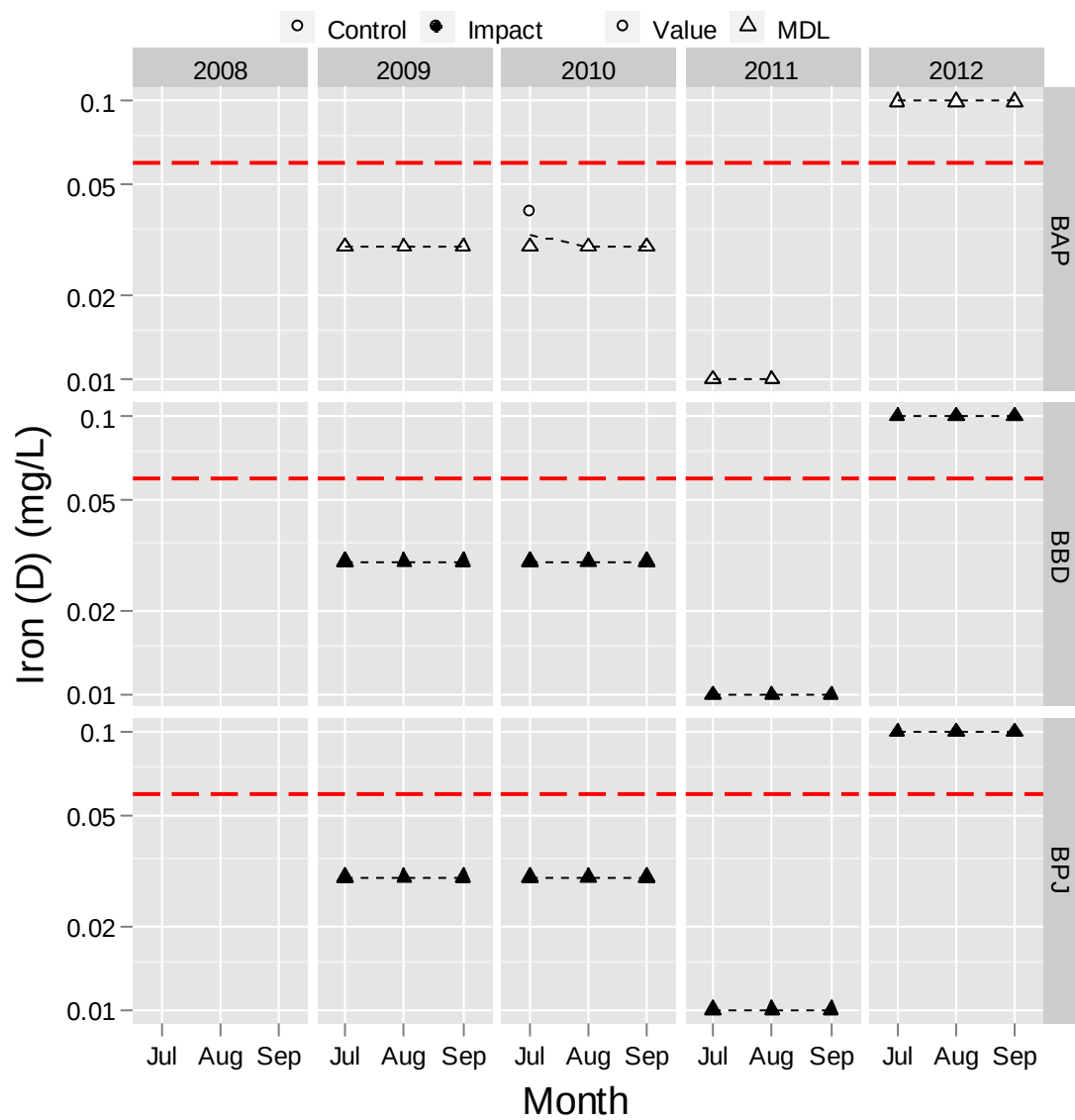


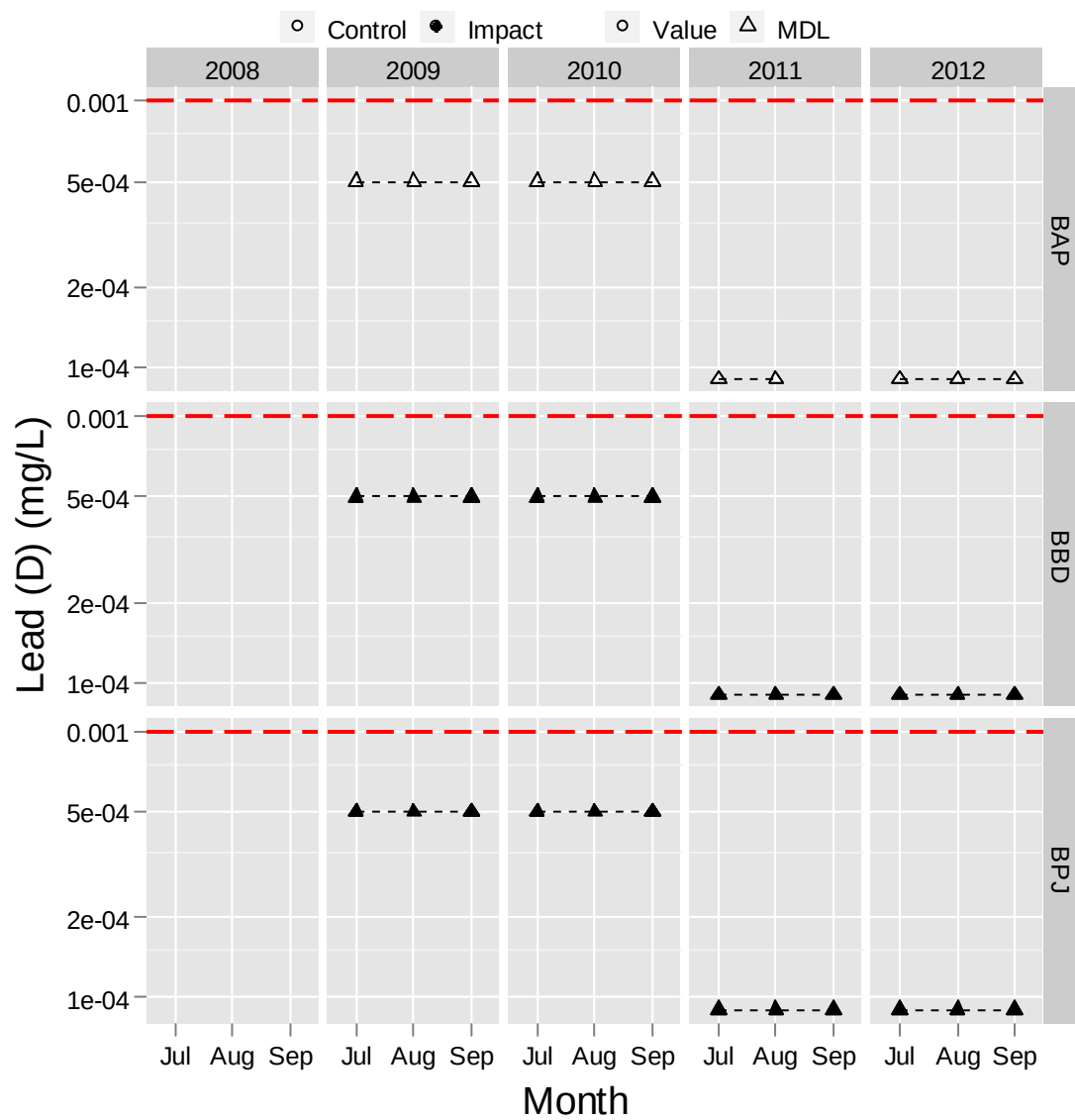


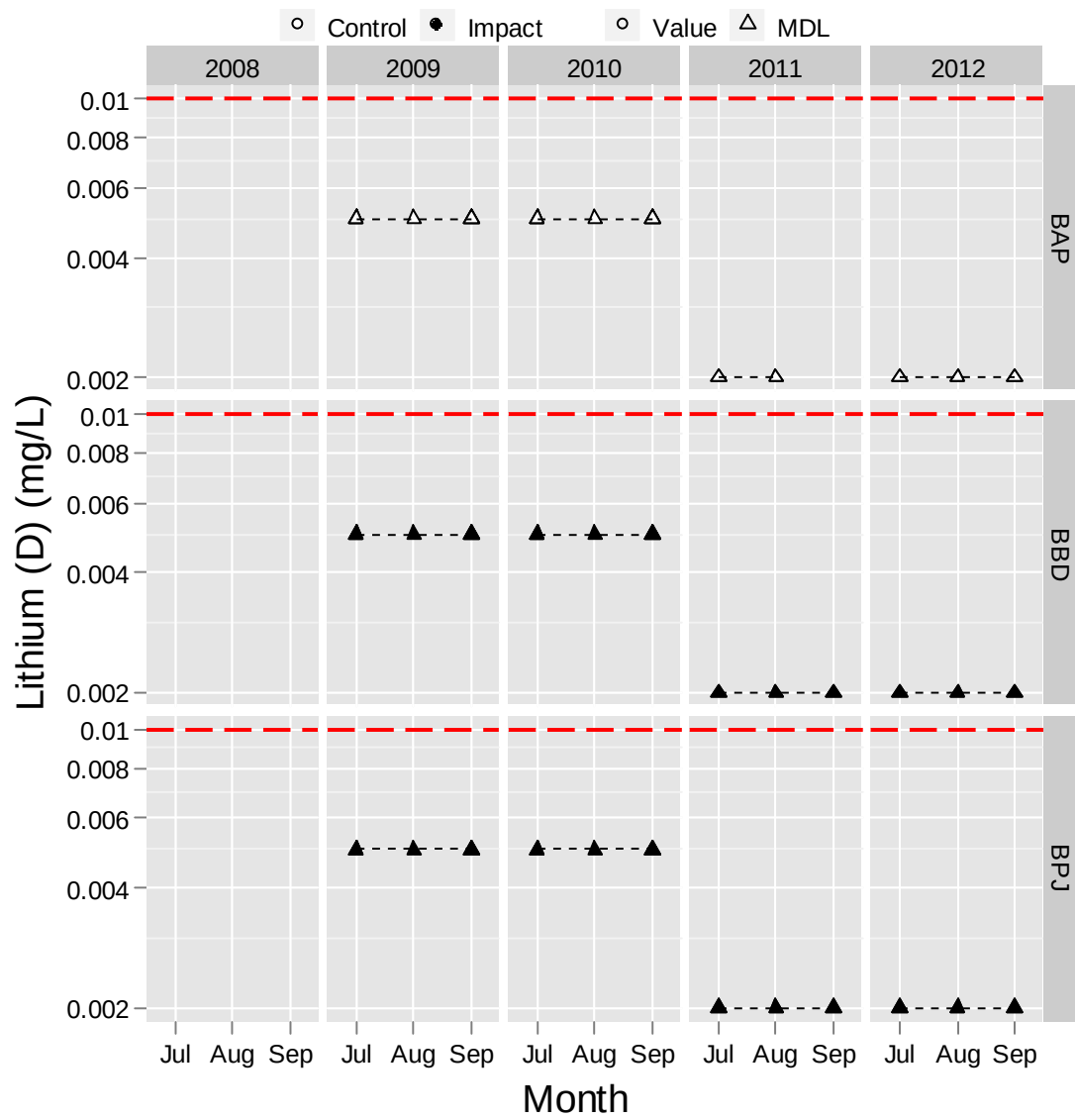


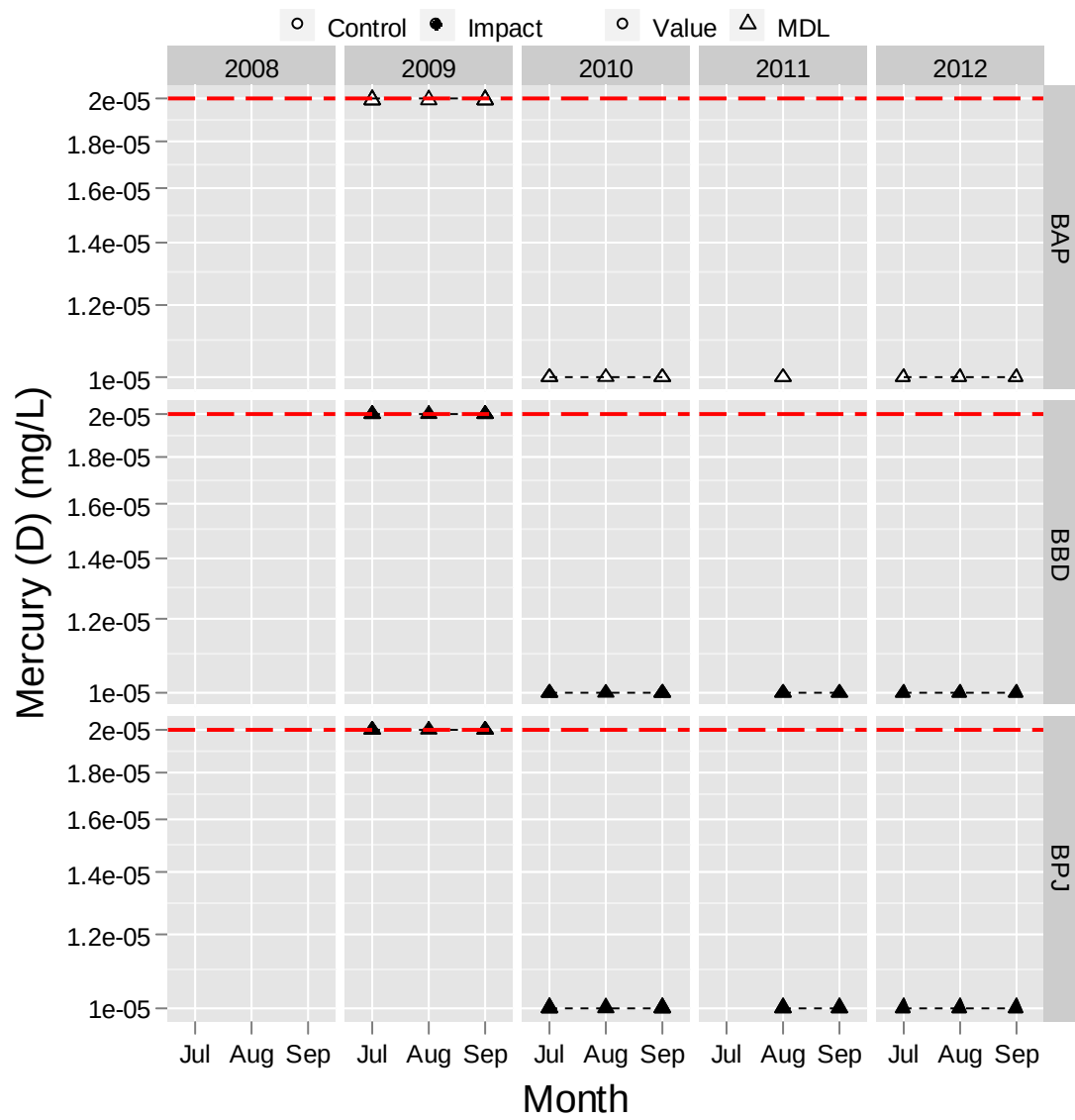


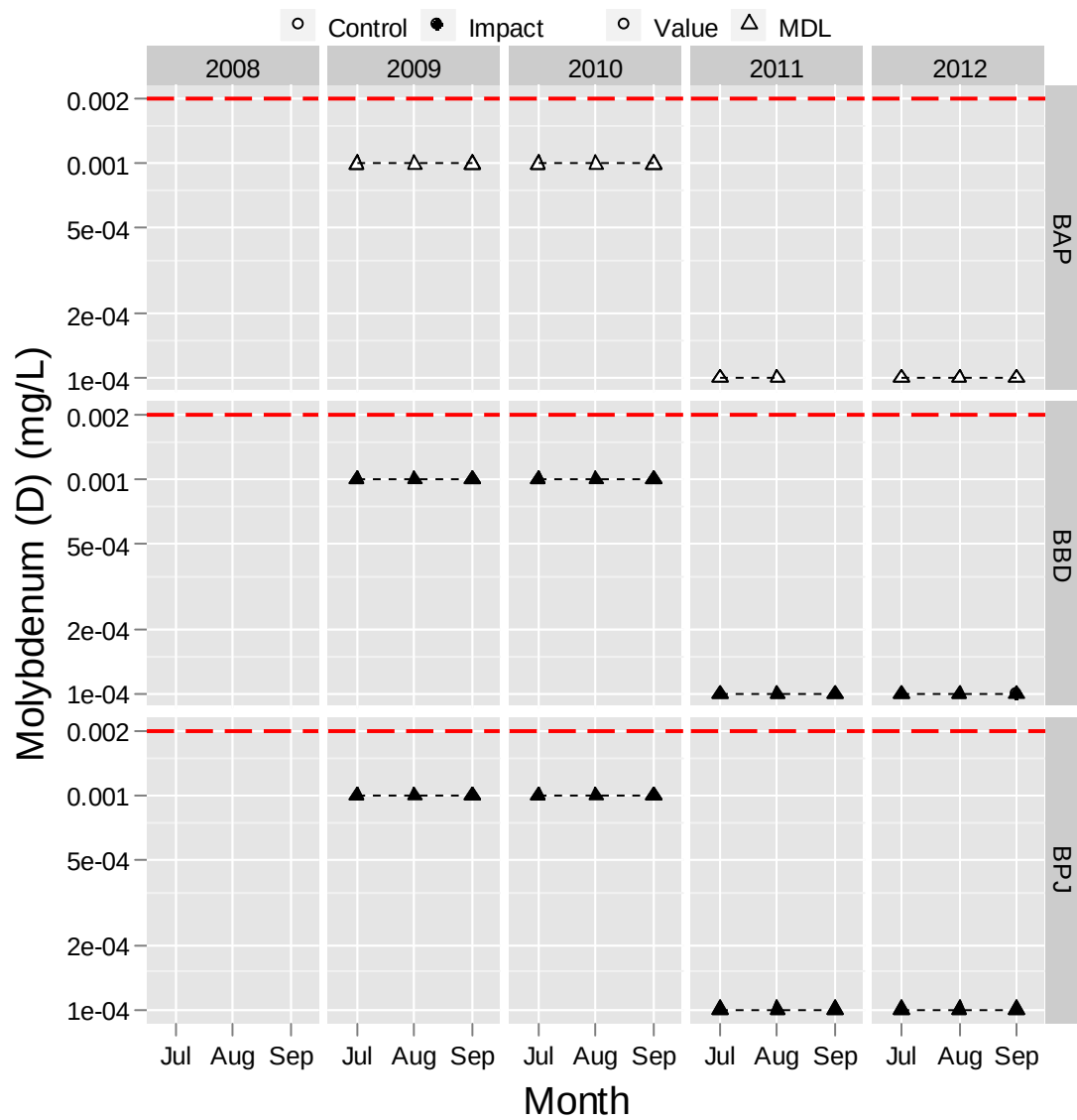


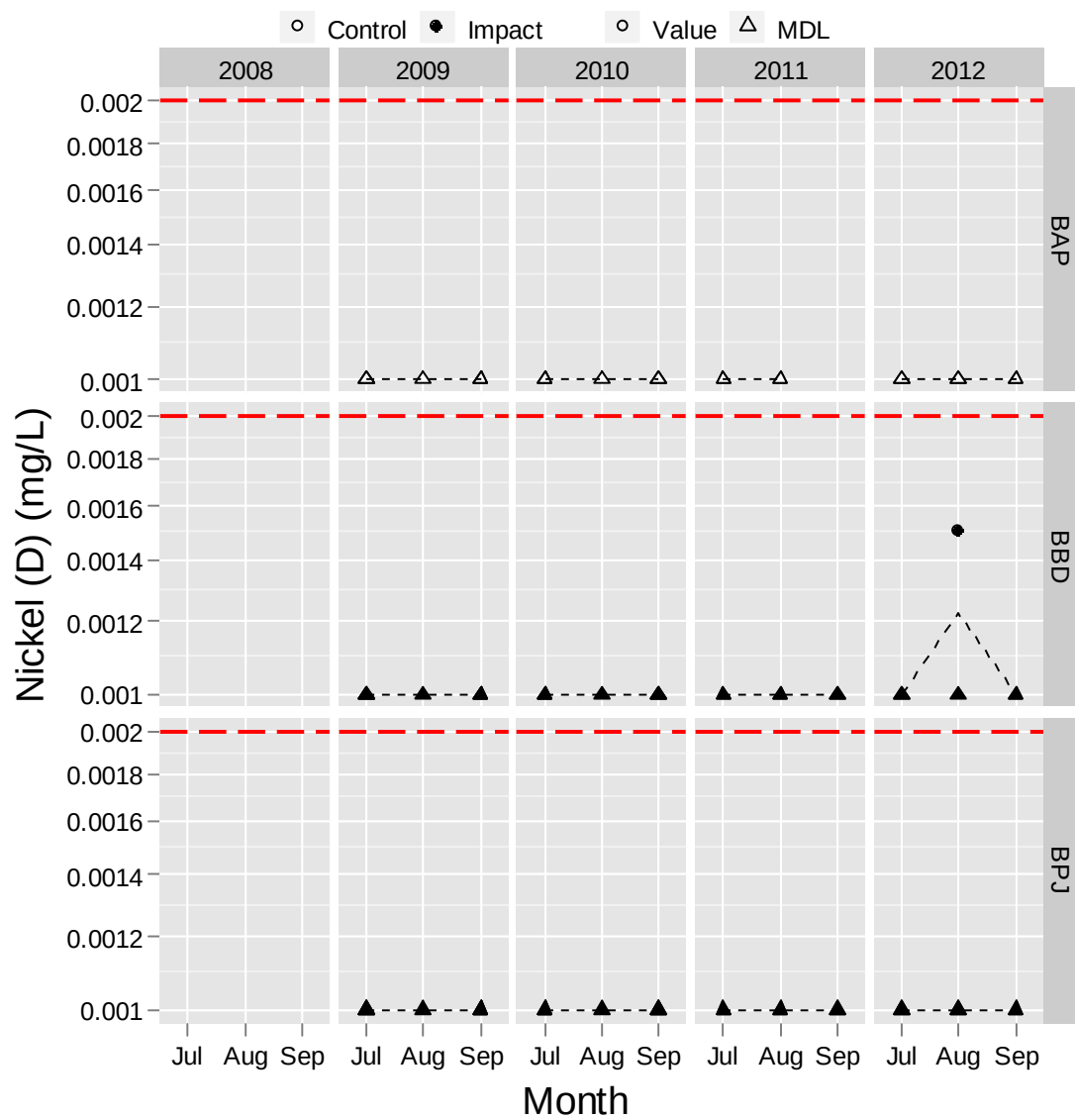


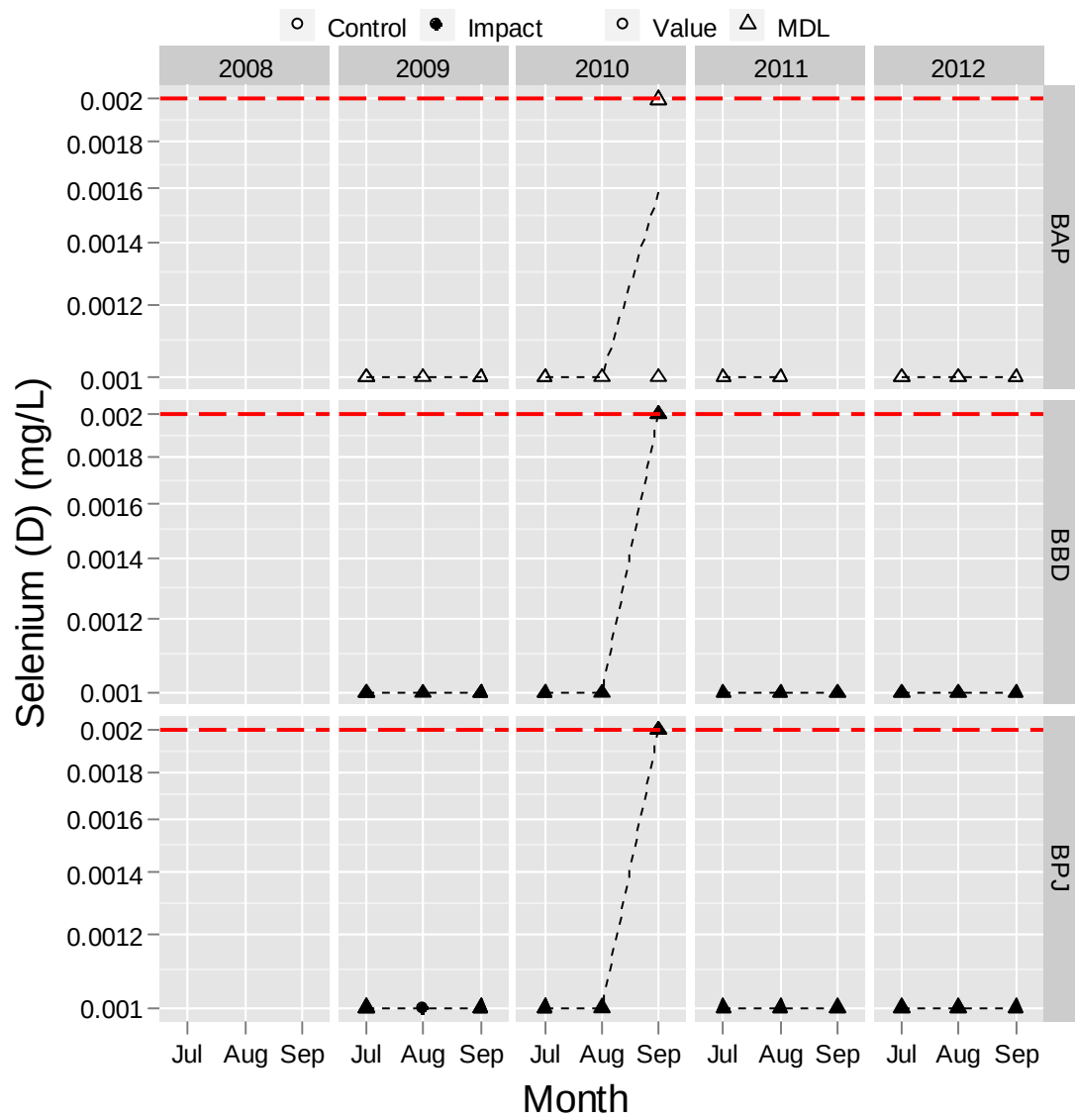


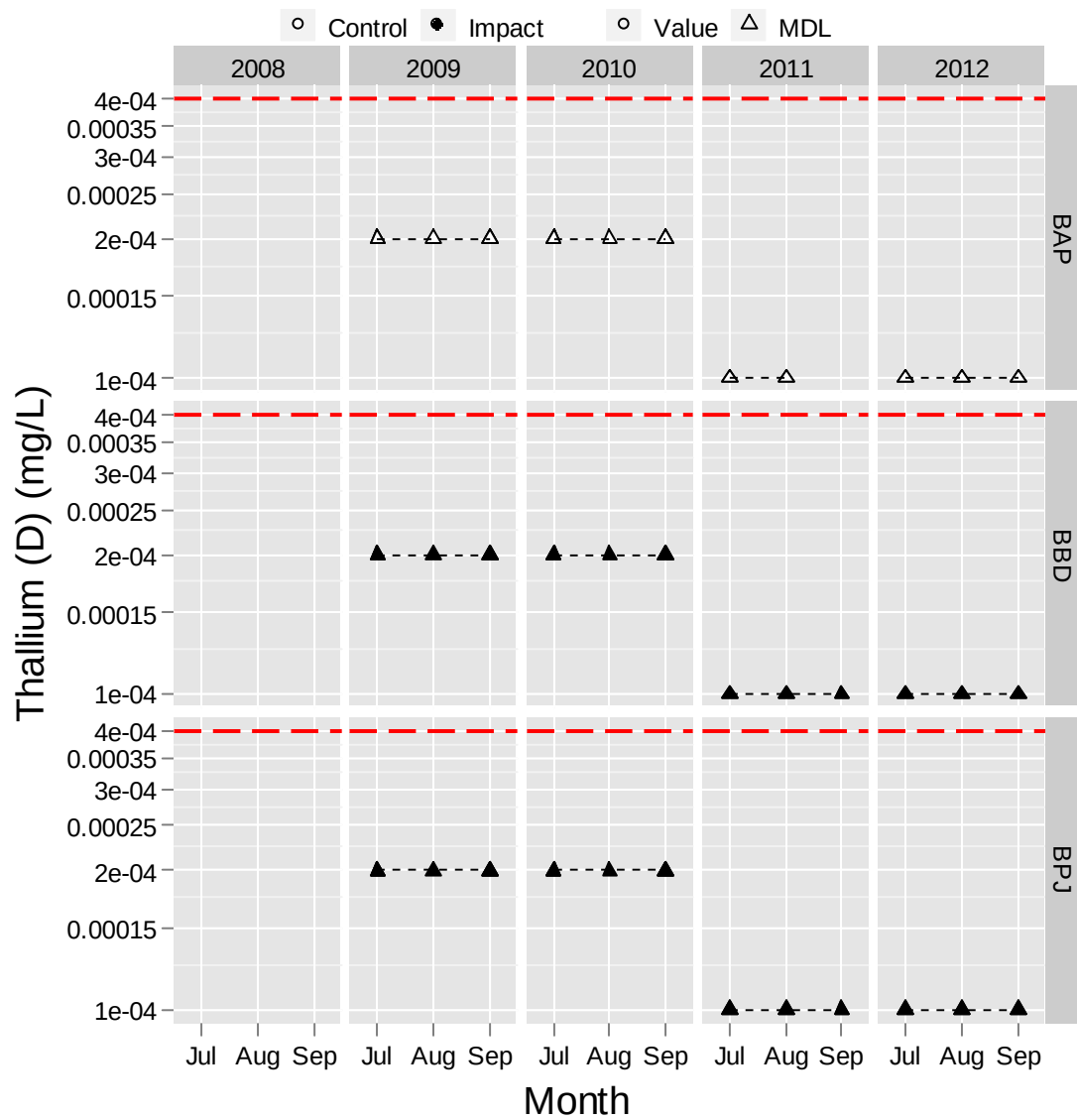


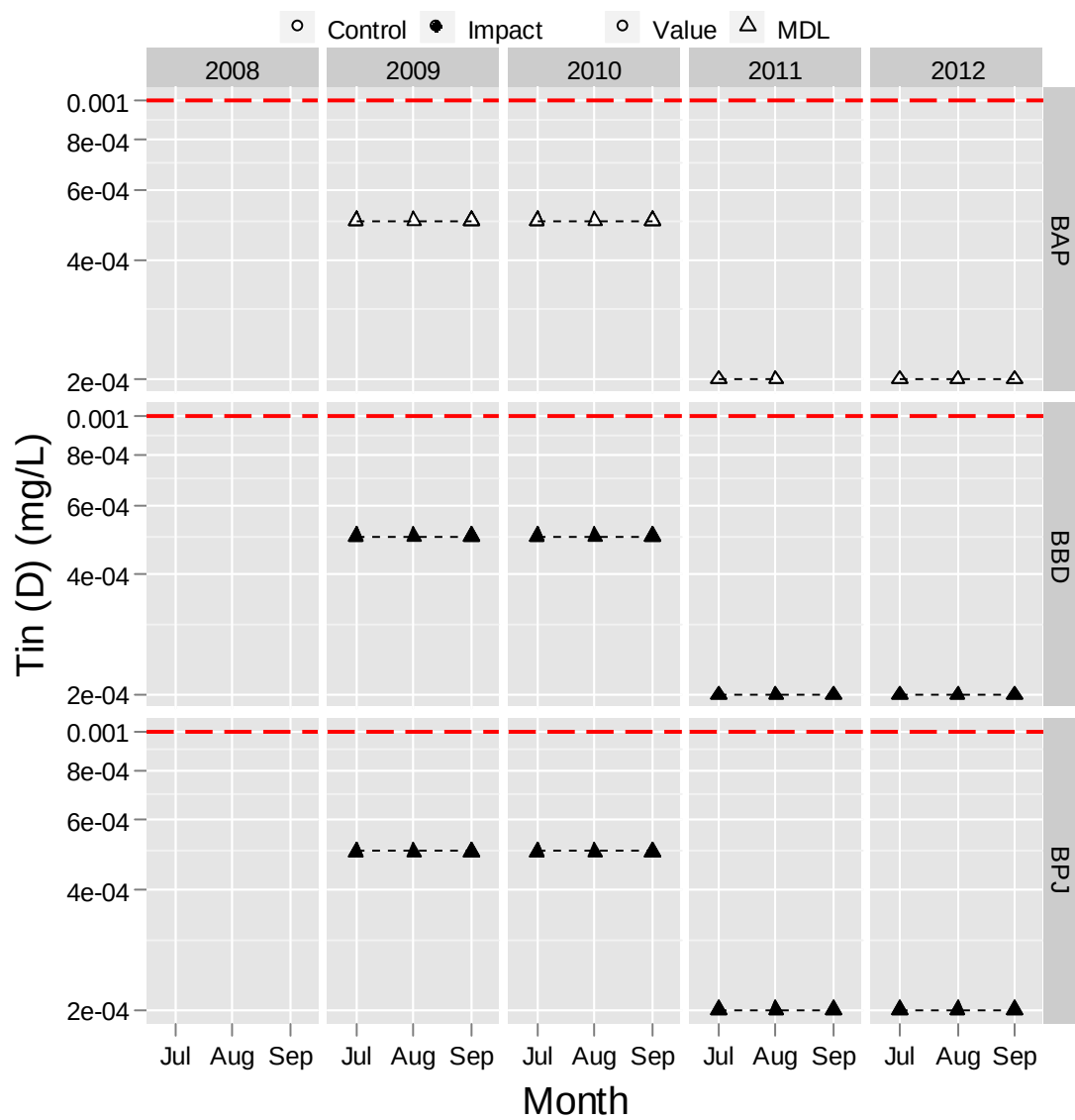


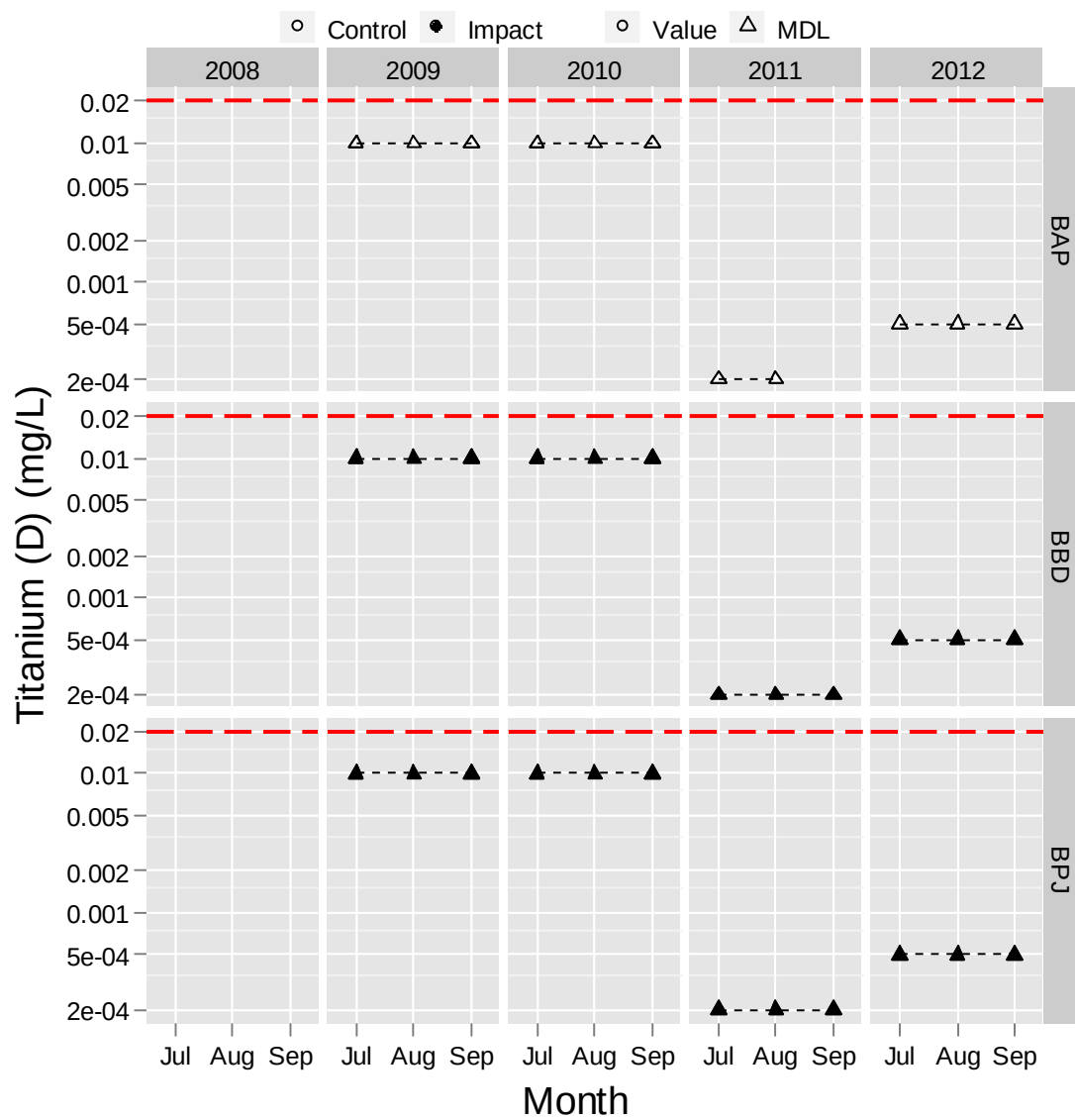


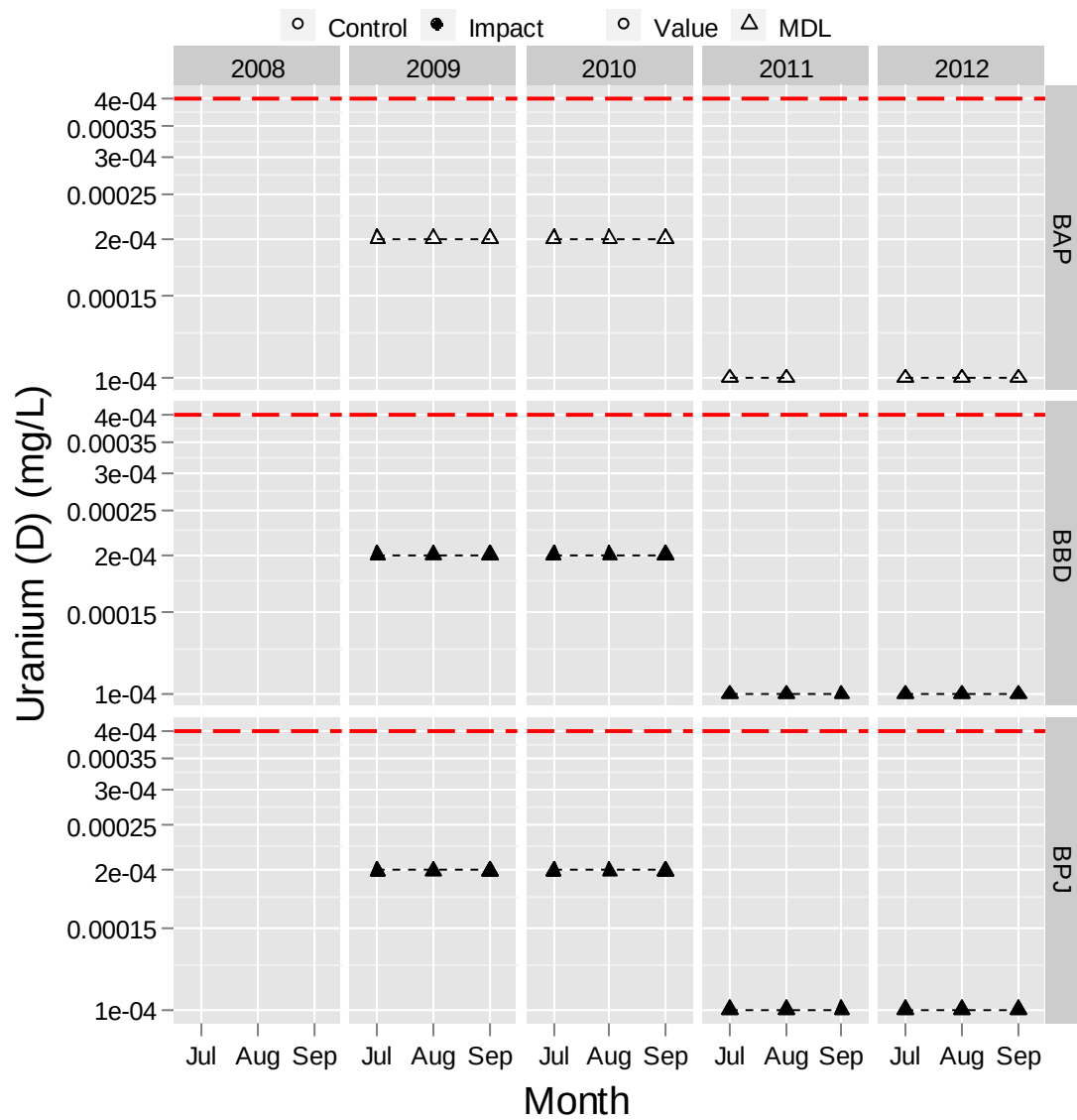


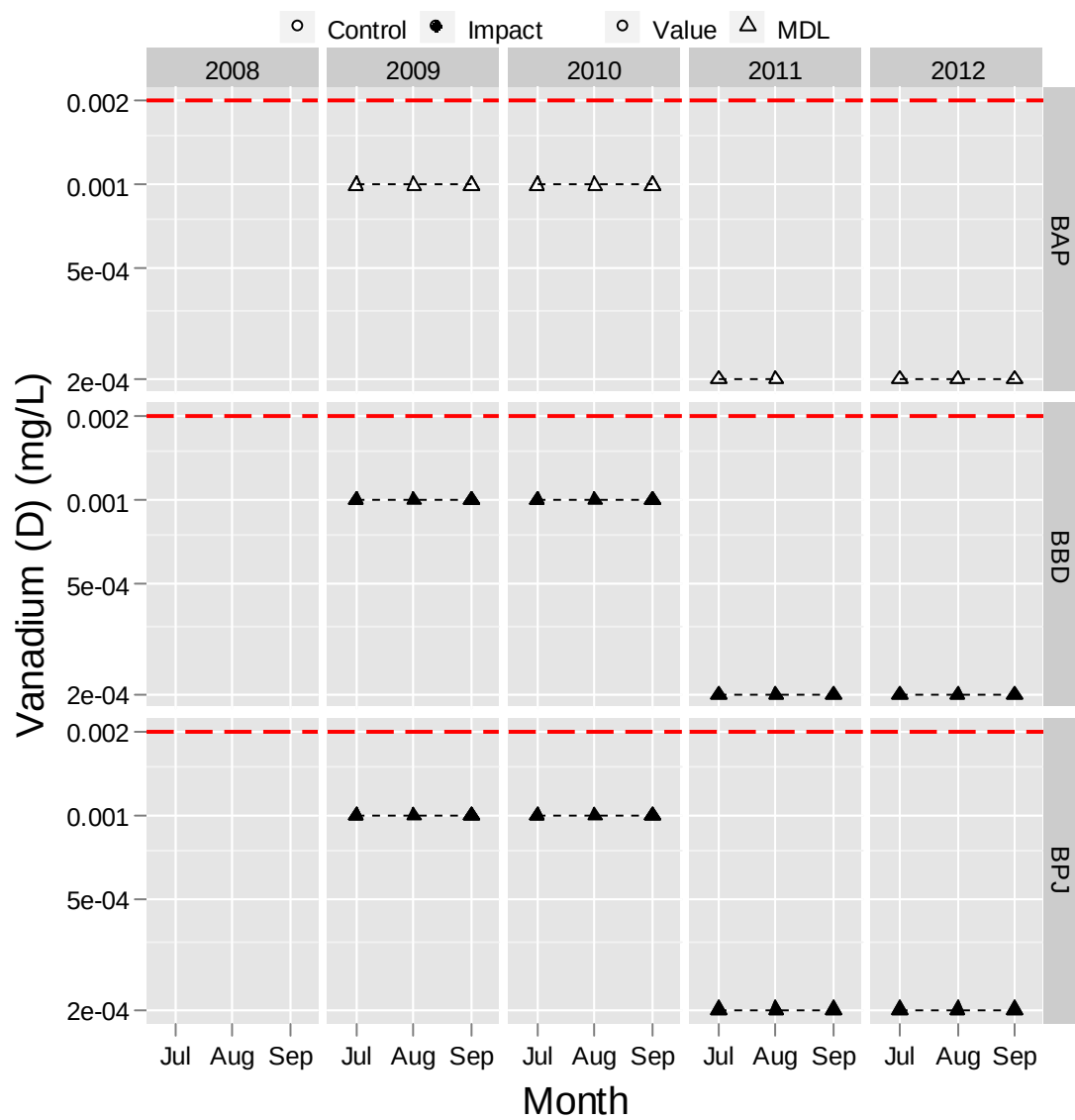


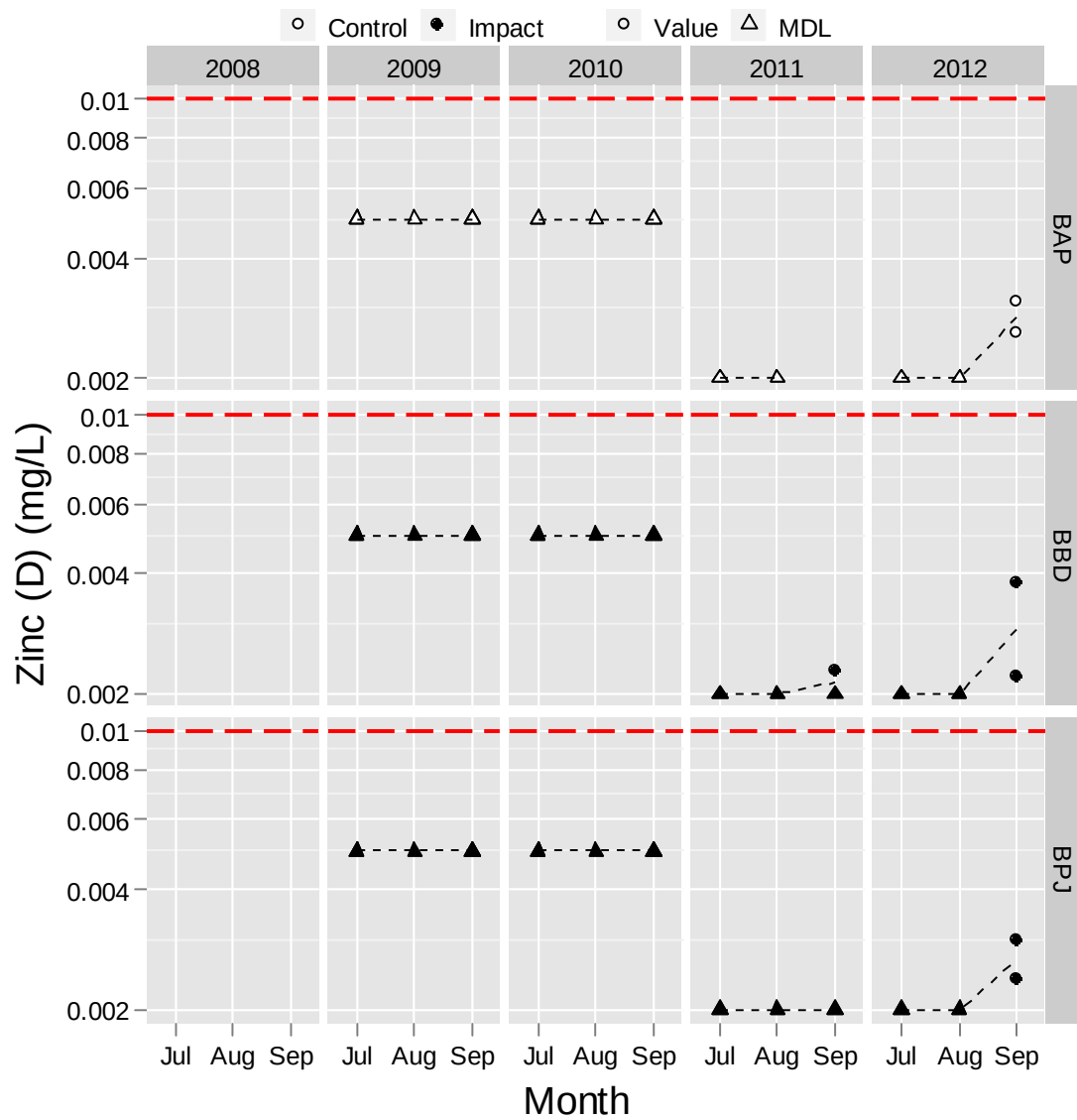












APPENDIX F

PRESENCE (+) / ABSENCE (-) MATRIX OF PHYTOPLANKTON SPECIES IN MEADOWBANK STUDY LAKES AND BAKER LAKE, 2012



Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Third Portage Lake - East Basin												Third	
		TPE46S	TPE47S	TPE48S	TPE49S	TPE50S	TPE51S	TPE52S	TPE53S	TPE54S	TPE55S	TPN46S	TPN47S	TPN48S	TPN49S
		19-Apr-12	19-Apr-12	08-May-12	08-May-12	21-Jul-12	21-Jul-12	26-Aug-12	26-Aug-12	14-Sep-12	14-Sep-12	19-Apr-12	19-Apr-12	8-May-12	08-May-12
Cyanophyte															
1007	<i>Aphanocapsa delicatissima</i> W. and G.S. West	-	-	-	-	-	-	-	+	-	-	-	-	-	-
1008	<i>Aphanocapsa</i> sp.	-	-	-	-	-	+	-	-	-	-	-	-	-	-
1012	<i>Aphanothece</i> sp.	-	-	-	-	-	-	-	-	-	+	-	-	+	-
1014	<i>Chroococcus limneticus</i> Lemmermann	-	-	-	-	-	-	-	-	-	+	-	-	-	-
1026	<i>Merismopedia tenuissima</i> Lemmermann	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1028	<i>Merismopedia glauca</i> (Ehrenberg) Kutzin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1033	<i>Rhabdogloea lineare</i> Schmidle and Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1054	<i>Planktolyngbya limnetica</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1073	<i>Snowella</i> sp	-	-	-	-	-	-	-	-	-	-	-	-	+	-
1077	<i>Pseudoanabaena</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Chlorophyte															
2100	<i>Pyramidomonas tetrarhynchus</i> Schmarda	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2105	<i>Chlamydomonas</i> spp.	-	+	-	-	+	+	+	+	+	+	-	+	-	-
2112	<i>Sphaerocystis schroeteri</i> Chodat	-	-	-	-	+	+	+	+	+	+	-	-	-	-
2121	<i>Oocystis lacustris</i> Chodat	-	-	-	+	+	+	+	+	+	+	-	-	-	-
2125	<i>Paulschulzia pseudovolvox</i> (Schulz and Teiling) Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2126	<i>Chodatella</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2132	<i>Scenedesmus denticulatus</i> Lagerhiem	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2137	<i>Dictyosphaerium simplex</i> Sukja	+	+	+	+	-	-	-	-	-	-	+	+	+	+
2138	<i>Monoraphidium komarkovae</i> (Nyg.) Komarkova-Legnerova	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2143	<i>Monoraphidium minutum</i> (Nag.) Komarkova-Legnerova	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2145	<i>Crucigenia quadrata</i> Morr.	-	-	-	-	-	-	-	-	-	-	+	-	-	-
2157	<i>Kichnerella lunaris</i> (Kirchn.) Moeb.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2164	<i>Quadrigula closterioides</i> (Bohl.) Printz	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2167	<i>Elakatothrix gelatinosa</i> Willen	-	-	-	+	+	+	+	+	+	+	-	-	+	-
2169	<i>Planctonema lauterbornii</i> Schmidle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2176	<i>Cosmarium depressum</i> v <i>achondrum</i> (Boldt) W. And G.S.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2178	<i>Cosmarium</i> sp.	+	-	-	-	-	-	-	+	-	-	-	-	-	-
2182	<i>Euastrum</i> spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2185	<i>Microsterias</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2186	<i>Xanthidium</i> sp.	-	-	-	-	-	-	+	-	-	-	-	-	-	-
2187	<i>Staurodesmus extensus</i> (Andersson) Teiling	-	-	+	-	-	-	+	+	+	-	+	-	+	-
2191	<i>Staurodesmus cuspidatus</i> (Brebisson and Ralfs) Teiling	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2193	<i>Staurodesmus paradoxum</i> Meyen	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2195	<i>Staurodesmus bullardii</i> G.M. Smith	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2199	<i>Spondylosium planum</i> (Wolle) W. and G.S. West	-	-	-	-	+	+	-	+	-	+	-	-	-	-
2205	<i>Mougeotia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2206	<i>Botryococcus braunii</i> Kutzin	-	-	-	-	+	+	+	+	+	+	-	-	-	-
2215	<i>Tetraedron caudatum</i> (Corda) Hansgrig	+	+	+	-	+	+	+	+	+	+	-	-	-	-
2235	<i>Ankistrodesmus spiralis</i> Lemmermann	-	-	-	-	+	+	+	+	+	+	+	+	-	-
2247	<i>Oocystis gigas</i> Archer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Euglenophyte															
3309	<i>Astasia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Third Portage Lake - East Basin											Third		
		TPE46S	TPE47S	TPE48S	TPE49S	TPE50S	TPE51S	TPE52S	TPE53S	TPE54S	TPE55S	TPN46S	TPN47S	TPN48S	TPN49S
		19-Apr-12	19-Apr-12	08-May-12	08-May-12	21-Jul-12	21-Jul-12	26-Aug-12	26-Aug-12	14-Sep-12	14-Sep-12	19-Apr-12	19-Apr-12	8-May-12	08-May-12
Chrysophyte															
4351	Small chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	
4352	Large chrysophyceae	+	+	-	-	-	-	+	+	+	+	+	+	-	
4355	Chrysochromulina parva Lackey	-	-	-	-	-	-	-	-	-	-	+	-	-	
4357	Chrysococcus sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	
4358	Chrysostephanospaera globulifera Scherffel	-	-	-	-	-	+	+	-	-	-	-	-	-	
4361	Kephyrion boreale Skuja	-	-	-	-	-	-	+	-	-	-	-	-	-	
4362	Kephyrion sp.	+	+	-	-	+	+	+	+	+	-	+	+	+	
4363	Spinifiromonas sirratus*****	-	-	-	-	-	-	-	-	-	-	-	-	-	
4368	Mallomonas crassisquama (Asmund) Fott	-	-	-	-	-	-	-	-	-	-	-	-	-	
4369	Mallomonas pseudocoronata Prescott	-	-	-	-	-	-	-	-	-	-	-	-	-	
4370	Mallomonas akrokomos Asmund and Kristiansen	-	-	-	-	-	-	-	-	-	-	-	-	-	
4372	Mallomonas tonsurata Teiling and Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	
4375	Synura sphagnicola Korschikow	-	-	-	-	-	-	-	-	-	-	-	-	-	
4378	Dinobryon borgei Lemmermann	-	-	-	-	+	+	+	+	+	-	-	-	-	
4381	Dinobryon mucronutum Nygaard	-	-	-	-	+	+	-	+	+	-	-	-	-	
4383	Dinobryon bavaricum Imhof	-	-	-	-	-	-	+	+	-	-	-	-	-	
4384	Dinobryon bavaricum v vanhoeffenii (Bachmann) Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	
4387	Dinobryon cylindricum Imhof	-	-	-	-	-	-	-	-	-	-	-	-	-	
4388	Dinobryon sertularia Ehrenberg	-	-	+	-	+	+	+	+	+	+	-	-	+	
4390	Dinobryon sociale Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	
4394	Epiphyxis sp.	-	-	-	-	+	+	-	+	+	+	-	-	-	
4396	Chrysalkos skuja (Nauwerck) Willen	-	-	-	-	+	+	+	+	+	+	-	-	+	
4400	Ochromonas sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	
4403	Chrysosphaerella longispina Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	
4411	Bitrichia chodatii (Reverdin) Chodat	+	-	-	-	-	-	+	+	+	+	-	+	+	
4413	Chrysochromulina laurentiana Kling	+	-	-	-	+	+	+	+	+	+	-	-	+	
4414	Stichogloea spp.	-	-	-	-	+	+	+	+	+	+	-	-	-	
4415	Bicoeca lacustris Clark	-	-	-	-	-	-	-	+	-	-	-	-	-	
4418	Salpingoeca frequentissima (Zach.) Lemmermann	-	-	-	-	-	-	-	+	+	+	-	-	-	
4436	Dinobryon attenuatum Hill	-	-	-	-	-	-	-	-	-	-	-	-	-	
4437	Pteridomonas sp.	-	-	-	-	+	-	-	-	-	-	-	-	-	
4439	Chrysosphaerella brevispina	-	-	-	-	-	-	-	-	-	-	-	-	-	
4444	Dinobryon pediforme (Lemmermann) Steineche	-	-	-	-	-	-	-	+	+	-	-	-	-	
4453	Desmarella brachycalyx Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	

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		TPE46S	TPE47S	TPE48S	TPE49S	TPE50S	TPE51S	TPE52S	TPE53S	TPE54S	TPE55S	TPN46S	TPN47S	TPN48S	TPN49S
		19-Apr-12	19-Apr-12	08-May-12	08-May-12	21-Jul-12	21-Jul-12	26-Aug-12	26-Aug-12	14-Sep-12	14-Sep-12	19-Apr-12	19-Apr-12	8-May-12	08-May-12
Diatom															
5507	Cyclotella stelligera Cleve and Grunow	+	+	-	+	+	+	-	-	+	+	+	+	-	
5509	Cyclotella ocellata Pant.	-	-	+	+	-	-	+	+	+	+	-	-	-	
5511	Rhizosolenia eriensis H.L. Smith	-	+	-	-	+	+	+	+	+	+	-	+	-	
5513	Tabellaria fenestrata (Lyngbye) Kutzin	-	-	-	-	+	-	-	-	+	-	-	-	-	
5514	Tabellaria flocculsa (Roth) Kutzin	-	-	-	-	+	+	+	-	+	+	-	-	-	
5518	Synedra acus Kutzin	-	-	-	-	+	+	+	+	+	-	+	+	-	
5523	Synedra ulna (Nitzsch) Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	
5524	Asterionella formosa Hassall	-	-	-	-	-	-	-	-	-	-	-	-	-	
5540	Aulacoseira italica v subarctica (O. Muller) Simonsen	-	-	-	-	-	-	-	-	-	-	-	-	-	
5551	Cyclotella michiganiana Skvortzow	+	+	+	+	-	+	+	+	+	+	+	+	+	
5702	Achnanthes minutissima Kutzin	-	-	-	-	-	-	-	-	-	-	-	-	-	
5720	Cyclotella bodanica Eulens.	-	-	-	-	-	-	-	-	-	-	-	-	-	
5836	Encyonema silesiacum (Bleisch) D.G. Mann	-	-	-	-	-	-	-	-	-	-	-	-	-	
5908	Diatoma tenue Agardh	-	-	-	-	-	-	-	-	-	-	-	-	-	
5916	Fragilaria capucina Grunow	-	-	-	-	-	-	-	-	-	-	-	-	+	
5917	Hannaea arcus Patrick	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cryptophyte															
6554	Rhodomonas minuta Skuja	+	-	+	-	+	+	+	+	+	-	-	-	-	
6558	Cryptomonas erosa Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	
6559	Cryptomonas ovata Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	
6562	Cryptomonas reflexa (Marsson) Skuja	+	-	-	-	+	+	+	+	+	+	-	-	-	
6565	Cryptomonas rostratiformis Skuja	+	-	-	-	-	-	+	+	+	+	-	-	+	
6568	Katablepharis ovalis Skuja	-	-	-	-	+	+	-	+	-	+	-	-	-	
Dinoflagellate															
7631	Gymnodinium helveticum Penard	+	-	-	-	+	-	-	+	-	-	-	-	-	
7632	Gymnodinium sp.	+	+	-	-	+	+	+	+	+	+	+	+	-	
7635	Peridinium willei Huitfeldt-Kaas	-	-	-	-	-	-	-	-	-	-	-	+	-	
7639	Peridinium pusillum (Penard) Lemmermann	-	-	-	-	+	+	+	+	+	+	-	+	+	
7640	Peridinium goslawiense Woloszyńska	-	-	-	-	-	-	-	-	-	-	-	-	-	
7641	Peridinium aciculiferum Lemmermann	-	-	-	-	-	-	-	-	-	-	-	+	-	
7642	Peridinium wisconsinense Eddy	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Portage Lake - North Basin						Third Portage Lake - South Basin									
		TPN50S 22-Jul-12	TPN51S 22-Jul-12	TPN52S 26-Aug-12	TPN53S 26-Aug-12	TPN54S 19-Sep-12	TPN55S 19-Sep-12	TPS33S 25-Jul-12	TPS34S 25-Jul-12	TPS35S 27-Aug-12	TPS36S 27-Aug-12	TPS37S 19-Sep-12	TPS38S 19-Sep-12	SP46S 19-Apr-12	SP47S 19-Apr-12	SP48S 10-May-12	
Cyanophyte																	
1007	<i>Aphanocapsa delicatissima</i> W. and G.S. West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1008	<i>Aphanocapsa</i> sp.	+	+	-	-	-	-	+	+	-	-	-	-	-	-	-	
1012	<i>Aphanothece</i> sp.	-	-	+	+	+	-	-	-	-	-	+	+	-	-	-	
1014	<i>Chroococcus limneticus</i> Lemmermann	-	-	+	+	-	+	-	+	-	+	-	-	-	-	-	
1026	<i>Merismopedia tenuissima</i> Lemmermann	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	
1028	<i>Merismopedia glauca</i> (Ehrenberg) Kutzin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1033	<i>Rhabdogloea lineare</i> Schmidle and Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1054	<i>Planktolyngbya limnetica</i>	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	
1073	<i>Snowella</i> sp	-	-	+	+	-	-	-	-	+	+	-	-	-	+	-	
1077	<i>Pseudoanabaena</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chlorophyte																	
2100	<i>Pyramidomonas tetrarhynchus</i> Schmarda	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	
2105	<i>Chlamydomonas</i> spp.	+	-	+	+	-	+	-	-	+	+	+	+	+	+	-	
2112	<i>Sphaerocystis schroeteri</i> Chodat	-	-	+	-	-	+	+	+	+	+	-	-	-	-	-	
2121	<i>Oocystis lacustris</i> Chodat	+	+	+	+	-	+	+	+	+	-	-	-	-	+	-	
2125	<i>Paulschulzia pseudovolvox</i> (Schulz and Teiling) Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2126	<i>Chodatella</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2132	<i>Scenedesmus denticulatus</i> Lagerhiem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2137	<i>Dictyosphaerium simplex</i> Sukja	-	-	-	-	+	-	+	-	+	+	+	+	+	+	+	
2138	<i>Monoraphidium komarkovae</i> (Nyg.) Komarkova-Legnerova	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	
2143	<i>Monoraphidium minutum</i> (Nag.) Komarkova-Legnerova	-	-	-	-	-	-	+	+	-	-	-	-	+	-	-	
2145	<i>Crucigenia quadrata</i> Morr.	-	+	-	-	+	-	-	-	-	+	+	+	-	-	-	
2157	<i>Kichnerella lunaris</i> (Kirchn.) Moeb.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2164	<i>Quadrigula closterioides</i> (Bohl.) Printz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2167	<i>Elakatothrix gelatinosa</i> Willen	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	
2169	<i>Planctonema lauterbornii</i> Schmidle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2176	<i>Cosmarium depressum</i> v <i>achondrum</i> (Boldt) W. And G.S.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2178	<i>Cosmarium</i> sp.	-	-	+	-	-	-	+	+	-	-	-	+	-	-	-	
2182	<i>Euastrum</i> spp.	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	
2185	<i>Microsterias</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2186	<i>Xanthidium</i> sp.	-	-	+	+	+	+	-	-	-	-	+	-	-	-	-	
2187	<i>Staurodesmus extensus</i> (Andersson) Teiling	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	
2191	<i>Staurodesmus cuspidatus</i> (Brebisson and Ralfs) Teiling	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	
2193	<i>Staurodesmus paradoxum</i> Meyen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2195	<i>Staurodesmus bullardii</i> G.M. Smith	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2199	<i>Spondylosium planum</i> (Wolle) W. and G.S. West	-	+	-	-	-	+	-	-	+	+	-	+	-	-	-	
2205	<i>Mougeotia</i> sp.	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
2206	<i>Botryococcus braunii</i> Kutzin	+	-	+	+	+	+	+	+	-	+	-	+	-	+	-	
2215	<i>Tetraedron caudatum</i> (Corda) Hansgrig	+	-	+	+	+	+	+	+	+	+	+	+	+	+	-	
2235	<i>Ankistrodesmus spiralis</i> Lemmermann	+	+	+	+	+	+	+	+	+	+	+	+	-	+	-	
2247	<i>Oocystis gigas</i> Archer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Euglenophyte																	
3309	<i>Astasia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Portage Lake - North Basin						Third Portage Lake - South Basin										
		TPN50S	TPN51S	TPN52S	TPN53S	TPN54S	TPN55S	TPS33S	TPS34S	TPS35S	TPS36S	TPS37S	TPS38S	SP46S	SP47S	SP48S		
		22-Jul-12	22-Jul-12	26-Aug-12	26-Aug-12	19-Sep-12	19-Sep-12	25-Jul-12	25-Jul-12	27-Aug-12	27-Aug-12	19-Sep-12	19-Sep-12	19-Apr-12	19-Apr-12	10-May-12		
Chrysophyte																		
4351	Small chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
4352	Large chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
4355	Chrysochromulina parva Lackey	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-		
4357	Chrysococcus sp.	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+		
4358	Chrysostephanospaera globulifera Scherffel	-	+	-	-	+	-	-	+	-	-	-	+	+	-	-		
4361	Kephyrion boreale Skuja	-	-	-	+	-	-	-	-	+	-	-	+	+	-	-		
4362	Kephyrion sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
4363	Spinifiromonas sirratus*****	+	-	-	+	-	-	+	+	-	+	-	-	+	-	-		
4368	Mallomonas crassisquama (Asmund) Fott	+	-	+	+	-	-	+	+	-	-	-	-	-	-	-		
4369	Mallomonas pseudocoronata Prescott	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-		
4370	Mallomonas akrokomos Asmund and Kristiansen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4372	Mallomonas tonsurata Teiling and Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4375	Synura sphagnicola Korschikow	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-		
4378	Dinobryon borgei Lemmermann	+	-	+	+	+	+	+	+	-	+	+	+	-	-	-		
4381	Dinobryon mucronutum Nygaard	+	-	+	+	-	+	-	+	+	+	+	+	-	-	-		
4383	Dinobryon bavaricum Imhof	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-		
4384	Dinobryon bavaricum v vanhoeffenii (Bachmann) Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4387	Dinobryon cylindricum Imhof	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4388	Dinobryon sertularia Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	-	+	-		
4390	Dinobryon sociale Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
4394	Epiphyxis sp.	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-		
4396	Chrysalkos skuja (Nauwerck) Willen	+	+	+	-	+	+	+	+	+	+	+	+	+	-	+		
4400	Ochromonas sp.	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-		
4403	Chrysosphaerella longispina Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4411	Bitrichia chodatii (Reverdin) Chodat	+	+	+	+	+	-	+	+	+	+	-	+	-	-	-		
4413	Chrysochromulina laurentiana Kling	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
4414	Stichogloea spp.	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-		
4415	Bicoeca lacustris Clark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4418	Salpingoeca frequentissima (Zach.) Lemmermann	+	+	+	+	+	+	-	+	+	+	+	+	-	-	-		
4436	Dinobryon attenuatum Hill	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-		
4437	Pteridomonas sp.	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-		
4439	Chrysosphaerella brevispina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4444	Dinobryon pediforme (Lemmermann) Steineche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4453	Desmarella brachycalyx Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Portage Lake - North Basin						Third Portage Lake - South Basin								
		TPN50S	TPN51S	TPN52S	TPN53S	TPN54S	TPN55S	TPS33S	TPS34S	TPS35S	TPS36S	TPS37S	TPS38S	SP46S	SP47S	SP48S
		22-Jul-12	22-Jul-12	26-Aug-12	26-Aug-12	19-Sep-12	19-Sep-12	25-Jul-12	25-Jul-12	27-Aug-12	27-Aug-12	19-Sep-12	19-Sep-12	19-Apr-12	19-Apr-12	10-May-12
Diatom																
5507	Cyclotella stelligera Cleve and Grunow	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-
5509	Cyclotella ocellata Pant.	-	-	+	+	+	+	+	+	+	+	+	+	-	-	+
5511	Rhizosolenia eriensis H.L. Smith	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-
5513	Tabellaria fenestrata (Lyngbye) Kutzing	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5514	Tabellaria flocculsa (Roth) Kutzing	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-
5518	Synedra acus Kutzing	+	+	+	-	+	+	+	-	+	-	+	+	+	+	+
5523	Synedra ulna (Nitzsch) Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5524	Asterionella formosa Hassall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5540	Aulacoseira italica v subarctica (O. Muller) Simonsen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5551	Cyclotella michiganiana Skvortzow	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5702	Achnanthes minutissima Kutzing	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
5720	Cyclotella bodanica Eulens.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5836	Encyonema silesiacum (Bleisch) D.G. Mann	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5908	Diatoma tenue Agardh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5916	Fragilaria capucina Grunow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5917	Hannaea arcus Patrick	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptophyte																
6554	Rhodomonas minuta Skuja	+	+	+	+	+	+	+	+	+	+	+	-	+	-	-
6558	Cryptomonas erosa Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6559	Cryptomonas ovata Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6562	Cryptomonas reflexa (Marsson) Skuja	-	-	+	-	-	+	+	+	+	+	+	+	+	-	+
6565	Cryptomonas rostratiformis Skuja	-	+	-	+	+	+	+	+	+	+	+	+	-	-	-
6568	Katablepharis ovalis Skuja	+	+	+	+	+	+	+	+	-	-	+	+	-	-	+
Dinoflagellate																
7631	Gymnodinium helveticum Penard	-	-	+	+	+	-	+	+	-	-	+	-	-	-	-
7632	Gymnodinium sp.	+	+	+	+	+	+	+	+	+	+	+	+	-	+	-
7635	Peridinium willei Huitfeldt-Kaas	-	-	-	+	+	-	+	+	-	-	-	-	-	-	-
7639	Peridinium pusillum (Penard) Lemmermann	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
7640	Peridinium goslawiense Woloszyńska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7641	Peridinium aciculiferum Lemmermann	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
7642	Peridinium wisconsinense Eddy	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Second Portage Lake								Tehek Lake					
		SP49S	SP50S	SP51S	SP52S	SP53S	SP54S	SP55S	TE46S	TE47S	TE48S	TE49S	TE50S	TE51S	TE52S
		10-May-12	20-Jul-12	20-Jul-12	20-Aug-12	20-Aug-12	18-Sep-12	18-Sep-12	19-Apr-12	19-Apr-12	11-May-12	11-May-12	28-Jul-12	28-Jul-12	18-Aug-12
Cyanophyte															
1007	<i>Aphanocapsa delicatissima</i> W. and G.S. West	-	-	+	-	-	-	-	-	-	-	-	-	-	-
1008	<i>Aphanocapsa</i> sp.	-	-	+	-	-	-	-	-	-	-	-	-	+	-
1012	<i>Aphanothece</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1014	<i>Chroococcus limneticus</i> Lemmermann	-	-	-	-	-	-	-	-	-	-	-	+	-	-
1026	<i>Merismopedia tenuissima</i> Lemmermann	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1028	<i>Merismopedia glauca</i> (Ehrenberg) Kutzig	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1033	<i>Rhabdogloea lineare</i> Schmidle and Lauterborn	-	-	-	+	-	-	-	-	-	-	-	-	-	-
1054	<i>Planktolyngbya limnetica</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1073	<i>Snowella</i> sp	-	-	+	-	-	+	-	-	-	-	-	+	-	-
1077	<i>Pseudoanabaena</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorophyte															
2100	<i>Pyramidomonas tetrarhynchus</i> Schmarda	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2105	<i>Chlamydomonas</i> spp.	+	+	+	+	+	+	+	+	-	+	-	-	+	-
2112	<i>Sphaerocystis schroeteri</i> Chodat	-	+	+	+	+	-	-	-	-	-	-	-	+	+
2121	<i>Oocystis lacustris</i> Chodat	-	+	+	+	+	+	-	-	-	-	-	+	-	+
2125	<i>Paulschulzia pseudovolvox</i> (Schulz and Teiling) Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2126	<i>Chodatella</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2132	<i>Scenedesmus denticulatus</i> Lagerhiem	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2137	<i>Dictyosphaerium simplex</i> Sukja	+	-	-	+	+	+	+	+	+	+	+	-	-	+
2138	<i>Monoraphidium komarkovae</i> (Nyg.) Komarkova-Legnere	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2143	<i>Monoraphidium minutum</i> (Nag.) Komarkova-Legnere	-	-	-	+	+	-	-	-	-	-	-	-	-	-
2145	<i>Crucigenia quadrata</i> Morr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2157	<i>Kichnerella lunaris</i> (Kirchn.) Moeb.	-	-	-	-	+	-	-	-	-	-	-	-	-	-
2164	<i>Quadrigula closterioides</i> (Bohl.) Printz	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2167	<i>Elakatothrix gelatinosa</i> Willen	-	+	+	-	-	+	+	-	-	-	-	+	+	+
2169	<i>Planctonema lauterbornii</i> Schmidle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2176	<i>Cosmarium depressum</i> v <i>achondrum</i> (Boldt) W. And G.S.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2178	<i>Cosmarium</i> sp.	-	-	-	-	+	-	-	-	-	-	-	+	+	+
2182	<i>Euastrum</i> spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2185	<i>Microsterias</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2186	<i>Xanthidium</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	+	-
2187	<i>Staurodesmus extensus</i> (Andersson) Teiling	+	+	+	+	-	+	+	-	-	-	-	+	+	+
2191	<i>Staurodesmus cuspidatus</i> (Brebisson and Ralfs) Teiling	-	-	-	+	-	-	-	-	-	-	-	-	-	-
2193	<i>Staurodesmus paradoxum</i> Meyen	-	-	-	-	-	-	-	-	-	-	-	-	+	-
2195	<i>Staurodesmus bullardii</i> G.M. Smith	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2199	<i>Spondylosium planum</i> (Wolle) W. and G.S. West	-	-	+	-	-	+	-	+	+	-	-	+	+	+
2205	<i>Mougeotia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2206	<i>Botryococcus braunii</i> Kutzig	-	+	+	+	+	+	+	-	+	-	-	-	-	-
2215	<i>Tetraedron caudatum</i> (Corda) Hansgrig	+	+	+	+	+	+	+	+	+	-	-	+	+	+
2235	<i>Ankistrodesmus spiralis</i> Lemmermann	-	+	+	+	+	+	+	+	+	+	+	+	+	+
2247	<i>Oocystis gigas</i> Archer	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Euglenophyte															
3309	<i>Astasia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Second Portage Lake									Tehek Lake					
		SP49S	SP50S	SP51S	SP52S	SP53S	SP54S	SP55S	TE46S	TE47S	TE48S	TE49S	TE50S	TE51S	TE52S	
		10-May-12	20-Jul-12	20-Jul-12	20-Aug-12	20-Aug-12	18-Sep-12	18-Sep-12	19-Apr-12	19-Apr-12	11-May-12	11-May-12	28-Jul-12	28-Jul-12	18-Aug-12	
Chrysophyte																
4351	Small chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
4352	Large chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
4355	Chrysochromulina parva Lackey	-	+	+	-	-	-	-	-	-	-	-	-	-	-	
4357	Chrysococcus sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
4358	Chrysostephanospaera globulifera Scherffel	-	-	-	+	-	-	-	-	-	-	-	+	-	-	
4361	Kephyrion boreale Skuja	-	-	-	+	-	-	-	-	-	-	-	+	+	+	
4362	Kephyrion sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
4363	Spinifiromonas sirratus*****	-	+	+	+	+	-	-	+	+	-	-	+	+	+	
4368	Mallomonas crassisquama (Asmund) Fott	-	+	+	-	-	-	+	+	-	-	-	+	-	+	
4369	Mallomonas pseudocoronata Prescott	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4370	Mallomonas akrokomas Asmund and Kristiansen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4372	Mallomonas tonsurata Teiling and Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4375	Synura sphagnicola Korschikow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4378	Dinobryon borgei Lemmermann	-	+	+	-	+	+	+	-	-	-	-	+	+	+	
4381	Dinobryon mucronutum Nygaard	-	+	+	+	+	+	+	-	-	+	-	+	+	+	
4383	Dinobryon bavaricum Imhof	-	-	-	-	-	-	-	-	-	-	-	-	-	+	
4384	Dinobryon bavaricum v vanhoeffenii (Bachmann) Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4387	Dinobryon cylindricum Imhof	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4388	Dinobryon sertularia Ehrenberg	-	+	+	+	+	-	+	+	-	+	+	+	+	+	
4390	Dinobryon sociale Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
4394	Epiphyxis sp.	-	+	+	-	+	-	+	-	-	-	-	+	+	-	
4396	Chrysalkos skuja (Nauwerck) Willen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
4400	Ochromonas sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4403	Chrysophaerella longispina Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4411	Bitrichia chodatii (Reverdin) Chodat	-	-	-	+	+	-	+	-	-	-	-	-	+	+	
4413	Chrysochromulina laurentiana Kling	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
4414	Stichogloea spp.	-	+	+	+	+	+	+	-	-	-	-	+	+	-	
4415	Bicoeca lacustris Clark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4418	Salpingoeca frequentissima (Zach.) Lemmermann	-	-	+	+	+	+	+	-	-	-	-	+	-	+	
4436	Dinobryon attenatum Hill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4437	Pteridomonas sp.	-	-	-	+	-	-	-	-	-	-	-	+	+	+	
4439	Chrysophaerella brevispina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4444	Dinobryon pediforme (Lemmermann) Steineche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4453	Desmarella brachycalyx Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code	Second Portage Lake								Tehek Lake					
	SP49S	SP50S	SP51S	SP52S	SP53S	SP54S	SP55S	TE46S	TE47S	TE48S	TE49S	TE50S	TE51S	TE52S
	10-May-12	20-Jul-12	20-Jul-12	20-Aug-12	20-Aug-12	18-Sep-12	18-Sep-12	19-Apr-12	19-Apr-12	11-May-12	11-May-12	28-Jul-12	28-Jul-12	18-Aug-12
Diatom														
5507 <i>Cyclotella stelligera</i> Cleve and Grunow	-	+	+	+	+	+	+	+	+	-	+	+	-	+
5509 <i>Cyclotella ocellata</i> Pant.	+	+	+	+	+	+	-	-	-	+	+	-	+	+
5511 <i>Rhizosolenia erianse</i> H.L. Smith	-	-	-	+	-	+	-	+	+	-	+	+	+	+
5513 <i>Tabellaria fenestrata</i> (Lyngbye) Kutzing	-	+	-	-	+	+	-	+	-	-	-	-	-	-
5514 <i>Tabellaria flocculsa</i> (Roth) Kutzing	-	-	+	-	-	-	-	-	-	-	-	-	+	+
5518 <i>Synedra acus</i> Kutzing	-	+	+	+	+	+	+	+	+	+	+	+	+	+
5523 <i>Synedra ulna</i> (Nitzsch) Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5524 <i>Asterionella formosa</i> Hassall	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5540 <i>Aulacoseira italica</i> v <i>subarctica</i> (O. Muller) Simonsen	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5551 <i>Cyclotella michiganiana</i> Skvortzow	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5702 <i>Achnanthes minutissima</i> Kutzing	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5720 <i>Cyclotella bodanica</i> Eulens.	-	-	-	-	-	+	+	-	-	-	-	-	-	-
5836 <i>Encyonema silesiacum</i> (Bleisch) D.G. Mann	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5908 <i>Diatoma tenue</i> Agardh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5916 <i>Fragilaria capucina</i> Grunow	-	-	-	-	-	-	-	-	-	+	-	-	-	-
5917 <i>Hannaea arcus</i> Patrick	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptophyte														
6554 <i>Rhodomonas minuta</i> Skuja	-	+	+	+	+	+	+	+	+	-	-	+	+	+
6558 <i>Cryptomonas erosa</i> Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6559 <i>Cryptomonas ovata</i> Ehrenberg	-	+	+	-	-	-	-	-	-	-	-	-	-	-
6562 <i>Cryptomonas reflexa</i> (Marsson) Skuja	+	+	+	+	+	-	-	+	+	+	+	+	+	+
6565 <i>Cryptomonas rostratiformis</i> Skuja	-	+	+	+	+	-	-	+	+	-	-	+	+	-
6568 <i>Katablepharis ovalis</i> Skuja	-	+	+	+	+	-	-	-	+	-	-	+	+	+
Dinoflagellate														
7631 <i>Gymnodinium helveticum</i> Penard	-	-	-	-	+	+	+	-	-	-	-	-	-	-
7632 <i>Gymnodinium</i> sp.	-	+	+	+	+	+	+	+	+	-	+	+	+	+
7635 <i>Peridinium willei</i> Huitfeldt-Kaas	-	+	+	-	-	-	+	-	-	-	+	-	-	-
7639 <i>Peridinium pusillum</i> (Penard) Lemmermann	+	+	+	+	+	+	+	+	+	+	+	+	+	+
7640 <i>Peridinium goslawiense</i> Woloszyńska	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7641 <i>Peridinium aciculiferum</i> Lemmermann	+	+	+	-	-	-	-	+	-	+	-	-	-	-
7642 <i>Peridinium wisconsinense</i> Eddy	-	-	-	-	-	-	-	-	-	-	+	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Tehek Lake - Farfield										Inuggugay				
		TE53S	TE54S	TE55S	TE56S	TEFF21S	TEFF22S	TEFF23S	TEFF24S	TEFF25S	TEFF26S	INUG34S	INUG35S	INUG36S	INUG37S	INUG38S
		18-Aug-12	17-Sep-12	17-Sep-12	5-Dec-12	28-Jul-12	28-Jul-12	18-Aug-12	18-Aug-12	17-Sep-12	16-Sep-12	15-Apr-12	15-Apr-12	9-May-12	9-May-12	25-Jul-12
Cyanophyte																
1007	Aphanocapsa delicatissima W. and G.S. West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1008	Aphanocapsa sp.	-	-	-	-	-	+	-	-	-	-	+	+	-	-	+
1012	Aphanothece sp.	-	+	+	-	-	-	-	-	+	-	-	-	-	-	-
1014	Chroococcus limneticus Lemmermann	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-
1026	Merismopedia tenuissima Lemmermann	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
1028	Merismopedia glauca (Ehrenberg) Kutzing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1033	Rhabdogloea lineare Schmidle and Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1054	Planktolyngbya limnetica	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1073	Snowella sp	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
1077	Pseudoanabaena sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorophyte																
2100	Pyramidomonas tetrarhynchus Schmarda	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
2105	Chlamydomonas spp.	+	+	+	+	-	-	+	+	+	+	-	+	-	-	+
2112	Sphaerocystis schroeteri Chodat	+	-	-	-	+	+	+	+	+	-	-	-	-	-	+
2121	Oocystis lacustris Chodat	+	+	+	-	+	+	+	+	+	-	-	-	-	-	-
2125	Paulschulzia pseudovolvox (Schulz and Teiling) Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2126	Chodatella sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2132	Scenedesmus denticulatus Lagerhiem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2137	Dictyosphaerium simplex Sukja	+	+	+	+	-	-	+	-	-	-	+	+	+	+	-
2138	Monoraphidium komarkovae (Nyg.) Komarkova-Legnere	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2143	Monoraphidium minutum (Nag.) Komarkova-Legnere	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-
2145	Crucigenia quadrata Morr.	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
2157	Kichnerella lunaris (Kirchn.) Moeb.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2164	Quadrigula closterioides (Bohl.) Printz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2167	Elakatothrix gelatinosa Willen	+	+	+	+	+	-	+	+	+	+	-	-	-	-	+
2169	Planctonema lauterbornii Schmidle	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
2176	Cosmarium depressum v achondrum (Boldt) W. And G.S.	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
2178	Cosmarium sp.	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2182	Euastrum spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2185	Microsterias sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2186	Xanthidium sp.	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
2187	Staurodesmus extensus (Andersson) Teiling	+	+	-	+	+	+	+	+	+	+	-	-	+	-	+
2191	Staurodesmus cuspidatus (Brebisson and Ralfs) Teiling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2193	Staurodesmus paradoxum Meyen	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
2195	Staurodesmus bullardii G.M. Smith	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2199	Spondylosium planum (Wolle) W. and G.S. West	+	+	+	+	+	-	-	-	+	+	-	-	-	-	+
2205	Mougeotia sp.	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
2206	Botryococcus braunii Kutzing	+	-	+	+	-	-	-	+	+	-	+	+	+	+	+
2215	Tetraedron caudatum (Corda) Hansgrig	+	+	+	-	-	+	+	+	+	+	-	-	-	-	-
2235	Ankistrodesmus spiralis Lemmermann	+	+	+	-	+	+	+	+	-	-	-	-	-	-	+
2247	Oocystis gigas Archer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Euglenophyte																
3309	Astasia sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Tehek Lake - Farfield										Inuggugay				
		TE53S	TE54S	TE55S	TE56S	TEFF21S	TEFF22S	TEFF23S	TEFF24S	TEFF25S	TEFF26S	INUG34S	INUG35S	INUG36S	INUG37S	INUG38S
		18-Aug-12	17-Sep-12	17-Sep-12	5-Dec-12	28-Jul-12	28-Jul-12	18-Aug-12	18-Aug-12	17-Sep-12	16-Sep-12	15-Apr-12	15-Apr-12	9-May-12	9-May-12	25-Jul-12
Chrysophyte																
4351	Small chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4352	Large chrysophyceae	+	+	+	+	+	+	+	+	+	+	-	-	+	+	+
4355	<i>Chrysochromulina parva</i> Lackey	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
4357	<i>Chrysococcus</i> sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4358	<i>Chrysostephanosphaera globulifera</i> Scherffel	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
4361	<i>Kephyrion boreale</i> Skuja	+	+	-	-	-	-	+	-	+	-	+	-	-	-	-
4362	<i>Kephyrion</i> sp.	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+
4363	<i>Spinifromonas sirratus</i> *****	+	-	+	-	-	-	-	-	+	+	-	-	-	-	-
4368	<i>Mallomonas crassisquama</i> (Asmund) Fott	-	-	+	-	+	-	+	-	+	-	-	+	-	-	+
4369	<i>Mallomonas pseudocoronata</i> Prescott	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4370	<i>Mallomonas akrokomos</i> Asmund and Kristiansen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4372	<i>Mallomonas tonsurata</i> Teiling and Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4375	<i>Synura sphagnicola</i> Korschikow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4378	<i>Dinobryon borgei</i> Lemmermann	+	+	+	-	+	+	+	+	+	+	-	-	-	-	+
4381	<i>Dinobryon mucronutum</i> Nygaard	+	-	+	-	-	+	+	+	+	-	-	-	-	-	+
4383	<i>Dinobryon bavaricum</i> Imhof	+	-	-	-	-	-	+	+	-	-	-	-	-	-	-
4384	<i>Dinobryon bavaricum</i> v <i>vanhoeffenii</i> (Bachmann) Krieger	-	-	-	-	+	-	+	-	-	+	-	-	+	-	+
4387	<i>Dinobryon cylindricum</i> Imhof	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4388	<i>Dinobryon sertularia</i> Ehrenberg	-	+	-	-	+	+	+	+	+	-	+	+	-	-	+
4390	<i>Dinobryon sociale</i> Ehrenberg	+	+	+	+	+	+	+	+	+	+	-	-	+	-	+
4394	<i>Epiphyxis</i> sp.	+	+	+	-	-	+	-	+	+	+	-	-	-	-	-
4396	<i>Chrysalkos skuja</i> (Nauwerck) Willen	+	+	+	+	+	+	+	+	+	+	-	-	-	+	+
4400	<i>Ochromonas</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4403	<i>Chrysosphaerella longispina</i> Lauterborn	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
4411	<i>Bitrichia chodatii</i> (Reverdin) Chodat	+	+	+	-	-	-	+	+	+	+	-	-	-	-	+
4413	<i>Chrysochromulina laurentiana</i> Kling	+	+	+	-	+	+	+	+	+	+	-	-	+	-	+
4414	<i>Stichogloea</i> spp.	+	+	+	-	+	+	+	+	+	+	-	-	-	-	+
4415	<i>Bicoeca lacustris</i> Clark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4418	<i>Salpingoeca frequentissima</i> (Zach.) Lemmermann	+	+	+	+	-	-	-	+	+	+	-	-	-	-	+
4436	<i>Dinobryon attenuatum</i> Hill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4437	<i>Pteridomonas</i> sp.	-	-	-	-	-	+	+	-	-	-	-	-	-	-	+
4439	<i>Chrysosphaerella brevispina</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4444	<i>Dinobryon pediforme</i> (Lemmermann) Steineche	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4453	<i>Desmarella brachycalyx</i> Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Species & Code	Tehek Lake - Farfield										Inuggugay				
	TE53S	TE54S	TE55S	TE56S	TEFF21S	TEFF22S	TEFF23S	TEFF24S	TEFF25S	TEFF26S	INUG34S	INUG35S	INUG36S	INUG37S	INUG38S
	18-Aug-12	17-Sep-12	17-Sep-12	5-Dec-12	28-Jul-12	28-Jul-12	18-Aug-12	18-Aug-12	17-Sep-12	16-Sep-12	15-Apr-12	15-Apr-12	9-May-12	9-May-12	25-Jul-12
Diatom															
5507 <i>Cyclotella stelligera</i> Cleve and Grunow	+	+	+	-	+	+	+	+	+	+	+	+	-	-	+
5509 <i>Cyclotella ocellata</i> Pant.	+	+	-	-	+	+	+	+	+	+	-	-	+	-	+
5511 <i>Rhizosolenia eriense</i> H.L. Smith	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+
5513 <i>Tabellaria fenestrata</i> (Lyngbye) Kutzing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5514 <i>Tabellaria flocculsa</i> (Roth) Kutzing	+	+	-	-	+	+	+	-	+	+	-	-	-	-	+
5518 <i>Synedra acus</i> Kutzing	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+
5523 <i>Synedra ulna</i> (Nitzsch) Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5524 <i>Asterionella formosa</i> Hassall	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
5540 <i>Aulacoseira italica</i> v <i>subarctica</i> (O. Muller) Simonsen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5551 <i>Cyclotella michiganiana</i> Skvortzow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5702 <i>Achnanthes minutissima</i> Kutzing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5720 <i>Cyclotella bodanica</i> Eulens.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5836 <i>Encyonema silesiacum</i> (Bleisch) D.G. Mann	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5908 <i>Diatoma tenue</i> Agardh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5916 <i>Fragilaria capucina</i> Grunow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5917 <i>Hannaea arcus</i> Patrick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptophyte															
6554 <i>Rhodomonas minuta</i> Skuja	+	+	+	+	+	+	+	+	+	+	-	-	-	-	+
6558 <i>Cryptomonas erosa</i> Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+
6559 <i>Cryptomonas ovata</i> Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6562 <i>Cryptomonas reflexa</i> (Marsson) Skuja	+	-	+	-	+	+	+	-	-	+	-	-	-	-	+
6565 <i>Cryptomonas rostratiformis</i> Skuja	-	+	-	-	+	+	-	-	-	-	-	-	-	+	-
6568 <i>Katablepharis ovalis</i> Skuja	+	-	-	+	+	+	+	+	+	+	-	-	+	+	+
Dinoflagellate															
7631 <i>Gymnodinium helveticum</i> Penard	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+
7632 <i>Gymnodinium</i> sp.	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+
7635 <i>Peridinium willei</i> Huitfeldt-Kaas	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
7639 <i>Peridinium pusillum</i> (Penard) Lemmermann	+	+	+	+	+	+	-	+	+	-	-	-	+	+	-
7640 <i>Peridinium goslawiense</i> Woloszyńska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7641 <i>Peridinium aciculiferum</i> Lemmermann	-	-	-	-	-	-	-	-	+	-	-	+	-	+	+
7642 <i>Peridinium wisconsinense</i> Eddy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Inualik Lake					Wally Lake						Pipedream Lake		
		INUG39S	INUG40S	INUG41S	INUG42S	INUG43S	WAL21S	WAL22S	WAL23S	WAL24S	WAL25S	WAL26S	PDL23S	PDL24S	PDL25S
		25-Jul-12	21-Aug-12	21-Aug-12	16-Sep-12	16-Sep-12	29-Jul-12	29-Jul-12	17-Aug-12	17-Aug-12	12-Sep-12	12-Sep-12	22-Aug-12	22-Aug-12	18-Sep-12
Cyanophyte															
1007	<i>Aphanocapsa delicatissima</i> W. and G.S. West	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1008	<i>Aphanocapsa</i> sp.	-	-	-	-	-	+	+	-	-	-	-	-	-	-
1012	<i>Aphanothece</i> sp.	-	-	-	+	+	-	-	+	+	+	+	-	-	-
1014	<i>Chroococcus limneticus</i> Lemmermann	+	-	-	-	-	-	-	+	+	+	+	-	+	-
1026	<i>Merismopedia tenuissima</i> Lemmermann	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1028	<i>Merismopedia glauca</i> (Ehrenberg) Kutzin	-	-	-	-	-	-	-	-	-	-	-	-	+	-
1033	<i>Rhabdogloea lineare</i> Schmidle and Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1054	<i>Planktolyngbya limnetica</i>	+	+	-	+	+	+	+	+	+	-	-	+	-	+
1073	<i>Snowella</i> sp	-	-	+	-	-	-	+	-	-	-	-	-	-	-
1077	<i>Pseudoanabaena</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorophyte															
2100	<i>Pyramidomonas tetrarhynchus</i> Schmarda	-	-	+	+	-	-	-	-	-	+	+	-	-	+
2105	<i>Chlamydomonas</i> spp.	+	+	+	+	+	-	+	+	+	+	+	-	-	+
2112	<i>Sphaerocystis schroeteri</i> Chodat	+	+	+	+	+	+	+	+	+	-	-	+	+	+
2121	<i>Oocystis lacustris</i> Chodat	-	+	+	+	+	+	+	-	+	+	+	+	+	+
2125	<i>Paulschulzia pseudovolvox</i> (Schulz and Teiling) Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2126	<i>Chodatella</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2132	<i>Scenedesmus denticulatus</i> Lagerhiem	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2137	<i>Dictyosphaerium simplex</i> Sukja	+	+	-	-	-	-	-	+	-	+	+	-	-	+
2138	<i>Monoraphidium komarkovae</i> (Nyg.) Komarkova-Legnerova	+	+	+	+	+	+	+	+	+	+	+	-	+	+
2143	<i>Monoraphidium minutum</i> (Nag.) Komarkova-Legnerova	-	-	-	-	-	-	-	-	-	+	+	-	+	-
2145	<i>Crucigenia quadrata</i> Morr.	-	-	-	-	-	-	-	-	-	+	-	-	+	-
2157	<i>Kichnerella lunaris</i> (Kirchn.) Moeb.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2164	<i>Quadrigula closterioides</i> (Bohl.) Printz	-	-	-	-	-	-	-	+	-	+	-	-	-	-
2167	<i>Elakatothrix gelatinosa</i> Willen	+	+	-	+	+	+	+	+	+	+	+	+	+	+
2169	<i>Planctonema lauterbornii</i> Schmidle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2176	<i>Cosmarium depressum</i> v <i>achondrum</i> (Baldt) W. And G.S.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2178	<i>Cosmarium</i> sp.	+	+	+	-	-	-	+	+	+	+	+	-	-	-
2182	<i>Euastrum</i> spp.	-	-	+	+	-	-	-	+	+	-	-	-	-	-
2185	<i>Microsterias</i> sp.	-	-	-	-	-	-	+	-	-	-	-	-	-	-
2186	<i>Xanthidium</i> sp.	-	+	-	-	-	-	-	-	-	-	-	-	-	-
2187	<i>Staurodesmus extensus</i> (Andersson) Teiling	+	+	+	+	+	+	+	+	+	+	-	+	+	+
2191	<i>Staurodesmus cuspidatus</i> (Brebisson and Ralfs) Teiling	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2193	<i>Staurodesmus paradoxum</i> Meyen	+	-	-	-	-	-	-	-	-	-	-	-	-	-
2195	<i>Staurodesmus bullardii</i> G.M. Smith	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2199	<i>Spondylosium planum</i> (Wolle) W. and G.S. West	+	-	+	+	+	-	-	-	-	-	-	+	-	+
2205	<i>Mougeotia</i> sp.	-	-	+	-	-	-	-	-	-	-	-	-	-	-
2206	<i>Botryococcus braunii</i> Kutzin	+	+	+	+	+	+	+	+	+	+	+	-	-	+
2215	<i>Tetraedron caudatum</i> (Corda) Hansgrig	+	-	-	+	-	-	+	+	-	+	+	+	+	+
2235	<i>Ankistrodesmus spiralis</i> Lemmermann	+	+	+	-	+	-	-	+	+	+	+	-	-	+
2247	<i>Oocystis gigas</i> Archer	-	-	+	-	-	-	-	-	+	-	-	-	-	-
Euglenophyte															
3309	<i>Astasia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code	Quailik Lake					Wally Lake						Pipedream Lake		
	INUG39S	INUG40S	INUG41S	INUG42S	INUG43S	WAL21S	WAL22S	WAL23S	WAL24S	WAL25S	WAL26S	PDL23S	PDL24S	PDL25S
	25-Jul-12	21-Aug-12	21-Aug-12	16-Sep-12	16-Sep-12	29-Jul-12	29-Jul-12	17-Aug-12	17-Aug-12	12-Sep-12	12-Sep-12	22-Aug-12	22-Aug-12	18-Sep-12
Chrysophyte														
4351 Small chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4352 Large chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4355 <i>Chrysochromulina parva</i> Lackey	-	-	-	-	-	-	-	-	-	+	+	-	-	-
4357 <i>Chrysococcus</i> sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4358 <i>Chrysostephanosphaera globulifera</i> Scherffel	-	-	-	+	-	-	-	-	-	-	-	-	-	-
4361 <i>Kephyrion boreale</i> Skuja	+	+	+	+	+	+	-	-	-	-	-	+	+	-
4362 <i>Kephyrion</i> sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4363 <i>Spiniferomonas sirratus</i> *****	-	+	+	+	+	+	+	+	+	-	-	+	+	+
4368 <i>Mallomonas crassisquama</i> (Asmund) Fott	+	-	-	+	-	+	+	+	+	-	-	-	+	+
4369 <i>Mallomonas pseudocoronata</i> Prescott	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4370 <i>Mallomonas akrokomos</i> Asmund and Kristiansen	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4372 <i>Mallomonas tonsurata</i> Teiling and Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4375 <i>Synura sphagnicola</i> Korschikow	-	-	-	-	-	+	+	-	-	-	-	-	-	-
4378 <i>Dinobryon borgei</i> Lemmermann	+	+	+	+	-	+	+	+	+	+	+	+	+	+
4381 <i>Dinobryon mucronutum</i> Nygaard	+	+	+	-	+	+	+	+	+	-	-	+	-	+
4383 <i>Dinobryon bavaricum</i> Imhof	-	+	+	-	-	-	-	-	-	-	-	+	+	-
4384 <i>Dinobryon bavaricum</i> v <i>vanhoeffenii</i> (Bachmann) Krieger	+	+	+	+	+	-	-	-	-	-	-	-	-	-
4387 <i>Dinobryon cylindricum</i> Imhof	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4388 <i>Dinobryon sertularia</i> Ehrenberg	+	+	+	+	+	+	+	+	-	-	-	+	+	+
4390 <i>Dinobryon sociale</i> Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4394 <i>Epiphyxis</i> sp.	-	-	+	-	-	+	-	-	-	-	-	-	+	-
4396 <i>Chrysalkos skuja</i> (Nauwerck) Willen	+	+	+	+	+	+	+	+	-	-	-	+	+	+
4400 <i>Ochromonas</i> sp.	-	-	-	-	-	-	-	-	-	+	-	-	-	-
4403 <i>Chrysosphaerella longispina</i> Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4411 <i>Bitrichia chodatii</i> (Reverdin) Chodat	+	+	+	-	+	+	+	+	+	-	+	+	-	+
4413 <i>Chrysochromulina laurentiana</i> Kling	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4414 <i>Stichogloea</i> spp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4415 <i>Bicoeca lacustris</i> Clark	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4418 <i>Salpingoeca frequentissima</i> (Zach.) Lemmermann	-	-	+	+	+	-	+	+	+	+	+	-	+	+
4436 <i>Dinobryon attenuatum</i> Hill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4437 <i>Pteridomonas</i> sp.	+	-	-	-	-	-	-	-	-	-	-	-	-	-
4439 <i>Chrysosphaerella brevispina</i>	+	-	-	-	-	-	-	-	-	-	-	-	-	-
4444 <i>Dinobryon pediforme</i> (Lemmermann) Steineche	-	-	-	+	-	-	-	-	-	-	-	-	-	-
4453 <i>Desmarella brachycalyx</i> Skuja	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code	Inukjuag Lake					Wally Lake						Pipedream Lake		
	INUG39S	INUG40S	INUG41S	INUG42S	INUG43S	WAL21S	WAL22S	WAL23S	WAL24S	WAL25S	WAL26S	PDL23S	PDL24S	PDL25S
	25-Jul-12	21-Aug-12	21-Aug-12	16-Sep-12	16-Sep-12	29-Jul-12	29-Jul-12	17-Aug-12	17-Aug-12	12-Sep-12	12-Sep-12	22-Aug-12	22-Aug-12	18-Sep-12
Diatom														
5507 <i>Cyclotella stelligera</i> Cleve and Grunow	+	+	+	+	+	+	+	+	+	+	+	+	-	+
5509 <i>Cyclotella ocellata</i> Pant.	+	+	+	+	+	-	-	+	+	+	+	+	+	+
5511 <i>Rhizosolenia erianse</i> H.L. Smith	+	+	+	+	+	+	+	-	+	-	-	+	+	+
5513 <i>Tabellaria fenestrata</i> (Lyngbye) Kutzing	-	+	-	-	-	-	-	-	-	+	+	-	-	-
5514 <i>Tabellaria flocculsa</i> (Roth) Kutzing	+	+	+	+	+	-	+	-	+	+	+	-	+	-
5518 <i>Synedra acus</i> Kutzing	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5523 <i>Synedra ulna</i> (Nitzsch) Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5524 <i>Asterionella formosa</i> Hassall	-	-	-	-	-	-	-	-	-	+	-	-	-	-
5540 <i>Aulacoseira italica</i> v <i>subarctica</i> (O. Muller) Simonsen	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5551 <i>Cyclotella michiganiana</i> Skvortzow	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5702 <i>Achnanthes minutissima</i> Kutzing	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5720 <i>Cyclotella bodanica</i> Eulens.	-	-	-	-	-	+	+	-	-	-	+	-	-	-
5836 <i>Encyonema silesiacum</i> (Bleisch) D.G. Mann	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5908 <i>Diatoma tenue</i> Agardh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5916 <i>Fragilaria capucina</i> Grunow	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5917 <i>Hannaea arcus</i> Patrick	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptophyte														
6554 <i>Rhodomonas minuta</i> Skuja	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6558 <i>Cryptomonas erosa</i> Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6559 <i>Cryptomonas ovata</i> Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6562 <i>Cryptomonas reflexa</i> (Marsson) Skuja	-	-	-	+	+	+	+	+	+	+	+	+	+	-
6565 <i>Cryptomonas rostratiformis</i> Skuja	+	-	-	-	-	+	+	-	-	-	-	-	-	+
6568 <i>Katablepharis ovalis</i> Skuja	+	+	+	+	+	-	+	-	+	+	+	-	+	-
Dinoflagellate														
7631 <i>Gymnodinium helveticum</i> Penard	-	-	-	+	-	-	+	+	-	-	+	+	-	+
7632 <i>Gymnodinium</i> sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
7635 <i>Peridinium willei</i> Huitfeldt-Kaas	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7639 <i>Peridinium pusillum</i> (Penard) Lemmermann	+	+	+	+	+	+	+	+	+	+	+	+	-	+
7640 <i>Peridinium goslawiense</i> Woloszyńska	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7641 <i>Peridinium aciculiferum</i> Lemmermann	+	-	-	-	-	-	+	-	-	-	-	-	-	-
7642 <i>Peridinium wisconsinense</i> Eddy	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Baker Lake - Akilahaarjuk Point							Baker Lake - Barge Dock						
		PDL26S 18-Sep-12	BAP21S 27-Jul-12	BAP22S 27-Jul-12	BAP23S 24-Aug-12	BAP24S 24-Aug-12	BAP25S 21-Sep-12	BAP26S 21-Sep-12	BBD21S 27-Jul-12	BBD22S 27-Jul-12	BBD23S 25-Aug-12	BBD24S 25-Aug-12	BBD25S 21-Sep-12	BBD26S 21-Sep-12	BPJ21S 27-Jul-12
Cyanophyte															
1007	<i>Aphanocapsa delicatissima</i> W. and G.S. West	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1008	<i>Aphanocapsa</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1012	<i>Aphanothece</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1014	<i>Chroococcus limneticus</i> Lemmermann	-	-	-	-	+	-	+	-	-	-	-	-	-	-
1026	<i>Merismopedia tenuissima</i> Lemmermann	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1028	<i>Merismopedia glauca</i> (Ehrenberg) Kutzing	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1033	<i>Rhabdogloea lineare</i> Schmidle and Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1054	<i>Planktolyngbya limnetica</i>	+	+	+	+	+	-	-	-	+	+	+	+	-	+
1073	<i>Snowella</i> sp	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1077	<i>Pseudoanabaena</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorophyte															
2100	<i>Pyramidomonas tetrarhynchus</i> Schmarda	+	-	-	-	-	+	-	-	-	-	-	+	-	-
2105	<i>Chlamydomonas</i> spp.	+	-	+	+	+	+	+	+	+	+	+	+	+	+
2112	<i>Sphaerocystis schroeteri</i> Chodat	+	-	-	-	-	-	+	+	+	+	-	+	-	+
2121	<i>Oocystis lacustris</i> Chodat	-	-	-	-	-	-	+	-	+	-	+	+	+	-
2125	<i>Paulschulzia pseudovolvox</i> (Schulz and Teiling) Skuja	-	-	-	-	-	-	-	+	-	-	-	-	-	+
2126	<i>Chodatella</i> sp.	-	+	-	+	-	-	-	-	+	-	-	-	+	-
2132	<i>Scenedesmus denticulatus</i> Lagerhiem	-	+	-	+	+	+	+	-	+	+	+	+	+	-
2137	<i>Dictyosphaerium simplex</i> Sukja	+	-	-	+	-	-	-	+	-	+	-	-	-	+
2138	<i>Monoraphidium komarkovae</i> (Nyg.) Komarkova-Legnere	+	+	+	-	+	+	+	+	+	+	+	+	+	+
2143	<i>Monoraphidium minutum</i> (Nag.) Komarkova-Legnere	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2145	<i>Crucigenia quadrata</i> Morr.	-	-	-	-	-	-	-	-	-	+	+	+	+	-
2157	<i>Kichnerella lunaris</i> (Kirchn.) Moeb.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2164	<i>Quadrigula closterioides</i> (Bohl.) Printz	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2167	<i>Elakatothrix gelatinosa</i> Willen	-	-	-	-	-	+	+	+	-	-	-	-	-	-
2169	<i>Planctonema lauterbornii</i> Schmidle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2176	<i>Cosmarium depressum</i> v <i>achondrum</i> (Boldt) W. And G.S.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2178	<i>Cosmarium</i> sp.	-	-	-	-	+	+	-	-	-	-	-	-	+	-
2182	<i>Euastrum</i> spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2185	<i>Microsterias</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2186	<i>Xanthidium</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2187	<i>Staurodesmus extensus</i> (Andersson) Teiling	+	-	-	-	-	-	+	+	-	-	-	-	+	-
2191	<i>Staurodesmus cuspidatus</i> (Brebisson and Ralfs) Teiling	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2193	<i>Staurodesmus paradoxum</i> Meyen	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2195	<i>Staurodesmus bullardii</i> G.M. Smith	-	-	-	-	-	-	-	-	-	-	-	+	+	-
2199	<i>Spondylosium planum</i> (Wolle) W. and G.S. West	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2205	<i>Mougeotia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2206	<i>Botryococcus braunii</i> Kutzing	+	+	-	+	-	+	+	-	+	+	-	-	+	-
2215	<i>Tetraedron caudatum</i> (Corda) Hansgrig	+	-	+	+	+	+	+	+	-	+	+	+	+	-
2235	<i>Ankistrodesmus spiralis</i> Lemmermann	+	-	-	+	+	+	+	+	-	+	+	+	+	+
2247	<i>Oocystis gigas</i> Archer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Euglenophyte															
3309	<i>Astasia</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

		Baker Lake - Akilahaarjuk Point							Baker Lake - Barge Dock						
Species & Code		PDL26S 18-Sep-12	BAP21S 27-Jul-12	BAP22S 27-Jul-12	BAP23S 24-Aug-12	BAP24S 24-Aug-12	BAP25S 21-Sep-12	BAP26S 21-Sep-12	BBD21S 27-Jul-12	BBD22S 27-Jul-12	BBD23S 25-Aug-12	BBD24S 25-Aug-12	BBD25S 21-Sep-12	BBD26S 21-Sep-12	BPJ21S 27-Jul-12
Chrysophyte															
4351	Small chrysophyceae	+	+	+	+	-	+	+	+	+	+	+	+	+	+
4352	Large chrysophyceae	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4355	Chrysochromulina parva Lackey	-	-	-	-	-	-	-	-	-	-	-	-	-	+
4357	Chrysococcus sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4358	Chrysostephanospaera globulifera Scherffell	-	-	-	-	-	-	-	-	-	-	+	-	-	-
4361	Kephyrion boreale Skuja	+	-	-	-	-	-	-	-	-	-	-	-	-	-
4362	Kephyrion sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4363	Spinifiromonas sirratus*****	-	+	+	-	+	+	-	-	-	+	-	+	+	+
4368	Mallomonas crassisquama (Asmund) Fott	+	+	+	-	-	-	-	+	+	-	+	+	+	+
4369	Mallomonas pseudocoronata Prescott	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4370	Mallomonas akrokomos Asmund and Kristiansen	-	-	-	-	-	-	-	-	-	-	-	+	-	-
4372	Mallomonas tonsurata Teiling and Krieger	-	-	-	+	-	-	-	-	-	-	-	-	-	-
4375	Synura sphagnicola Korschikow	-	-	-	-	-	-	+	-	-	-	-	-	-	-
4378	Dinobryon borgei Lemmermann	+	+	-	+	+	+	+	+	+	+	+	+	+	+
4381	Dinobryon mucronutum Nygaard	+	-	+	-	+	-	-	+	+	-	-	-	-	+
4383	Dinobryon bavaricum Imhof	-	-	-	-	+	-	-	-	-	+	+	-	-	-
4384	Dinobryon bavaricum v vanhoeffenii (Bachmann) Krieger	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4387	Dinobryon cylindricum Imhof	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4388	Dinobryon sertularia Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4390	Dinobryon sociale Ehrenberg	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4394	Epiphyxis sp.	+	-	-	-	-	-	-	-	-	-	-	-	-	-
4396	Chrysolkos skuja (Nauwerck) Willen	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4400	Ochromonas sp.	-	+	+	+	-	-	+	-	-	-	-	+	+	-
4403	Chrysosphaerella longispina Lauterborn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4411	Bitrichia chodatii (Reverdin) Chodat	+	-	-	-	-	-	-	-	-	-	-	-	+	-
4413	Chrysochromulina laurentiana Kling	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4414	Stichogloea spp.	+	-	+	+	+	-	-	-	+	+	+	-	-	+
4415	Bicoeca lacustris Clark	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4418	Salpingoeca frequentissima (Zach.) Lemmermann	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4436	Dinobryon attenuatum Hill	-	+	-	+	-	-	-	-	+	+	+	-	-	-
4437	Pteridomonas sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4439	Chrysosphaerella brevispina	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4444	Dinobryon pediforme (Lemmermann) Steineche	-	-	-	-	-	-	-	-	-	-	-	-	-	+
4453	Desmarella brachycalyx Skuja	-	+	+	-	-	-	-	+	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

		Baker Lake - Akilahaarjuk Point							Baker Lake - Barge Dock						
Species & Code		PDL26S	BAP21S	BAP22S	BAP23S	BAP24S	BAP25S	BAP26S	BBD21S	BBD22S	BBD23S	BBD24S	BBD25S	BBD26S	BPJ21S
		18-Sep-12	27-Jul-12	27-Jul-12	24-Aug-12	24-Aug-12	21-Sep-12	21-Sep-12	27-Jul-12	27-Jul-12	25-Aug-12	25-Aug-12	21-Sep-12	21-Sep-12	27-Jul-12
Diatom															
5507	Cyclotella stelligera Cleve and Grunow	+	+	+	-	+	+	+	+	+	+	+	+	+	+
5509	Cyclotella ocellata Pant.	+	-	-	+	+	+	+	-	+	+	+	+	-	-
5511	Rhizosolenia erienae H.L. Smith	+	+	+	+	+	+	+	+	+	+	+	-	-	+
5513	Tabellaria fenestrata (Lyngbye) Kutzing	-	+	-	-	+	+	+	-	+	+	+	+	+	+
5514	Tabellaria flocculsa (Roth) Kutzing	+	-	+	+	+	+	+	+	+	+	+	+	+	+
5518	Synedra acus Kutzing	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5523	Synedra ulna (Nitzsch) Ehrenberg	-	-	-	-	-	+	-	+	-	-	+	+	-	-
5524	Asterionella formosa Hassall	-	+	+	+	+	+	+	+	+	+	+	+	+	+
5540	Aulacoseira italica v subarctica (O. Muller) Simonsen	-	+	+	+	+	+	+	+	+	+	+	+	+	+
5551	Cyclotella michiganiana Skvortzow	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5702	Achnanthes minutissima Kutzing	-	-	-	-	-	-	+	-	-	-	-	-	+	-
5720	Cyclotella bodanica Eulens.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5836	Encyonema silesiacum (Bleisch) D.G. Mann	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5908	Diatoma tenue Agardh	-	-	-	-	-	-	-	-	-	-	-	-	-	+
5916	Fragilaria capucina Grunow	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5917	Hannaea arcus Patrick	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptophyte															
6554	Rhodomonas minuta Skuja	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6558	Cryptomonas erosa Ehrenberg	+	+	+	+	+	-	+	+	+	+	+	+	+	+
6559	Cryptomonas ovata Ehrenberg	-	-	-	-	-	-	-	-	-	-	-	-	-	+
6562	Cryptomonas reflexa (Marsson) Skuja	-	-	-	-	-	-	-	-	+	+	+	-	-	-
6565	Cryptomonas rostratiformis Skuja	+	-	-	-	+	+	+	-	+	-	-	+	+	+
6568	Katablepharis ovalis Skuja	-	+	-	+	+	+	+	+	+	+	+	+	+	+
Dinoflagellate															
7631	Gymnodinium helveticum Penard	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7632	Gymnodinium sp.	+	+	+	+	+	+	+	+	+	+	-	+	+	+
7635	Peridinium willei Huitfeldt-Kaas	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7639	Peridinium pusillum (Penard) Lemmermann	+	+	+	+	+	+	+	+	+	+	+	+	+	+
7640	Peridinium goslawiense Woloszyńska	-	-	-	-	-	-	-	-	-	-	-	-	-	+
7641	Peridinium aciculiferum Lemmermann	-	-	+	+	-	-	+	+	+	+	-	+	+	+
7642	Peridinium wisconsinense Eddy	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Baker Lake - Proposed Jetty				
		BPJ22S	BPJ23S	BPJ24S	BPJ25S	BPJ26S
		27-Jul-12	25-Aug-12	25-Aug-12	21-Sep-12	21-Sep-12
Cyanophyte						
1007	<i>Aphanocapsa delicatissima</i> W. and G.S. West	-	-	-	-	-
1008	<i>Aphanocapsa</i> sp.	-	-	-	-	-
1012	<i>Aphanothece</i> sp.	-	+	+	+	+
1014	<i>Chroococcus limneticus</i> Lemmermann	-	-	-	-	-
1026	<i>Merismopedia tenuissima</i> Lemmermann	-	-	-	-	-
1028	<i>Merismopedia glauca</i> (Ehrenberg) Kutzin	-	-	-	-	-
1033	<i>Rhabdogloea lineare</i> Schmidle and Lauterborn	-	-	-	-	-
1054	<i>Planktolyngbya limnetica</i>	+	+	+	+	+
1073	<i>Snowella</i> sp	-	-	-	-	-
1077	<i>Pseudoanabaena</i> sp.	-	-	-	-	-
Chlorophyte						
2100	<i>Pyramidomonas tetrarhynchus</i> Schmarda	-	+	-	+	-
2105	<i>Chlamydomonas</i> spp.	-	+	+	+	+
2112	<i>Sphaerocystis schroeteri</i> Chodat	+	-	-	-	-
2121	<i>Oocystis lacustris</i> Chodat	-	+	-	+	+
2125	<i>Paulschulzia pseudovolvox</i> (Schulz and Teiling) Skuja	-	-	-	-	-
2126	<i>Chodatella</i> sp.	-	-	-	-	-
2132	<i>Scenedesmus denticulatus</i> Lagerhiem	+	+	+	+	+
2137	<i>Dictyosphaerium simplex</i> Sukja	-	-	-	-	+
2138	<i>Monoraphidium komarkovae</i> (Nyg.) Komarkova-Legnerova	+	+	+	+	+
2143	<i>Monoraphidium minutum</i> (Nag.) Komarkova-Legnerova	-	-	-	-	-
2145	<i>Crucigenia quadrata</i> Morr.	-	+	-	+	-
2157	<i>Kichnerella lunaris</i> (Kirchn.) Moeb.	-	+	-	-	-
2164	<i>Quadrigula closterioides</i> (Bohl.) Printz	-	-	-	-	-
2167	<i>Elakatothrix gelatinosa</i> Willen	-	+	+	+	+
2169	<i>Planctonema lauterbornii</i> Schmidle	-	-	-	-	-
2176	<i>Cosmarium depressum</i> v <i>achondrum</i> (Baldt) W. And G.S.	-	-	-	-	-
2178	<i>Cosmarium</i> sp.	-	-	-	+	-
2182	<i>Euastrum</i> spp.	-	-	-	-	-
2185	<i>Microsterias</i> sp.	-	-	-	-	-
2186	<i>Xanthidium</i> sp.	-	-	-	-	-
2187	<i>Staurodesmus extensus</i> (Andersson) Teiling	-	-	-	+	-
2191	<i>Staurodesmus cuspidatus</i> (Brebisson and Ralfs) Teiling	-	-	-	-	-
2193	<i>Staurodesmus paradoxum</i> Meyen	-	-	-	-	+
2195	<i>Staurodesmus bullardii</i> G.M. Smith	-	-	-	-	-
2199	<i>Spondylosium planum</i> (Wolle) W. and G.S. West	-	-	-	-	-
2205	<i>Mougeotia</i> sp.	-	-	-	-	+
2206	<i>Botryococcus braunii</i> Kutzin	-	+	+	+	+
2215	<i>Tetraedron caudatum</i> (Corda) Hansgrig	+	+	+	+	+
2235	<i>Ankistrodesmus spiralis</i> Lemmermann	+	+	+	+	+
2247	<i>Oocystis gigas</i> Archer	-	-	-	-	-
Euglenophyte						
3309	<i>Astasia</i> sp.	-	-	-	-	+

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

Species & Code		Baker Lake - Proposed Jetty				
		BPJ22S	BPJ23S	BPJ24S	BPJ25S	BPJ26S
		27-Jul-12	25-Aug-12	25-Aug-12	21-Sep-12	21-Sep-12
Chrysophyte						
4351	Small chrysophyceae	+	+	+	+	+
4352	Large chrysophyceae	+	+	+	+	+
4355	<i>Chrysochromulina parva</i> Lackey	+	-	-	-	-
4357	<i>Chrysococcus</i> sp.	+	+	+	+	+
4358	<i>Chrysostephanospora globulifera</i> Scherffel	-	-	+	-	-
4361	<i>Kephyrion boreale</i> Skuja	+	-	+	+	-
4362	<i>Kephyrion</i> sp.	-	+	+	+	+
4363	<i>Spinifiromonas sirratus</i> *****	+	+	+	-	+
4368	<i>Mallomonas crassisquama</i> (Asmund) Fott	+	-	-	+	+
4369	<i>Mallomonas pseudocoronata</i> Prescott	-	-	-	-	-
4370	<i>Mallomonas akrokomos</i> Asmund and Kristiansen	-	-	-	-	-
4372	<i>Mallomonas tonsurata</i> Teiling and Krieger	-	-	-	-	-
4375	<i>Synura sphagnicola</i> Korschikow	-	-	-	-	-
4378	<i>Dinobryon borgei</i> Lemmermann	+	+	+	-	+
4381	<i>Dinobryon mucronutum</i> Nygaard	-	-	+	-	-
4383	<i>Dinobryon bavaricum</i> Imhof	-	+	+	-	-
4384	<i>Dinobryon bavaricum</i> v <i>vanhoeffenii</i> (Bachmann) Krieger	-	-	+	-	-
4387	<i>Dinobryon cylindricum</i> Imhof	-	-	+	-	-
4388	<i>Dinobryon sertularia</i> Ehrenberg	+	+	+	+	+
4390	<i>Dinobryon sociale</i> Ehrenberg	+	+	+	+	+
4394	<i>Epiphyxis</i> sp.	+	-	+	-	-
4396	<i>Chrysalkos skuja</i> (Nauwerck) Willen	+	+	+	+	+
4400	<i>Ochromonas</i> sp.	-	-	-	-	+
4403	<i>Chrysosphaerella longispina</i> Lauterborn	-	-	-	-	-
4411	<i>Bitrichia chodatii</i> (Reverdin) Chodat	-	-	-	-	-
4413	<i>Chrysochromulina laurentiana</i> Kling	+	+	+	+	+
4414	<i>Stichogloea</i> spp.	+	-	-	-	-
4415	<i>Bicoeca lacustris</i> Clark	-	-	-	-	-
4418	<i>Salpingoeca frequentissima</i> (Zach.) Lemmermann	+	+	+	+	+
4436	<i>Dinobryon attenuatum</i> Hill	-	-	-	-	-
4437	<i>Pteridomonas</i> sp.	-	-	-	-	-
4439	<i>Chrysosphaerella brevispina</i>	-	-	-	-	-
4444	<i>Dinobryon pediforme</i> (Lemmermann) Steineche	-	-	-	-	-
4453	<i>Desmarella brachycalyx</i> Skuja	-	-	-	-	-

Appendix G. Presence (+) / Absence (-) Matrix of Phytoplankton Species in Meadowbank Study Lakes and Baker Lake, 2012.

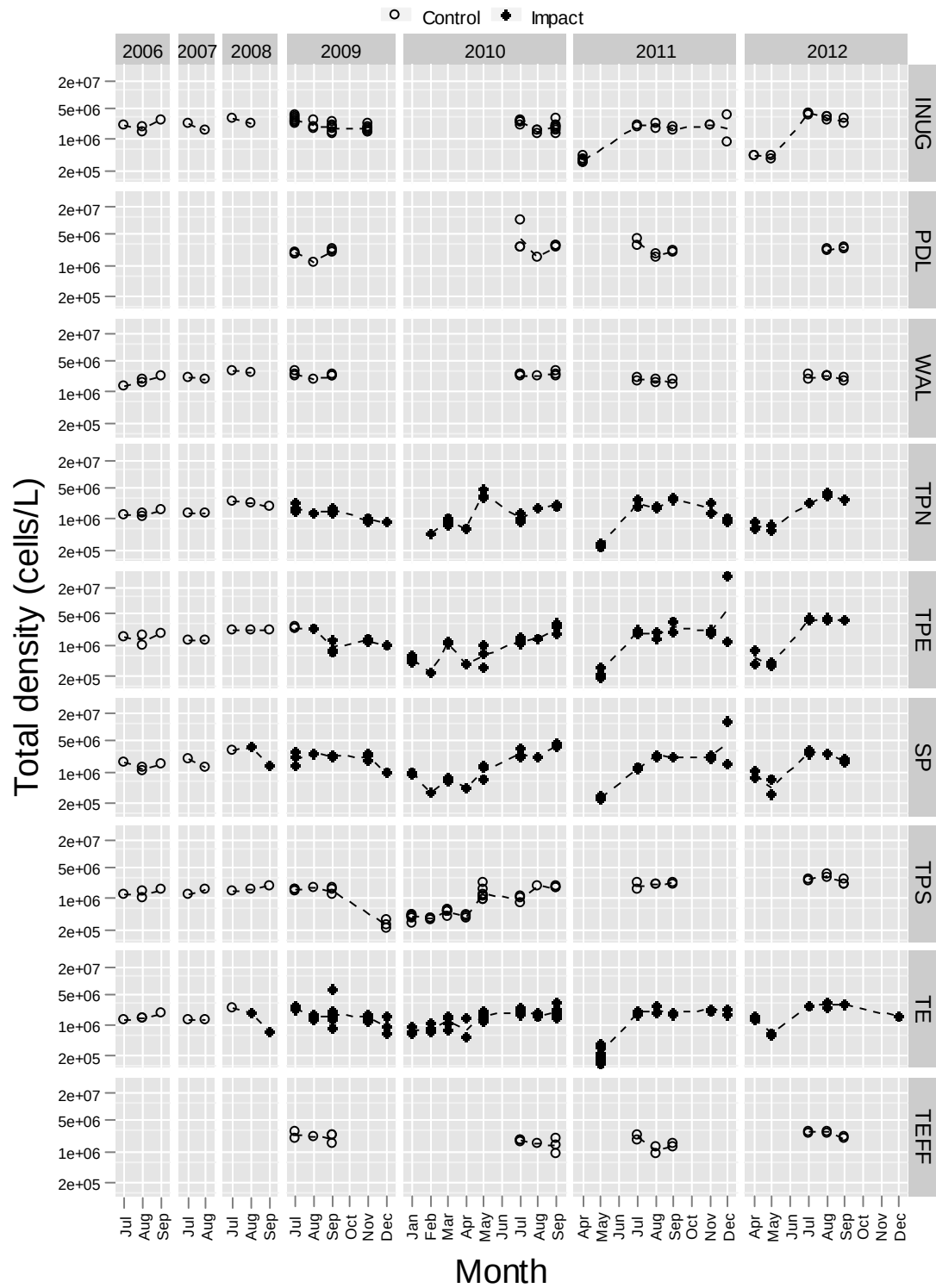
Species & Code		Baker Lake - Proposed Jetty				
		BPJ22S	BPJ23S	BPJ24S	BPJ25S	BPJ26S
		27-Jul-12	25-Aug-12	25-Aug-12	21-Sep-12	21-Sep-12
Diatom						
5507	<i>Cyclotella stelligera</i> Cleve and Grunow	+	+	+	+	+
5509	<i>Cyclotella ocellata</i> Pant.	-	+	+	-	+
5511	<i>Rhizosolenia erianse</i> H.L. Smith	+	+	+	+	+
5513	<i>Tabellaria fenestrata</i> (Lyngbye) Kutzin	+	-	-	+	+
5514	<i>Tabellaria flocculsa</i> (Roth) Kutzin	+	+	+	+	+
5518	<i>Synedra acus</i> Kutzin	+	+	+	+	+
5523	<i>Synedra ulna</i> (Nitzsch) Ehrenberg	-	-	-	-	+
5524	<i>Asterionella formosa</i> Hassall	+	+	+	+	+
5540	<i>Aulacoseira italica</i> v <i>subarctica</i> (O. Muller) Simonsen	+	+	+	+	+
5551	<i>Cyclotella michiganiana</i> Skvortzow	+	+	+	+	+
5702	<i>Achnanthes minutissima</i> Kutzin	-	-	-	-	-
5720	<i>Cyclotella bodanica</i> Eulens.	-	-	-	-	-
5836	<i>Encyonema silesiacum</i> (Bleisch) D.G. Mann	-	+	-	-	-
5908	<i>Diatoma tenue</i> Agardh	-	-	-	-	-
5916	<i>Fragilaria capucina</i> Grunow	-	-	-	-	-
5917	<i>Hannaea arcus</i> Patrick	-	-	-	-	-
Cryptophyte						
6554	<i>Rhodomonas minuta</i> Skuja	+	+	+	+	+
6558	<i>Cryptomonas erosa</i> Ehrenberg	+	+	+	+	+
6559	<i>Cryptomonas ovata</i> Ehrenberg	-	-	-	-	-
6562	<i>Cryptomonas reflexa</i> (Marsson) Skuja	+	+	-	+	-
6565	<i>Cryptomonas rostratiformis</i> Skuja	-	-	-	+	+
6568	<i>Katablepharis ovalis</i> Skuja	+	+	+	+	+
Dinoflagellate						
7631	<i>Gymnodinium helveticum</i> Penard	-	-	-	-	-
7632	<i>Gymnodinium</i> sp.	+	+	+	+	+
7635	<i>Peridinium willei</i> Huitfeldt-Kaas	-	-	-	-	-
7639	<i>Peridinium pusillum</i> (Penard) Lemmermann	+	-	+	+	+
7640	<i>Peridinium goslawiense</i> Woloszyńska	-	-	-	-	-
7641	<i>Peridinium aciculiferum</i> Lemmermann	+	-	-	-	+
7642	<i>Peridinium wisconsinense</i> Eddy	-	-	-	-	-

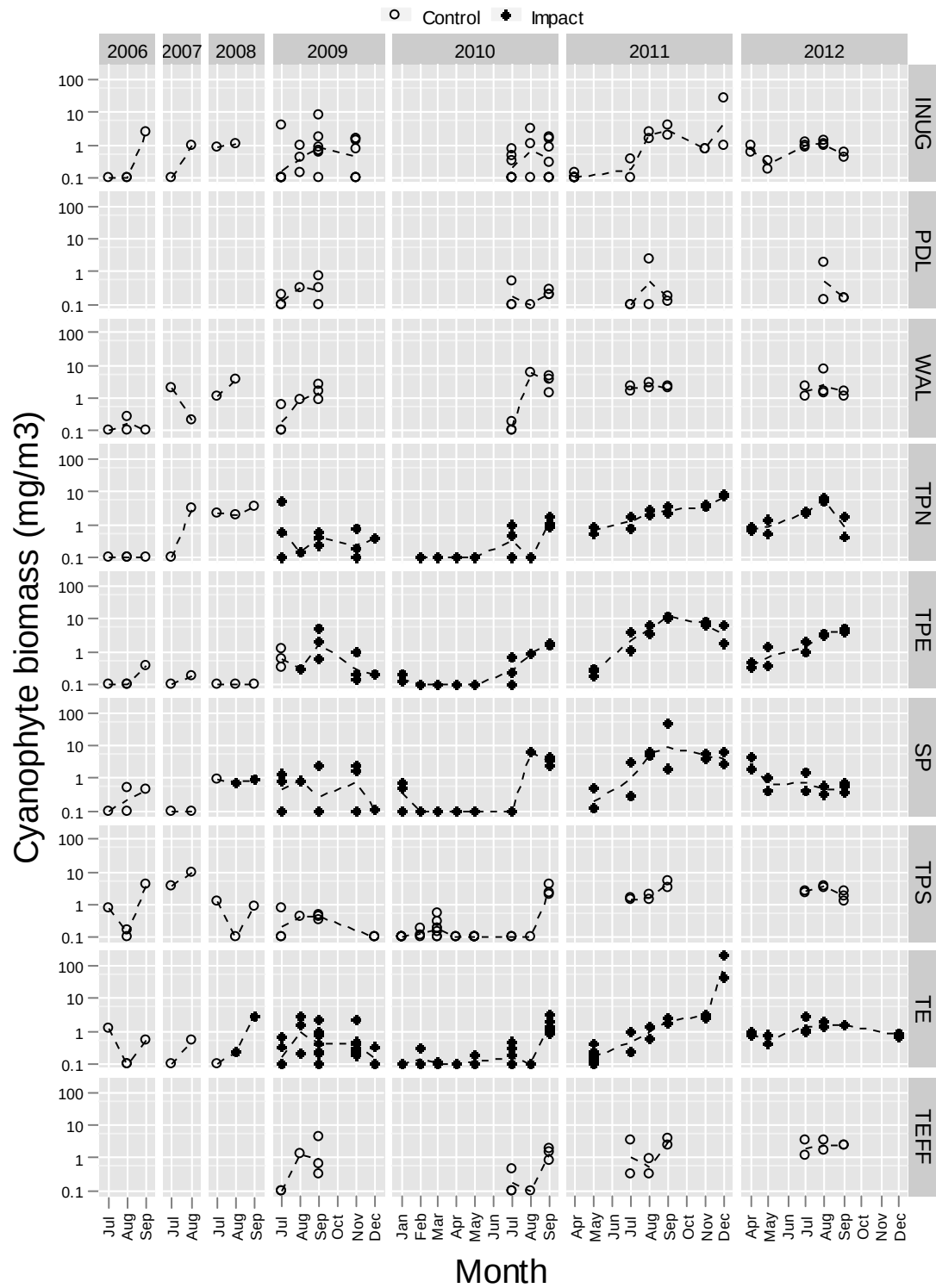
APPENDIX G

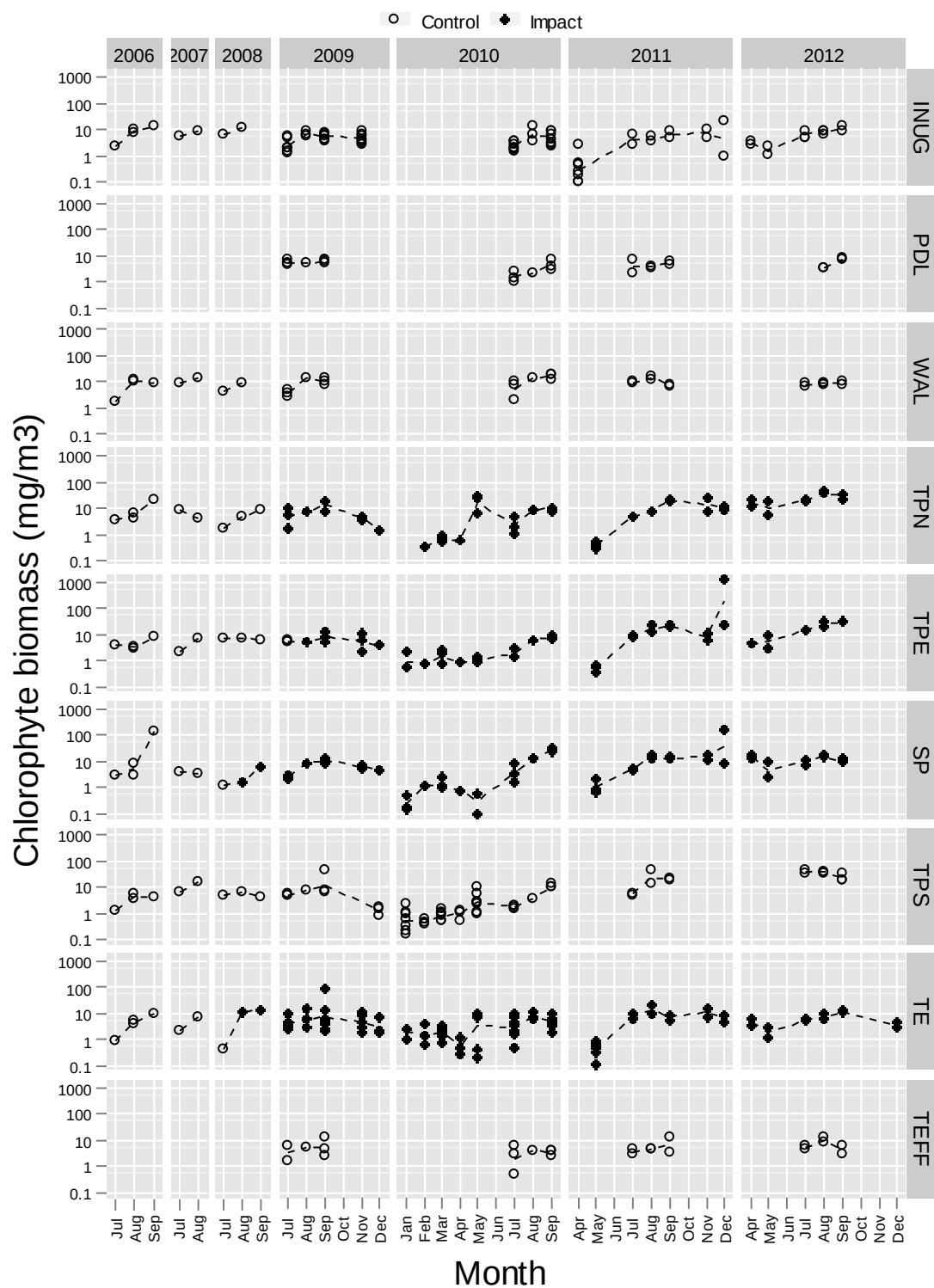
PHYTOPLANKTON PLOTS 2006 – 2012

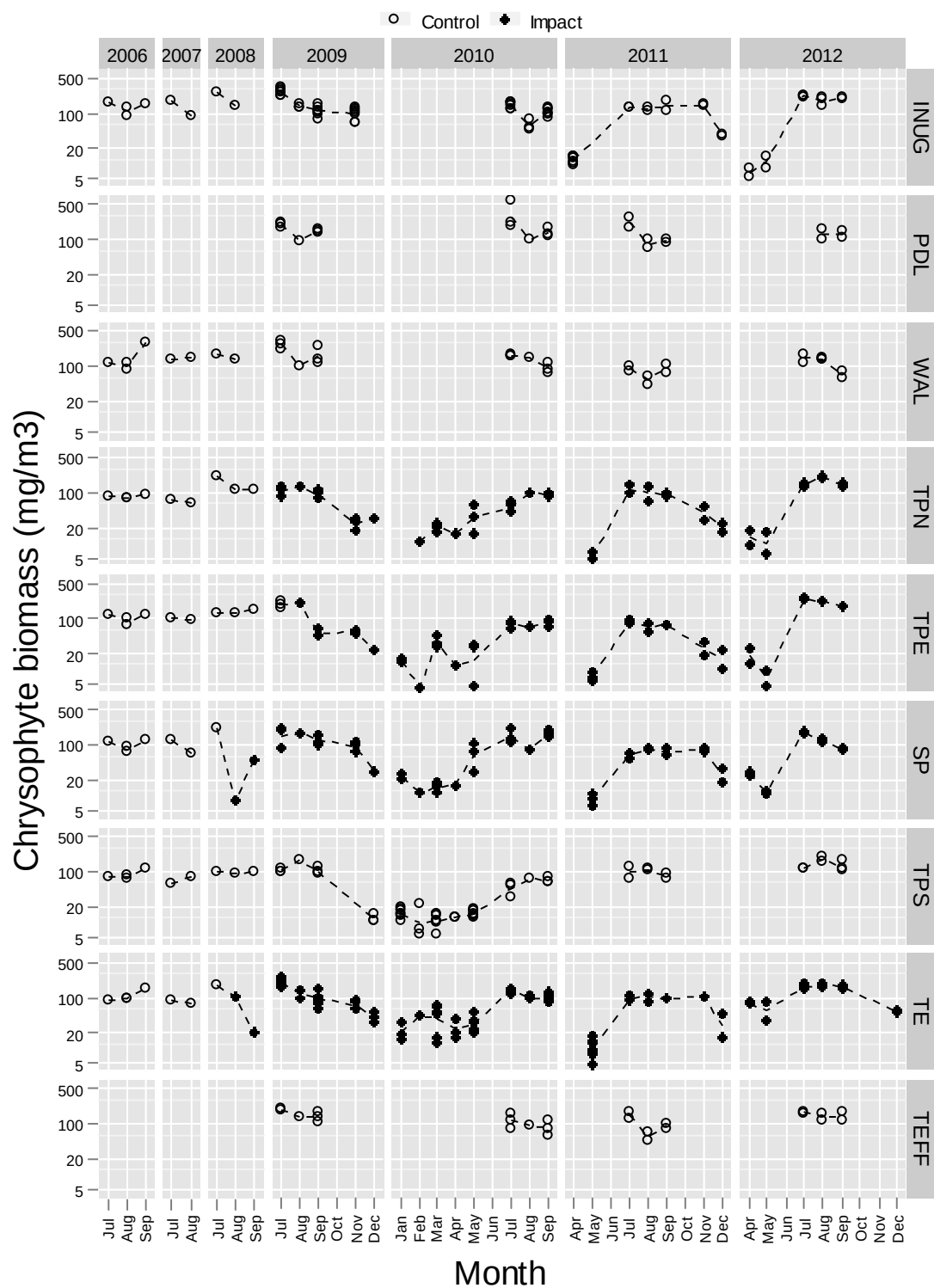


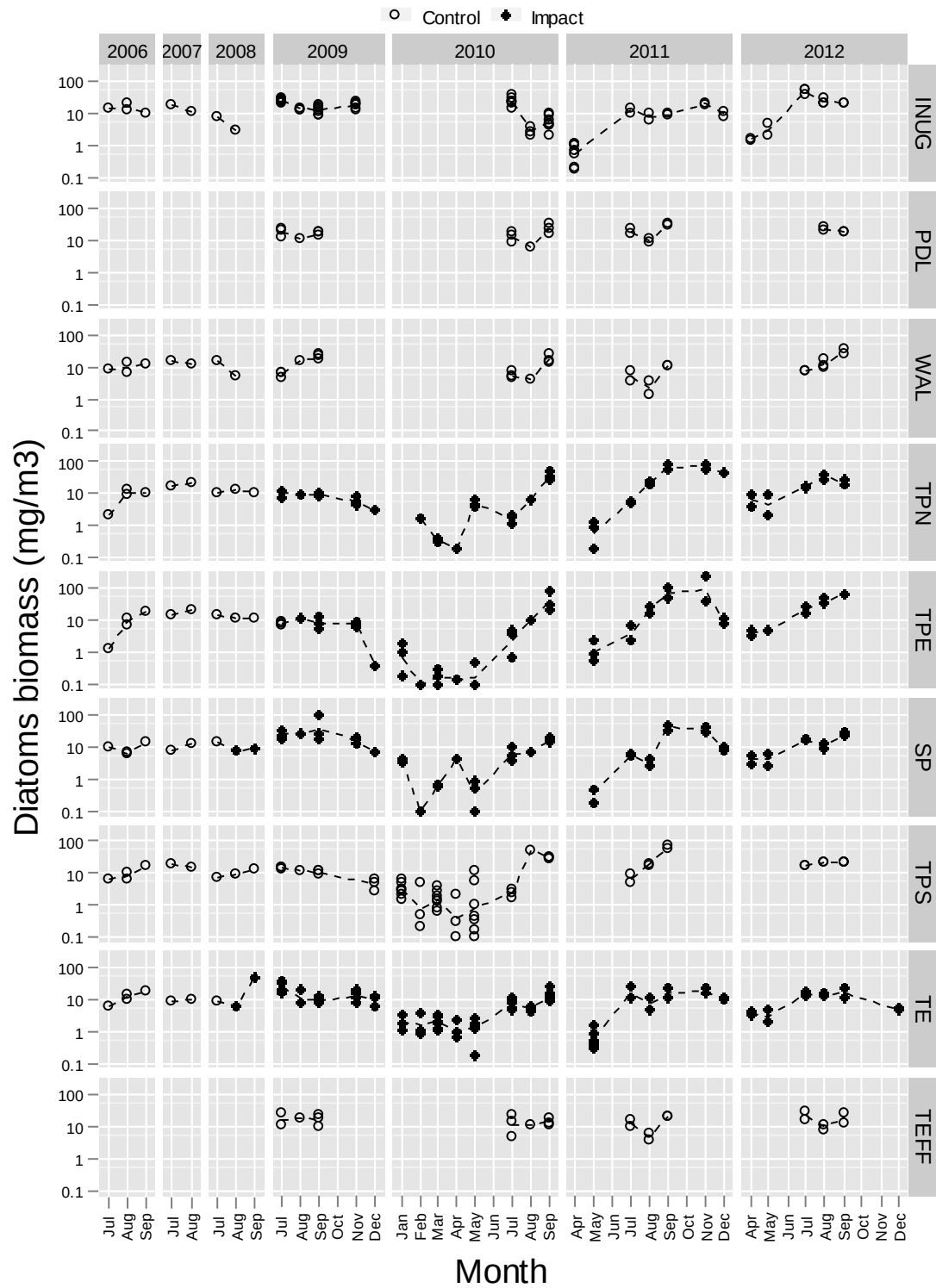
MEADOWBANK
PHYTOPLANKTON PLOTS

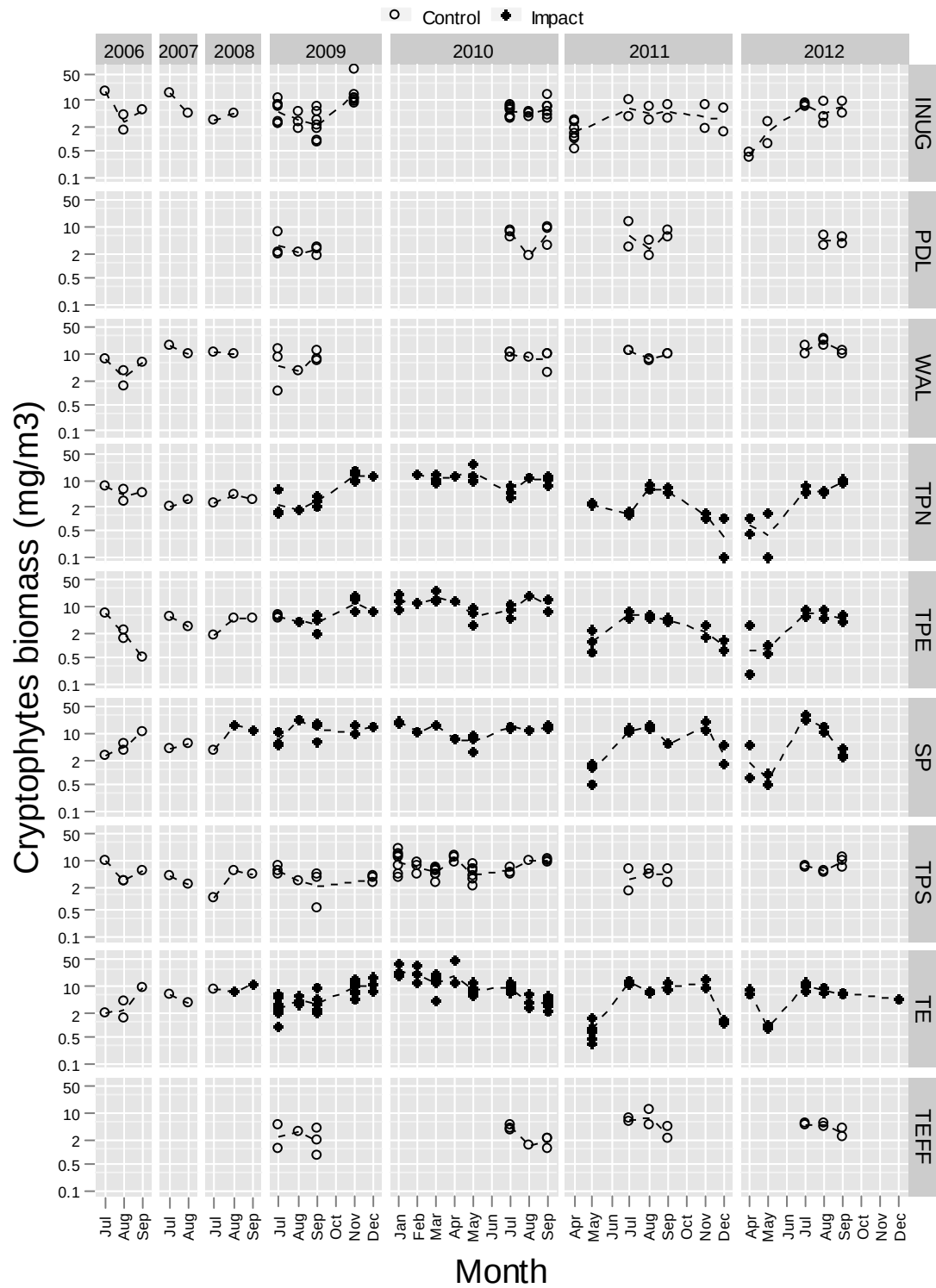


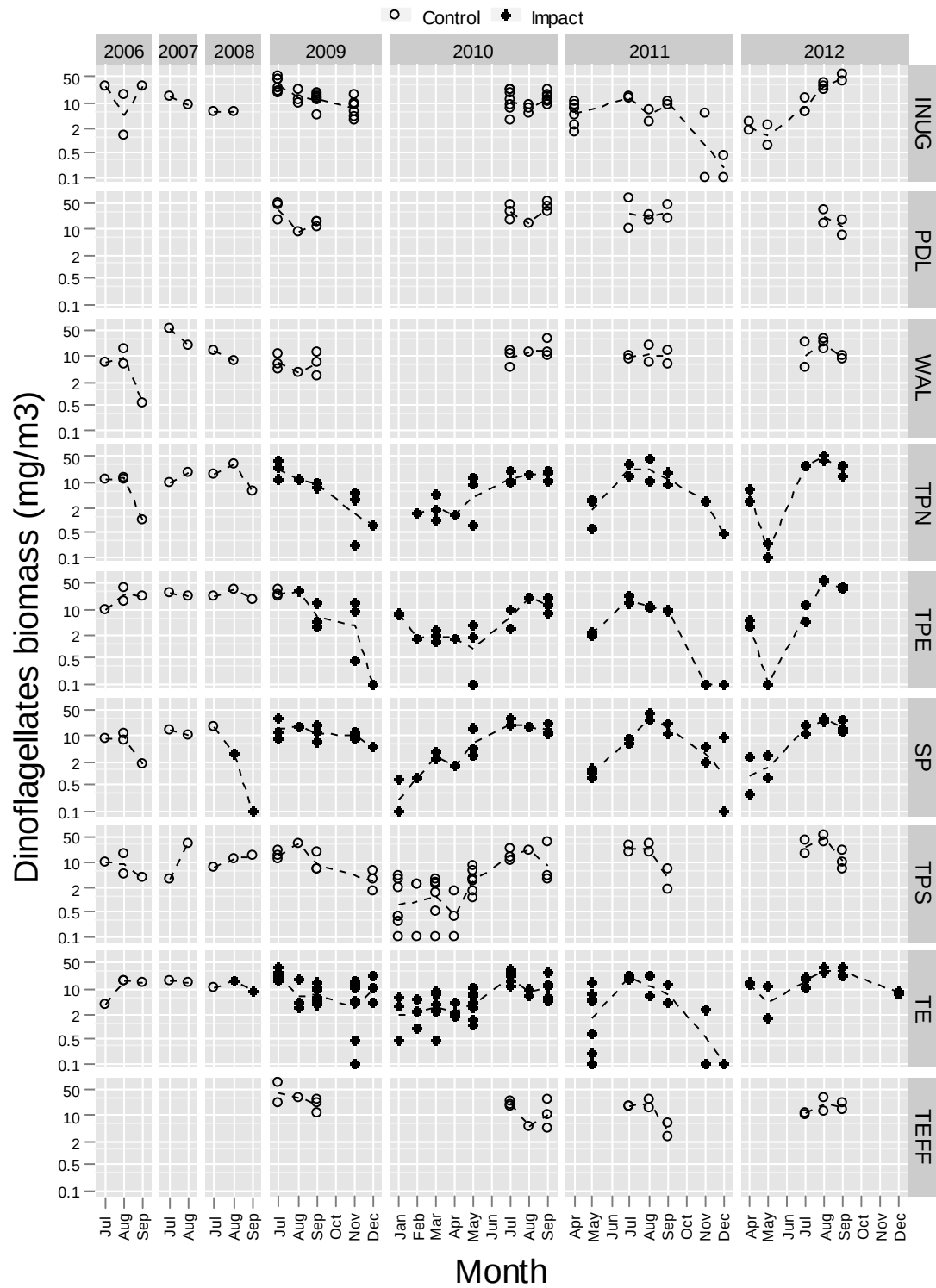


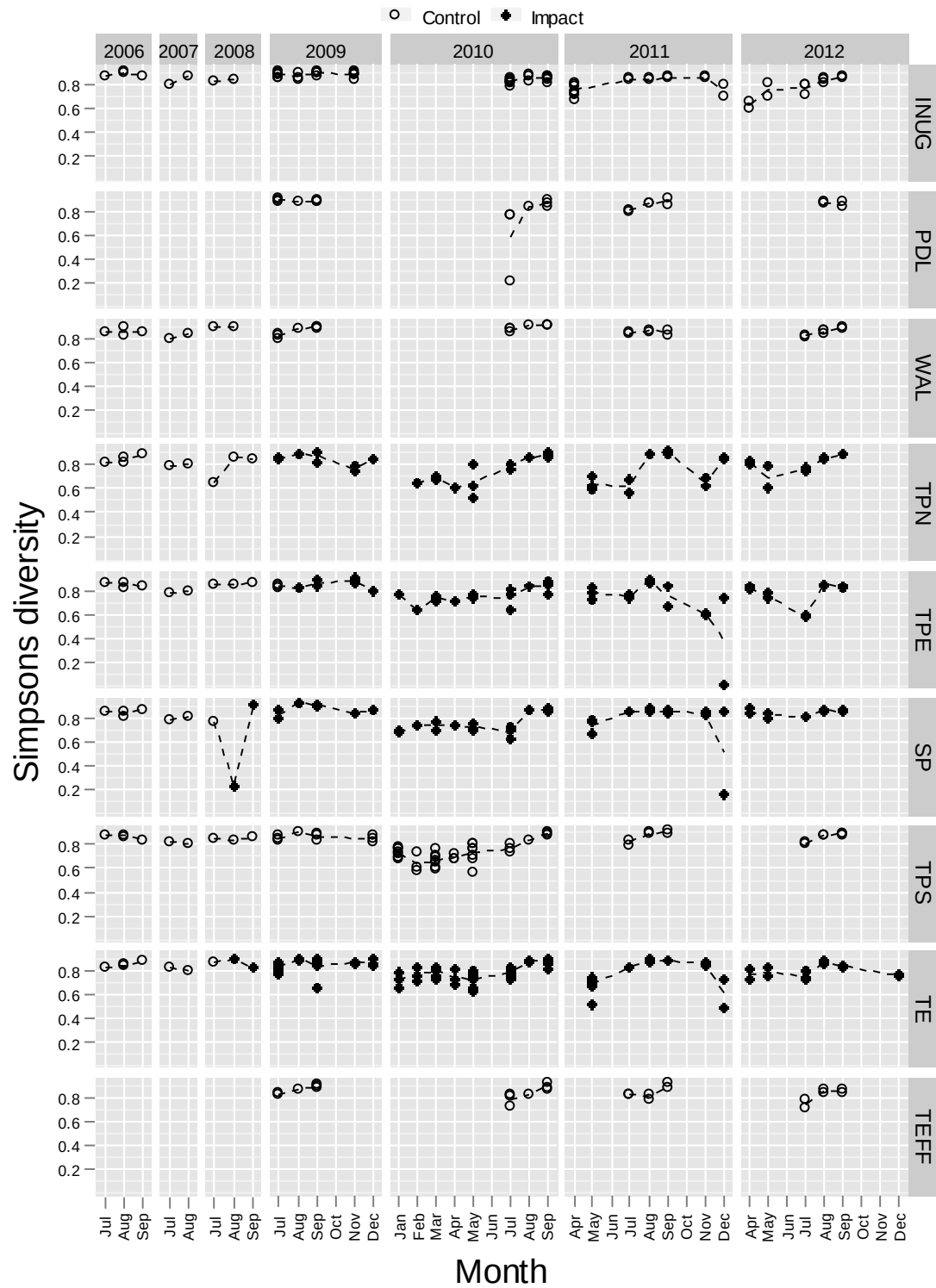


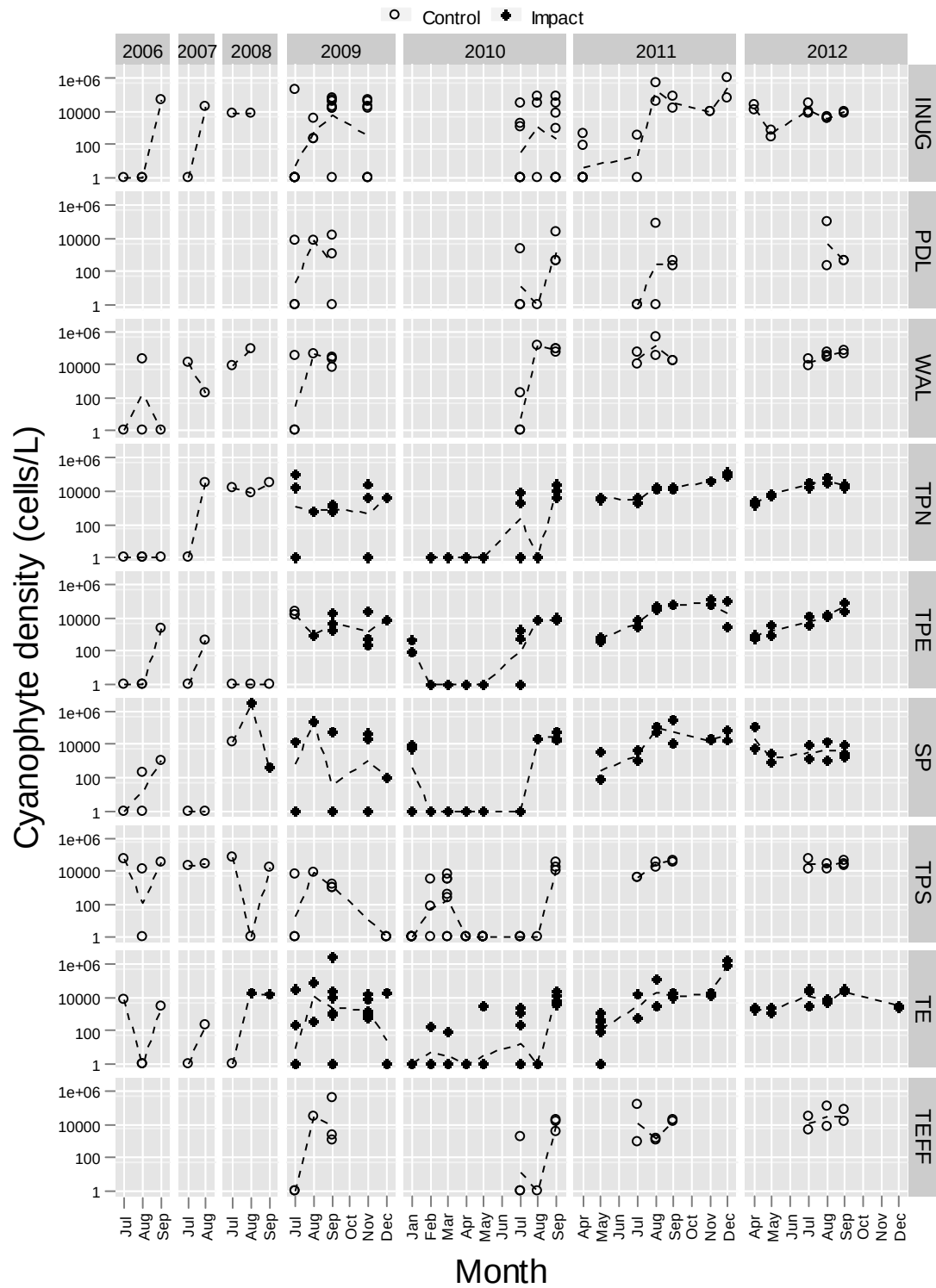


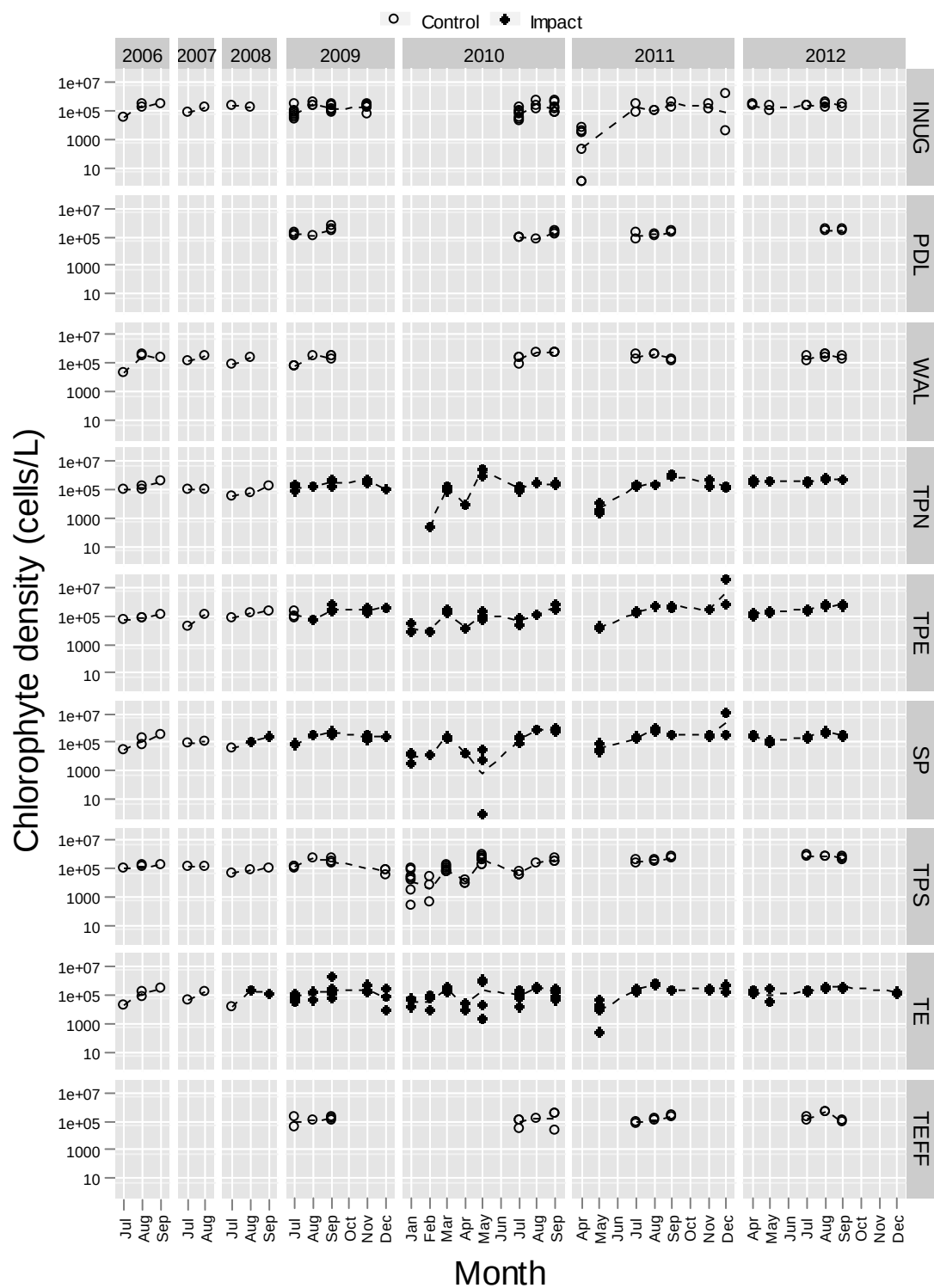


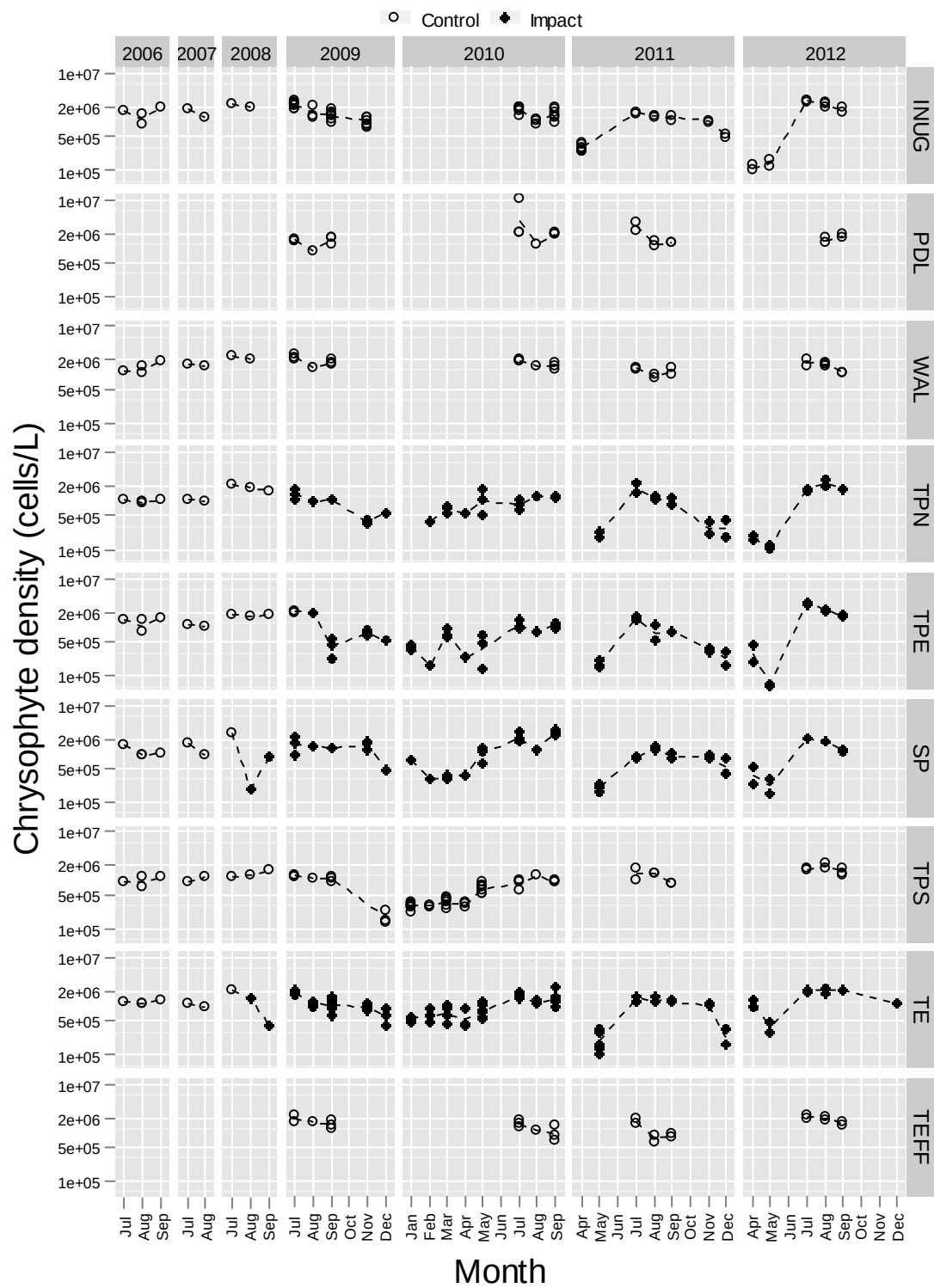


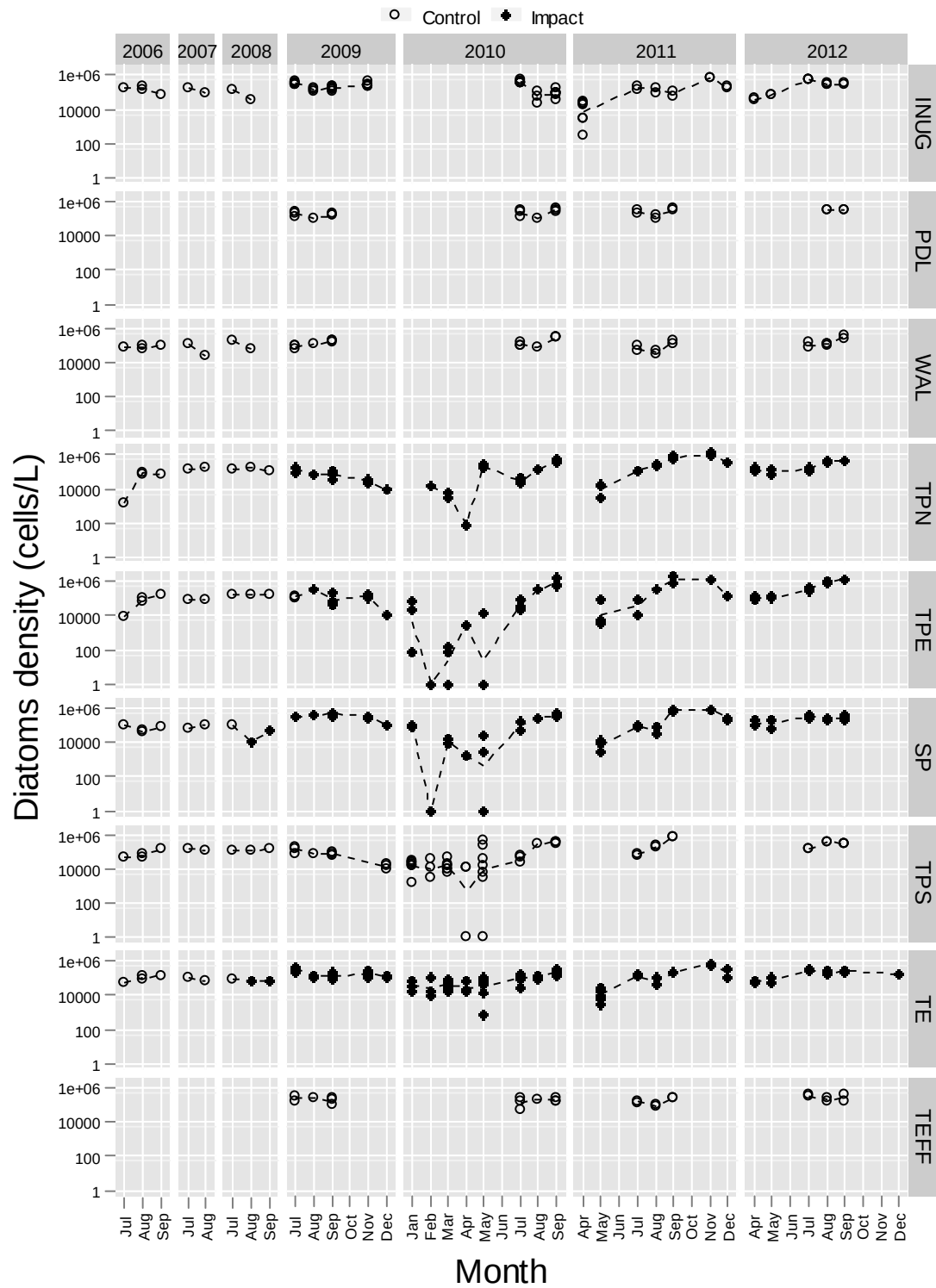


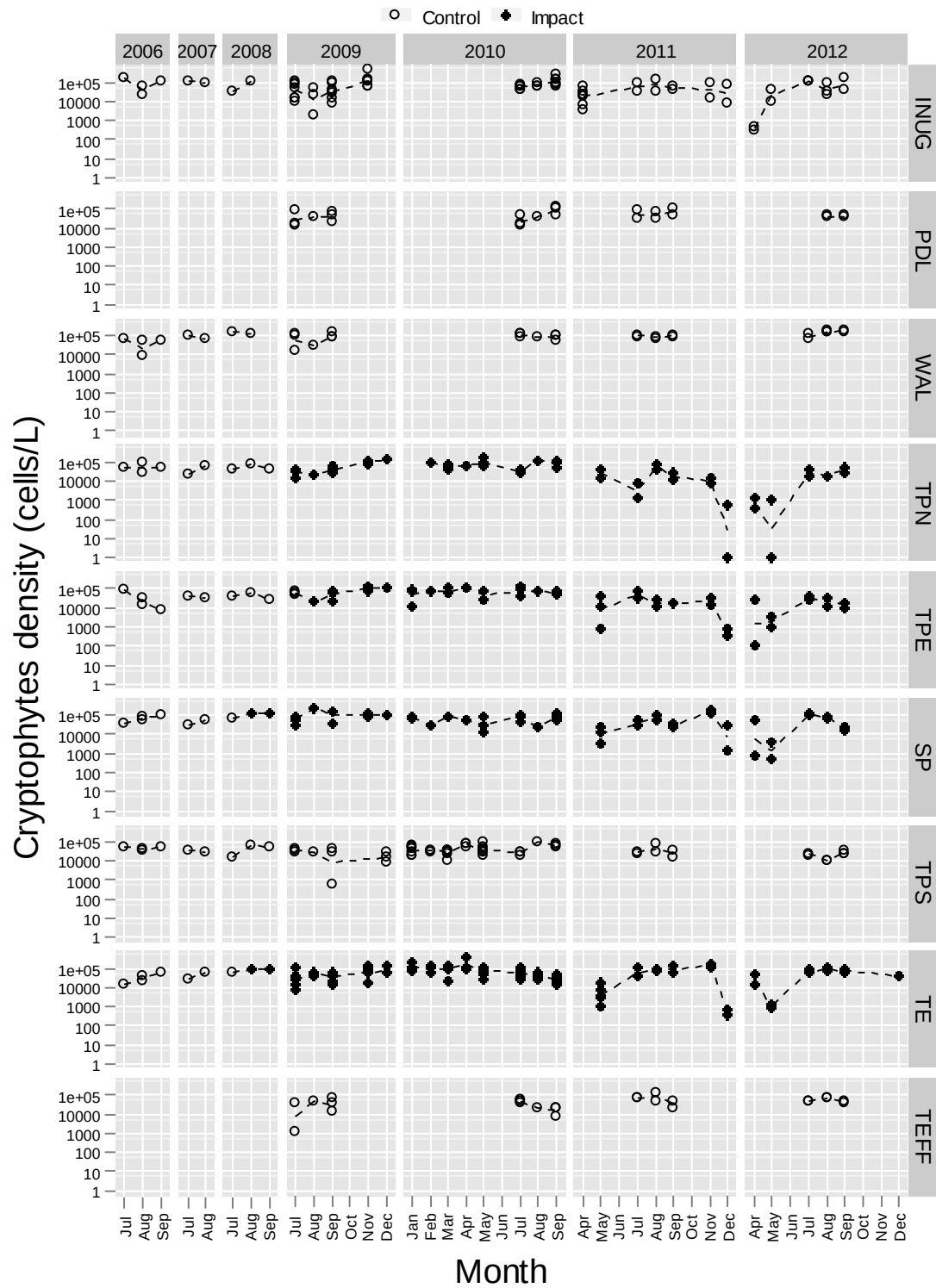


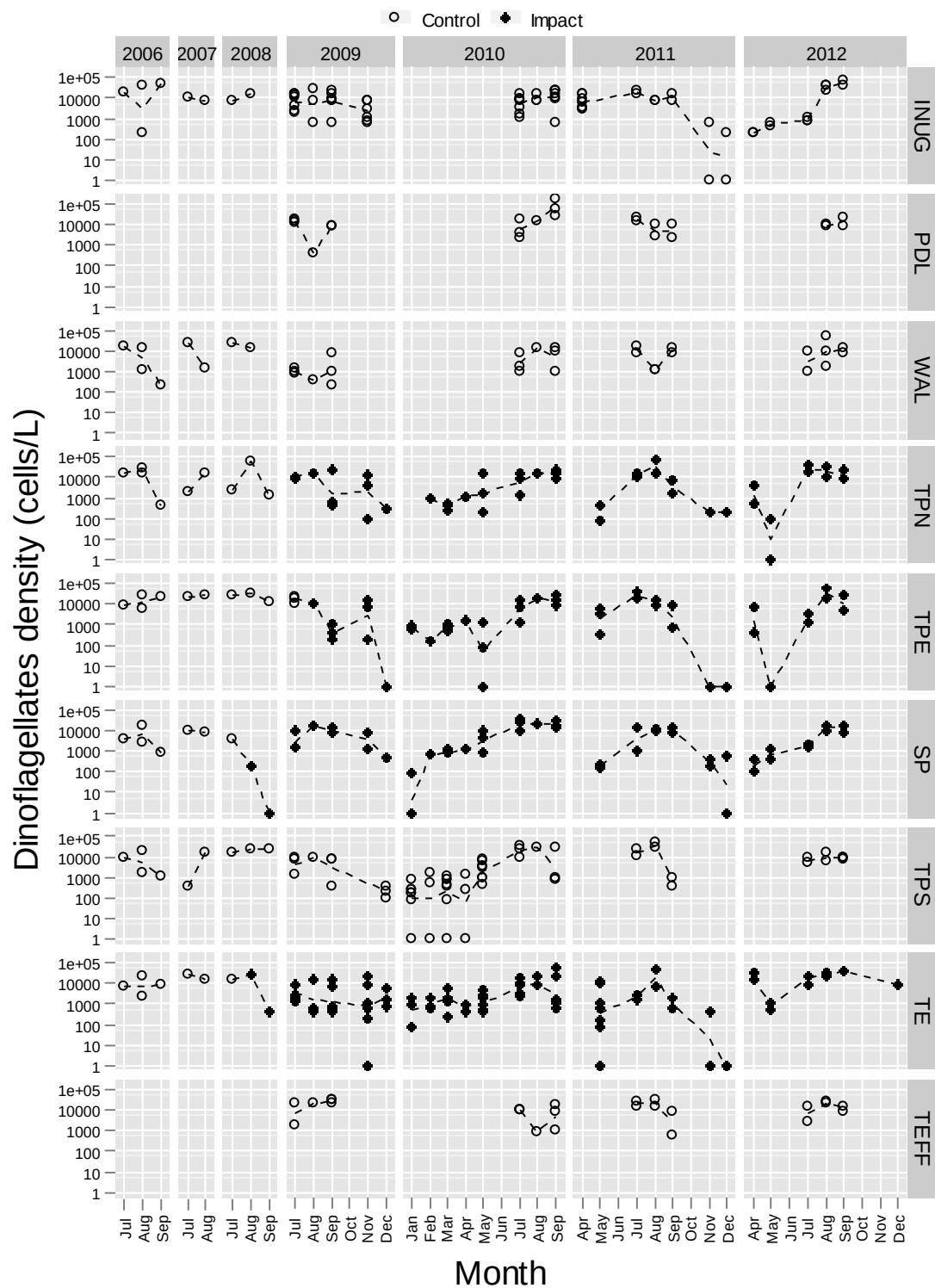


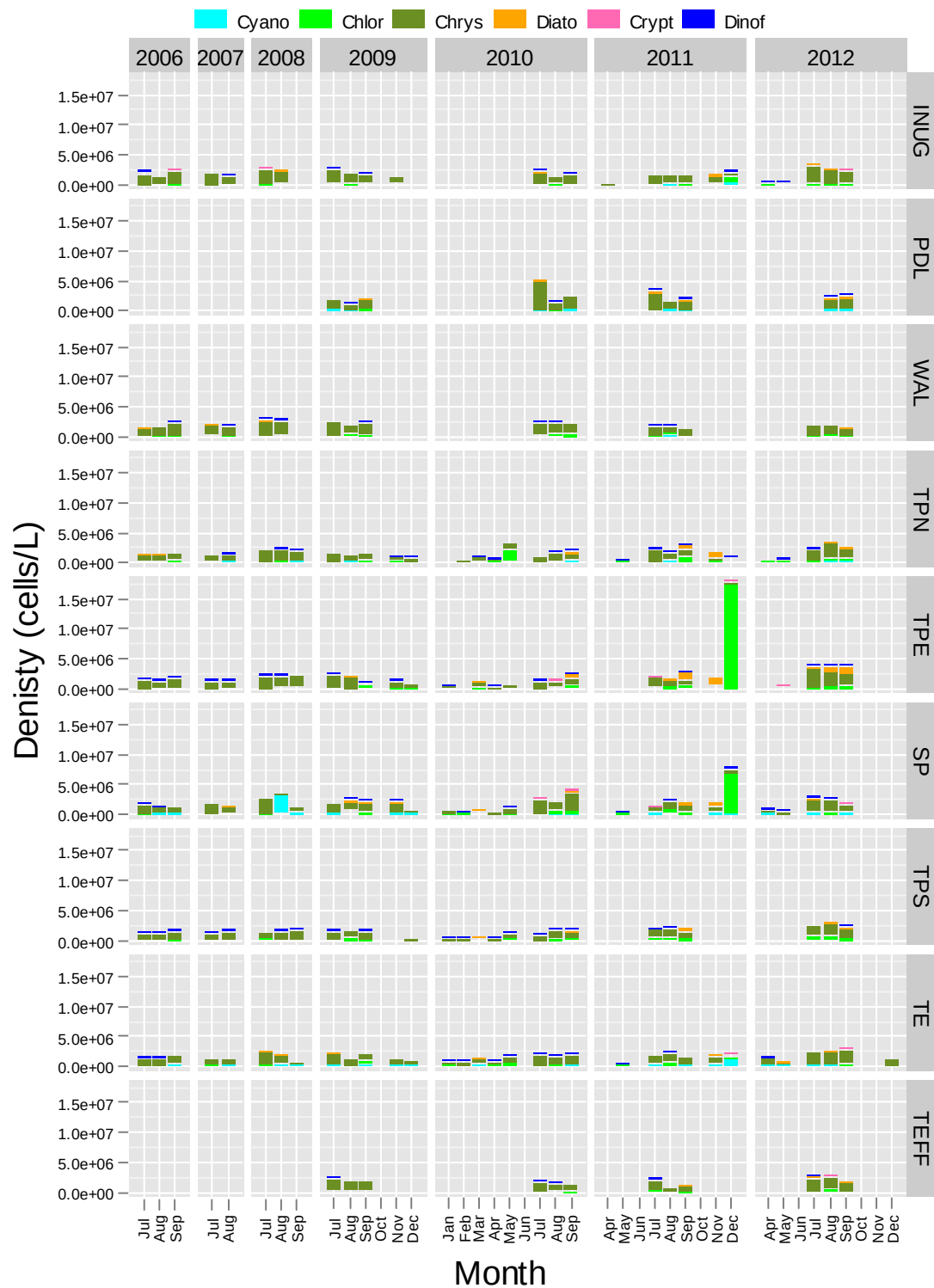


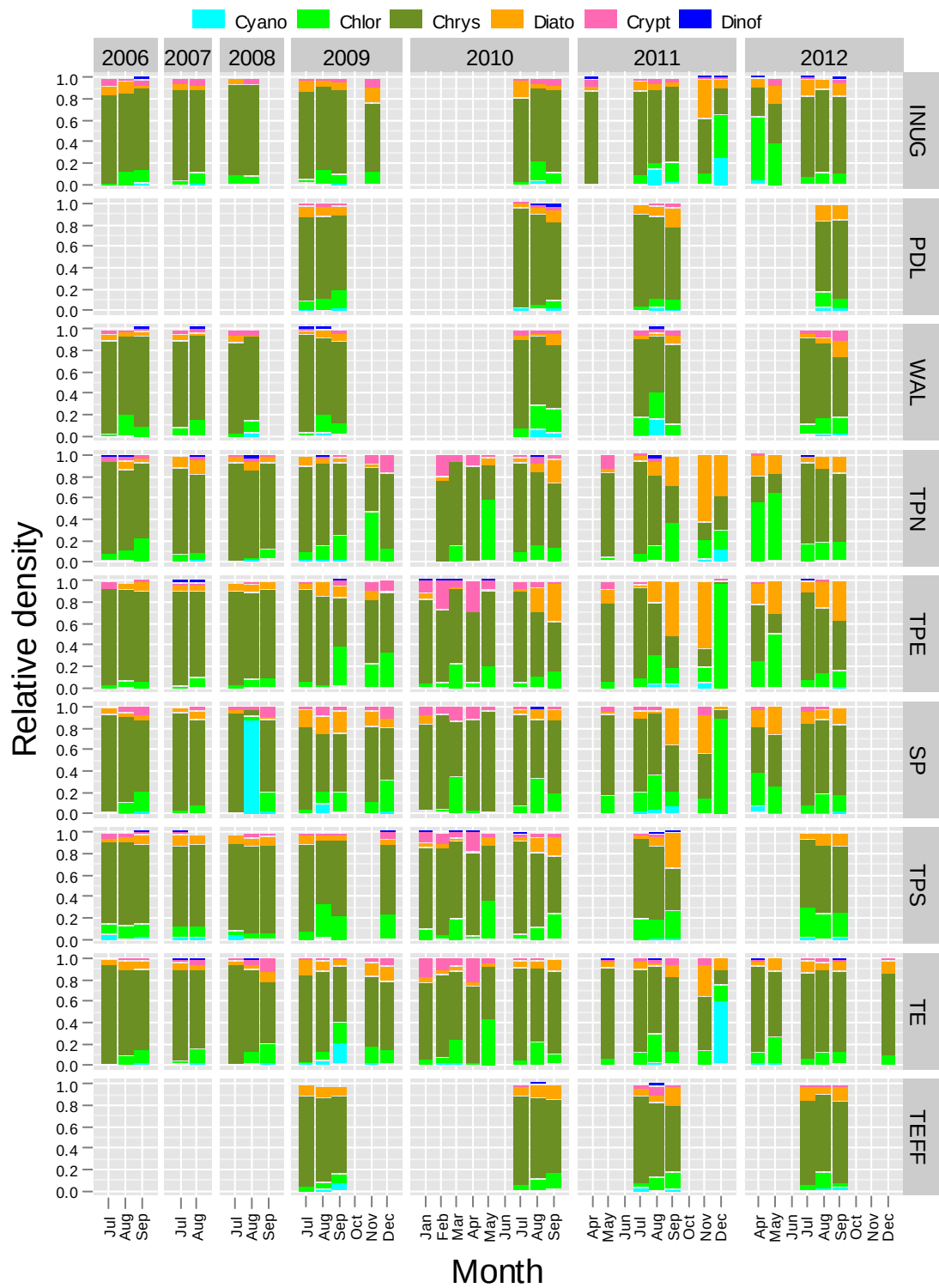




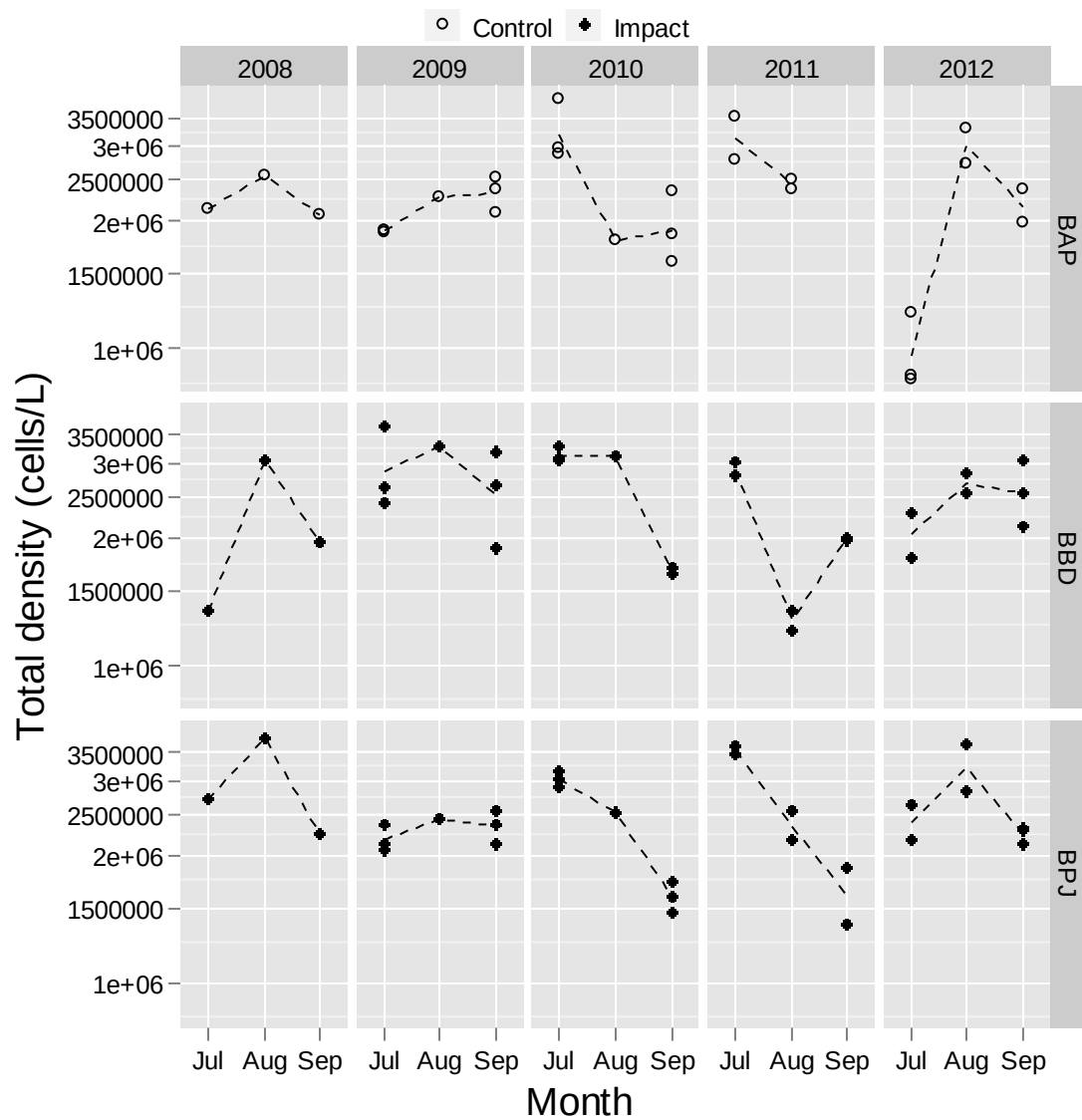


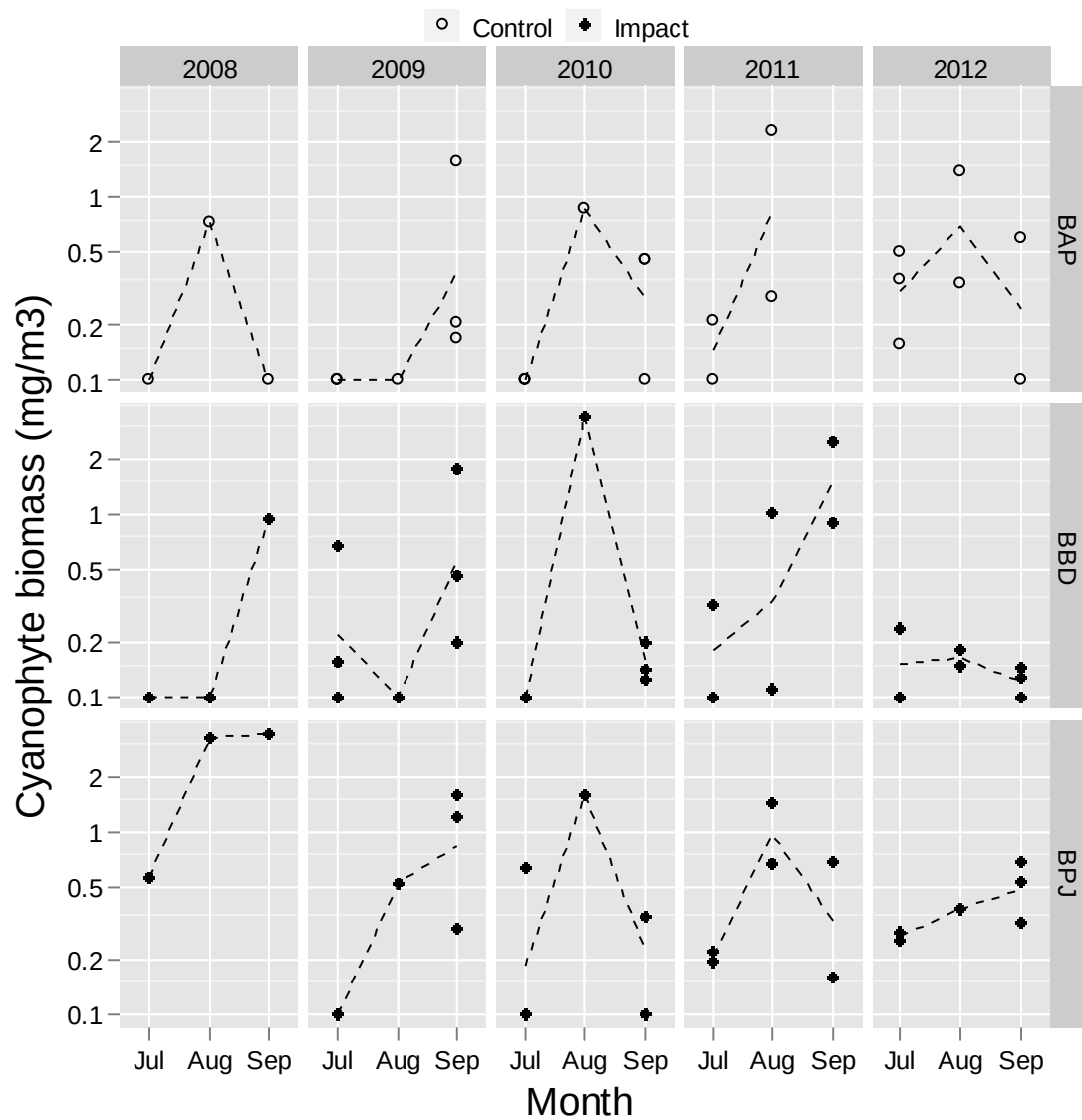


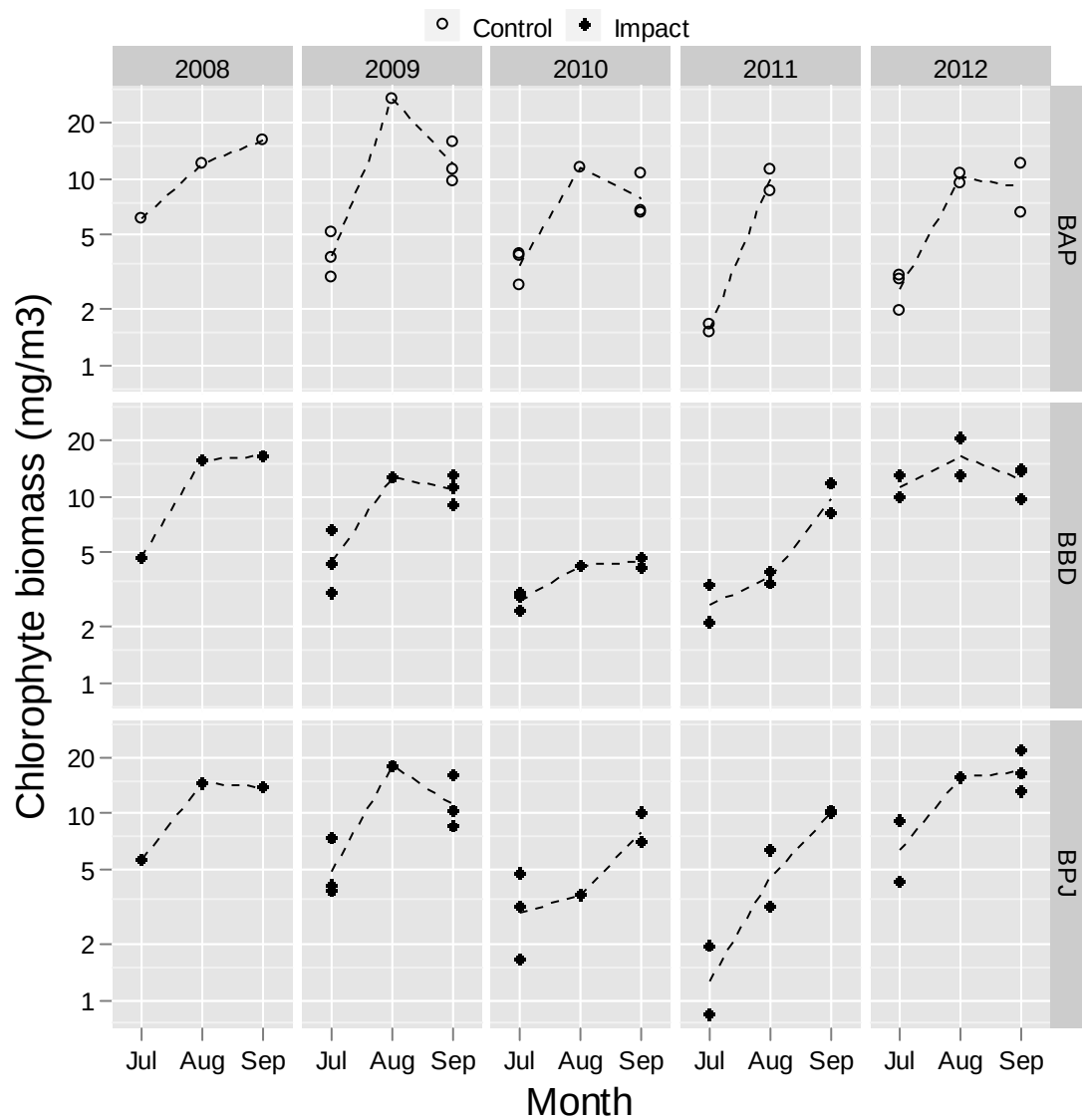


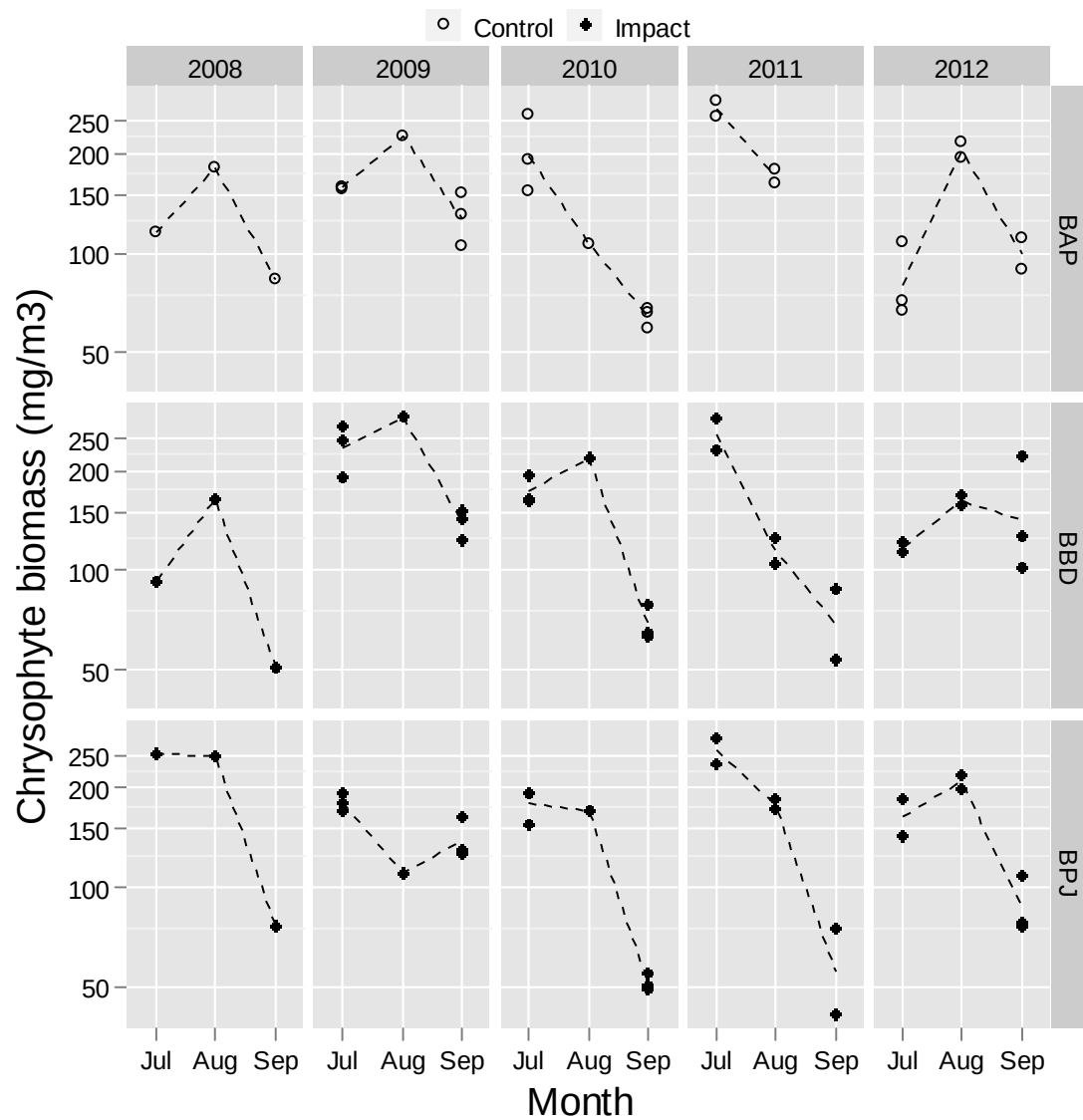


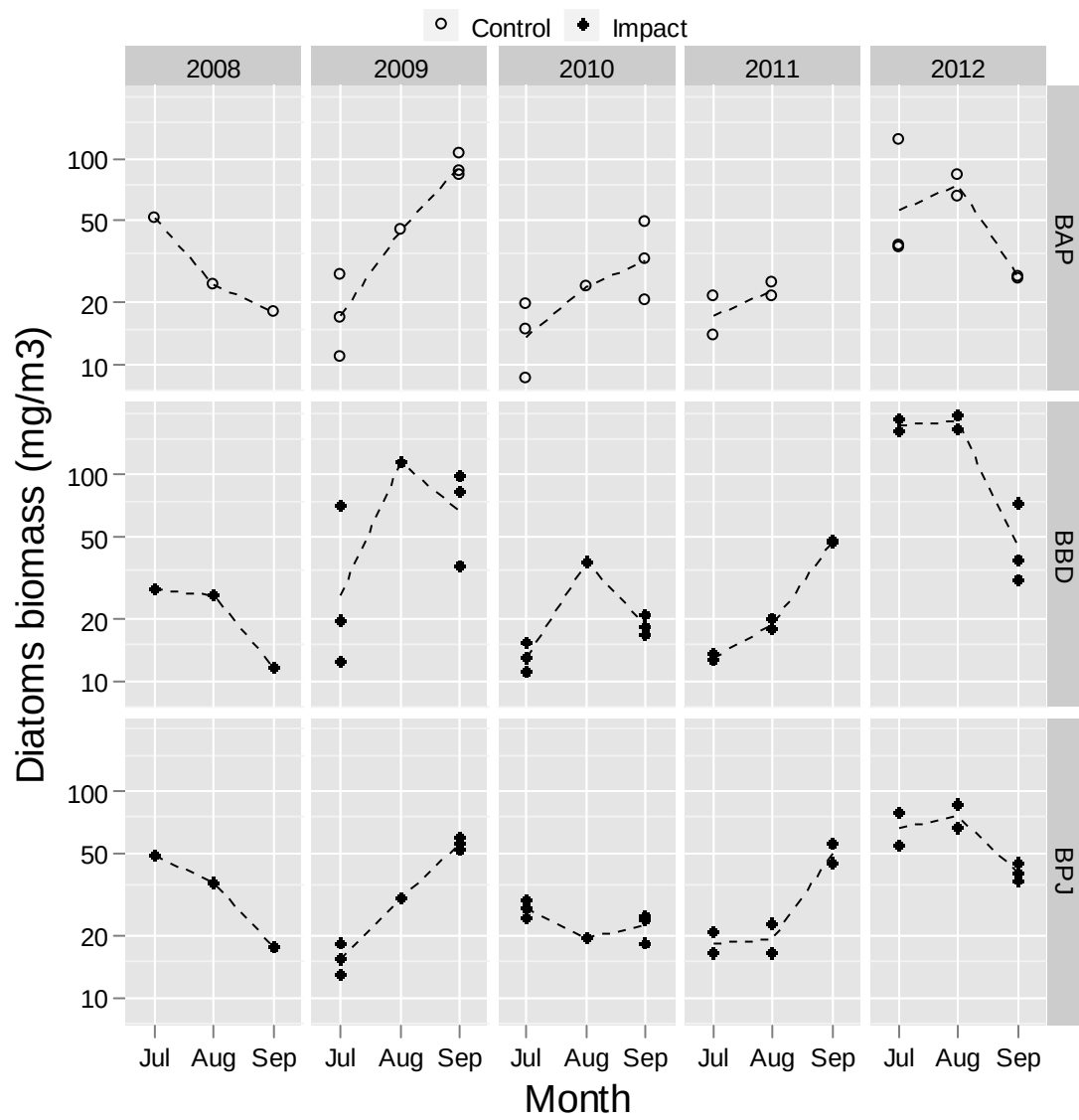
BAKER LAKE
PHYTOPLANKTON PLOTS

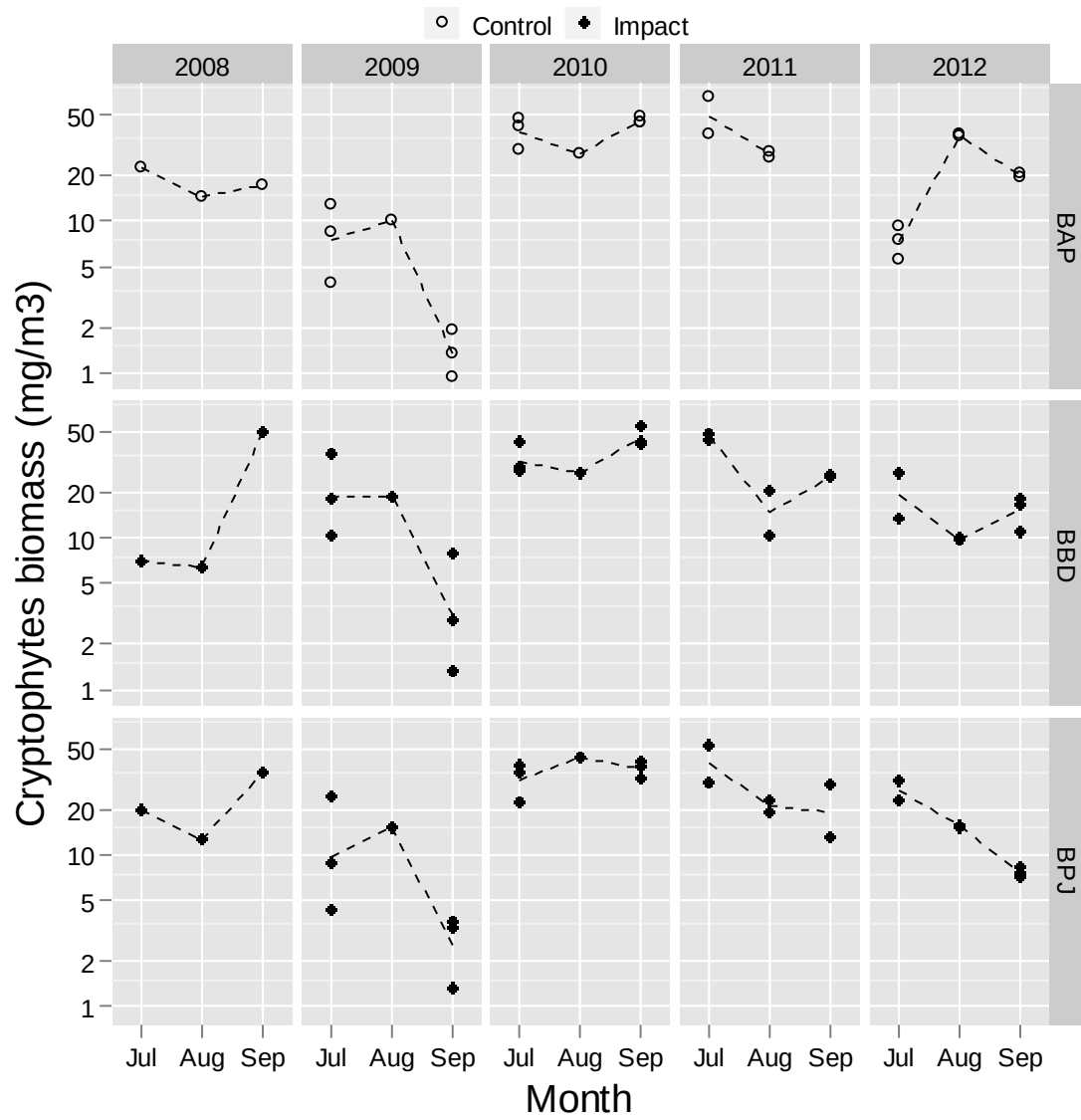


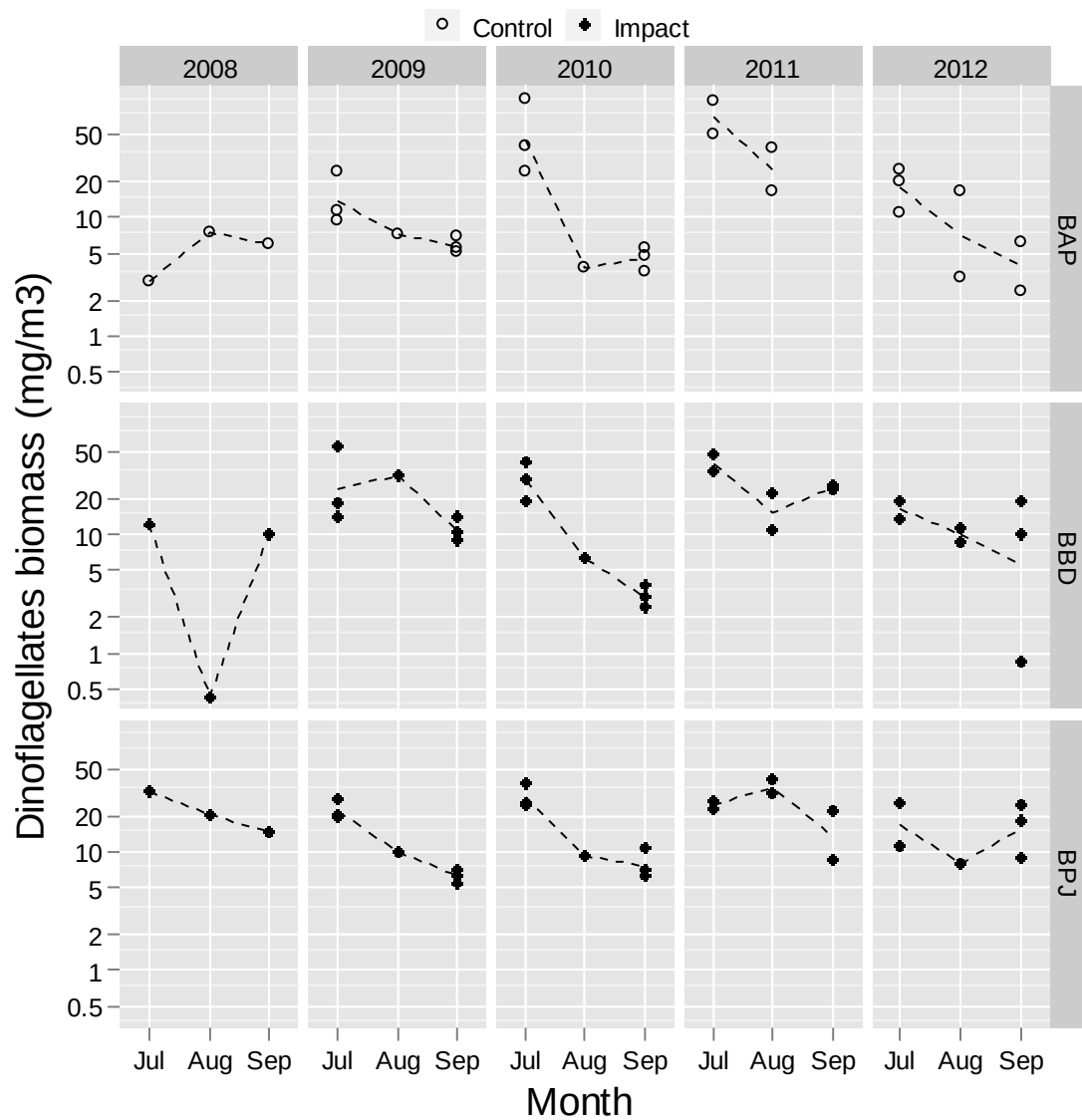


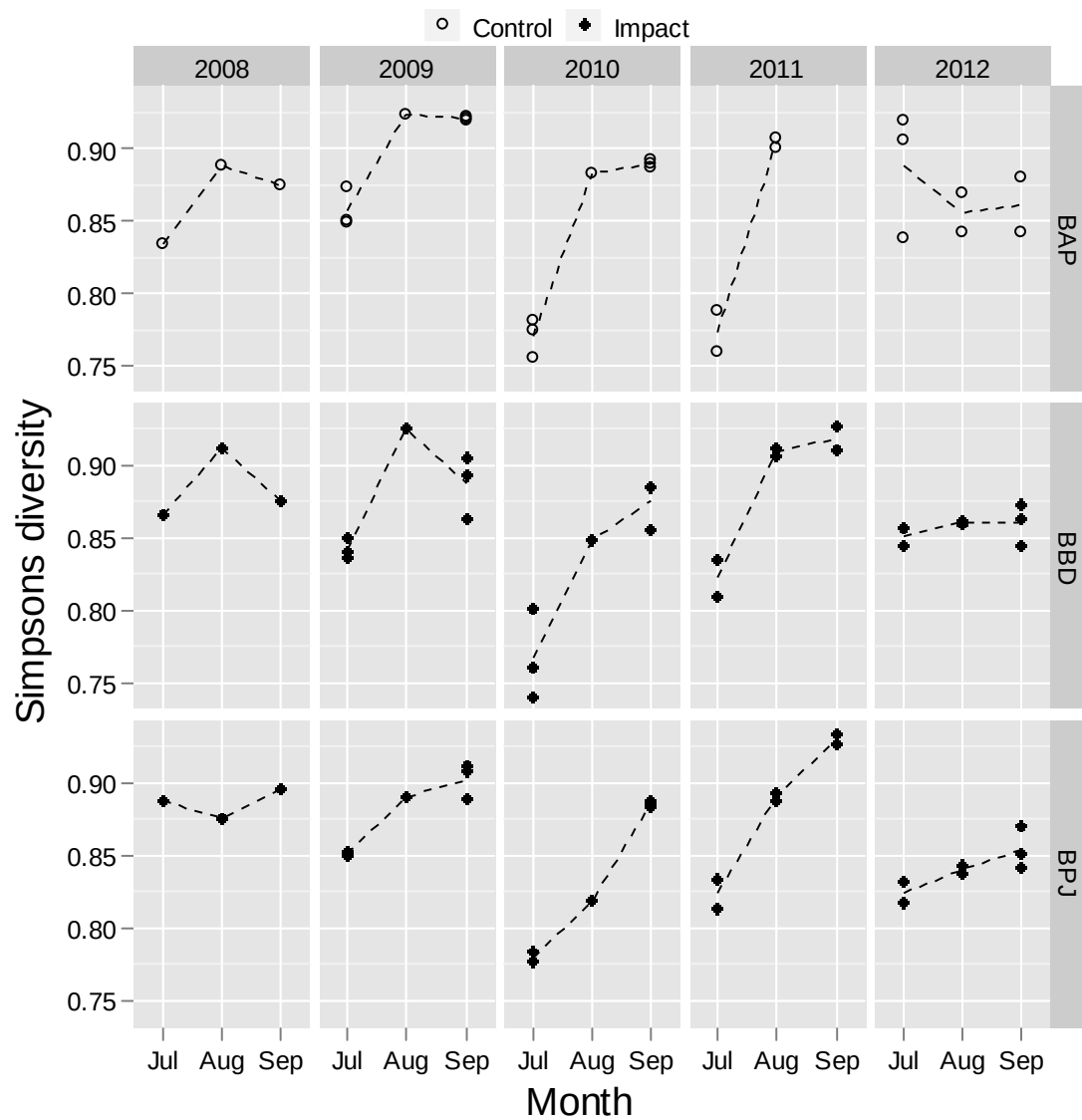


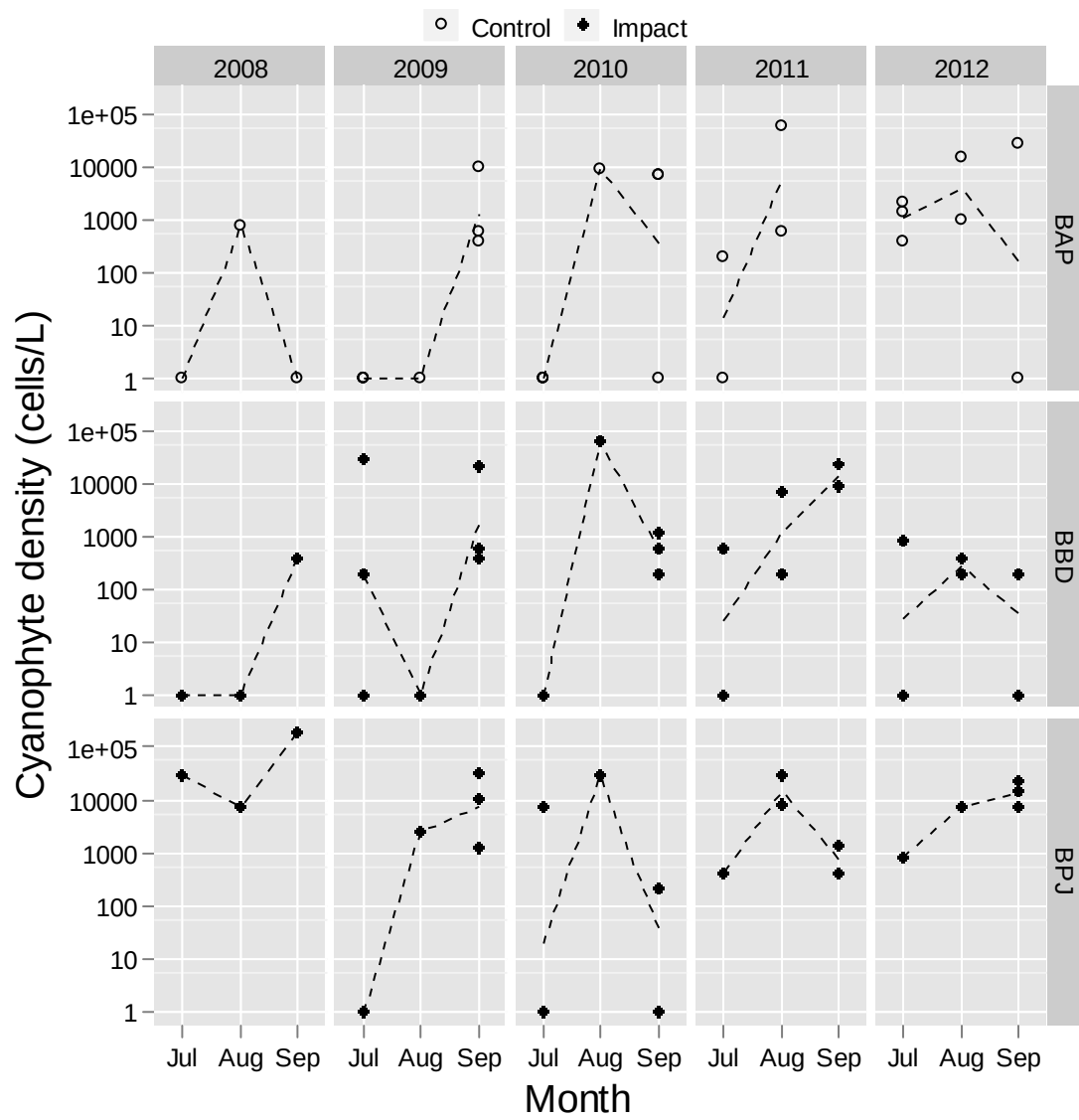


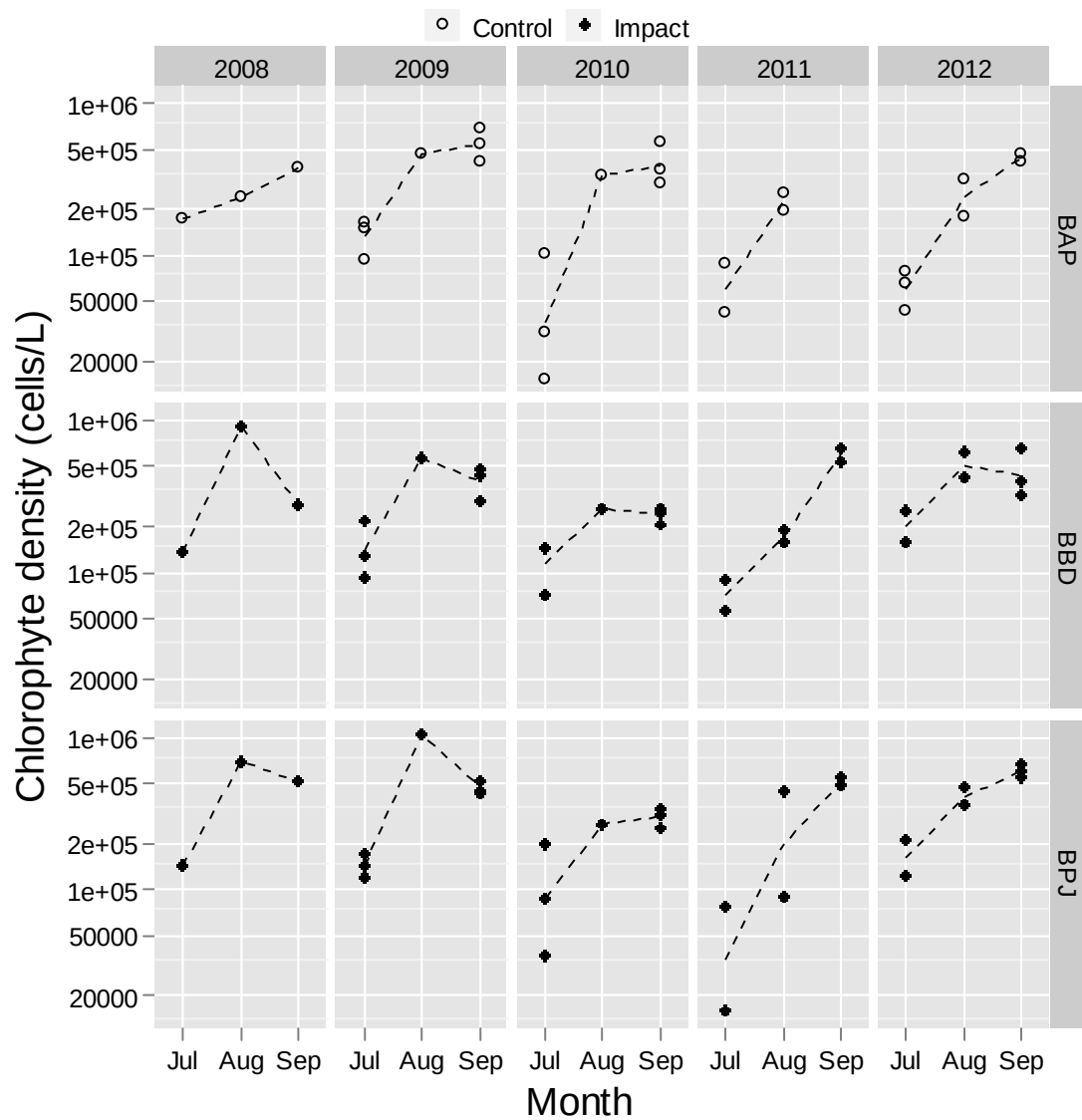


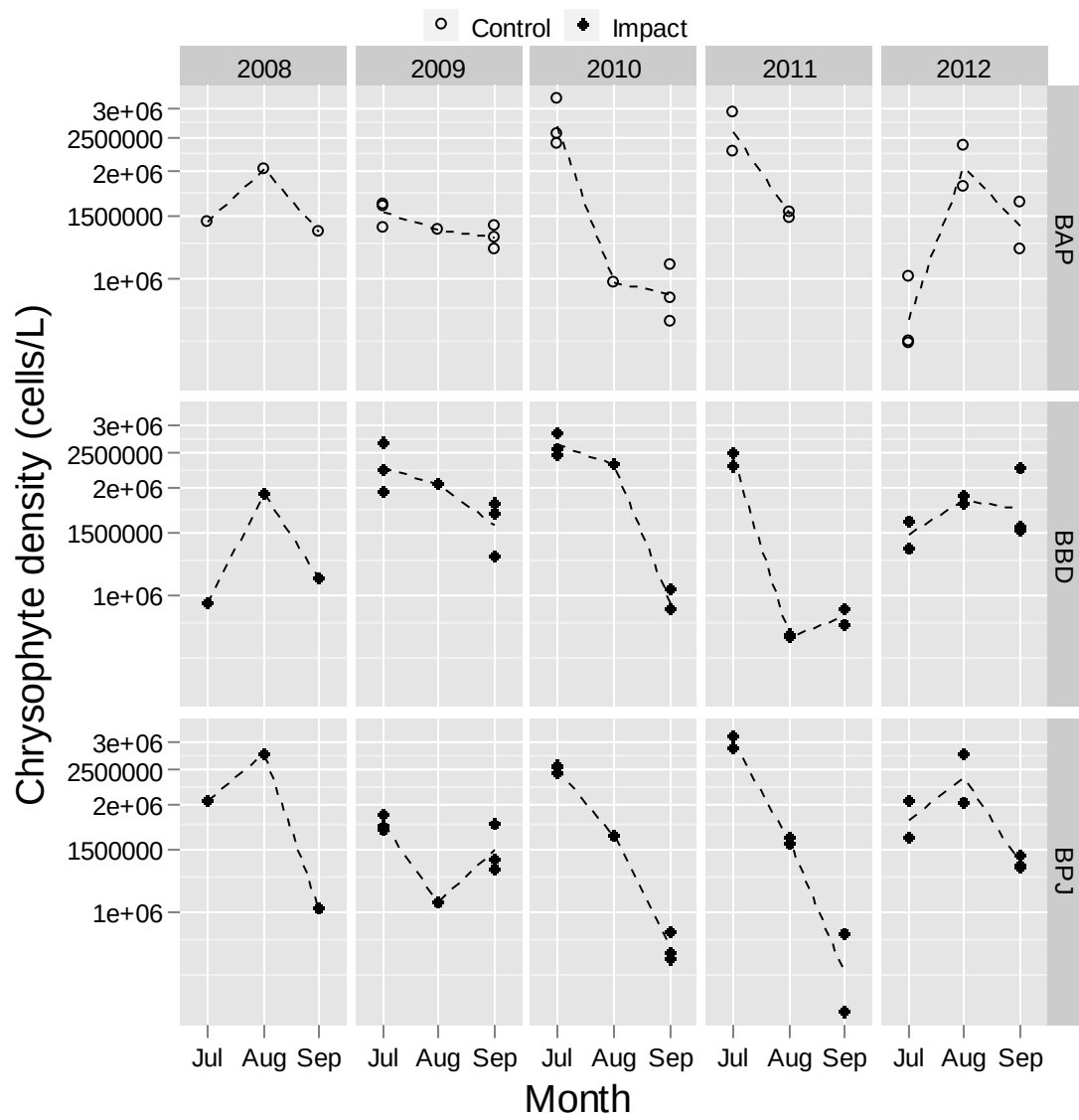


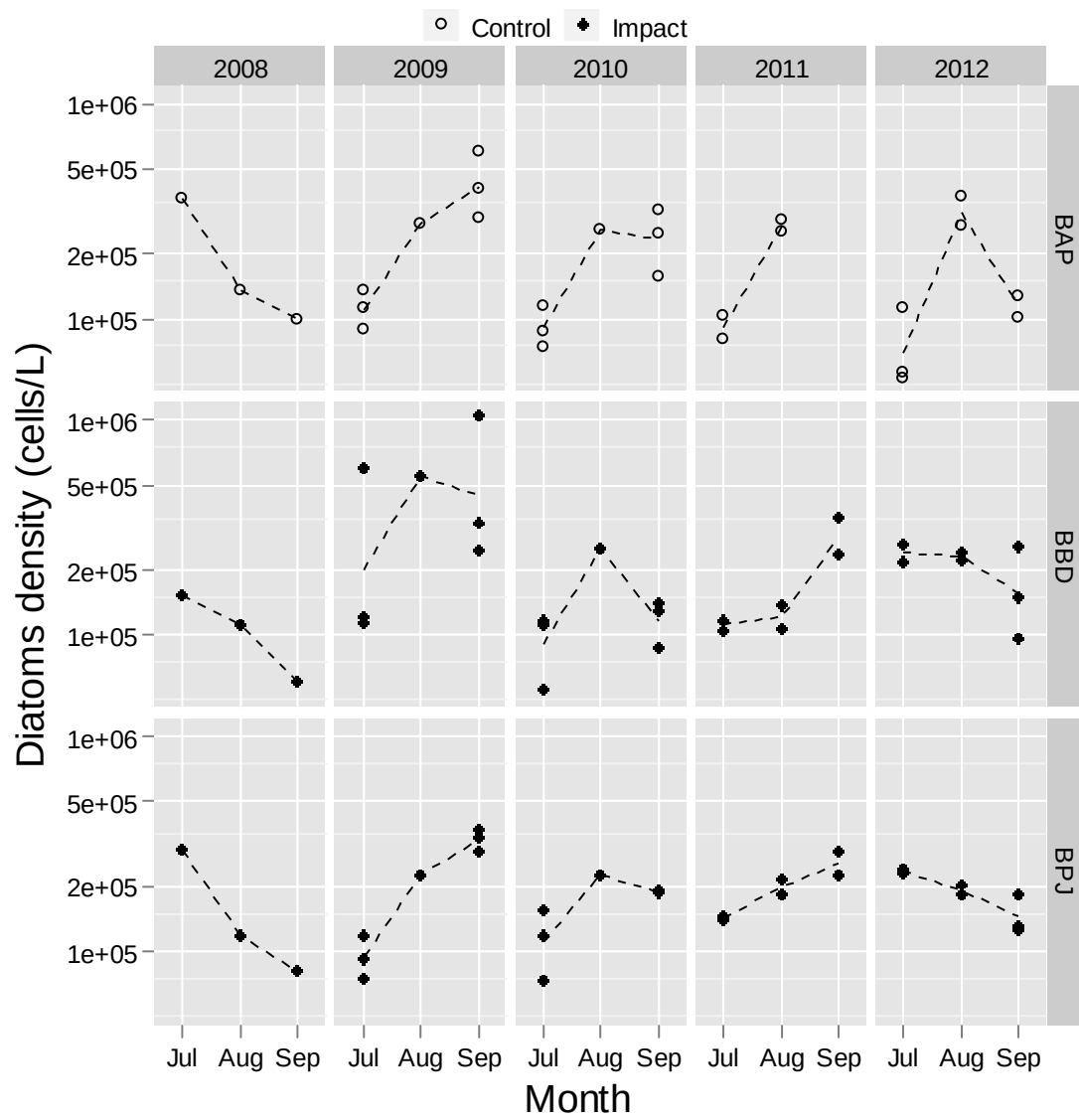


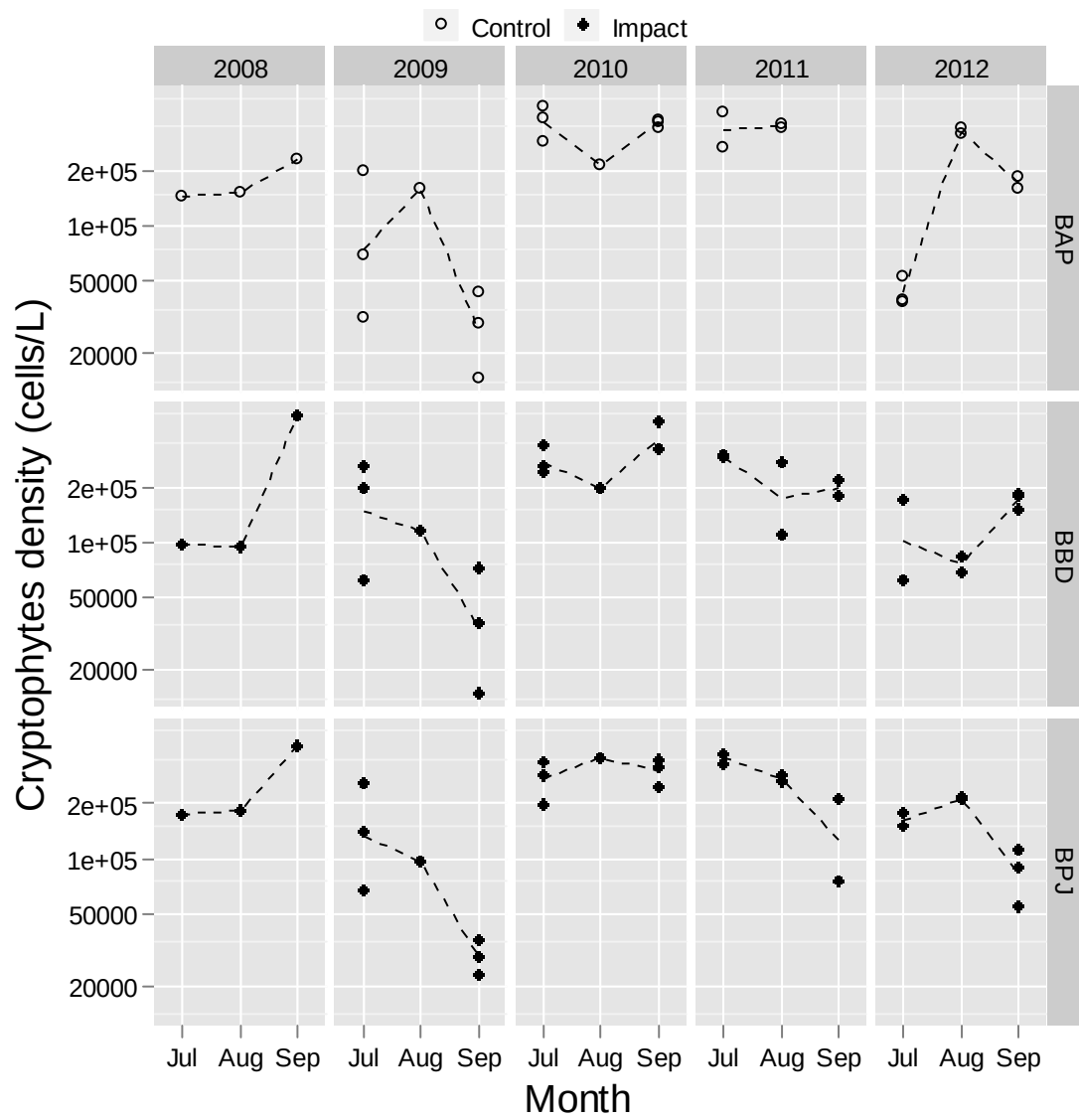


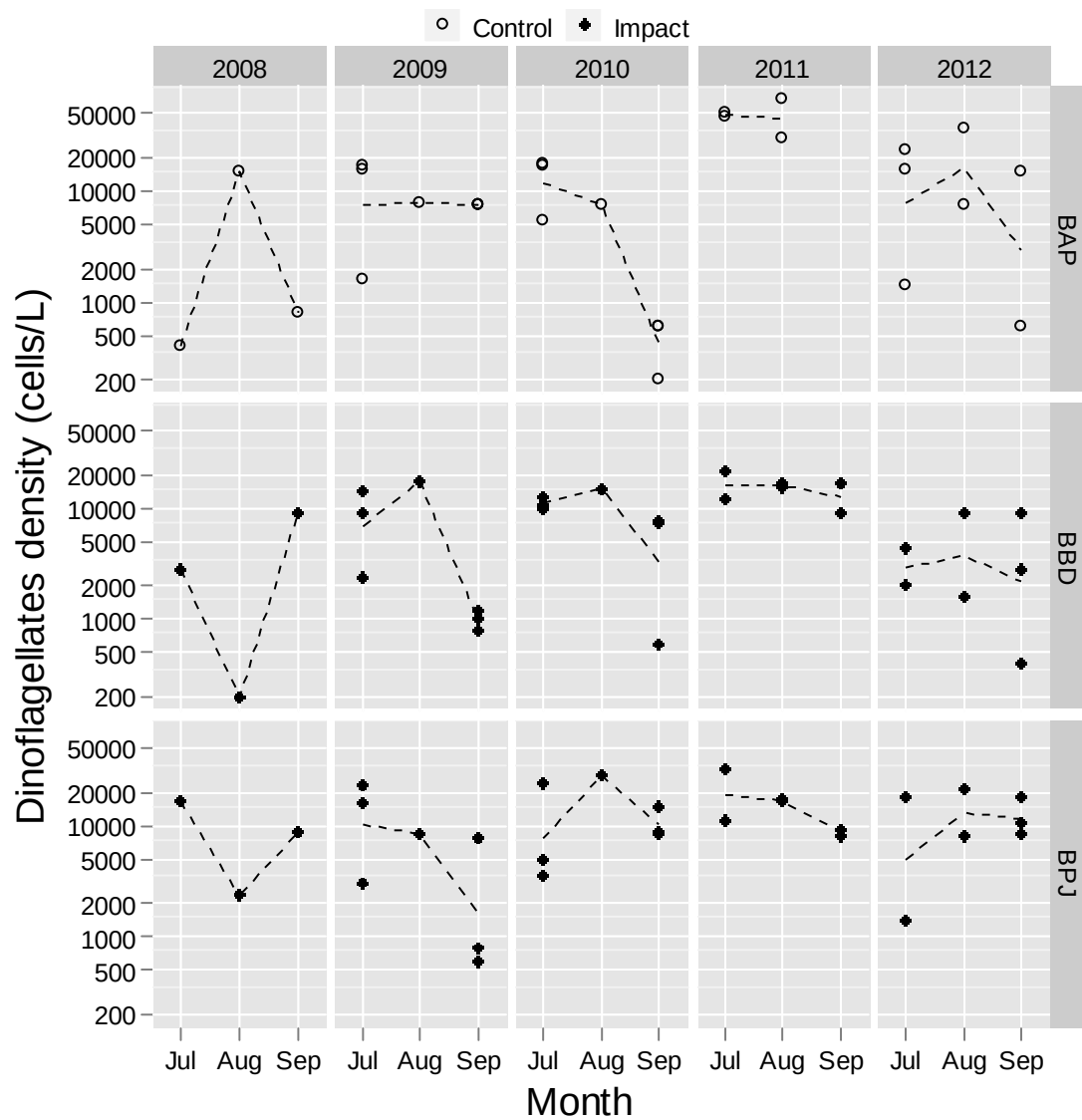


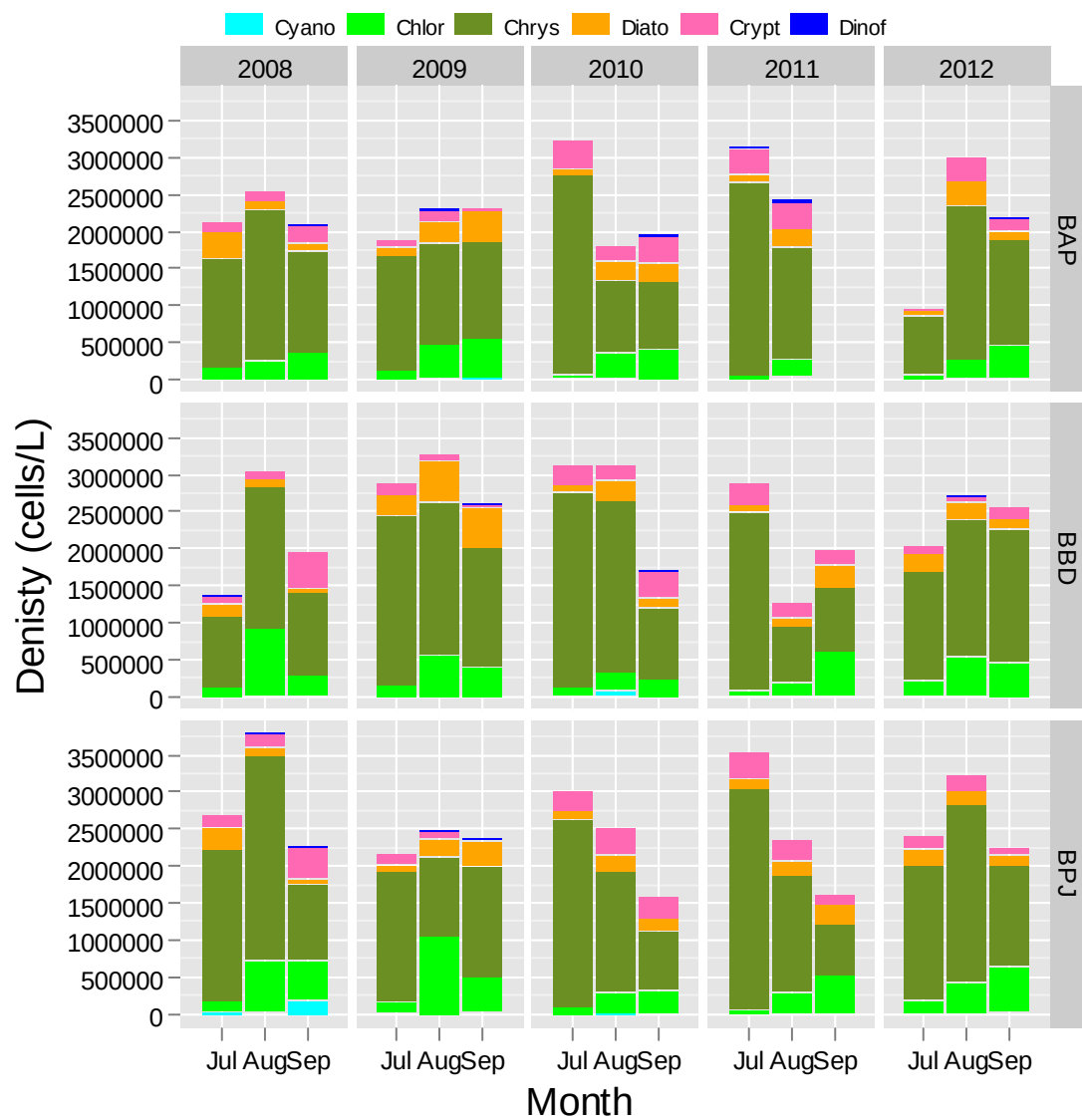


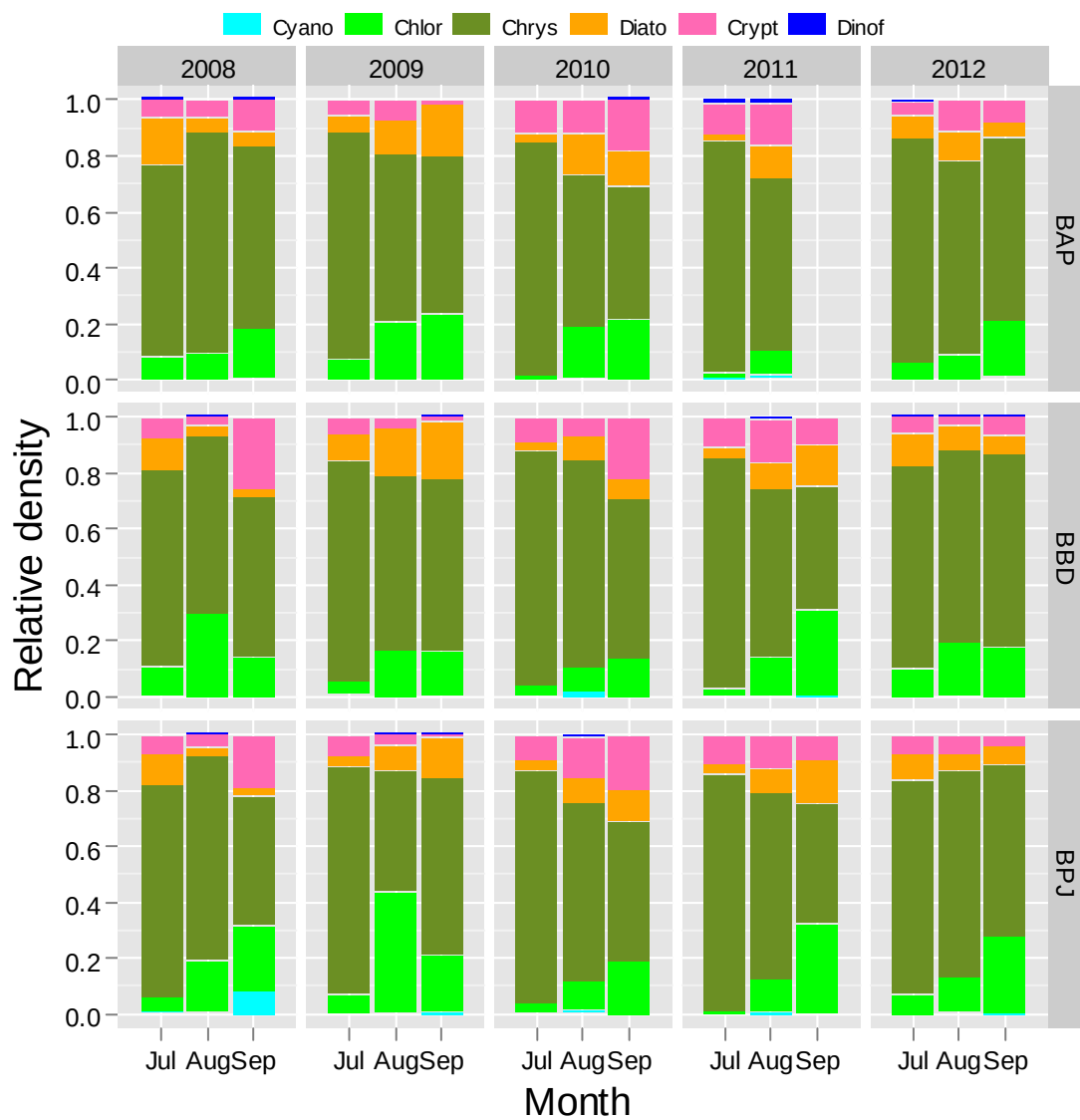












APPENDIX H

**BENTHIC INVERTEBRATE RAW DATA,
MEADOWBANK STUDY LAKES AND BAKER LAKE,
2012**



Appendix I. Benthic Invertebrate raw data (total number of organisms in two 0.023 m2 grabs), Meadowbank Study Lakes and Baker Lake, August 2012.

Area	BAP	BAP	BAP	BAP	BAP	BBD	BBD	BBD	BBD	BBD	BES	BES	BES	BES	BES	BPJ	BPJ	BPJ	BPJ	BPJ	INUG	INUG
Replicate	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2
Depth (m)	7	8.4	9	9.1	9	9.2	9	9.4	9.3	9.5	8.0	8.4	9.3	8.5	8.8	9.5	8	9	9.3	8.9	6.6	8
# Grabs/sample	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mesh Size (µm)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
P. Cnidaria																						
Cl. Hydrozoa																						
F. Hydrozoa																						
Hydra											6	2										
ROUNDWORMS																						
P. Nemata	2	7	17	1		5	2	12		3	9	9	7	7	6	7	1		2			1
FLATWORMS																						
P. Platyhelminthes																						
Cl. Turbellaria																						
indeterminate																						
ANNELIDS																						
P. Annelida																						
WORMS																						
Cl. Oligochaeta																						
F. Enchytraeidae											1	2		1	1							
F. Naididae																						
Slavina appendiculata			5								1											
F. Tubificidae																						
Limnodrilus hoffmeisteri	1			5				1														
Rhyacodrilus coccineus	2		21	10		3				2										1		1
Rhyacodrilus montana	17	8	57	38	5	26	19		9	9	4	4	1	3		7		1				
immatures with hair chaetae			16	38		2	1			1												
immatures without hair chaetae										2												
F. Lumbriculidae																						
Lumbriculus																					2	3
Styodrilus				5																		
ARTHROPODS																						
P. Arthropoda																						
MITES																						
Cl. Arachnida																						
O. Acarina	9		3	7	6	2	2				10	2	3		1	1				3		1
SEED SHRIMPS																						
Cl. Ostracoda	1		2	7	1	13	28	4		6	5	4			1	4	1		2	4	2	3
FAIRY SHRIMP																						
O. Notostraca																						
Lepidurus arcticus																						
WATER SCUDS																						
O. Amphipoda																						
F. Gammaracanthidae																						
Gammaracanthus aestuariorum			1																			
INSECTS																						
Cl. Insecta																						
CADDISFLIES																						
O. Trichoptera																						
pupae																						
F. Apataniidae																						
Apatania											2											
F. Limnephilidae																						
Grensia praeterita																						
TRUE FLIES																						
O. Diptera																						
MIDGES																						
F. Chironomidae																						
chironomid pupae	10	3		6	7	1	1	1	1	2	15	15	12	8	7			2	4	9		1
S.F. Chironominae																						
Cladotanytarsus																						
Constempellina	2			1	1		1				1	2	1		1					1		
Dicrotendipes																						
Micropsectra			1	3	1	4	3	1				1	1		1					2	2	13
Microtendipes																						3
Paracladopelma	3	1	2				1				1		1			1			1			
Paratanytarsus	1		11	3									1	1	1	1						
Sergentia			1	1		2	1	2														
Stempellinella																						
Stictochironomus	3	2	34	38		95	60	168	17	106	3					23		1	1	10	7	7
Tanytarsus	1	2	5	4	2	2	3			2	4	6	3	4	3	1			1	3		
S.F. Diamesinae																						
Protanypus	1			1			1	1		1												1
Pothastia											1											
Pseudodiamesa				1	1	1							4	1		1				1		
S.F. Orthocladiinae																						
Abiskomyia	37	2	25	5	7	7	21	2			41	7	22	3	13					91		1
Corynoneura												1										1
Cricotopus												2										

Appendix I. Benthic Invertebrate raw data (total number of organisms in two 0.023 m2 grabs), Meadowbank Study Lakes and Baker Lake, August 2012.

Area	BAP	BAP	BAP	BAP	BAP	BBD	BBD	BBD	BBD	BBD	BES	BES	BES	BES	BES	BPJ	BPJ	BPJ	BPJ	BPJ	INUG	INUG
Replicate	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2
Depth (m)	7	8.4	9	9.1	9	9.2	9	9.4	9.3	9.5	8.0	8.4	9.3	8.5	8.8	9.5	8	9	9.3	8.9	6.6	8
# Grabs/sample	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mesh Size (µm)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
<i>Cricotopus/Orthocladus</i>	1							1					1		1					1		5
<i>Heterotrissocladius</i>		1	2	2	9	2	1			2	1	3	12	4	5	1			1			
<i>Mesocricotopus</i>	1										1											
<i>Paracladus</i>	4		2									1	1	1								
<i>Parakiefferiella</i>													1		1							
<i>Psectrocladius</i>											1	1										1
<i>Zalutschia</i>																						
S.F. Prodiamesinae																						
<i>Monodiamesa</i>	1	1				4	1	1	2	2	4	4	3		3	1			1		3	3
S.F. Tanypodinae																						
<i>Abalabesmyia</i>												1										
<i>Procladius</i>	6	1	3	8	2	10	11	2		7	10	6	4	3	4	1			3	5	5	5
<i>Thienemannimyia</i> complex			2																			1
F. Empididae																						
<i>Chelifera</i>			1			2	4							1	1							
<i>Wiedemannia</i>															1			1				
pupae	1										1											
MOLLUSCS																						
P. Mollusca																						
CLAMS																						
Cl. Bivalvia																						
F. Sphaeriidae																						
<i>Cyclocalyx/Neopisidium</i>	17	3	20	10	9	35	57				15	11	13	2	4	2				1	12	18
<i>Cyclocalyx</i>				2			1			1											5	1
<i>Sphaerium nitidum</i>																						
R (Richness) - raw																						
Oligochaete	3	1	3	3	1	2	1	1	1	2	3	2	1	2	1	1	0	1	0	1	1	1
Oligochaete	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Insect	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Insect	5	3	6	6	3	4	6	3	1	2	4	3	5	2	4	4	0	1	3	4	2	3
Insect	5	2	3	4	3	3	3	3	0	2	5	7	6	3	4	2	0	0	1	3	0	4
Insect	2	2	2	1	1	2	2	2	1	2	2	3	2	1	2	2	0	0	2	1	2	3
Insect	0	0	1	0	0	1	1	0	0	0	0	0	0	1	2	0	0	1	0	0	0	0
Mollusc	1	1	1	2	1	1	2	0	0	1	1	1	1	1	1	1	0	0	0	1	2	2
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	1	0	1	1	1	1	1	0	0	0	1	1	1	0	1	1	0	0	0	1	0	1
Other	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R (Richness) - totals																						
Total	17	9	18	18	10	14	16	9	3	9	17	17	16	10	15	11	0	3	6	11	8	15
Oligochaete	3	1	3	4	1	2	1	1	1	2	3	2	1	2	1	1	0	1	0	1	2	2
Insect	12	7	12	11	7	10	12	8	2	6	12	13	13	7	12	8	0	2	6	8	4	10
Mollusc	1	1	1	2	1	1	2	0	0	1	1	1	1	1	1	1	0	0	0	1	2	2
Other	1	0	2	1	1	1	1	0	0	0	1	1	1	0	1	1	0	0	0	1	0	1
N (Abundance) - raw																						
Total	118	24	212	188	50	198	189	180	29	137	117	70	85	31	48	40	0	5	12	132	37	61
Oligochaete	20	8	99	96	5	31	20	1	9	14	6	6	1	4	1	7	0	1	0	1	3	4
Insect	72	13	89	73	30	130	109	179	20	122	86	51	68	25	42	30	0	4	12	127	17	37
Mollusc	17	3	20	12	9	35	58	0	0	1	15	11	13	2	4	2	0	0	0	1	17	19
Other	9	0	4	7	6	2	2	0	0	0	10	2	3	0	1	1	0	0	0	3	0	1
N (Abundance) - #/m²																						
Total	2565	522	4609	4087	1087	4304	4109	3913	630	2978	2543	1522	1848	674	1043	870	0	109	261	2870	804	1326
Oligochaete	435	174	2152	2087	109	674	435	22	196	304	130	130	22	87	22	152	0	22	0	22	65	87
Insect	1565	283	1935	1587	652	2826	2370	3891	435	2652	1870	1109	1478	543	913	652	0	87	261	2761	370	804
Mollusc	370	65	435	261	196	761	1261	0	0	22	326	239	283	43	87	43	0	0	0	22	370	413
Other	196	0	87	152	130	43	43	0	0	0	217	43	65	0	22	22	0	0	0	65	0	22
TOTAL NUMBER OF TAXA ¹																						
TOTAL NUMBER OF ORGANISMS ²	118	24	212	188	50	198	189	180	29	137	117	70	85	31	48	40	0	5	12	132	37	61

Notes:

¹ Number of taxa totals exclude nematodes & ostracods, immatures & pupae (Tubificidae, Limnephilidae, Chironomidae, Empididae), and indeterminates (Lumbriculidae, Diptera, Chironominae, Orthoclaadiinae, Tanypodinae).

² Number of organisms totals exclude nematodes (P. Nemata) & ostracods (Cl. Ostracoda).

TPE,TPN,TPS=Third Portage Lake - East, North, South basins; SP=Second Portage Lake; TE,TEFF=Tehek Lake - Farfield;

INUG=Inuggugayualik Lake; WAL=Wally Lake; PDL=Pipedream Lake;

BBD,BPJ,BAP,BES=Baker Lake - Barge Dock, Proposed Jetty, Akilahaarjuk Point, East Shore.

Notes:

¹ Number of taxa t

² Number of organ

TPE,TPN,TPS=Thin

INUG=Inuggugayul

BBD,BPJ,BAP,BES=

Appendix I. Benthic Invertebrate raw data (total number of organisms in two 0.023 m2 grabs), Meadowbank Study Lakes and Baker Lake, August 2012.

Area	INUG	INUG	INUG	PDL	PDL	PDL	PDL	PDL	SP	SP	SP	SP	SP	TE	TE	TE	TE	TE	TEFF	TEFF	TEFF	TEFF	TEFF
Replicate	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Depth (m)	8.5	8.9	6.8	7.1	6.8	8.1	8.7	8.1	8.4	8.9	7.6	8.8	7.7	7.9	9.4	6.5	7.4	7.1	9.5	8.8	8.9	7.6	7.2
# Grabs/sample	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mesh Size (µm)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
P. Cnidaria																							
Cl. Hydrozoa																							
F. Hydrozoa																							
Hydra																							
ROUNDWORMS																							
P. Nemata		1	2	1		4		1	3	1	3	6	4	1	1	6				2	2		2
FLATWORMS																							
P. Platyhelminthes																							
Cl. Turbellaria																							
indeterminate			4																				
ANNELIDS																							
P. Annelida																							
WORMS																							
Cl. Oligochaeta																							
F. Enchytraeidae																							
F. Naididae																							
Slavina appendiculata																							
F. Tubificidae																							
Limnodrilus hoffmeisteri																							
Rhyacodrilus coccineus										2	1					1				3		2	
Rhyacodrilus montana																							
immatures with hair chaetae			1					1	2						1	1	1	1			1		
immatures without hair chaetae																							
F. Lumbriculidae																							
Lumbriculus		2	2			2		1	2		2			3	1	1	1				2	1	
Styodrilus																							
ARTHROPODS																							
P. Arthropoda																							
MITES																							
Cl. Arachnida																							
O. Acarina	6	1	2	1	1	2		1	4		4	4	2	3	3	3	2			4	3	7	2
SEED SHRIMPS																							
Cl. Ostracoda	5		4	1		4			5	5	4	12	8	11	4	14	4	17	12	8	12	6	9
FAIRY SHRIMP																							
O. Notostraca																							
Lepidurus arcticus		1	1																				
WATER SCUDS																							
O. Amphipoda																							
F. Gammaracanthidae																							
Gammaracanthus aestuariorum																							
INSECTS																							
Cl. Insecta																							
CADDISFLIES																							
O. Trichoptera																							
pupae																							
F. Apataniidae																							
Apatania																							
F. Limnephilidae																							
Grensia praeterita						1		3	1				1				1						
TRUE FLIES																							
O. Diptera																							
MIDGES																							
F. Chironomidae																							
chironomid pupae		1		1		1			1						1		2					2	
S.F. Chironominae																							
Cladotanytarsus			1							1													
Constempellina																							
Dicrotendipes																							
Micropsectra	2			3	3		1	1	3	1	1	16	3	16	1	1	11			5	4		1
Microtendipes	2	8	1																				
Paracladopelma																							
Paratanytarsus										1	1	2		2		1						1	
Sergentia						1													3				
Stempellinella													1										
Stictochironomus	2	1	5	8	1	14	36	1	1	11	7	4	8			4			19	3	24	18	
Tanytarsus									1	4		2							3				
S.F. Diamesinae																							
Protanypus		1	1	2	3				2	2	1		2							1			
Pothastia																							
Pseudodiamesa				1																			
S.F. Orthocladiinae																							
Abiskomyia	2								3	2	2	1	2									1	
Corynoneura															2	1							
Cricotopus																							

Appendix I. Benthic Invertebrate raw data (total number of organisms in two 0.023 m2 grabs), Meadowbank Study Lakes and Baker Lake, August 2012.

Area	INUG	INUG	INUG	PDL	PDL	PDL	PDL	PDL	SP	SP	SP	SP	SP	TE	TE	TE	TE	TE	TEFF	TEFF	TEFF	TEFF	TEFF
Replicate	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Depth (m)	8.5	8.9	6.8	7.1	6.8	8.1	8.7	8.1	8.4	8.9	7.6	8.8	7.7	7.9	9.4	6.5	7.4	7.1	9.5	8.8	8.9	7.6	7.2
# Grabs/sample	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mesh Size (µm)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
<i>Cricotopus/Orthocladus</i>																							
<i>Heterotrissocladius</i>				3		2		1	3	3	1	7	1	1				1		3			6
<i>Mesocricotopus</i>																							
<i>Paracladus</i>										2			1			1				3	1	1	3
<i>Parakiefferiella</i>																							
<i>Psectrocladius</i>				1			1	1								3						1	
<i>Zalutschia</i>										3					1				2	1	1	2	
S.F. Prodiamesinae																							
<i>Monodiamesa</i>	2	1	2	1	2	1			2	4	3	1	3	7	3	1	2	2		1	1	2	
S.F. Tanypodinae																							
<i>Abalbesmyia</i>																							
<i>Procladius</i>	10	20	3	8	7	12	18	16	7	13	8	11	11	7	8	8	5	6	11	1	13		2
<i>Thienemannimyia</i> complex		1				1								1									1
F. Empididae																							
<i>Chelifera</i>																							
<i>Wiedemannia</i>																							
pupae																							
MOLLUSCS																							
P. Mollusca																							
CLAMS																							
Cl. Bivalvia																							
F. Sphaeriidae																							
<i>Cyclocalyx/Neopisidium</i>	17	28	14	8	22	16	9	7	18	9	13	15	17	8	7	6	12	19		16	6	15	14
<i>Cyclocalyx</i>	3											3	1			1	1						
<i>Sphaerium nitidum</i>		1																					
R (Richness) - raw																							
Oligochaete	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	1	0
Oligochaete	0	1	1	0	0	0	1	0	1	1	0	1	0	1	1	1	1	0	0	0	0	1	1
Insect	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Insect	3	2	3	2	2	1	3	2	3	5	3	4	3	2	1	3	1	0	3	2	2	2	1
Insect	1	1	1	4	1	1	1	2	3	5	3	2	4	2	2	2	0	1	1	4	2	4	2
Insect	2	3	2	2	2	3	1	2	2	2	2	2	2	3	2	2	2	2	1	2	2	1	2
Insect	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mollusc	2	2	1	1	1	1	1	1	1	1	1	2	2	1	1	2	2	1	0	1	1	1	1
Other	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	0	0	1	1	1	1
Other	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R (Richness) - totals																							
Total	9	11	11	10	8	7	7	8	12	15	11	12	13	10	8	12	7	5	5	11	8	11	8
Oligochaete	0	1	1	0	0	0	1	0	1	2	1	1	0	1	1	2	1	0	0	1	0	2	1
Insect	6	6	6	8	6	5	5	6	9	12	8	8	10	7	5	7	3	4	5	8	6	7	5
Mollusc	2	2	1	1	1	1	1	1	1	1	1	2	2	1	1	2	2	1	0	1	1	1	1
Other	1	2	3	1	1	1	0	1	1	0	1	1	1	1	1	1	1	0	0	1	1	1	1
N (Abundance) - raw																							
Total	46	66	37	37	40	49	68	31	48	62	42	68	53	50	27	32	37	30	38	41	53	55	30
Oligochaete	0	2	3	0	0	0	2	0	2	6	1	2	0	3	2	3	2	1	0	3	0	5	1
Insect	20	33	13	28	17	31	57	23	24	47	24	44	33	36	15	19	20	10	38	18	44	28	13
Mollusc	20	29	14	8	22	16	9	7	18	9	13	18	18	8	7	7	13	19	0	16	6	15	14
Other	6	2	7	1	1	2	0	1	4	0	4	4	2	3	3	3	2	0	0	4	3	7	2
N (Abundance) - #/m²																							
Total	1000	1435	804	804	870	1065	1478	674	1043	1348	913	1478	1152	1087	587	696	804	652	826	891	1152	1196	652
Oligochaete	0	43	65	0	0	0	43	0	43	130	22	43	0	65	43	65	43	22	0	65	0	109	22
Insect	435	717	283	609	370	674	1239	500	522	1022	522	957	717	783	326	413	435	217	826	391	957	609	283
Mollusc	435	630	304	174	478	348	196	152	391	196	283	391	391	174	152	152	283	413	0	348	130	326	304
Other	130	43	152	22	22	43	0	22	87	0	87	87	43	65	65	65	43	0	0	87	65	152	43
TOTAL NUMBER OF TAXA¹																							
TOTAL NUMBER OF ORGANISMS²	9	11	11	10	8	7	7	8	12	15	11	12	13	10	8	12	7	5	5	11	8	11	8
	46	66	37	37	40	49	68	31	48	62	42	68	53	50	27	32	37	30	38	41	53	55	30

totals exclude nematodes & ostracods, immatures & pupae (Tubificidae, Limnephilidae, Chironomidae, Empididae), and indeterminates (Lumbriculidae, Diptera, Chironominae, Orthocladiinae, Tanypodinae).
isms totals exclude nematodes (P. Nemata) & ostracods (Cl. Ostracoda).

d Portage Lake - East, North, South basins; SP=Second Portage Lake; TE, TEFF=Tehek Lake - Farfield;
alik Lake; WAL=Wally Lake; PDL=Pipedream Lake;
-Baker Lake - Barge Dock, Proposed Jetty, Akilahaarjuk Point, East Shore.

Notes:
¹ Number of taxa totals exclude nem and indeterminat
² Number of organisms totals exclud

TPE,TPN,TPS=Third Portage Lake - E;
INUG=Inuggugayualik Lake; WAL=W
BBD,BPJ,BAP,BES=Baker Lake - Barg

Appendix I. Benthic Invertebrate raw data (total number of organisms in two 0.023 m2 grabs), Meadowbank Study Lakes and Baker Lake, August 2012.

Area	TPE	TPE	TPE	TPE	TPE	TPN	TPN	TPN	TPN	TPN	TPS	TPS	TPS	TPS	TPS	WAL	WAL	WAL	WAL	WAL
Replicate	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Depth (m)	9	8.2	7.3	7.8	9.2	7.1	7.7	9	8.4	8.2	7.9	8	9.1	8.3	7.5	8.3	8.6	8.2	7.5	8
# Grabs/sample	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mesh Size (µm)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
P. Cnidaria																				
Cl. Hydrozoa																				
F. Hydrozoa																				
Hydra																				
ROUNDWORMS																				
P. Nematoda	3	3	8	3	1		3	1	2		5	5	5	1	2	1	1	2		1
FLATWORMS																				
P. Platyhelminthes																				
Cl. Turbellaria																				
indeterminate																6	4	2		2
ANNELIDS																				
P. Annelida																				
WORMS																				
Cl. Oligochaeta																				
F. Enchytraeidae																				
F. Naididae																				
Slavina appendiculata																				
F. Tubificidae																				
Limnodrilus hoffmeisteri																				
Rhyacodrilus coccineus	8	5	12	12	1										5					
Rhyacodrilus montana																				
immatures with hair chaetae											1				13					
immatures without hair chaetae																				
F. Lumbriculidae																				
Lumbriculus	1	2	2		2			1	1	1		1			1	4	2		1	1
Styodrilus																				
ARTHROPODS																				
P. Arthropoda																				
MITES																				
Cl. Arachnida																				
O. Acarina	3	3	1	3	5		1		1		1					2	2	1		
SEED SHRIMPS																				
Cl. Ostracoda	30	36	70	40	13	9	12	9	4	6	19	16	25	11	29	46	8	19	9	9
FAIRY SHRIMP																				
O. Notostraca																				
Lepidurus arcticus																				
WATER SCUDS																				
O. Amphipoda																				
F. Gammaracanthidae																				
Gammaracanthus aestuariorum																				
INSECTS																				
Cl. Insecta																				
CADDISFLIES																				
O. Trichoptera																				
pupae	1																			
F. Apataniidae																				
Apatania				1																
F. Limnephilidae																				
Grensia praeterita									3							3				
TRUE FLIES																				
O. Diptera																				
MIDGES																				
F. Chironomidae																				
chironomid pupae	1	1	1	1	2		2					1	1	1		2			1	
S.F. Chironominae																				
Cladotanytarsus																34		17		3
Constempellina																				
Dicrotendipes																1				
Micropsectra	10	12	12	28	17	3	11	6	12	10	38	45	54	11	102	7			10	
Microtendipes																				
Paracladopelma																				
Paratanytarsus	48	63	84	122	101	2	1	2	2	1	1	1	2		28	7		9		
Sergentia																				
Stempellinella																				
Stictochironomus	2	8	11	2	4				5	4					7	36	4	28	1	
Tanytarsus	2		1	6								1	1			14	1	4	15	16
S.F. Diamesinae																				
Protanypus			1			1	1	2	2	1	2	1	1				4	1		
Pothastia																				
Pseudodiamesa						1			3		2	5	7	4						
S.F. Orthoclaadiinae																				
Abiskomyia		1	3								1	1	2							
Corynoneura																159	11	17		4
Cricotopus										1										

Appendix I. Benthic Invertebrate raw data (total number of organisms in two 0.023 m2 grabs), Meadowbank Study Lakes and Baker Lake, August 2012.

Area	TPE	TPE	TPE	TPE	TPE	TPN	TPN	TPN	TPN	TPN	TPS	TPS	TPS	TPS	TPS	WAL	WAL	WAL	WAL	WAL
Replicate	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Depth (m)	9	8.2	7.3	7.8	9.2	7.1	7.7	9	8.4	8.2	7.9	8	9.1	8.3	7.5	8.3	8.6	8.2	7.5	8
# Grabs/sample	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mesh Size (µm)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
<i>Cricotopus/Orthocladus</i>																				
<i>Heterotrissocladus</i>	11	9	10	25	12	18	14	26	4	10	5	11	13	5	4					
<i>Mesocricotopus</i>																				
<i>Paracladus</i>																				
<i>Parakiefferiella</i>																				
<i>Psectrocladus</i>	1	2	1	2			1	2				1	3		5	2	3	1	1	3
<i>Zalutschia</i>								1					1		1					
S.F. Prodiamesinae																				
<i>Monodiamesa</i>			1	1	4				1	4	1		1	2						
S.F. Tanypodinae																				
<i>Abalabesmyia</i>																		2		
<i>Procladius</i>	5	12	2	7	12	4	7	3	11	3		3	2	2	4	14	4	2	9	5
<i>Thienemannimyia</i> complex	5	5	2	2	1	6	6	6	6	2		1		1	23	1		1		
F. Empididae																				
<i>Chelifera</i>																				
<i>Wiedemannia</i>																				
pupae																				
MOLLUSCS																				
P. Mollusca																				
CLAMS																				
Cl. Bivalvia																				
F. Sphaeriidae																				
<i>Cyclocalyx/Neopisidium</i>	33	24	26	53	57	8	8	8	14	11	13	10	11	18	46	8	5	9	9	7
<i>Cyclocalyx</i>																16	12	11	4	12
<i>Sphaerium nitidum</i>																			1	
R (Richness) - raw																				
Oligochaete	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Oligochaete	1	1	1	0	1	0	0	1	1	1	0	1	0	0	1	1	1	0	1	1
Insect	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
Insect	4	3	4	4	3	2	2	2	3	3	2	3	3	1	3	6	2	4	3	2
Insect	2	3	4	2	1	3	3	4	3	3	4	5	6	2	3	2	3	3	1	2
Insect	2	2	3	3	3	2	2	2	3	3	1	2	2	3	2	2	1	3	1	1
Insect	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mollusc	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
Other	1	1	1	1	1	0	1	0	1	0	1	0	0	0	0	1	1	1	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R (Richness) - totals																				
Total	12	12	16	12	11	8	9	10	13	11	9	12	12	7	11	16	11	14	9	9
Oligochaete	2	2	2	1	2	0	0	1	1	1	0	1	0	0	2	1	1	0	1	1
Insect	8	8	12	9	7	7	7	8	10	9	7	10	11	6	8	11	6	10	5	5
Mollusc	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2
Other	1	1	1	1	1	0	1	0	1	0	1	0	0	0	0	2	2	2	0	1
N (Abundance) - raw																				
Total	131	147	171	264	218	43	52	57	65	48	65	82	99	44	239	316	52	105	52	53
Oligochaete	9	7	14	12	3	0	0	1	1	1	1	1	0	0	19	4	2	0	1	1
Insect	86	113	130	196	153	35	43	48	49	36	50	71	88	26	174	280	27	82	37	31
Mollusc	33	24	26	53	57	8	8	8	14	11	13	10	11	18	46	24	17	20	14	19
Other	3	3	1	3	5	0	1	0	1	0	1	0	0	0	0	8	6	3	0	2
N (Abundance) - #/m²																				
Total	2848	3196	3717	5739	4739	935	1130	1239	1413	1043	1413	1783	2152	957	5196	6870	1130	2283	1130	1152
Oligochaete	196	152	304	261	65	0	0	22	22	22	22	22	22	0	413	87	43	0	22	22
Insect	1870	2457	2826	4261	3326	761	935	1043	1065	783	1087	1543	1913	565	3783	6087	587	1783	804	674
Mollusc	717	522	565	1152	1239	174	174	174	304	239	283	217	239	391	1000	522	370	435	304	413
Other	65	65	22	65	109	0	22	0	22	0	22	0	0	0	0	174	130	65	0	43
TOTAL NUMBER OF TAXA¹																				
TOTAL NUMBER OF ORGANISMS²	12	12	16	12	11	8	9	10	13	11	9	12	12	7	11	16	11	14	9	9
	131	147	171	264	218	43	52	57	65	48	65	82	99	44	239	316	52	105	52	53

1atodes & ostracods, immatures & pupae (Tubificidae, Limnephilidae, Chironomidae, Empididae),
as (Lumbriculidae, Diptera, Chironominae, Orthocladiinae, Tanypodinae).
e nematodes (P. Nemata) & ostracods (Cl. Ostracoda).

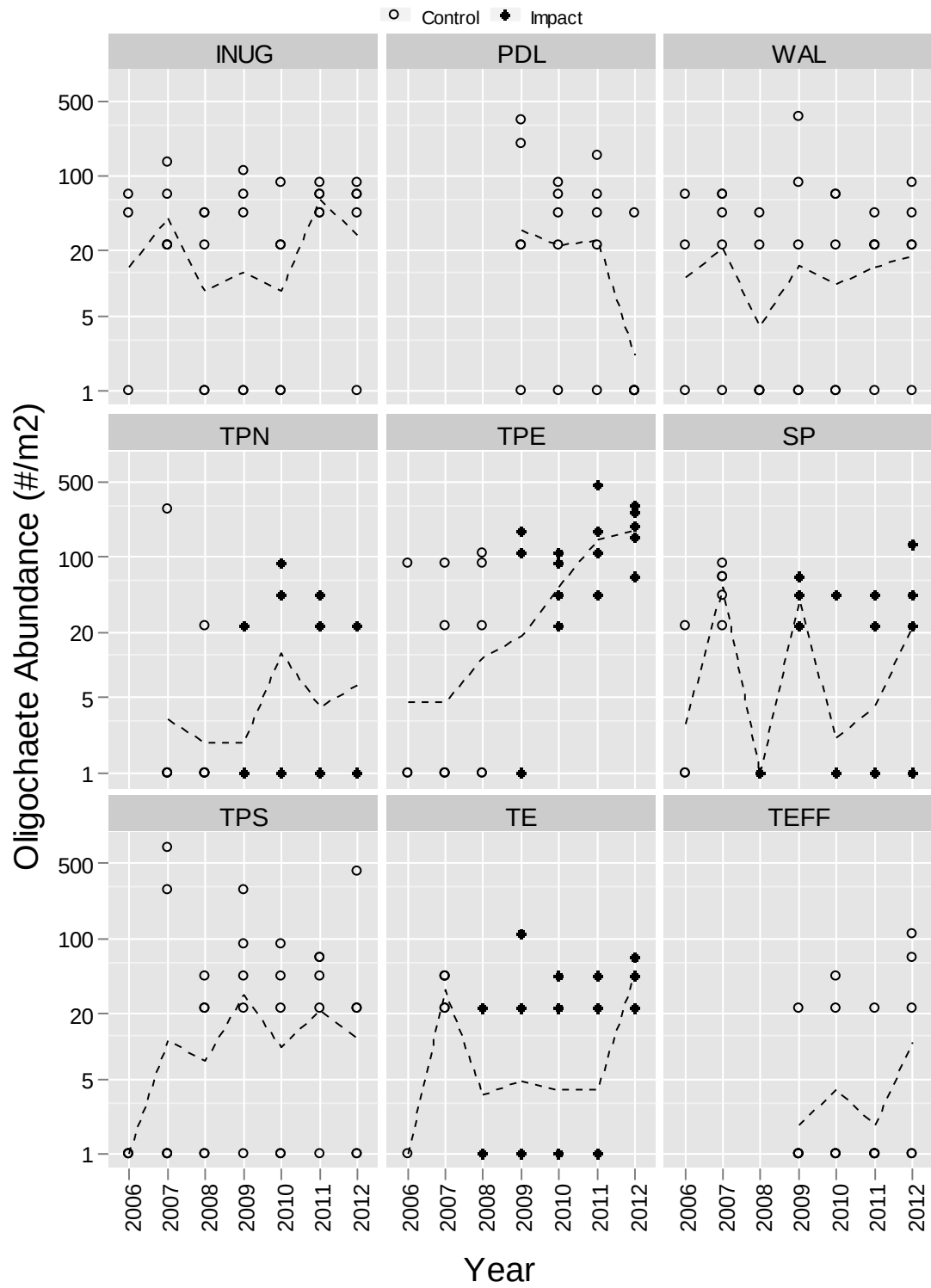
1st, North, South basins; SP=Second Portage Lake; TE, TEFF=Tehek Lake - Farfield;
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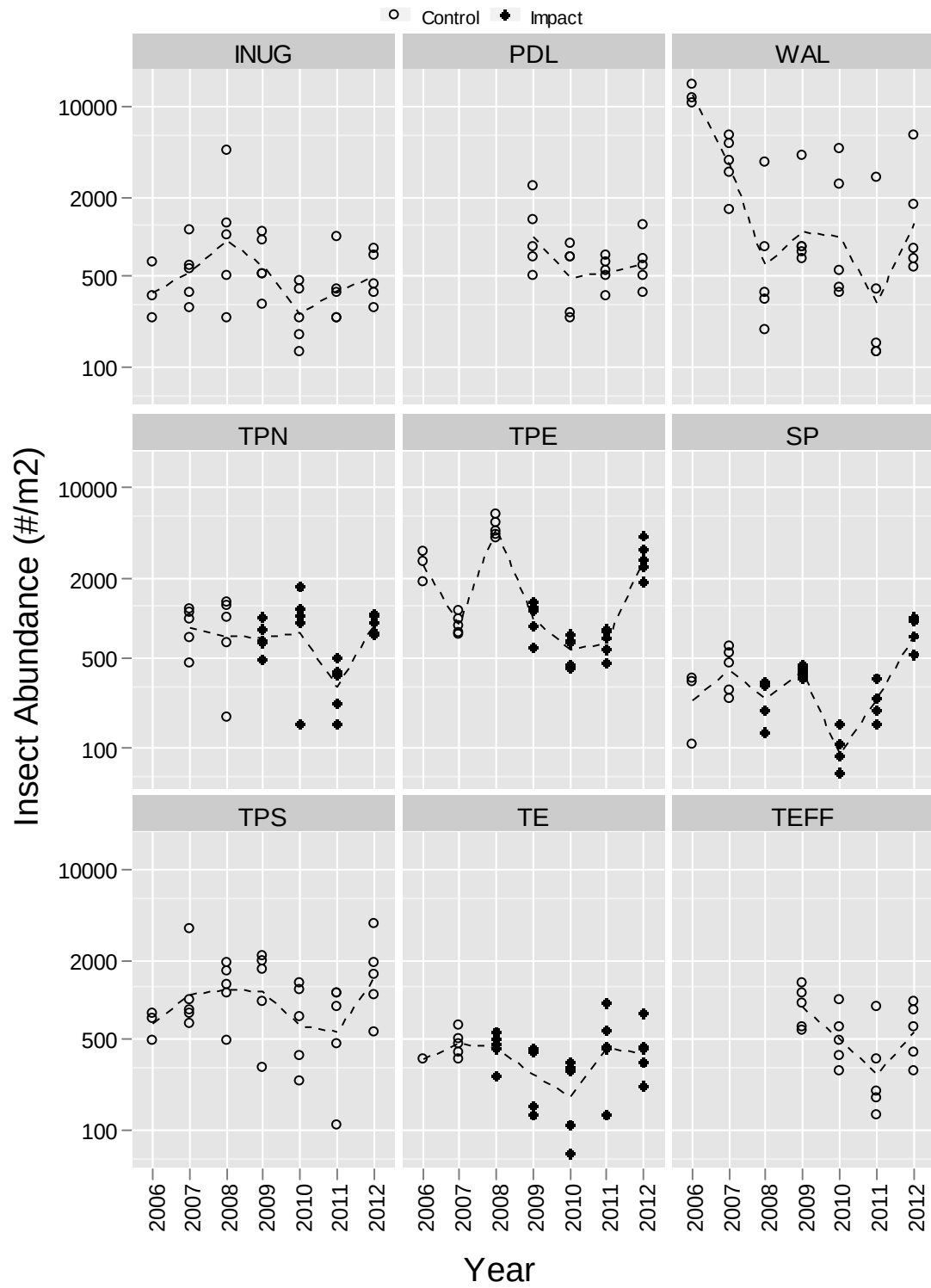
APPENDIX I

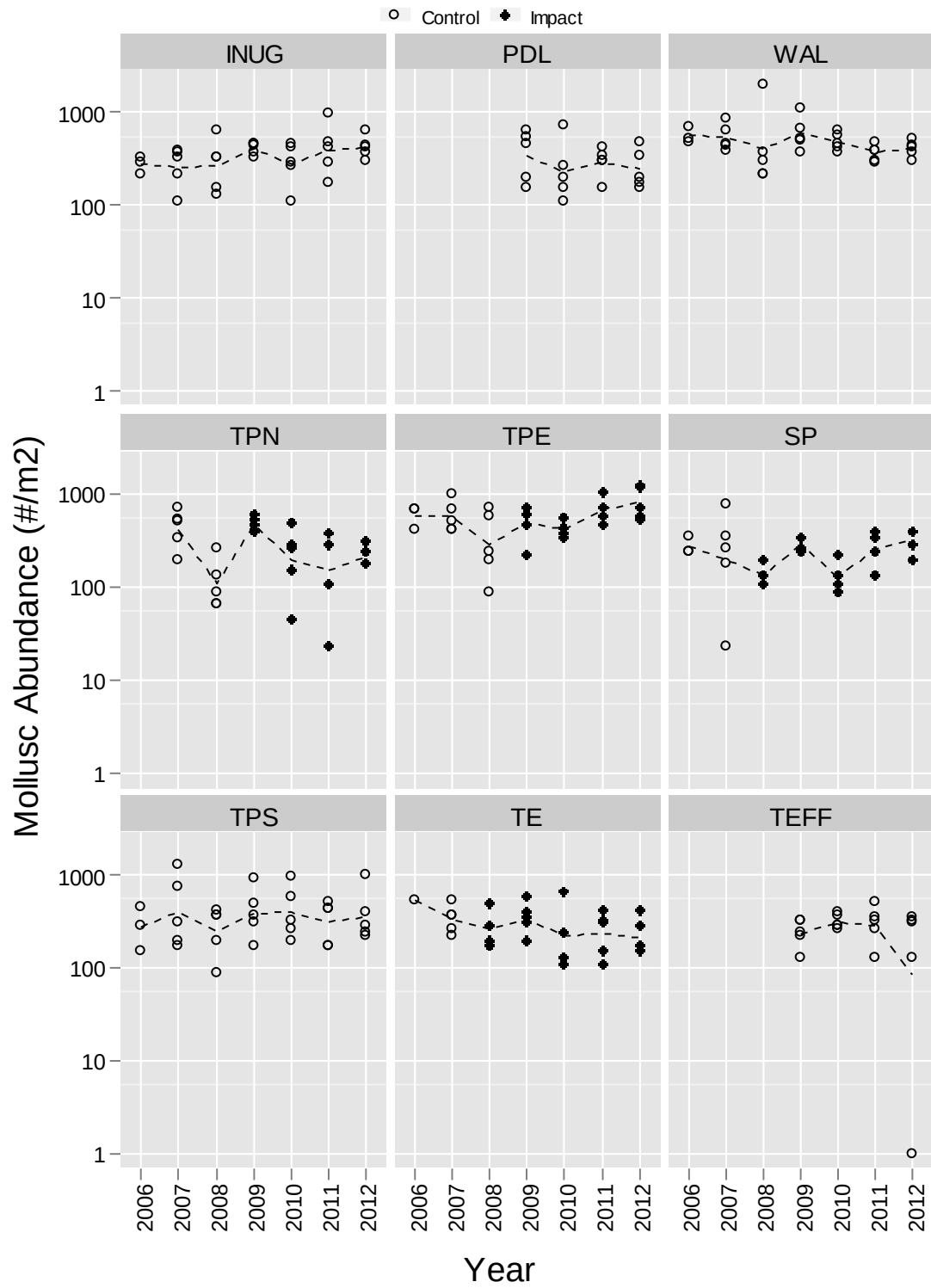
BENTHIC INVERTEBRATE PLOTS 2006 – 2012

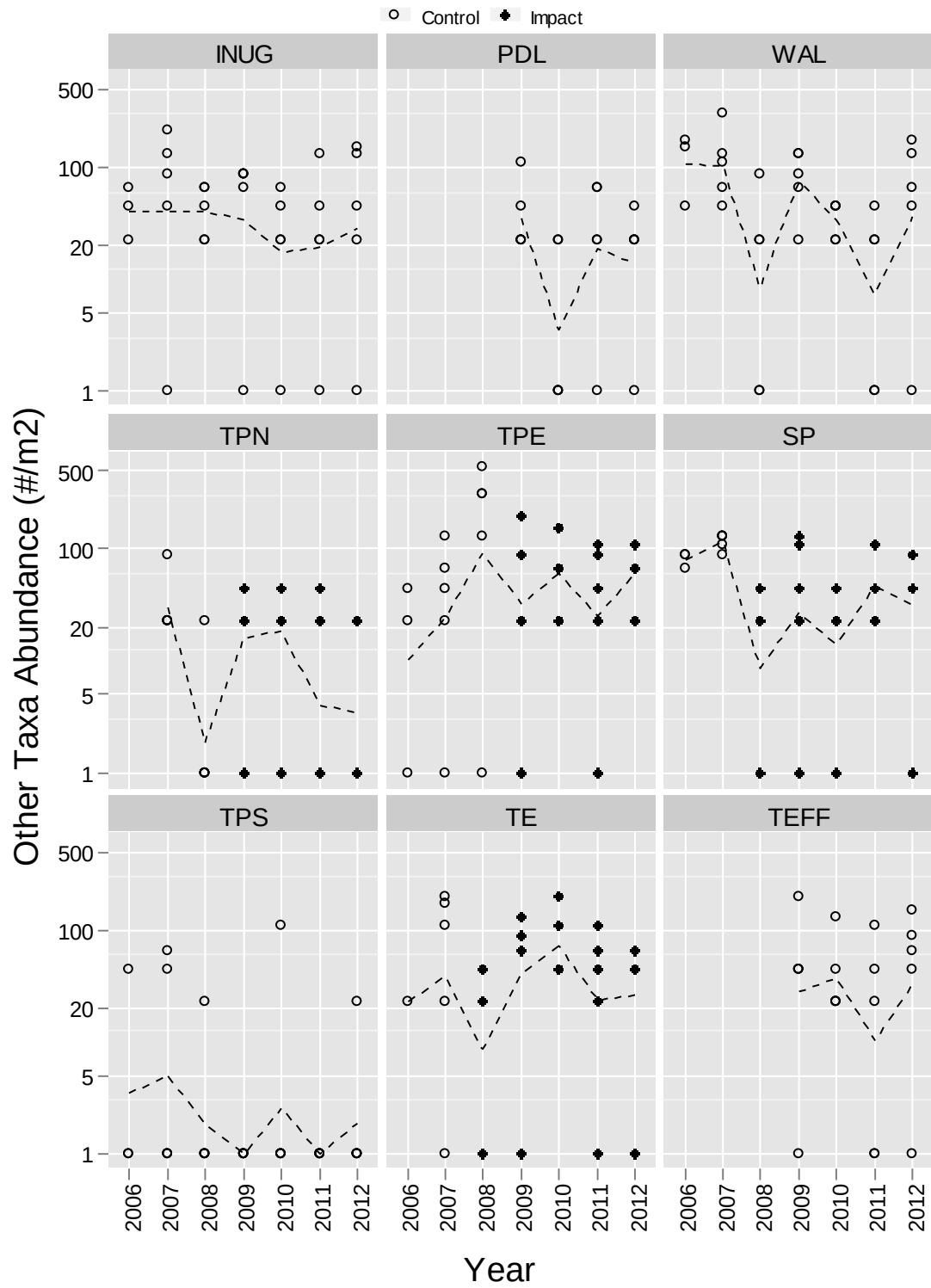


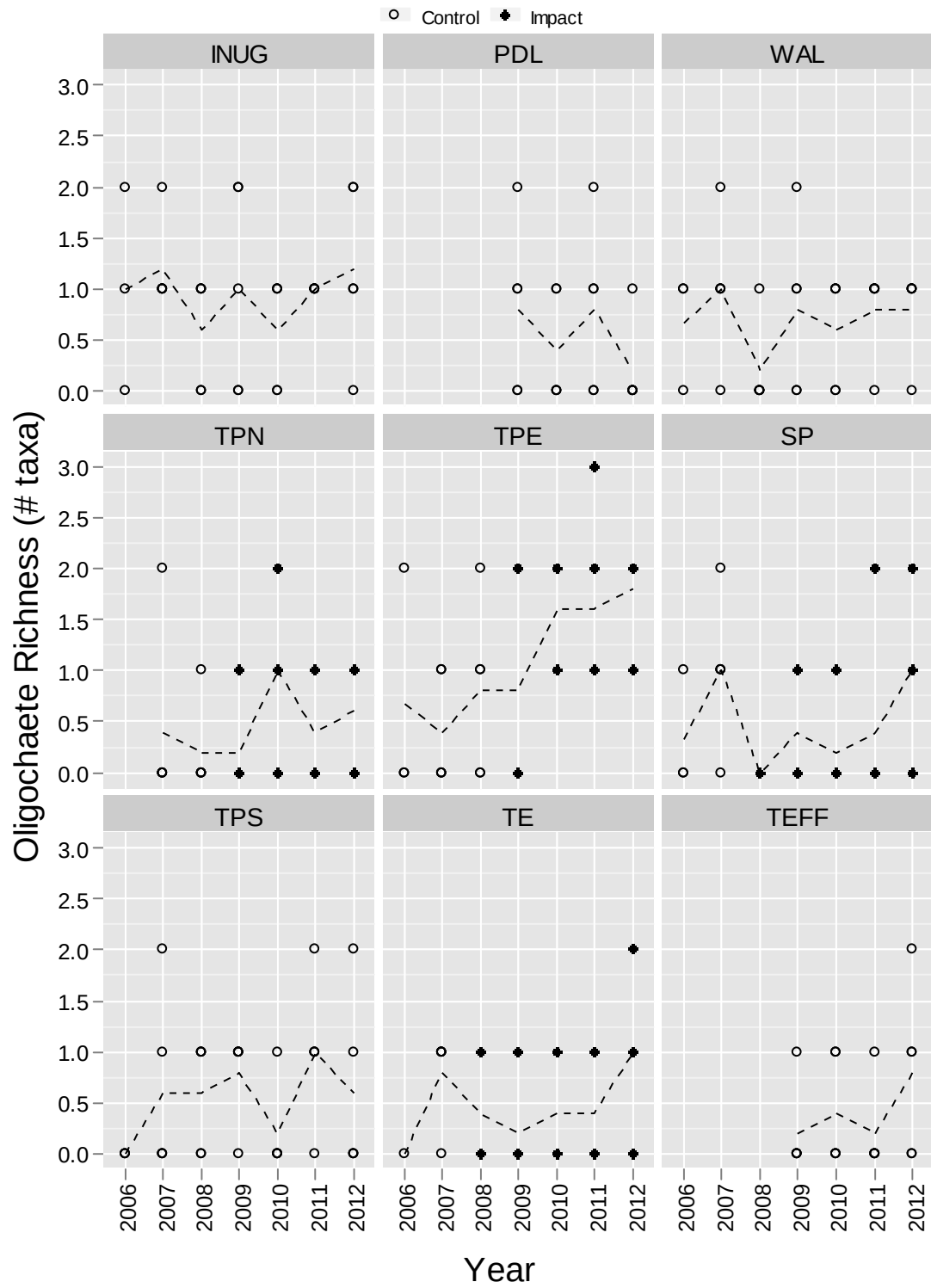
MEADOWBANK
BENTHIC INVERTEBRATE PLOTS

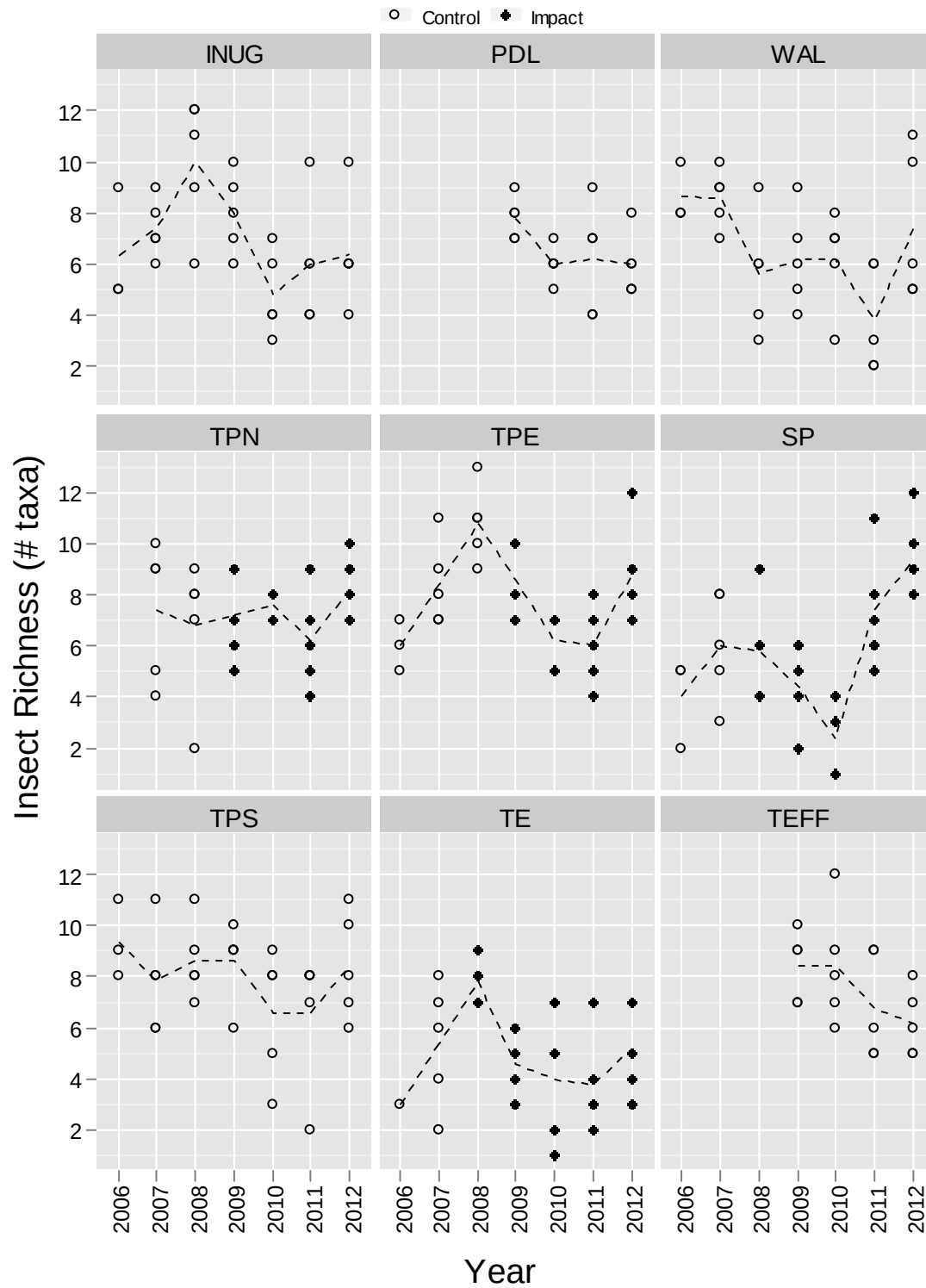


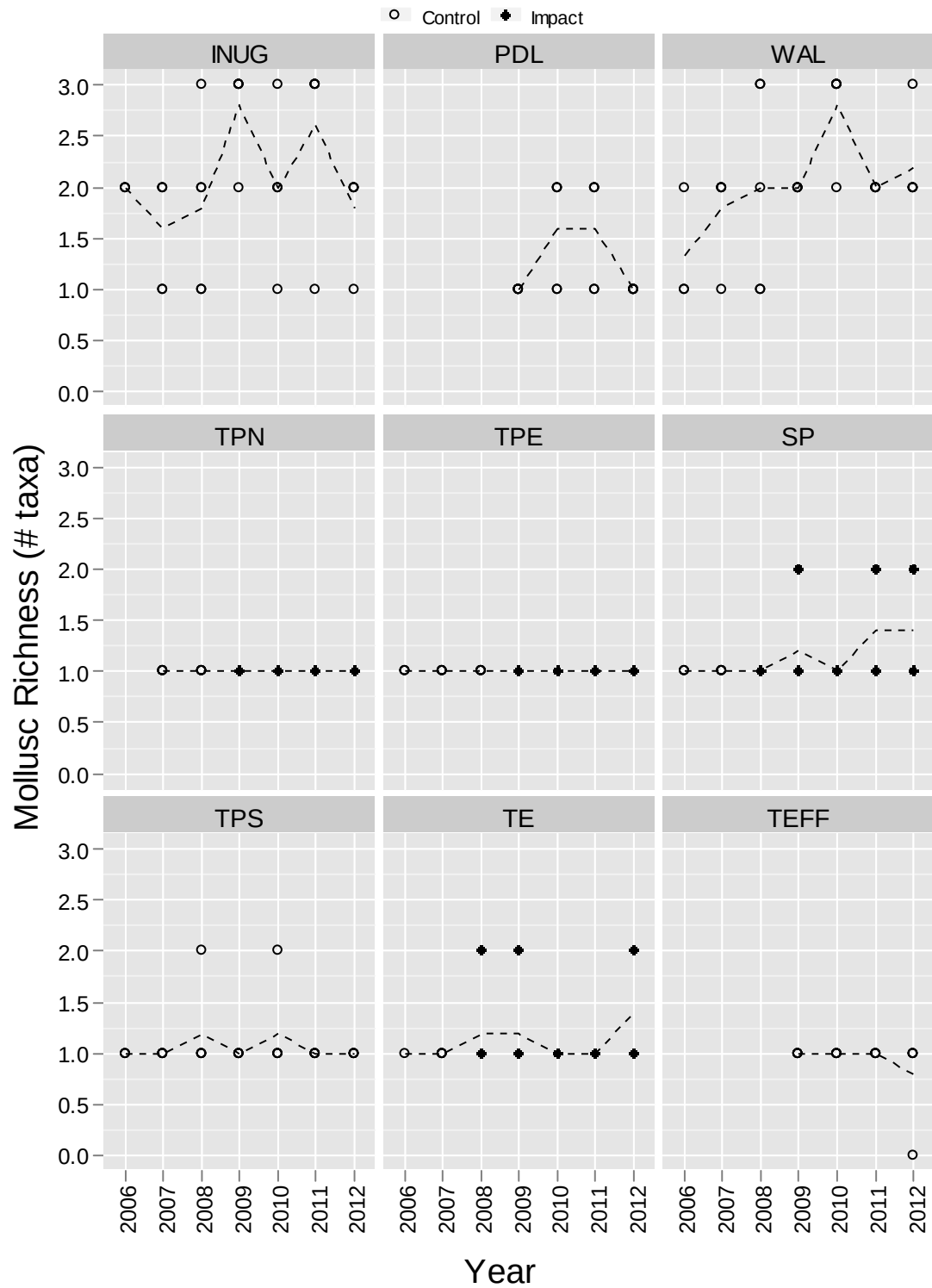


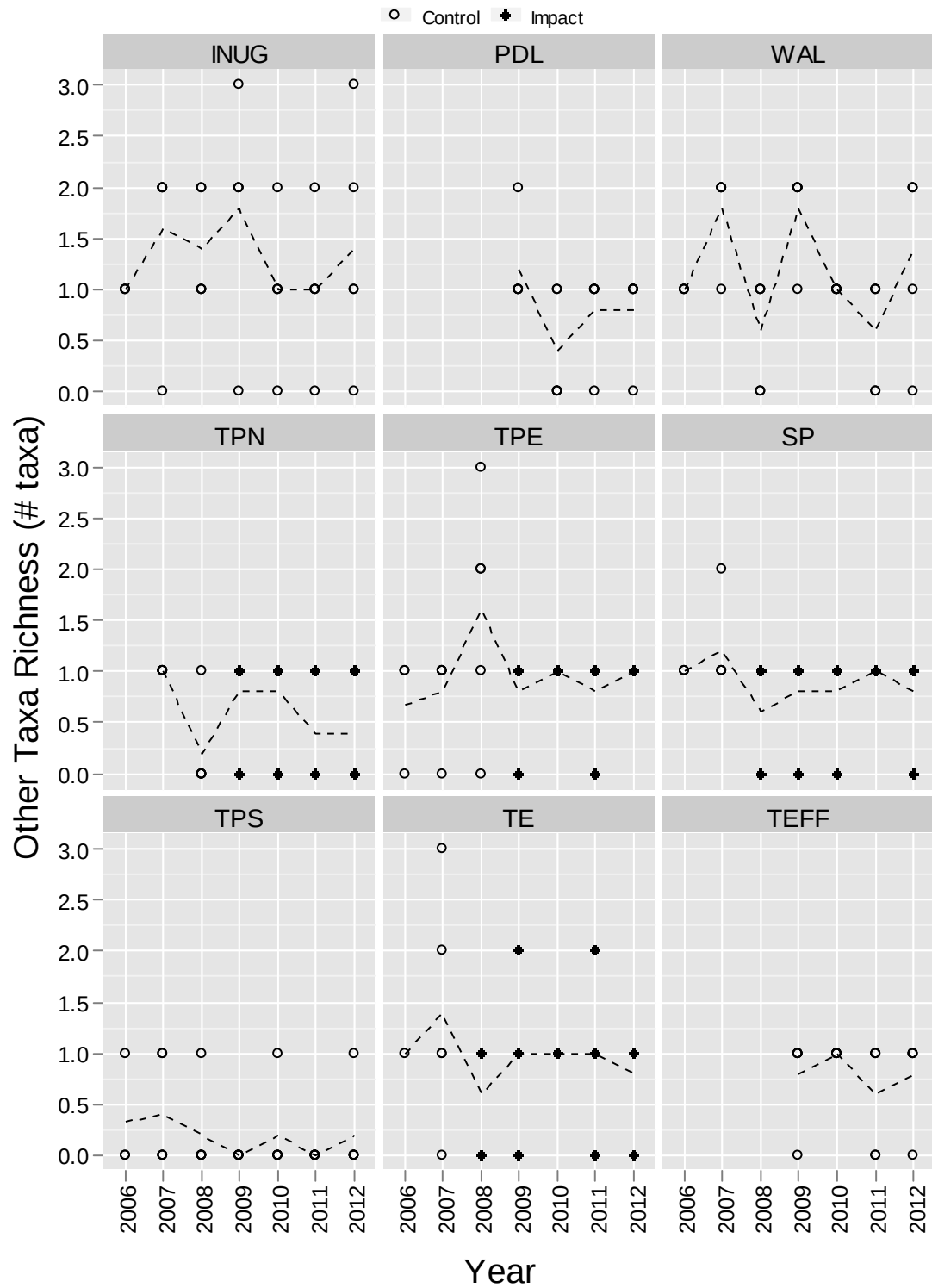


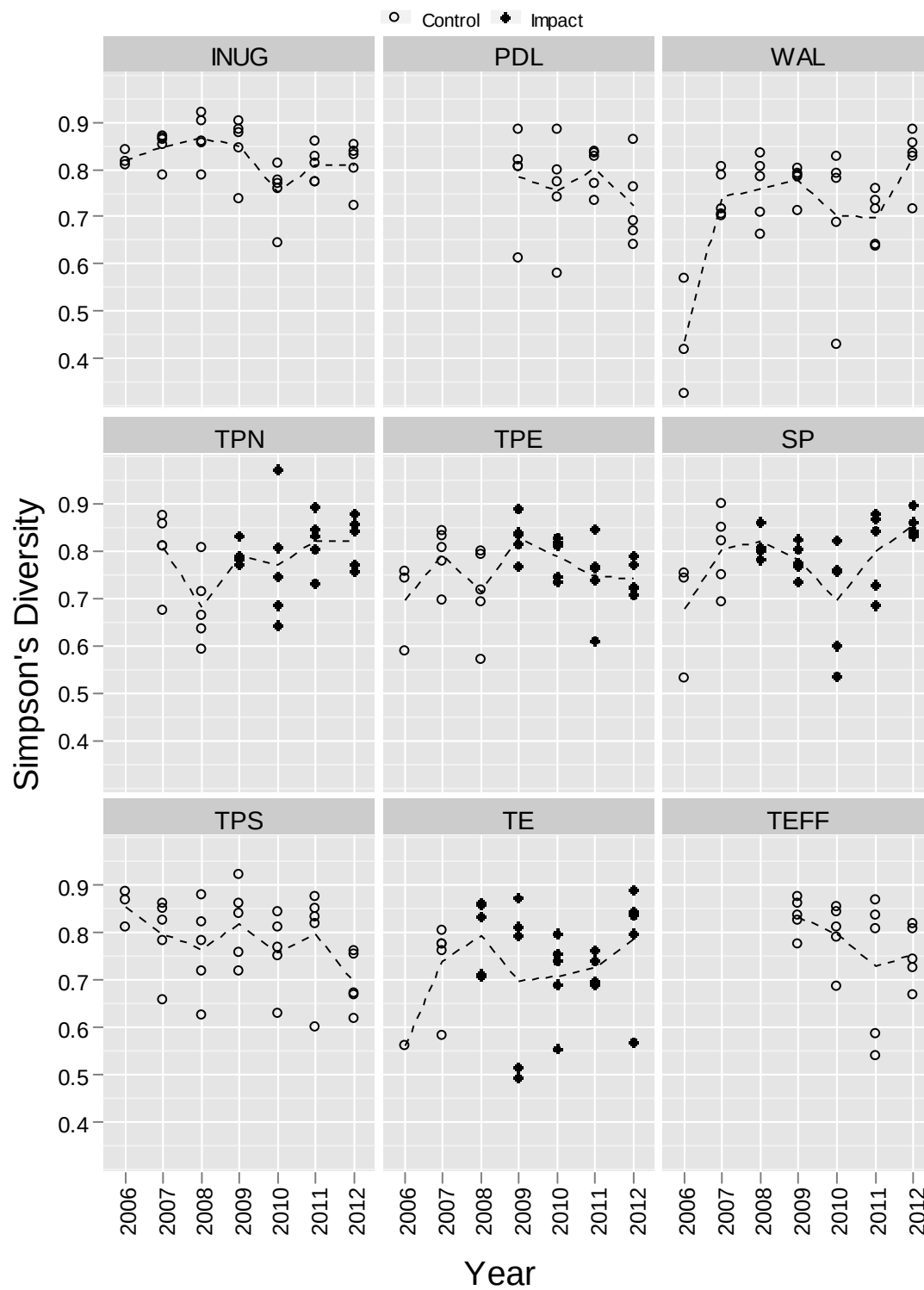


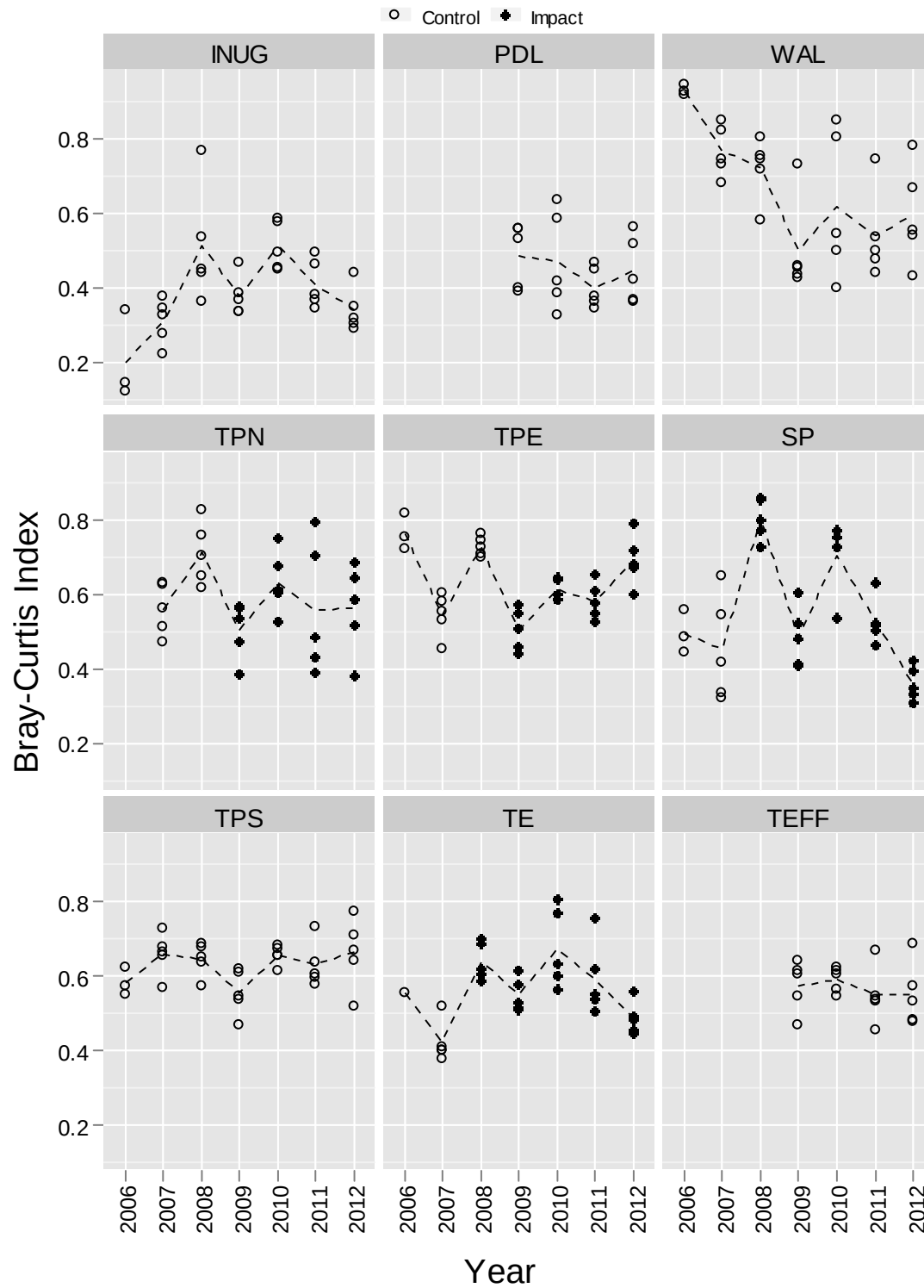






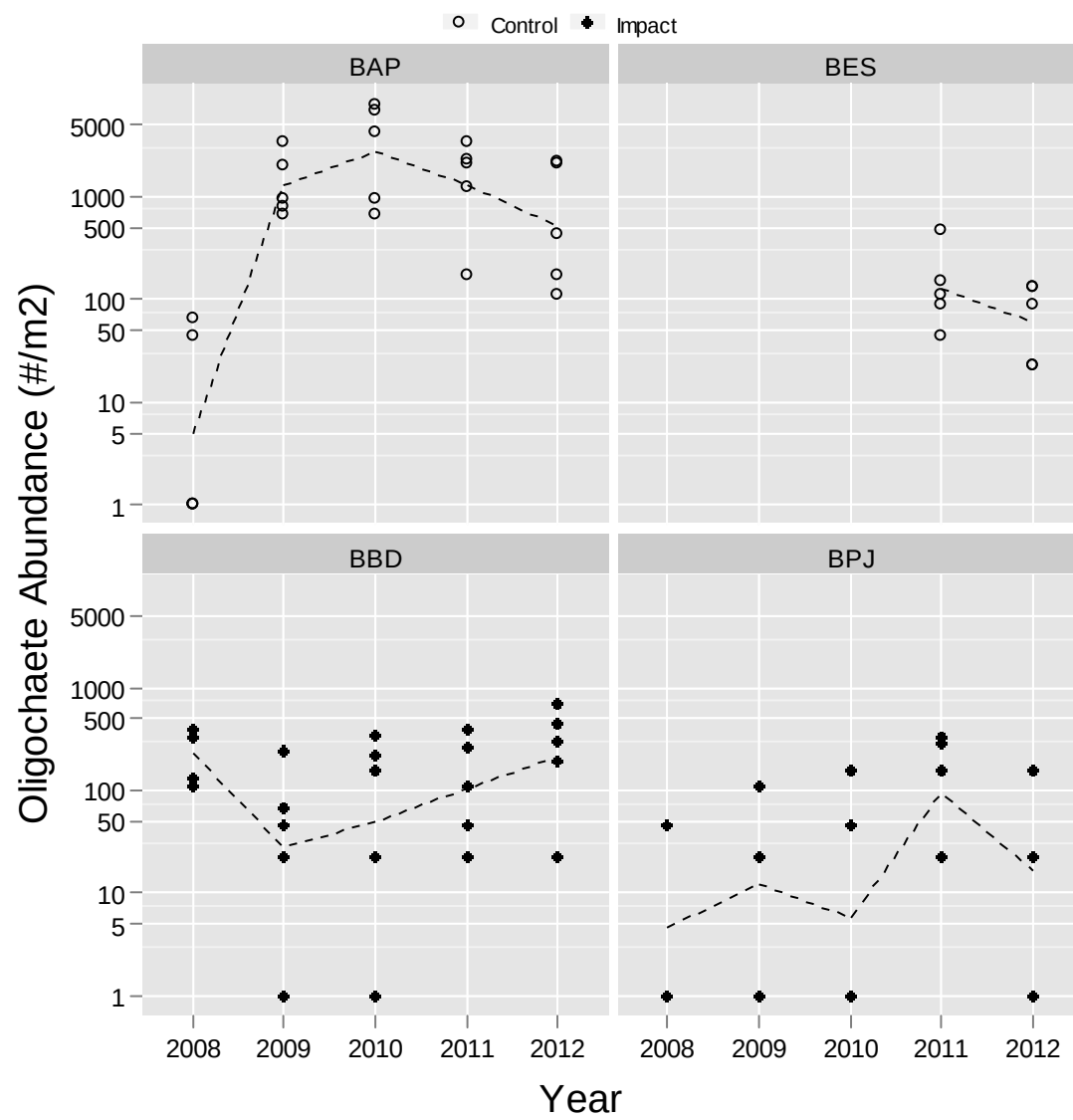


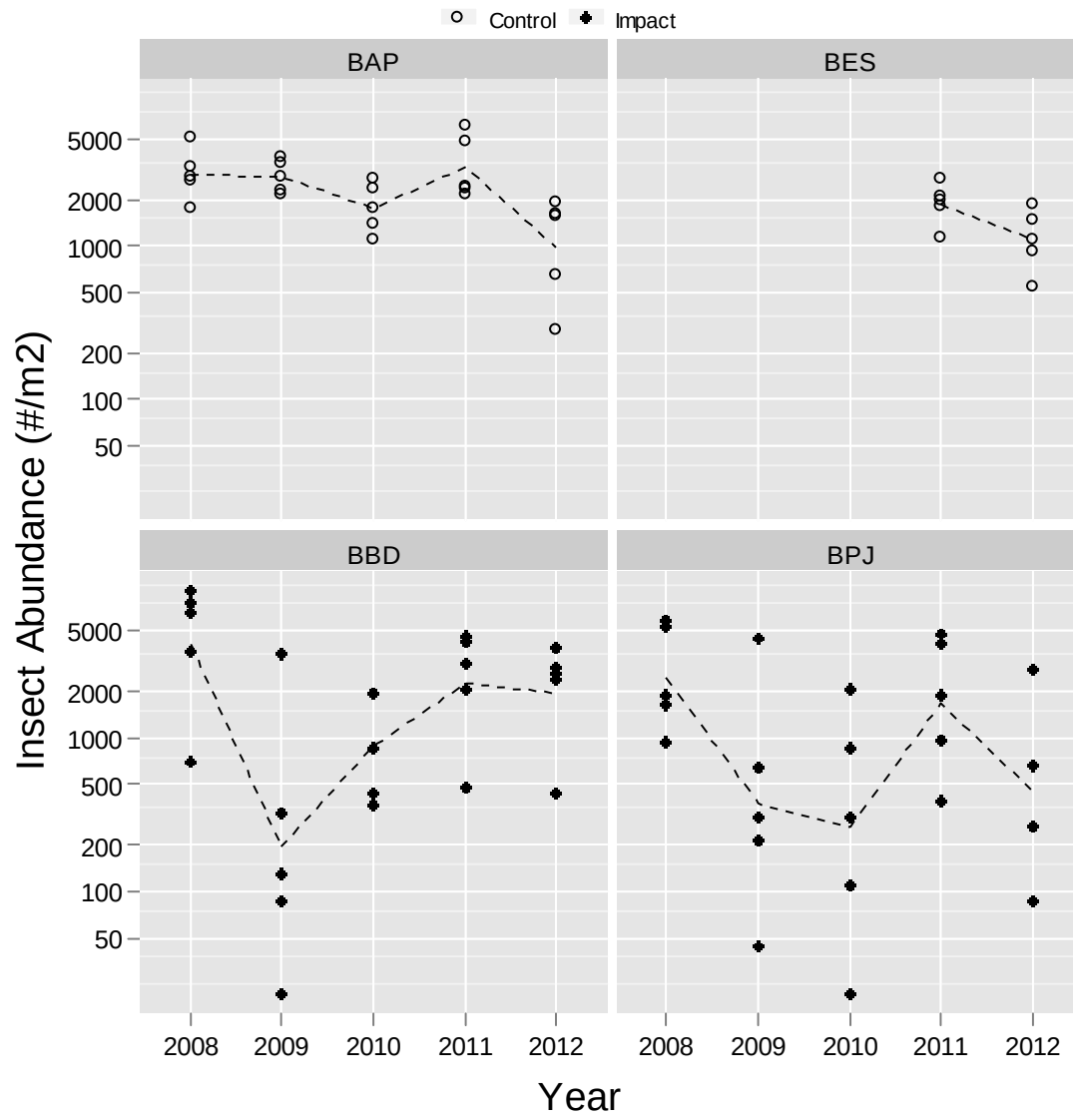


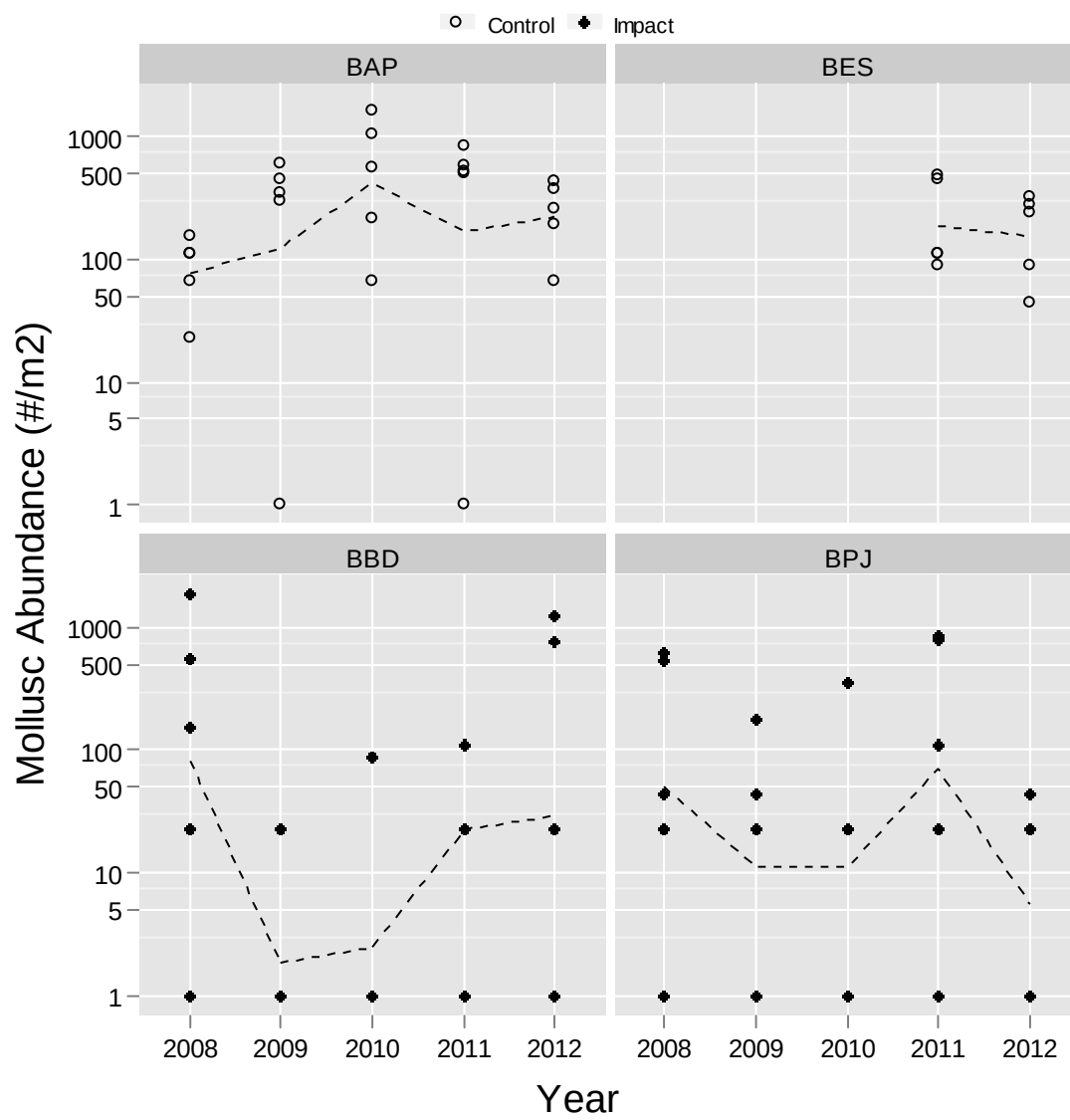


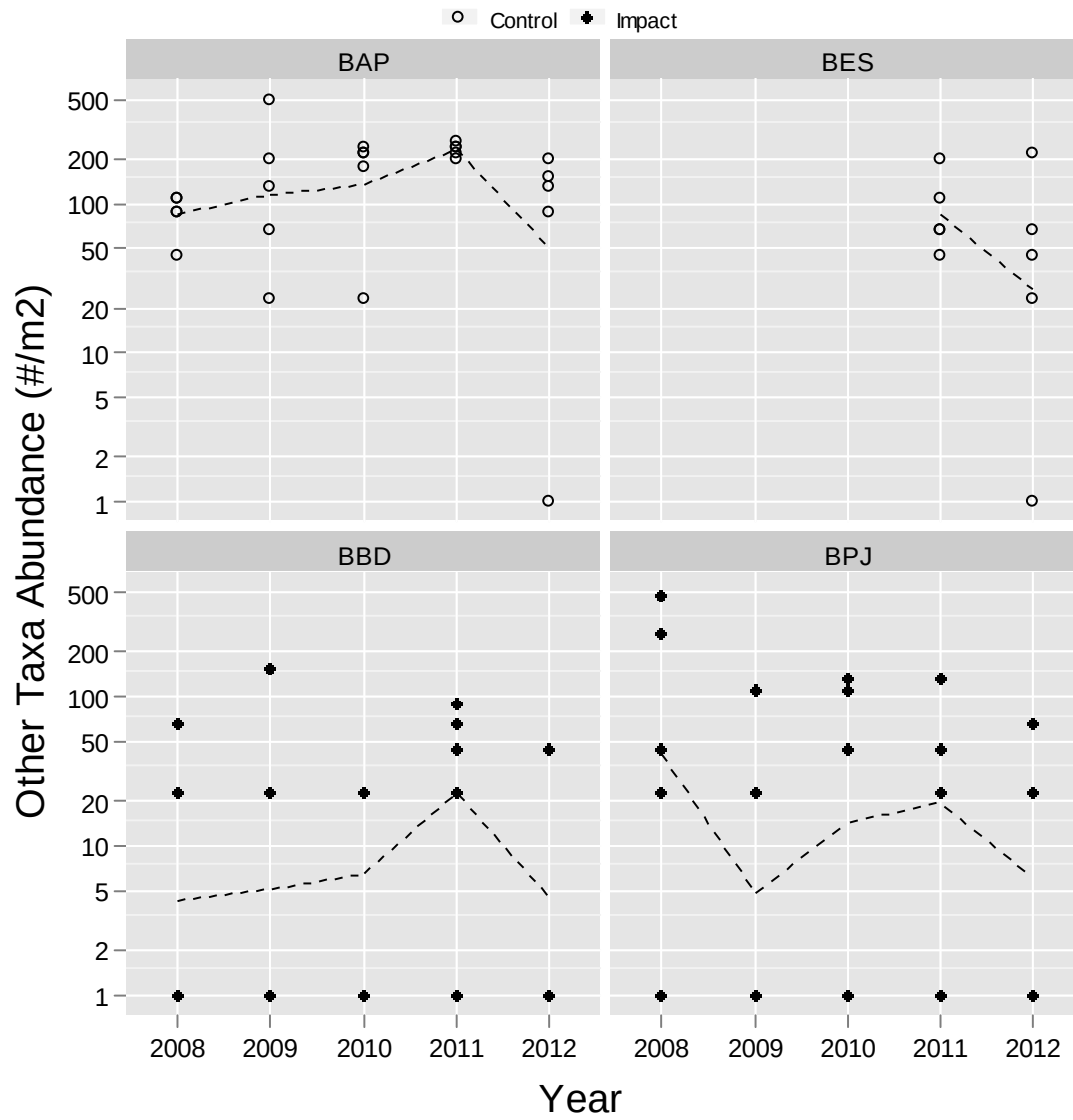
BAKER LAKE

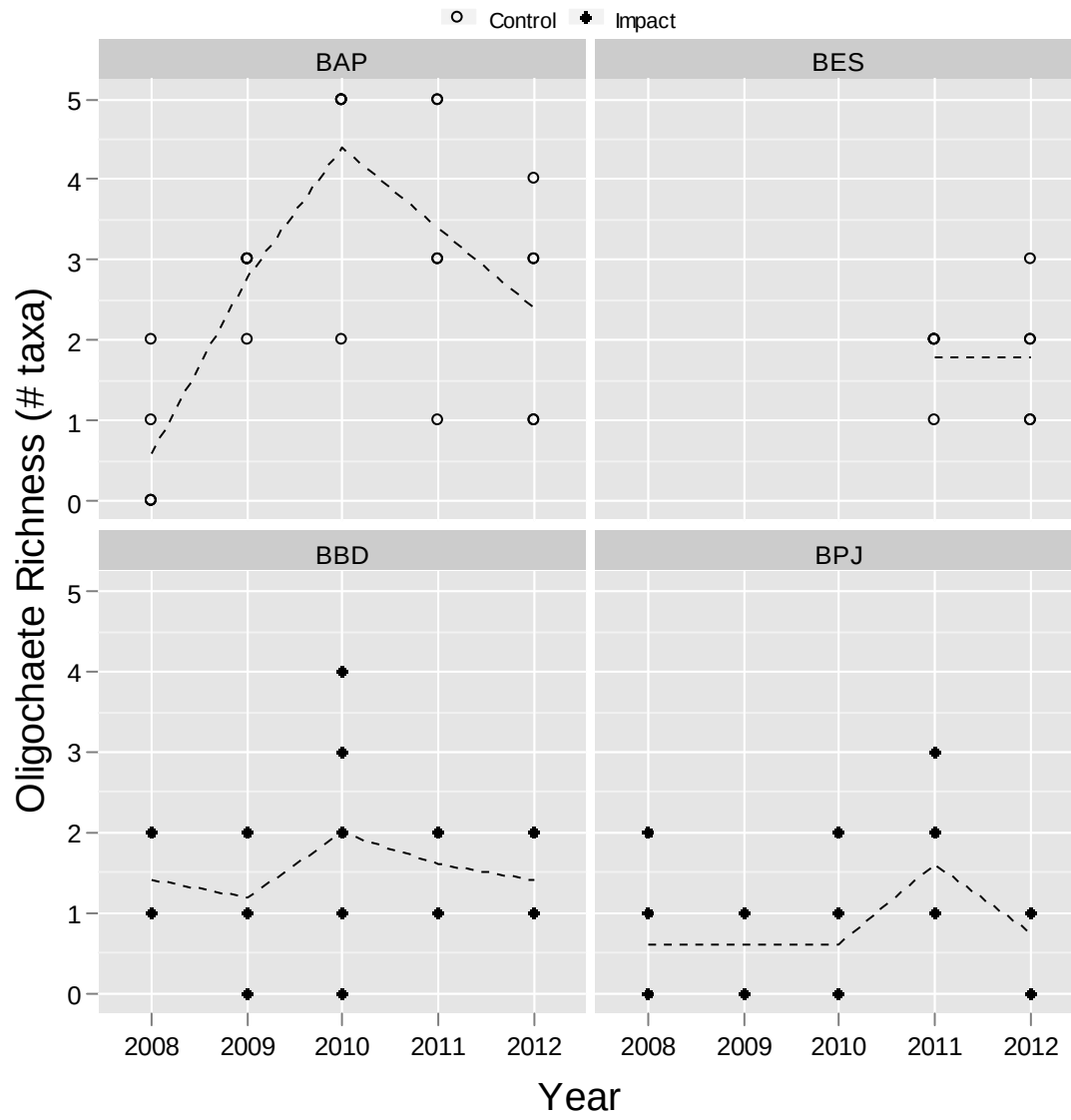
BENTHIC INVERTEBRATE PLOTS

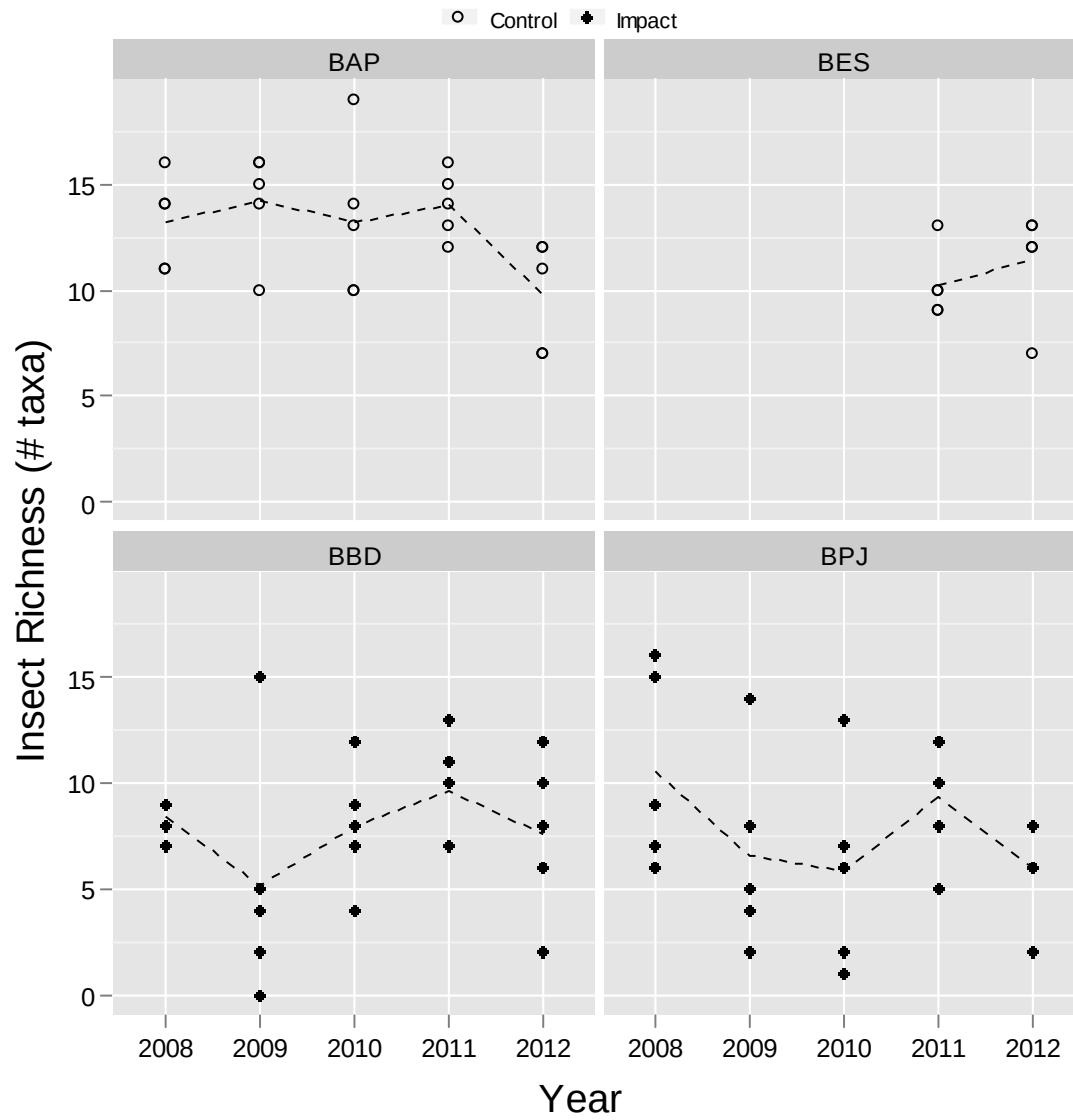


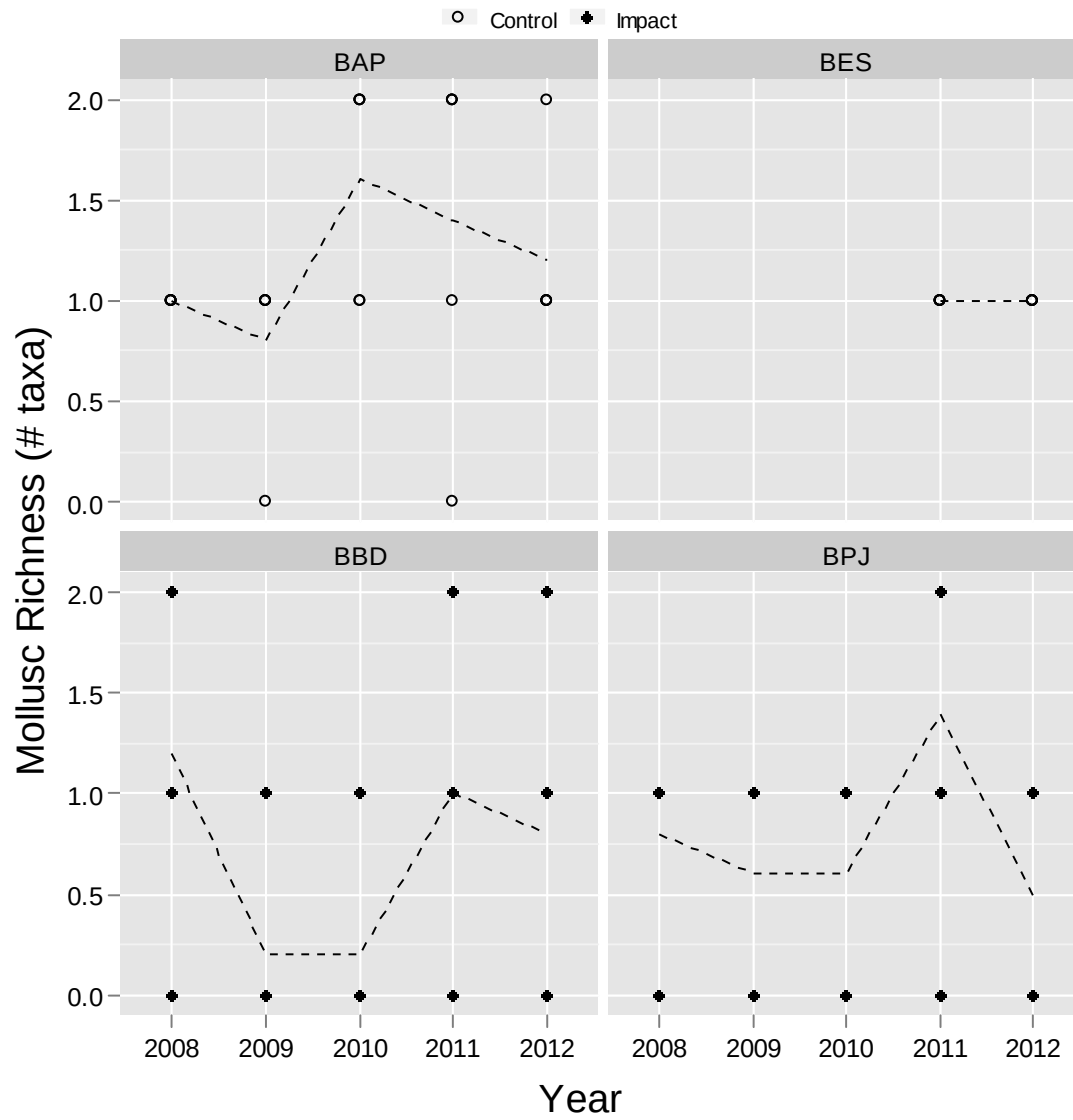


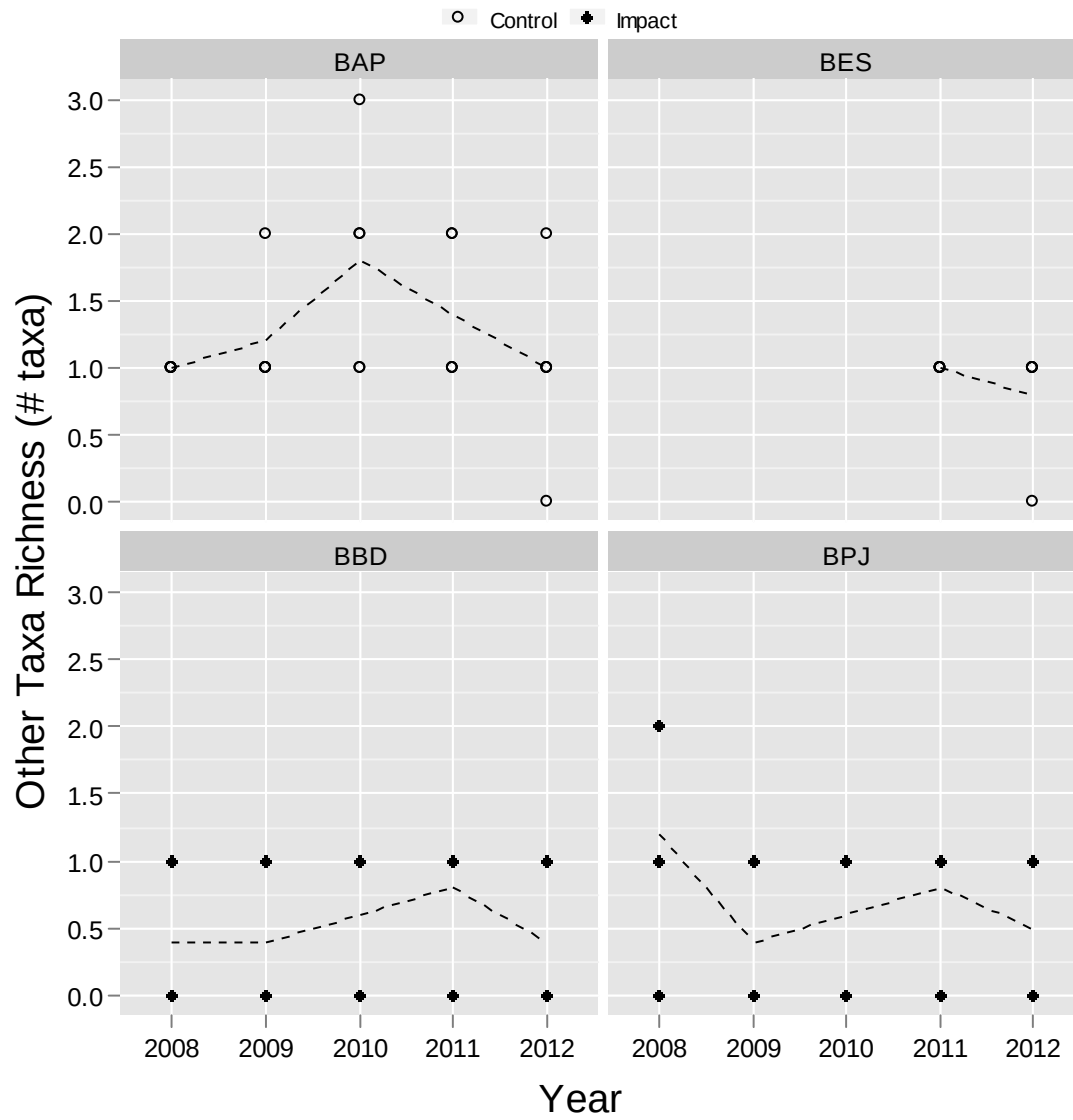


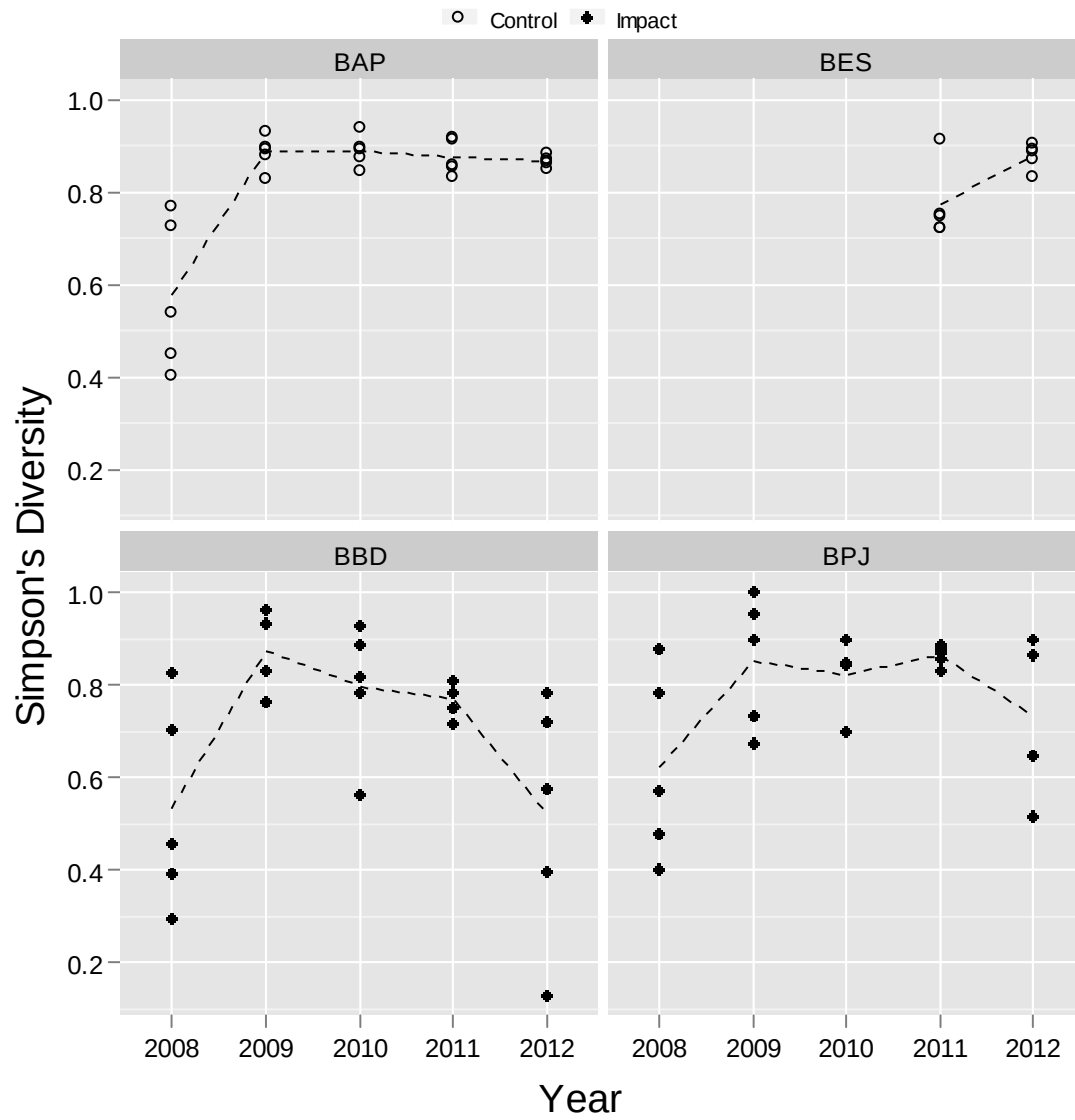


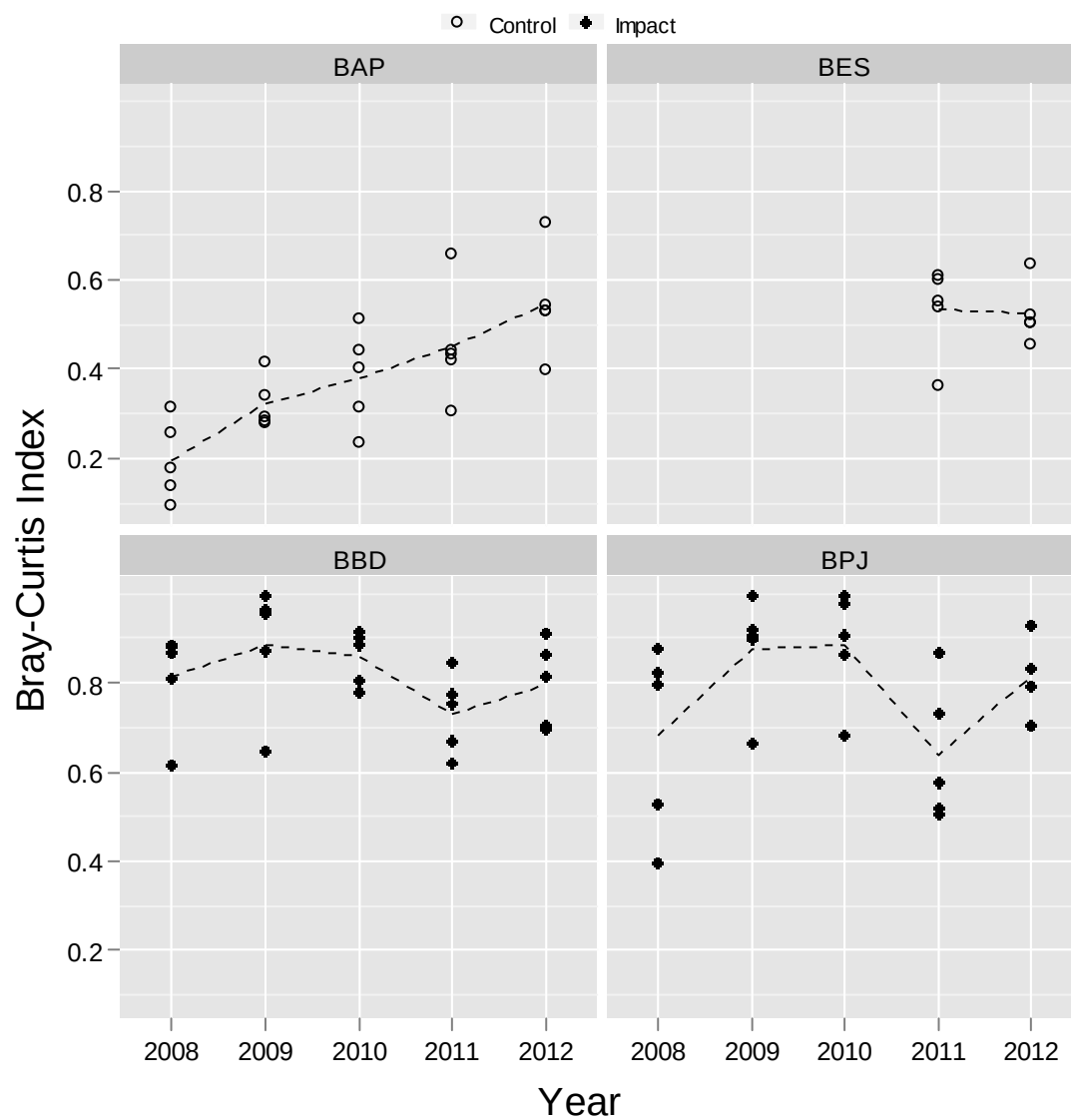




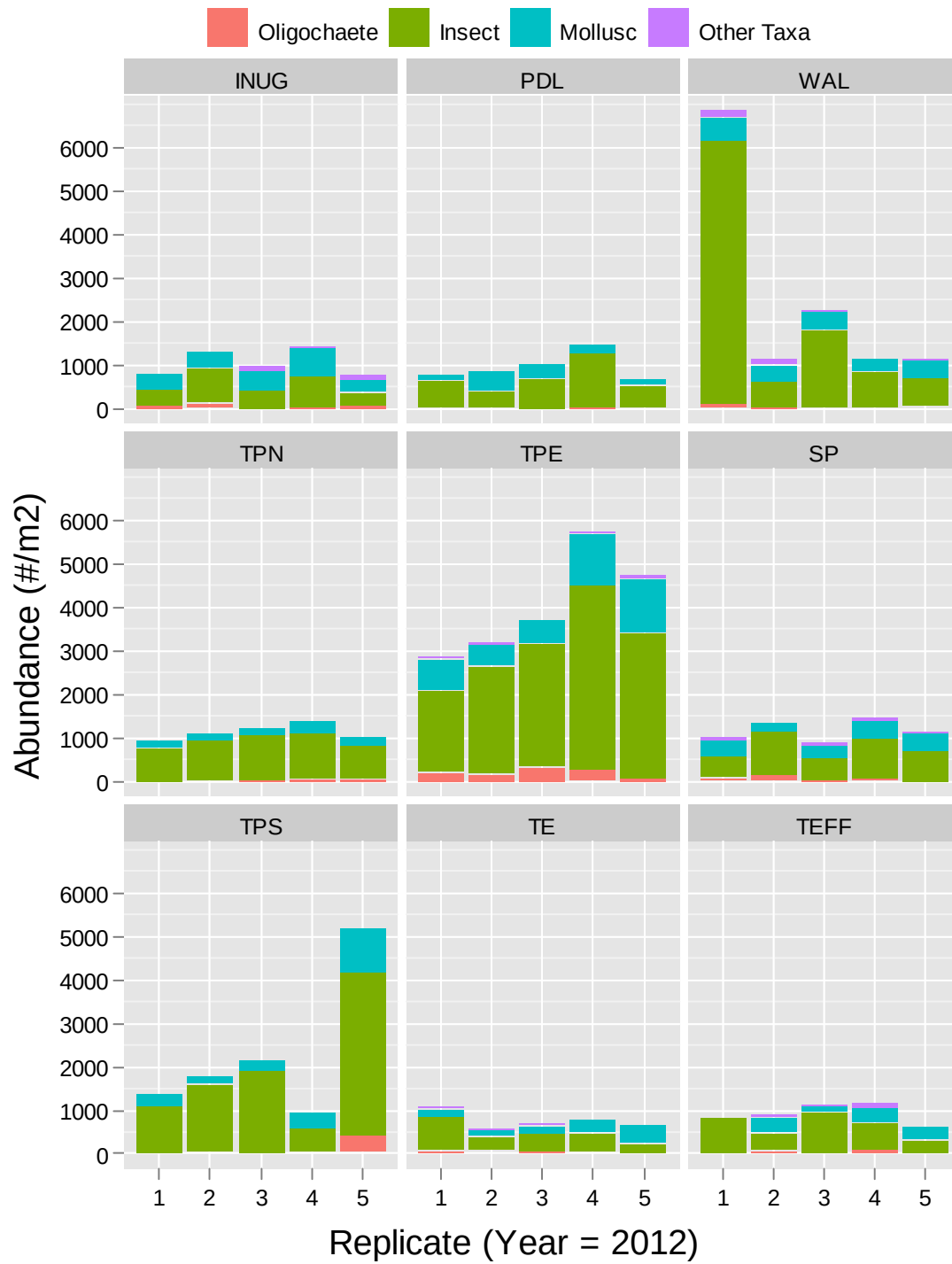


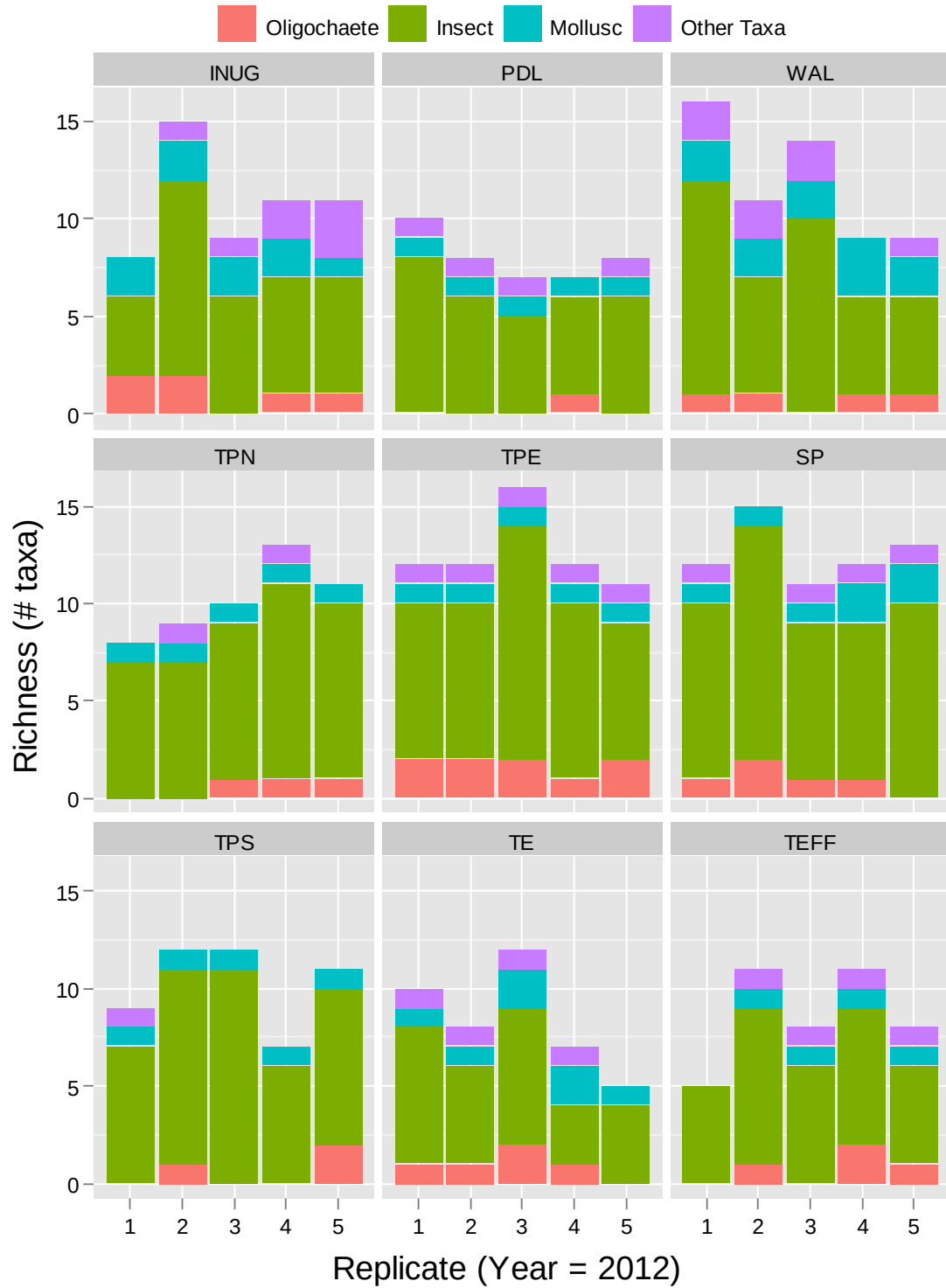


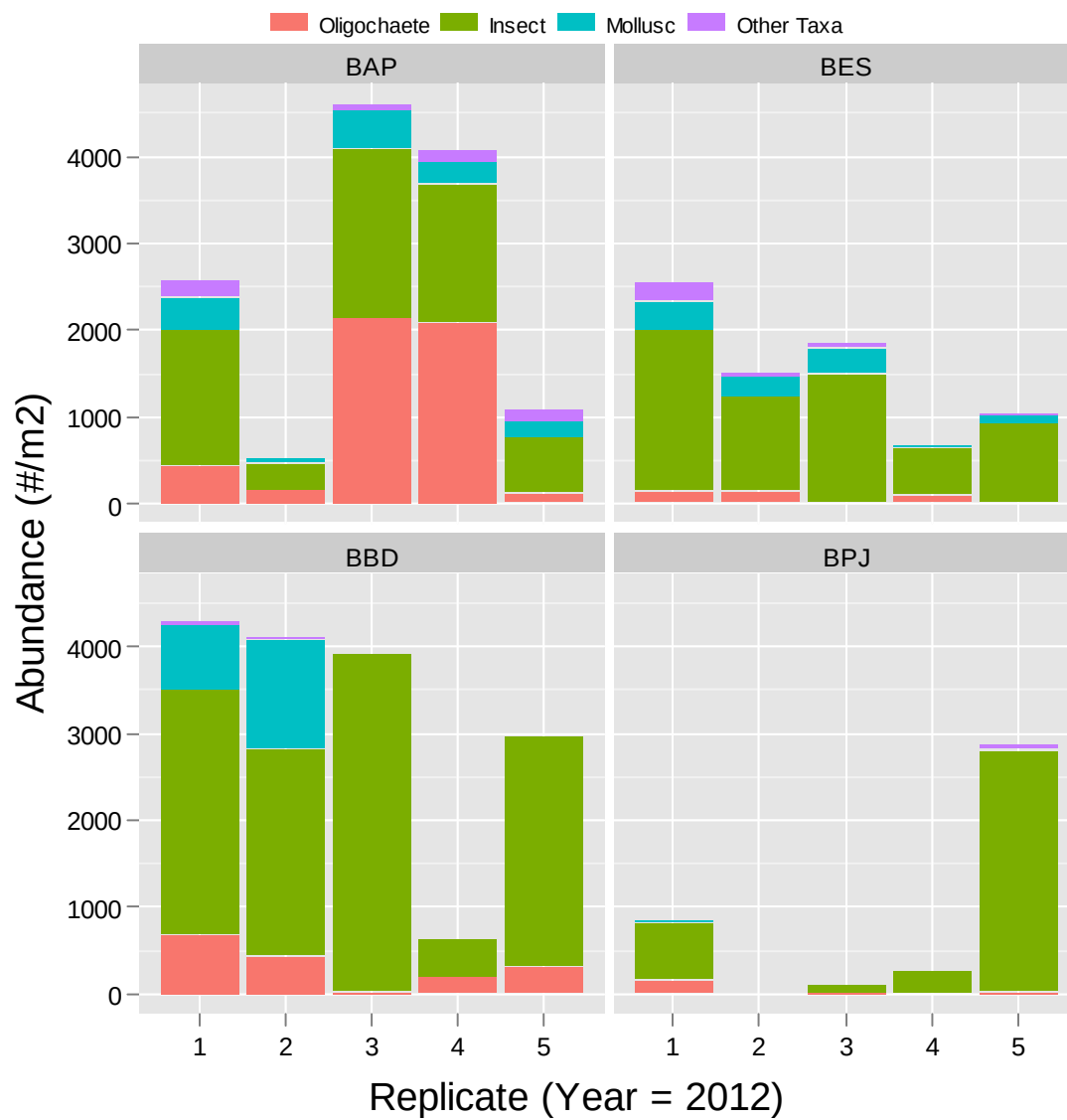


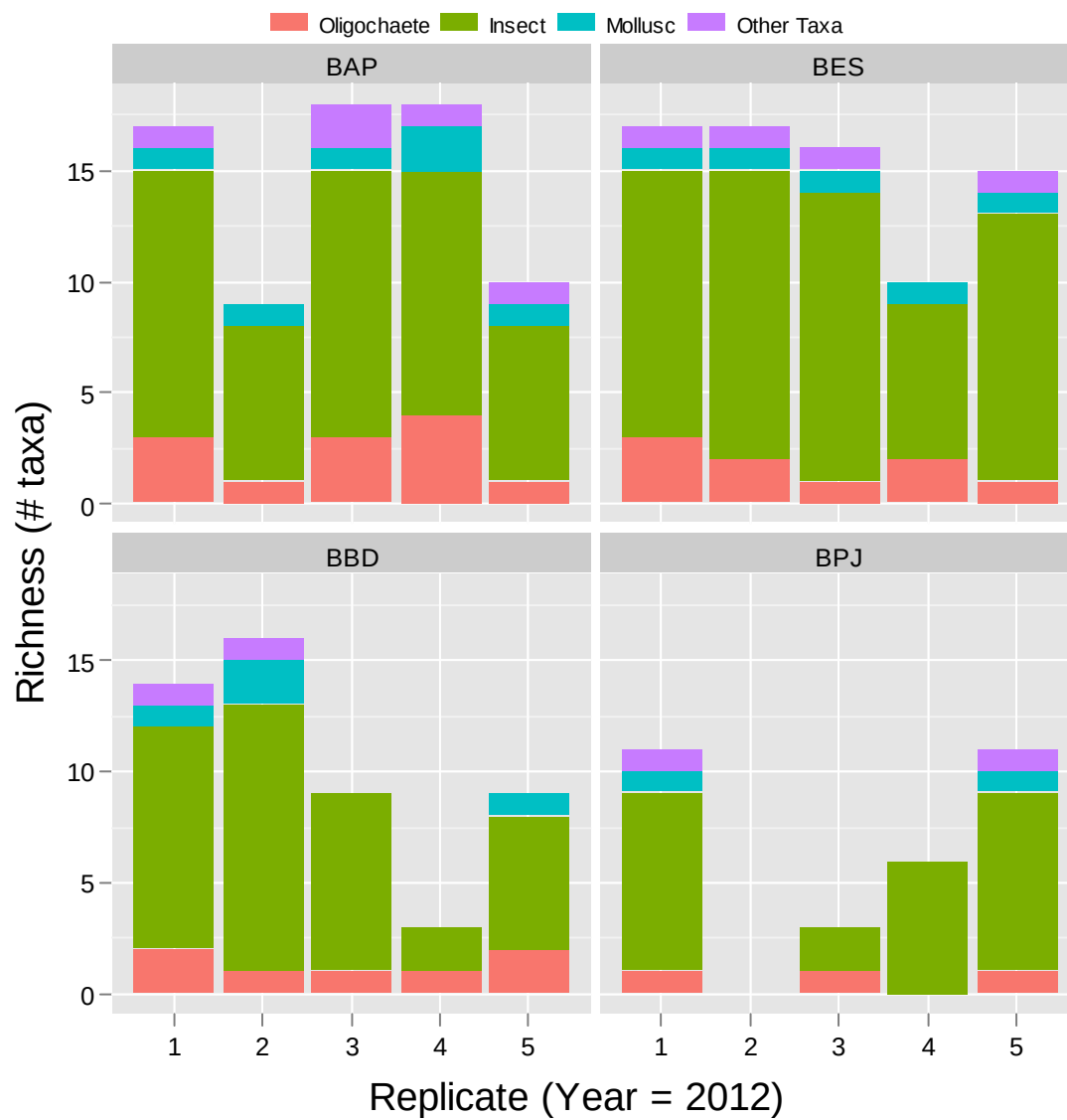


MEADOWBANK AND BAKER LAKE
REPLICATE PLOTS









APPENDIX J

LABORATORY REPORTS 2012





AZIMUTH CONSULTING GROUP INC.
ATTN: MAGGIE MCCONNELL
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 25-APR-12
Report Date: 14-MAY-12 15:45 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1138756
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-1 TPN-46-S								
Sampled By: CLIENT on 18-APR-12 @ 11:23								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		26-APR-12	R2357874
Bicarbonate (HCO3)		<24		24	mg/L		26-APR-12	R2357874
Carbonate (CO3)		<12		12	mg/L		26-APR-12	R2357874
Hydroxide (OH)		<6.8		6.8	mg/L		26-APR-12	R2357874
Ammonia by colour								
Ammonia, Total (as N)		0.011		0.010	mg/L		03-MAY-12	R2359521
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		26-APR-12	R2357123
Chloride by Ion Chromatography								
Chloride		0.58		0.20	mg/L		26-APR-12	R2357123
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.29		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Phaeophytin a		0.16		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity								
Conductivity		24		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved		0.00272		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved		<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved		1.64		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved		0.00034		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved		0.739		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved		0.00072		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved		0.00015		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved		0.423		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved		0.00054		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved		0.072		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved		0.852		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved		0.00843		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-1	TPN-46-S							
Sampled By: CLIENT on 18-APR-12 @ 11:23								
Matrix: WATER								
Dissolved Metals by ICP-MS								
Titanium (Ti)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved		<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon								
Dissolved Organic Carbon		1.5		1.0	mg/L		02-MAY-12	R2359422
Fluoride by Ion Chromatography								
Fluoride		0.065		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated								
Hardness (as CaCO3)		7.14		0.30	mg/L		30-APR-12	
Hardness Calculated								
Hardness (as CaCO3)		7.14		0.20	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography								
Nitrate-N		0.0334		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite								
Nitrate and Nitrite as N		0.0334		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography								
Nitrite-N		<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total								
Phosphorus (P)-Total		<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water								
Phosphorus (P)-Total Reactive		<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour								
Silica, Reactive (as SiO2)		0.139	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography								
Sulfate		3.26		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence								
Total Kjeldahl Nitrogen		0.099		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids								
Total Dissolved Solids		14.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)								
Mercury (Hg)-Total		<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS								
Aluminum (Al)-Total		<0.0050		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total		<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total		<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total		0.00274		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total		<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total		<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total		<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total		<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total		1.80		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total		<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total		<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total		0.00036		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total		<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total		<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total		<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total		0.715		0.010	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

[illegible]

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-2 TPN-47-S							
Sampled By: CLIENT on 18-APR-12 @ 12:26							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.35		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Phaeophytin a	0.14		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity							
Conductivity	27		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0021		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved	0.00324		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	1.99		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00041		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	0.866		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00092		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	0.00017		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.499		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.077		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.979		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.00931		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.6		1.0	mg/L		01-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.074		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	8.54		0.20	mg/L		30-APR-12	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-2 TPN-47-S							
Sampled By: CLIENT on 18-APR-12 @ 12:26							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	8.54		0.30	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0342		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0342		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.153	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography							
Sulfate	3.73		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.113		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0062		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00337		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	2.26		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00362		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	0.000396		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	0.929		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00148		0.00030	mg/L	27-APR-12	27-APR-12	R2357658
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Potassium (K)-Total	0.583		0.020	mg/L	27-APR-12	27-APR-12	R2357658
Rubidium (Rb)-Total	0.00072		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Silicon (Si)-Total	0.153		0.050	mg/L	27-APR-12	27-APR-12	R2357658
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Sodium (Na)-Total	1.19		0.030	mg/L	27-APR-12	27-APR-12	R2357658
Strontium (Sr)-Total	0.0106		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-2 TPN-47-S								
Sampled By: CLIENT on 18-APR-12 @ 12:26								
Matrix: WATER								
Total Metals by ICP-MS								
Thorium (Th)-Total		<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tin (Sn)-Total		<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Titanium (Ti)-Total		0.00022		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Tungsten (W)-Total		<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Uranium (U)-Total		<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Vanadium (V)-Total		<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Zinc (Zn)-Total		0.0031		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	27-APR-12	27-APR-12	R2357658
Total Organic Carbon								
Total Organic Carbon		1.6		1.0	mg/L		01-MAY-12	R2358754
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<2.0		2.0	mg/L		28-APR-12	R2357856
Turbidity								
Turbidity		0.16		0.10	NTU		27-APR-12	R2357233
pH								
pH		7.22		0.10	pH units		26-APR-12	R2357874
Alkalinity								
Alkalinity, Total (as CaCO3)		7.6		1.0	mg/L		01-MAY-12	R2358427
Bicarbonate (HCO3)		9.3		1.2	mg/L		01-MAY-12	R2358427
Carbonate (CO3)		<0.60		0.60	mg/L		01-MAY-12	R2358427
Hydroxide (OH)		<0.34		0.34	mg/L		01-MAY-12	R2358427
L1138756-3 TPE-46-S								
Sampled By: CLIENT on 19-APR-12 @ 12:35								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		26-APR-12	R2357874
Bicarbonate (HCO3)		<24		24	mg/L		26-APR-12	R2357874
Carbonate (CO3)		<12		12	mg/L		26-APR-12	R2357874
Hydroxide (OH)		<6.8		6.8	mg/L		26-APR-12	R2357874
Ammonia by colour								
Ammonia, Total (as N)		0.053		0.010	mg/L		02-MAY-12	R2359521
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		26-APR-12	R2357123
Chloride by Ion Chromatography								
Chloride		0.67		0.20	mg/L		26-APR-12	R2357123
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.20		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Phaeophytin a		0.14		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity								
Conductivity		30		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved		0.00060		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved		0.00335		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-3 TPE-46-S							
Sampled By: CLIENT on 19-APR-12 @ 12:35							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	2.23		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00047		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	0.932		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00021		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	0.00021		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.566		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00078		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.090		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.868		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.0109		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.7		1.0	mg/L		02-MAY-12	R2359422
Fluoride by Ion Chromatography							
Fluoride	0.080		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	9.41		0.20	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	10.6		0.30	mg/L		01-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0305		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0305		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.194	DLA	0.025	mg/L		07-MAY-12	R2361728

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-3 TPE-46-S Sampled By: CLIENT on 19-APR-12 @ 12:35 Matrix: WATER							
Sulfate by Ion Chromatography Sulfate	3.36		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.119		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids Total Dissolved Solids	18.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS Aluminum (Al)-Total	0.0054		0.0050	mg/L	30-APR-12	30-APR-12	R2358141
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Arsenic (As)-Total	0.00070		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Barium (Ba)-Total	0.00352		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Boron (B)-Total	<0.010		0.010	mg/L	30-APR-12	30-APR-12	R2358141
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	30-APR-12	30-APR-12	R2358141
Calcium (Ca)-Total	2.61		0.10	mg/L	30-APR-12	30-APR-12	R2358141
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	30-APR-12	30-APR-12	R2358141
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	30-APR-12	30-APR-12	R2358141
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Copper (Cu)-Total	0.00051		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Iron (Fe)-Total	<0.10		0.10	mg/L	30-APR-12	30-APR-12	R2358141
Lead (Pb)-Total	<0.000090		0.000090	mg/L	30-APR-12	30-APR-12	R2358141
Lithium (Li)-Total	<0.0020		0.0020	mg/L	30-APR-12	30-APR-12	R2358141
Magnesium (Mg)-Total	0.989		0.010	mg/L	30-APR-12	30-APR-12	R2358141
Manganese (Mn)-Total	0.00082		0.00030	mg/L	30-APR-12	30-APR-12	R2358141
Molybdenum (Mo)-Total	0.00024		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	30-APR-12	30-APR-12	R2358141
Phosphorus (P)-Total	<0.10		0.10	mg/L	30-APR-12	30-APR-12	R2358141
Potassium (K)-Total	0.558		0.020	mg/L	30-APR-12	30-APR-12	R2358141
Rubidium (Rb)-Total	0.00084		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Selenium (Se)-Total	<0.0010		0.0010	mg/L	30-APR-12	30-APR-12	R2358141
Silicon (Si)-Total	0.134		0.050	mg/L	30-APR-12	30-APR-12	R2358141
Silver (Ag)-Total	<0.00010		0.00010	mg/L	30-APR-12	30-APR-12	R2358141
Sodium (Na)-Total	0.930		0.030	mg/L	30-APR-12	30-APR-12	R2358141
Strontium (Sr)-Total	0.0113		0.00010	mg/L	30-APR-12	30-APR-12	R2358141
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	30-APR-12	30-APR-12	R2358141
Thorium (Th)-Total	<0.00010		0.00010	mg/L	30-APR-12	30-APR-12	R2358141
Tin (Sn)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Tungsten (W)-Total	<0.0010		0.0010	mg/L	30-APR-12	30-APR-12	R2358141
Uranium (U)-Total	<0.00010		0.00010	mg/L	30-APR-12	30-APR-12	R2358141
Vanadium (V)-Total	<0.00020		0.00020	mg/L	30-APR-12	30-APR-12	R2358141
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	30-APR-12	30-APR-12	R2358141
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	30-APR-12	30-APR-12	R2358141
Total Organic Carbon Total Organic Carbon	1.7		1.0	mg/L		01-MAY-12	R2358754
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<2.0		2.0	mg/L		28-APR-12	R2357856
Turbidity Turbidity	0.14		0.10	NTU		27-APR-12	R2357233

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-3 TPE-46-S Sampled By: CLIENT on 19-APR-12 @ 12:35 Matrix: WATER pH pH	7.11		0.10	pH units		26-APR-12	R2357874
Alkalinity Alkalinity, Total (as CaCO3)	9.4		1.0	mg/L		01-MAY-12	R2358427
Bicarbonate (HCO3)	11.5		1.2	mg/L		01-MAY-12	R2358427
Carbonate (CO3)	<0.60		0.60	mg/L		01-MAY-12	R2358427
Hydroxide (OH)	<0.34		0.34	mg/L		01-MAY-12	R2358427
L1138756-4 TPE-47-S Sampled By: CLIENT on 19-APR-12 @ 11:36 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3)	<20		20	mg/L		26-APR-12	R2357874
Bicarbonate (HCO3)	<24		24	mg/L		26-APR-12	R2357874
Carbonate (CO3)	<12		12	mg/L		26-APR-12	R2357874
Hydroxide (OH)	<6.8		6.8	mg/L		26-APR-12	R2357874
Ammonia by colour Ammonia, Total (as N)	0.016		0.010	mg/L		04-MAY-12	R2360636
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		26-APR-12	R2357123
Chloride by Ion Chromatography Chloride	0.71		0.20	mg/L		26-APR-12	R2357123
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.18		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Phaeophytin a	<0.10		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity Conductivity	32		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved	0.00052		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved	0.00339		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	2.38		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00056		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	0.992		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00038		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	0.00022		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-4 TPE-47-S							
Sampled By: CLIENT on 19-APR-12 @ 11:36							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.573		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00084		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.116		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.906		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.0116		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.8		1.0	mg/L		01-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.085		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	10.0		0.20	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	10.0		0.30	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0337		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0337		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.211	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography							
Sulfate	3.52		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.099		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0051		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	0.00050		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00348		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-4 TPE-47-S Sampled By: CLIENT on 19-APR-12 @ 11:36 Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	2.46		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00053		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	0.972		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00074		0.00030	mg/L	27-APR-12	27-APR-12	R2357658
Molybdenum (Mo)-Total	0.00023		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Potassium (K)-Total	0.603		0.020	mg/L	27-APR-12	27-APR-12	R2357658
Rubidium (Rb)-Total	0.00084		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Silicon (Si)-Total	0.160		0.050	mg/L	27-APR-12	27-APR-12	R2357658
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Sodium (Na)-Total	1.00		0.030	mg/L	27-APR-12	27-APR-12	R2357658
Strontium (Sr)-Total	0.0113		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Tungsten (W)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Uranium (U)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Vanadium (V)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	27-APR-12	27-APR-12	R2357658
Total Organic Carbon							
Total Organic Carbon	1.8		1.0	mg/L		01-MAY-12	R2358754
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<2.0		2.0	mg/L		28-APR-12	R2357856
Turbidity							
Turbidity	0.14		0.10	NTU		27-APR-12	R2357233
pH							
pH	7.11		0.10	pH units		26-APR-12	R2357874
Alkalinity							
Alkalinity, Total (as CaCO3)	9.6		1.0	mg/L		01-MAY-12	R2358427
Bicarbonate (HCO3)	11.7		1.2	mg/L		01-MAY-12	R2358427
Carbonate (CO3)	<0.60		0.60	mg/L		01-MAY-12	R2358427
Hydroxide (OH)	<0.34		0.34	mg/L		01-MAY-12	R2358427
L1138756-5 SP-46-S Sampled By: CLIENT on 19-APR-12 @ 17:05 Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-5 SP-46-S Sampled By: CLIENT on 19-APR-12 @ 17:05 Matrix: WATER							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		26-APR-12	R2357874
Bicarbonate (HCO3)	<24		24	mg/L		26-APR-12	R2357874
Carbonate (CO3)	<12		12	mg/L		26-APR-12	R2357874
Hydroxide (OH)	<6.8		6.8	mg/L		26-APR-12	R2357874
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		04-MAY-12	R2360636
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		26-APR-12	R2357123
Chloride by Ion Chromatography							
Chloride	0.69		0.20	mg/L		26-APR-12	R2357123
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.24		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Phaeophytin a	0.11		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity							
Conductivity	33		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved	0.00032		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved	0.00281		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	2.90		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00064		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	1.04		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00020		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	0.00013		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.499		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00070		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.288		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.737		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.0143		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-5	SP-46-S						
Sampled By:	CLIENT on 19-APR-12 @ 17:05						
Matrix:	WATER						
Dissolved Metals by ICP-MS							
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.8		1.0	mg/L		01-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.077		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	11.5		0.20	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	11.5		0.30	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0263		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0263		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.373	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography							
Sulfate	3.49		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.093		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids							
Total Dissolved Solids	20.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	0.00030		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00260		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	2.78		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00058		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	0.958		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00078		0.00030	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-6	SP-47-S							
Sampled By: CLIENT on 19-APR-12 @ 16:27								
Matrix: WATER								
Chlorophyll a, Pheophytin by fluorometry								
Phaeophytin a		0.19		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity								
Conductivity		33		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved		0.00031		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved		0.00286		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved		<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved		2.90		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved		0.00065		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved		1.05		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved		0.00024		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved		0.00014		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved		0.507		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved		0.00071		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved		0.298		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved		0.719		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved		0.0140		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved		<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon								
Dissolved Organic Carbon		1.9		1.0	mg/L		01-MAY-12	R2358754
Fluoride by Ion Chromatography								
Fluoride		0.074		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated								
Hardness (as CaCO3)		11.6		0.30	mg/L		30-APR-12	
Hardness Calculated								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-6 SP-47-S Sampled By: CLIENT on 19-APR-12 @ 16:27 Matrix: WATER							
Hardness Calculated Hardness (as CaCO3)	11.6		0.20	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography Nitrate-N	0.0228		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite Nitrate and Nitrite as N	0.0228		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour Silica, Reactive (as SiO2)	0.503	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography Sulfate	3.33		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.094		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids Total Dissolved Solids	20.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS Aluminum (Al)-Total	<0.0050		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	0.00029		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00267		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	2.93		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00139		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	1.00		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00077		0.00030	mg/L	27-APR-12	27-APR-12	R2357658
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Potassium (K)-Total	0.488		0.020	mg/L	27-APR-12	27-APR-12	R2357658
Rubidium (Rb)-Total	0.00065		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Silicon (Si)-Total	0.324		0.050	mg/L	27-APR-12	27-APR-12	R2357658
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Sodium (Na)-Total	0.735		0.030	mg/L	27-APR-12	27-APR-12	R2357658
Strontium (Sr)-Total	0.0136		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-6 SP-47-S Sampled By: CLIENT on 19-APR-12 @ 16:27 Matrix: WATER Total Metals by ICP-MS Thorium (Th)-Total Tin (Sn)-Total Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Alkalinity Alkalinity, Total (as CaCO ₃) Bicarbonate (HCO ₃) Carbonate (CO ₃) Hydroxide (OH)	<0.00010 <0.00020 <0.00020 <0.0010 <0.00010 <0.00020 <0.0020 <0.00040 1.9 <2.0 0.19 7.18 11.4 13.9 <0.60 <0.34		0.00010 0.00020 0.00020 0.0010 0.00010 0.00020 0.0020 0.00040 1.0 2.0 0.10 0.10 1.0 1.2 0.60 0.34	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 01-MAY-12 01-MAY-12 01-MAY-12 01-MAY-12	27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 01-MAY-12 01-MAY-12 01-MAY-12 01-MAY-12	R2357658 R2357658 R2357658 R2357658 R2357658 R2357658 R2357658 R2357658 R2358754 R2357856 R2357233 R2357874 R2358427 R2358427 R2358427 R2358427
L1138756-7 TE-46-S Sampled By: CLIENT on 19-APR-12 @ 16:02 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO ₃) Bicarbonate (HCO ₃) Carbonate (CO ₃) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Pheaophytin a Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved	<20 <24 <12 <6.8 <0.010 <0.10 0.84 0.79 0.26 39 FIELD <0.000010 <0.0020 <0.00020 0.00039 0.00377 <0.00020 <0.00020		20 24 12 6.8 0.010 0.10 0.20 0.10 0.10 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020	mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L	 30-APR-12 30-APR-12 	26-APR-12 26-APR-12 26-APR-12 26-APR-12 04-MAY-12 26-APR-12 26-APR-12 30-APR-12 30-APR-12 26-APR-12 11-MAY-12 11-MAY-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12 27-APR-12	R2357874 R2357874 R2357874 R2357874 R2360636 R2357123 R2357123 R2358008 R2358008 R2357874 R2364193 R2364030 R2357661 R2357661 R2357661 R2357661 R2357661 R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-7 TE-46-S Sampled By: CLIENT on 19-APR-12 @ 16:02 Matrix: WATER							
Dissolved Metals by ICP-MS							
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	3.41		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00068		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	1.26		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00040		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	0.00019		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.638		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00093		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.277		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.927		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.0170		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.1		1.0	mg/L		01-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.091		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	13.7		0.20	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	13.7		0.30	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0256		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0256		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.509	DLA	0.025	mg/L		07-MAY-12	R2361728

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-7 TE-46-S Sampled By: CLIENT on 19-APR-12 @ 16:02 Matrix: WATER							
Sulfate by Ion Chromatography Sulfate	4.08		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.104		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids Total Dissolved Solids	24.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS Aluminum (Al)-Total	<0.0050		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	0.00040		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00365		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	3.62		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00074		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	1.35		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00094		0.00030	mg/L	27-APR-12	27-APR-12	R2357658
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Potassium (K)-Total	0.704		0.020	mg/L	27-APR-12	27-APR-12	R2357658
Rubidium (Rb)-Total	0.00097		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Silicon (Si)-Total	0.337		0.050	mg/L	27-APR-12	27-APR-12	R2357658
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Sodium (Na)-Total	1.06		0.030	mg/L	27-APR-12	27-APR-12	R2357658
Strontium (Sr)-Total	0.0177		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Tungsten (W)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Uranium (U)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Vanadium (V)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	27-APR-12	27-APR-12	R2357658
Total Organic Carbon Total Organic Carbon	2.2		1.0	mg/L		01-MAY-12	R2358754
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<2.0		2.0	mg/L		28-APR-12	R2357856
Turbidity Turbidity	0.19		0.10	NTU		27-APR-12	R2357233

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-7	TE-46-S							
Sampled By: CLIENT on 19-APR-12 @ 16:02								
Matrix: WATER								
pH		7.21		0.10	pH units		26-APR-12	R2357874
pH								
Alkalinity								
Alkalinity, Total (as CaCO3)		13.2		1.0	mg/L		01-MAY-12	R2358427
Bicarbonate (HCO3)		16.1		1.2	mg/L		01-MAY-12	R2358427
Carbonate (CO3)		<0.60		0.60	mg/L		01-MAY-12	R2358427
Hydroxide (OH)		<0.34		0.34	mg/L		01-MAY-12	R2358427
L1138756-8	TE-47-S							
Sampled By: CLIENT on 19-APR-12 @ 14:52								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		26-APR-12	R2357874
Bicarbonate (HCO3)		<24		24	mg/L		26-APR-12	R2357874
Carbonate (CO3)		<12		12	mg/L		26-APR-12	R2357874
Hydroxide (OH)		<6.8		6.8	mg/L		26-APR-12	R2357874
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		04-MAY-12	R2360636
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		26-APR-12	R2357123
Chloride by Ion Chromatography								
Chloride		0.83		0.20	mg/L		26-APR-12	R2357123
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.48		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Phaeophytin a		0.17		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity								
Conductivity		30		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved		0.00319		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved		<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved		2.30		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved		0.00045		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved		0.990		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved		0.00031		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-8 TE-47-S Sampled By: CLIENT on 19-APR-12 @ 14:52 Matrix: WATER							
Dissolved Metals by ICP-MS							
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.563		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00100		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.222		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.843		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.0126		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		01-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.081		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	9.83		0.20	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	9.83		0.30	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0071		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0071		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.504	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography							
Sulfate	3.16		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.109		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0057		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00317		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-9 INUG-34-S							
Sampled By: CLIENT on 15-APR-12 @ 10:47							
Matrix: WATER							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		26-APR-12	R2357874
Bicarbonate (HCO3)	<24		24	mg/L		26-APR-12	R2357874
Carbonate (CO3)	<12		12	mg/L		26-APR-12	R2357874
Hydroxide (OH)	<6.8		6.8	mg/L		26-APR-12	R2357874
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		04-MAY-12	R2360636
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		26-APR-12	R2357123
Chloride by Ion Chromatography							
Chloride	0.85		0.20	mg/L		26-APR-12	R2357123
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.11		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Phaeophytin a	<0.10		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity							
Conductivity	21		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0040		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved	0.00215		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	1.34		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00045		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	0.867		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00017		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.471		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00057		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.218		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.677		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.00791		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-9 INUG-34-S							
Sampled By: CLIENT on 15-APR-12 @ 10:47							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.2		1.0	mg/L		02-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.072		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	6.90		0.20	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	6.90		0.30	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.477	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography							
Sulfate	1.15		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.130		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids							
Total Dissolved Solids	12.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0067		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00229		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	1.51		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00051		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	0.921		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00068		0.00030	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-10 INUG-35-S							
Sampled By: CLIENT on 15-APR-12 @ 12:37							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Phaeophytin a	0.12		0.10	ug/L	30-APR-12	30-APR-12	R2358008
Conductivity							
Conductivity	22		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0038		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved	0.00225		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	1.38		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00045		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	0.905		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00022		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.453		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00061		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.235		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.698		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.00814		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.4		1.0	mg/L		02-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.071		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	7.17		0.20	mg/L		30-APR-12	
Hardness Calculated							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-10 INUG-35-S							
Sampled By: CLIENT on 15-APR-12 @ 12:37							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	7.17		0.30	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.485	DLA	0.025	mg/L		07-MAY-12	R2361728
Sulfate by Ion Chromatography							
Sulfate	1.18		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.131		0.050	mg/L	03-MAY-12	04-MAY-12	R2360560
Total Dissolved Solids							
Total Dissolved Solids	12.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0105		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00253		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	0.000013		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	1.48		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00068		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	0.926		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00107		0.00030	mg/L	27-APR-12	27-APR-12	R2357658
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Potassium (K)-Total	0.477		0.020	mg/L	27-APR-12	27-APR-12	R2357658
Rubidium (Rb)-Total	0.00064		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Silicon (Si)-Total	0.292		0.050	mg/L	27-APR-12	27-APR-12	R2357658
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Sodium (Na)-Total	0.742		0.030	mg/L	27-APR-12	27-APR-12	R2357658
Strontium (Sr)-Total	0.00821		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-11 CREMP-APR-DUP-1							
Sampled By: CLIENT on 15-APR-12 @ 12:37							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	1.41		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	0.00045		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	0.922		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	0.00018		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	0.455		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	0.229		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.675		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.00803		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.3		1.0	mg/L		02-MAY-12	R2358754
Fluoride by Ion Chromatography							
Fluoride	0.071		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	7.31		0.30	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	7.31		0.20	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.470	DLA	0.025	mg/L		07-MAY-12	R2361728

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-11 CREMP-APR-DUP-1							
Sampled By: CLIENT on 15-APR-12 @ 12:37							
Matrix: WATER							
Sulfate by Ion Chromatography							
Sulfate	1.13		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.122		0.050	mg/L	04-MAY-12	07-MAY-12	R2361356
Total Dissolved Solids							
Total Dissolved Solids	12.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0082		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	0.00217		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	0.000041		0.000010	mg/L	27-APR-12	27-APR-12	R2357658
Calcium (Ca)-Total	1.43		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	0.00053		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	0.889		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	0.00068		0.00030	mg/L	27-APR-12	27-APR-12	R2357658
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Potassium (K)-Total	0.465		0.020	mg/L	27-APR-12	27-APR-12	R2357658
Rubidium (Rb)-Total	0.00061		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Silicon (Si)-Total	0.285		0.050	mg/L	27-APR-12	27-APR-12	R2357658
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Sodium (Na)-Total	0.710		0.030	mg/L	27-APR-12	27-APR-12	R2357658
Strontium (Sr)-Total	0.00787		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Tungsten (W)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Uranium (U)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Vanadium (V)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	27-APR-12	27-APR-12	R2357658
Total Organic Carbon							
Total Organic Carbon	2.4		1.0	mg/L		02-MAY-12	R2358754
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<2.0		2.0	mg/L		28-APR-12	R2357856
Turbidity							
Turbidity	0.14		0.10	NTU		27-APR-12	R2357233

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-11 CREMP-APR-DUP-1 Sampled By: CLIENT on 15-APR-12 @ 12:37 Matrix: WATER pH pH	7.09		0.10	pH units		26-APR-12	R2357874
Alkalinity Alkalinity, Total (as CaCO3)	7.8		1.0	mg/L		01-MAY-12	R2358427
Bicarbonate (HCO3)	9.5		1.2	mg/L		01-MAY-12	R2358427
Carbonate (CO3)	<0.60		0.60	mg/L		01-MAY-12	R2358427
Hydroxide (OH)	<0.34		0.34	mg/L		01-MAY-12	R2358427
L1138756-12 CREMP-APR-EB1 Sampled By: CLIENT on 21-APR-12 @ 07:30 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3)	<20		20	mg/L		26-APR-12	R2357874
Bicarbonate (HCO3)	<24		24	mg/L		26-APR-12	R2357874
Carbonate (CO3)	<12		12	mg/L		26-APR-12	R2357874
Hydroxide (OH)	<6.8		6.8	mg/L		26-APR-12	R2357874
Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		04-MAY-12	R2360636
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		26-APR-12	R2357123
Chloride by Ion Chromatography Chloride	<0.20		0.20	mg/L		26-APR-12	R2357123
Conductivity Conductivity	<20		20	umhos/cm		26-APR-12	R2357874
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					11-MAY-12	R2364193
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-MAY-12	11-MAY-12	R2364030
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Barium (Ba)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Boron (B)-Dissolved	<0.010		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	25-APR-12	27-APR-12	R2357661
Calcium (Ca)-Dissolved	0.082		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	25-APR-12	27-APR-12	R2357661
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	25-APR-12	27-APR-12	R2357661
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Magnesium (Mg)-Dissolved	0.026		0.010	mg/L	25-APR-12	27-APR-12	R2357661
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	25-APR-12	27-APR-12	R2357661
Potassium (K)-Dissolved	<0.020		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-12 CREMP-APR-EB1							
Sampled By: CLIENT on 21-APR-12 @ 07:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	25-APR-12	27-APR-12	R2357661
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	25-APR-12	27-APR-12	R2357661
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Sodium (Na)-Dissolved	0.021		0.020	mg/L	25-APR-12	27-APR-12	R2357661
Strontium (Sr)-Dissolved	0.00038		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	25-APR-12	27-APR-12	R2357661
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	25-APR-12	27-APR-12	R2357661
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	25-APR-12	27-APR-12	R2357661
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	25-APR-12	27-APR-12	R2357661
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		02-MAY-12	R2359422
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		26-APR-12	R2357123
Hardness Calculated							
Hardness (as CaCO3)	0.31		0.30	mg/L		30-APR-12	
Hardness Calculated							
Hardness (as CaCO3)	0.31		0.20	mg/L		30-APR-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		26-APR-12	R2357123
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		25-APR-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		26-APR-12	R2357123
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		30-APR-12	R2357838
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		27-APR-12	R2357112
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.0075		0.0050	mg/L		08-MAY-12	R2361750
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		26-APR-12	R2357123
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	04-MAY-12	07-MAY-12	R2361356
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		30-APR-12	R2357987
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		14-MAY-12	R2365011
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	27-APR-12	27-APR-12	R2357658
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Barium (Ba)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Boron (B)-Total	<0.010		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-APR-12	27-APR-12	R2357658

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1138756-12 CREMP-APR-EB1							
Sampled By: CLIENT on 21-APR-12 @ 07:30							
Matrix: WATER							
Total Metals by ICP-MS							
Calcium (Ca)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Copper (Cu)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Iron (Fe)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-APR-12	27-APR-12	R2357658
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Magnesium (Mg)-Total	0.024		0.010	mg/L	27-APR-12	27-APR-12	R2357658
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	27-APR-12	27-APR-12	R2357658
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-APR-12	27-APR-12	R2357658
Potassium (K)-Total	<0.020		0.020	mg/L	27-APR-12	27-APR-12	R2357658
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Silicon (Si)-Total	0.073		0.050	mg/L	27-APR-12	27-APR-12	R2357658
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Sodium (Na)-Total	<0.030		0.030	mg/L	27-APR-12	27-APR-12	R2357658
Strontium (Sr)-Total	0.00029		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Tungsten (W)-Total	<0.0010		0.0010	mg/L	27-APR-12	27-APR-12	R2357658
Uranium (U)-Total	<0.00010		0.00010	mg/L	27-APR-12	27-APR-12	R2357658
Vanadium (V)-Total	<0.00020		0.00020	mg/L	27-APR-12	27-APR-12	R2357658
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	27-APR-12	27-APR-12	R2357658
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	27-APR-12	27-APR-12	R2357658
Total Organic Carbon							
Total Organic Carbon	<1.0		1.0	mg/L		02-MAY-12	R2359422
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<2.0		2.0	mg/L		28-APR-12	R2357856
Turbidity							
Turbidity	0.14		0.10	NTU		27-APR-12	R2357233
pH							
pH	6.24		0.10	pH units		26-APR-12	R2357874
Miscellaneous Parameters							
Conductivity	1.4		1.0	umhos/cm		03-MAY-12	R2360076
Alkalinity							
Alkalinity, Total (as CaCO3)	2.8		1.0	mg/L		01-MAY-12	R2358427
Bicarbonate (HCO3)	3.4		1.2	mg/L		01-MAY-12	R2358427
Carbonate (CO3)	<0.60		0.60	mg/L		01-MAY-12	R2358427
Hydroxide (OH)	<0.34		0.34	mg/L		01-MAY-12	R2358427

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

L1138758



Chain of Custody / Analy
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:OC #

Page 1 of 1

Report To				Report Format / Distribution				Service Requested (Rush for routine analysis subject to availability)																
Company: Azimuth Consulting Group				☐ Standard ☐ Other ☒ PDF ☒ Excel ☐ Digital ☐ Fax				☒ Regular (Standard Turnaround Times - Business Days) ☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT ☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT ☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT																
Contact: Maggie McConnell / Gary Mann				Email 1: mmccconnell@azimuthgroup.ca				Analysis Request Please indicate below Filtered, Preserved or both (F, P, F/P)																
Address: 218 - 2902 West Broadway				Email 2: gmann@azimuthgroup.ca																				
Vancouver, BC, V6K 2G8				Email 3: rvanengen@agnico-eagle.com																				
Phone: 604-730-1220 Fax: 604-739-8511				Client / Project Information				AZM-AEM-MB-ROU-WP																
Invoice To Same as Report? ☒ Yes ☐ No				Job #: Meadowbank CREMP 2012																				
Hardcopy of Invoice with Report? ☐ Yes ☒ No				PO / AFE:																				
Company:				LSD:																				
Contact:				Quote #: Q33259																				
Address:				ALS Contact: Judy Dalmajier Sampler:				Number of Containers																
Phone: Fax:																								
Lab Work Order # (lab use only)																								
Sample #	Sample Identification (This description will appear on the report)					Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																
	TPN-46-S					18-Apr-12	11:23	Water	X														6	(+ chlorophyll filter)
	TPN-47-S					18-Apr-12	12:26	Water	X														6	(+ chlorophyll filter)
	TPE-46-S					19-Apr-12	12:35	Water	X														6	(+ chlorophyll filter)
	TPE-47-S					19-Apr-12	11:36	Water	X														6	(+ chlorophyll filter)
	SP-46-S					19-Apr-12	17:05	Water	X														6	(+ chlorophyll filter)
	SP-47-S					19-Apr-12	16:27	Water	X														6	(+ chlorophyll filter)
	TE-46-S					19-Apr-12	16:02	Water	X														6	(+ chlorophyll filter)
	TE-47-S					19-Apr-12	14:52	Water	X														6	(+ chlorophyll filter)
	INUG-34-S					15-Apr-12	10:47	Water	X														6	(+ chlorophyll filter)
	INUG-35-S					15-Apr-12	12:37	Water	X														6	(+ chlorophyll filter)
	CREMP-Apr-DUP-1					15-Apr-12	10:47	Water	X														6	(+ chlorophyll filter)
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																								
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab. Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																								
SHIPMENT RELEASE (Client use)					SHIPMENT RECEPTION (lab use only)					SHIPMENT VERIFICATION (lab use only)														
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF														
Robin Allard	21-Apr-12	9:00	MButa	25-Apr-12	9:42	12 °C																		



AZIMUTH CONSULTING GROUP INC.
ATTN: MAGGIE MCCONNELL
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 18-MAY-12
Report Date: 06-JUN-12 10:48 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1149598
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-1 INUG-36-S							
Sampled By: CLIENT on 09-MAY-12 @ 11:30							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		18-MAY-12	R2368180
Bicarbonate (HCO3)	<24		24	mg/L		18-MAY-12	R2368180
Carbonate (CO3)	<12		12	mg/L		18-MAY-12	R2368180
Hydroxide (OH)	<6.8		6.8	mg/L		18-MAY-12	R2368180
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		01-JUN-12	R2375034
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		19-MAY-12	R2368599
Chloride by Ion Chromatography							
Chloride	1.05		0.20	mg/L		19-MAY-12	R2368599
Conductivity							
Conductivity	25		20	umhos/cm		18-MAY-12	R2368180
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					04-JUN-12	R2376164
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	04-JUN-12	04-JUN-12	R2376273
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0045		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Barium (Ba)-Dissolved	0.00291		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Boron (B)-Dissolved	<0.010		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	1.72		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00055		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	1.06		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00034		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.592		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00078		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.335		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.795		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.00960		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-1 INUG-36-S							
Sampled By: CLIENT on 09-MAY-12 @ 11:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.8		1.0	mg/L		25-MAY-12	R2371860
Fluoride by Ion Chromatography							
Fluoride	0.073		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	9.11		0.30	mg/L		24-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	8.65		0.20	mg/L		23-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0054		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0054		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.564	DLA	0.050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	1.41		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.153		0.050	mg/L	30-MAY-12	31-MAY-12	R2374682
Total Dissolved Solids							
Total Dissolved Solids	20.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0068		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00338		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	1.84		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00064		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	1.10		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00080		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-1 INUG-36-S Sampled By: CLIENT on 09-MAY-12 @ 11:30 Matrix: WATER Total Metals by ICP-MS Phosphorus (P)-Total Potassium (K)-Total Rubidium (Rb)-Total Selenium (Se)-Total Silicon (Si)-Total Silver (Ag)-Total Sodium (Na)-Total Strontium (Sr)-Total Tellurium (Te)-Total Thallium (Tl)-Total Thorium (Th)-Total Tin (Sn)-Total Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Note: #REF!	<0.10 0.597 0.00076 <0.0010 0.309 <0.00010 0.893 0.0101 <0.00020 <0.00010 <0.00010 <0.00020 <0.00020 <0.00010 <0.00010 <0.00020 <0.00020 <0.00020 <0.0020 <0.00040 5.3 <1.0 0.21 6.91 9.1 11.1 <0.60 <0.34 0.39 0.21		0.10 0.020 0.00020 0.0010 0.050 0.00010 0.030 0.00010 0.00020 0.00010 0.00010 0.00020 0.00020 0.00010 0.00020 0.00020 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 1.0 1.2 0.60 0.34 0.10 0.10	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L NTU pH units mg/L mg/L mg/L mg/L ug/L ug/L	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 29-MAY-12 29-MAY-12	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 25-MAY-12 31-MAY-12 18-MAY-12 18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 30-MAY-12 30-MAY-12	R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2371860 R2375246 R2368289 R2368180 R2370909 R2370909 R2370909 R2370909 R2374082 R2374082
L1149598-2 INUG-37-S Sampled By: CLIENT on 09-MAY-12 @ 12:45 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Conductivity	<20 <24 <12 <6.8 0.011 <0.10 1.09		20 24 12 6.8 0.010 0.10 0.20	mg/L mg/L mg/L mg/L mg/L mg/L mg/L		18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 05-JUN-12 19-MAY-12 19-MAY-12	R2368180 R2368180 R2368180 R2368180 R2377130 R2368599 R2368599

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-2 INUG-37-S							
Sampled By: CLIENT on 09-MAY-12 @ 12:45							
Matrix: WATER							
Conductivity							
Conductivity	25		20	umhos/cm		18-MAY-12	R2368180
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					04-JUN-12	R2376164
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	04-JUN-12	04-JUN-12	R2376273
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0041		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Barium (Ba)-Dissolved	0.00266		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Boron (B)-Dissolved	<0.010		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	1.67		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00052		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	1.01		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00032		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.614		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00080		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.287		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.813		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.00927		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.1		1.0	mg/L		25-MAY-12	R2371860
Fluoride by Ion Chromatography							
Fluoride	0.077		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	9.37		0.30	mg/L		24-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	8.32		0.20	mg/L		23-MAY-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-2 INUG-37-S							
Sampled By: CLIENT on 09-MAY-12 @ 12:45							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.352	DLA	0.050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	1.42		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.164		0.050	mg/L	30-MAY-12	31-MAY-12	R2374682
Total Dissolved Solids							
Total Dissolved Solids	20.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0058		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00325		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	1.91		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00063		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	1.12		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00067		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Potassium (K)-Total	0.620		0.020	mg/L	23-MAY-12	23-MAY-12	R2370296
Rubidium (Rb)-Total	0.00082		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Silicon (Si)-Total	0.314		0.050	mg/L	23-MAY-12	23-MAY-12	R2370296
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Sodium (Na)-Total	0.920		0.030	mg/L	23-MAY-12	23-MAY-12	R2370296
Strontium (Sr)-Total	0.0106		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-2 INUG-37-S Sampled By: CLIENT on 09-MAY-12 @ 12:45 Matrix: WATER Total Metals by ICP-MS Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Note: #REF!	<0.00020 <0.00010 <0.00010 <0.00020 <0.0020 <0.00040 4.4 <1.0 0.18 7.00 9.1 11.1 <0.60 <0.34 0.41 0.28		0.00020 0.00010 0.00010 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 1.0 1.2 0.60 0.34 0.10 0.10	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 29-MAY-12 29-MAY-12	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 25-MAY-12 31-MAY-12 18-MAY-12 18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 30-MAY-12 30-MAY-12	R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2371860 R2375246 R2368289 R2368180 R2370909 R2370909 R2370909 R2370909 R2374082 R2374082
L1149598-3 SP-48-S Sampled By: CLIENT on 10-MAY-12 @ 14:27 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved	<20 <24 <12 <6.8 0.067 <0.10 0.68 34 FIELD <0.000010 0.0126 <0.00020 0.00038 0.00193 <0.00020 <0.00020 <0.010		20 24 12 6.8 0.010 0.10 0.20 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L	 04-JUN-12 04-JUN-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12	18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 01-JUN-12 19-MAY-12 19-MAY-12 18-MAY-12 04-JUN-12 04-JUN-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12	R2368180 R2368180 R2368180 R2368180 R2375034 R2368599 R2368599 R2368180 R2376164 R2376273 R2369105 R2369105 R2369105 R2369105 R2369105 R2369105 R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-3 SP-48-S Sampled By: CLIENT on 10-MAY-12 @ 14:27 Matrix: WATER							
Dissolved Metals by ICP-MS							
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	3.91		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00028		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	0.715		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00929		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	0.00051		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.561		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00078		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.195		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.652		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.0139		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.0		1.0	mg/L		25-MAY-12	R2371860
Fluoride by Ion Chromatography							
Fluoride	0.045		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	12.7		0.20	mg/L		23-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	13.0		0.30	mg/L		24-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0854		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0864		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	0.013		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.306		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-3 SP-48-S							
Sampled By: CLIENT on 10-MAY-12 @ 14:27							
Matrix: WATER							
Sulfate by Ion Chromatography							
Sulfate	2.54		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.213		0.050	mg/L	30-MAY-12	31-MAY-12	R2374682
Total Dissolved Solids							
Total Dissolved Solids	28.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0956		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	0.00049		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00267		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	3.83		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00063		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	0.12		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	0.000091		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	0.828		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00971		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	0.00044		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Potassium (K)-Total	0.533		0.020	mg/L	23-MAY-12	23-MAY-12	R2370296
Rubidium (Rb)-Total	0.00081		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Silicon (Si)-Total	0.312		0.050	mg/L	23-MAY-12	23-MAY-12	R2370296
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Sodium (Na)-Total	0.703		0.030	mg/L	23-MAY-12	23-MAY-12	R2370296
Strontium (Sr)-Total	0.0144		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Titanium (Ti)-Total	0.00113		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Tungsten (W)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-MAY-12	23-MAY-12	R2370296
Total Organic Carbon							
Total Organic Carbon	2.9		1.0	mg/L		25-MAY-12	R2371860
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	1.3		1.0	mg/L		31-MAY-12	R2375246
Turbidity							
Turbidity	2.16		0.10	NTU		18-MAY-12	R2368289

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-3 SP-48-S Sampled By: CLIENT on 10-MAY-12 @ 14:27 Matrix: WATER pH pH	7.24		0.10	pH units		18-MAY-12	R2368180
Alkalinity Alkalinity, Total (as CaCO3)	12.7		1.0	mg/L		24-MAY-12	R2370909
Bicarbonate (HCO3)	15.6		1.2	mg/L		24-MAY-12	R2370909
Carbonate (CO3)	<0.60		0.60	mg/L		24-MAY-12	R2370909
Hydroxide (OH)	<0.34		0.34	mg/L		24-MAY-12	R2370909
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	<0.10		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Phaeophytin a	<0.10		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Note: #REF!							
L1149598-4 SP-49-S Sampled By: CLIENT on 10-MAY-12 @ 15:30 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3)	<20		20	mg/L		18-MAY-12	R2368180
Bicarbonate (HCO3)	<24		24	mg/L		18-MAY-12	R2368180
Carbonate (CO3)	<12		12	mg/L		18-MAY-12	R2368180
Hydroxide (OH)	<6.8		6.8	mg/L		18-MAY-12	R2368180
Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		01-JUN-12	R2375034
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		19-MAY-12	R2368599
Chloride by Ion Chromatography Chloride	0.65		0.20	mg/L		19-MAY-12	R2368599
Conductivity Conductivity	32		20	umhos/cm		18-MAY-12	R2368180
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					04-JUN-12	R2376164
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	04-JUN-12	04-JUN-12	R2376273
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0022		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Arsenic (As)-Dissolved	0.00033		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Barium (Ba)-Dissolved	0.00300		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Boron (B)-Dissolved	<0.010		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	3.09		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00064		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	1.02		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00056		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	0.00017		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-4 SP-49-S Sampled By: CLIENT on 10-MAY-12 @ 15:30 Matrix: WATER							
Dissolved Metals by ICP-MS							
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.541		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00076		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.291		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.731		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.0142		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.9		1.0	mg/L		25-MAY-12	R2371860
Fluoride by Ion Chromatography							
Fluoride	0.065		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	12.3		0.30	mg/L		24-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	11.9		0.20	mg/L		23-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0181		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0181		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.386		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	3.32		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.099		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	26.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	0.00032		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00306		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-4 SP-49-S Sampled By: CLIENT on 10-MAY-12 @ 15:30 Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	3.19		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00069		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	1.05		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00087		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Potassium (K)-Total	0.531		0.020	mg/L	23-MAY-12	23-MAY-12	R2370296
Rubidium (Rb)-Total	0.00072		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Silicon (Si)-Total	0.305		0.050	mg/L	23-MAY-12	23-MAY-12	R2370296
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Sodium (Na)-Total	0.810		0.030	mg/L	23-MAY-12	23-MAY-12	R2370296
Strontium (Sr)-Total	0.0159		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Tungsten (W)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-MAY-12	23-MAY-12	R2370296
Total Organic Carbon							
Total Organic Carbon	3.1		1.0	mg/L		25-MAY-12	R2371860
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		31-MAY-12	R2375246
Turbidity							
Turbidity	0.26		0.10	NTU		18-MAY-12	R2368289
pH							
pH	7.13		0.10	pH units		18-MAY-12	R2368180
Alkalinity							
Alkalinity, Total (as CaCO3)	11.2		1.0	mg/L		24-MAY-12	R2370909
Bicarbonate (HCO3)	13.7		1.2	mg/L		24-MAY-12	R2370909
Carbonate (CO3)	<0.60		0.60	mg/L		24-MAY-12	R2370909
Hydroxide (OH)	<0.34		0.34	mg/L		24-MAY-12	R2370909
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.13		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Phaeophytin a	0.12		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Note: #REF!							

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-5 TE-48-S Sampled By: CLIENT on 11-MAY-12 @ 14:48 Matrix: WATER							
Dissolved Metals by ICP-MS							
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.8		1.0	mg/L		29-MAY-12	R2373312
Fluoride by Ion Chromatography							
Fluoride	0.076		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	13.5		0.30	mg/L		24-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	12.5		0.20	mg/L		23-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0366		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0366		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.434		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	3.73		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.110		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	28.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0073		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	0.00036		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00391		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	0.000012		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	3.43		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00109		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	1.19		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00137		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-5 TE-48-S Sampled By: CLIENT on 11-MAY-12 @ 14:48 Matrix: WATER Total Metals by ICP-MS Phosphorus (P)-Total Potassium (K)-Total Rubidium (Rb)-Total Selenium (Se)-Total Silicon (Si)-Total Silver (Ag)-Total Sodium (Na)-Total Strontium (Sr)-Total Tellurium (Te)-Total Thallium (Tl)-Total Thorium (Th)-Total Tin (Sn)-Total Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Note: #REF!	<0.10 0.625 0.00087 <0.0010 0.324 <0.00010 0.959 0.0164 <0.00020 <0.00010 <0.00010 <0.00020 <0.00020 <0.00010 <0.00020 <0.00020 <0.00020 <0.0020 <0.00040 3.0 <1.0 0.22 7.14 11.5 14.1 <0.60 <0.34 0.16 0.13		0.10 0.020 0.00020 0.0010 0.050 0.00010 0.030 0.00010 0.00020 0.00010 0.00010 0.00020 0.00010 0.00020 0.00010 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 1.0 1.2 0.60 0.34 0.10 0.10	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 29-MAY-12 29-MAY-12 29-MAY-12	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 29-MAY-12 31-MAY-12 18-MAY-12 18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 30-MAY-12 30-MAY-12	R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2373312 R2375246 R2368289 R2368180 R2370909 R2370909 R2370909 R2370909 R2374082 R2374082
L1149598-6 TE-49-S Sampled By: CLIENT on 11-MAY-12 @ 13:50 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Conductivity	<20 <24 <12 <6.8 0.018 <0.10 0.84		20 24 12 6.8 0.010 0.10 0.20	mg/L mg/L mg/L mg/L mg/L mg/L mg/L		18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 01-JUN-12 19-MAY-12 19-MAY-12	R2368180 R2368180 R2368180 R2368180 R2375034 R2368599 R2368599

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-6 TE-49-S Sampled By: CLIENT on 11-MAY-12 @ 13:50 Matrix: WATER							
Conductivity Conductivity	28		20	umhos/cm		18-MAY-12	R2368180
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					04-JUN-12	R2376164
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	04-JUN-12	04-JUN-12	R2376273
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Barium (Ba)-Dissolved	0.00310		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Boron (B)-Dissolved	<0.010		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	2.18		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00041		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	0.844		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00046		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.565		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00097		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.266		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.771		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.0110		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon Dissolved Organic Carbon	2.9		1.0	mg/L		25-MAY-12	R2371860
Fluoride by Ion Chromatography Fluoride	0.072		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated Hardness (as CaCO3)	8.91		0.20	mg/L		23-MAY-12	
Hardness Calculated Hardness (as CaCO3)	10.3		0.30	mg/L		24-MAY-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-6 TE-49-S Sampled By: CLIENT on 11-MAY-12 @ 13:50 Matrix: WATER							
Nitrate as N by Ion Chromatography Nitrate-N	<0.0050		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total Phosphorus (P)-Total	0.013		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour Silica, Reactive (as SiO2)	0.371		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography Sulfate	3.10		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.119		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids Total Dissolved Solids	22.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS Aluminum (Al)-Total	<0.0050		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00370		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	2.48		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00051		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	0.987		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00064		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Potassium (K)-Total	0.618		0.020	mg/L	23-MAY-12	23-MAY-12	R2370296
Rubidium (Rb)-Total	0.00107		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Silicon (Si)-Total	0.280		0.050	mg/L	23-MAY-12	23-MAY-12	R2370296
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Sodium (Na)-Total	0.933		0.030	mg/L	23-MAY-12	23-MAY-12	R2370296
Strontium (Sr)-Total	0.0131		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-6 TE-49-S Sampled By: CLIENT on 11-MAY-12 @ 13:50 Matrix: WATER Total Metals by ICP-MS Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Note: #REF!	<0.00020 <0.00010 <0.00010 <0.00020 <0.0020 <0.00040 3.3 <1.0 0.17 7.01 9.1 11.1 <0.60 <0.34 0.69 0.30		0.00020 0.00010 0.00010 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 1.0 1.2 0.60 0.34 0.10 0.10	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 29-MAY-12 29-MAY-12	23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 23-MAY-12 25-MAY-12 31-MAY-12 18-MAY-12 18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 30-MAY-12 30-MAY-12	R2370296 R2370296 R2370296 R2370296 R2370296 R2370296 R2371860 R2375246 R2368289 R2368180 R2370909 R2370909 R2370909 R2370909 R2374082 R2374082
L1149598-7 TPE-48-S Sampled By: CLIENT on 08-MAY-12 @ 10:38 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved	<20 <24 <12 <6.8 0.015 <0.10 0.66 28 FIELD <0.000010 0.0021 <0.00020 0.00067 0.00313 <0.00020 <0.00020 <0.010		20 24 12 6.8 0.010 0.10 0.20 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L	 04-JUN-12 04-JUN-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12	18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 01-JUN-12 19-MAY-12 19-MAY-12 18-MAY-12 04-JUN-12 04-JUN-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12	R2368180 R2368180 R2368180 R2368180 R2375034 R2368599 R2368599 R2368180 R2376164 R2376273 R2369105 R2369105 R2369105 R2369105 R2369105 R2369105 R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-7 TPE-48-S							
Sampled By: CLIENT on 08-MAY-12 @ 10:38							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	2.33		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00044		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	0.864		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00023		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	0.00023		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.566		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00080		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.128		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.795		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.0111		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		25-MAY-12	R2371860
Fluoride by Ion Chromatography							
Fluoride	0.073		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	10.6		0.30	mg/L		24-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	9.38		0.20	mg/L		23-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0287		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0287		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.168		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-7 TPE-48-S							
Sampled By: CLIENT on 08-MAY-12 @ 10:38							
Matrix: WATER							
Sulfate by Ion Chromatography							
Sulfate	3.25		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.100		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	22.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0060		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	0.00067		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00373		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	2.61		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00058		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	0.984		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00072		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	0.00024		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Potassium (K)-Total	0.593		0.020	mg/L	23-MAY-12	23-MAY-12	R2370296
Rubidium (Rb)-Total	0.00083		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Silicon (Si)-Total	0.146		0.050	mg/L	23-MAY-12	23-MAY-12	R2370296
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Sodium (Na)-Total	0.905		0.030	mg/L	23-MAY-12	23-MAY-12	R2370296
Strontium (Sr)-Total	0.0120		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Titanium (Ti)-Total	0.00021		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Tungsten (W)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-MAY-12	23-MAY-12	R2370296
Total Organic Carbon							
Total Organic Carbon	2.6		1.0	mg/L		25-MAY-12	R2371860
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		31-MAY-12	R2375246
Turbidity							
Turbidity	0.17		0.10	NTU		18-MAY-12	R2368289

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-7	TPE-48-S							
Sampled By:	CLIENT on 08-MAY-12 @ 10:38							
Matrix:	WATER							
pH		7.06		0.10	pH units		18-MAY-12	R2368180
Alkalinity								
Alkalinity, Total (as CaCO3)		9.4		1.0	mg/L		24-MAY-12	R2370909
Bicarbonate (HCO3)		11.5		1.2	mg/L		24-MAY-12	R2370909
Carbonate (CO3)		<0.60		0.60	mg/L		24-MAY-12	R2370909
Hydroxide (OH)		<0.34		0.34	mg/L		24-MAY-12	R2370909
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		<0.10		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Phaeophytin a		<0.10		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Note: #REF!								
L1149598-8	TPE-49-S							
Sampled By:	CLIENT on 08-MAY-12 @ 11:29							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		18-MAY-12	R2368180
Bicarbonate (HCO3)		<24		24	mg/L		18-MAY-12	R2368180
Carbonate (CO3)		<12		12	mg/L		18-MAY-12	R2368180
Hydroxide (OH)		<6.8		6.8	mg/L		18-MAY-12	R2368180
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		05-JUN-12	R2377130
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		19-MAY-12	R2368599
Chloride by Ion Chromatography								
Chloride		0.71		0.20	mg/L		19-MAY-12	R2368599
Conductivity								
Conductivity		30		20	umhos/cm		18-MAY-12	R2368180
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					04-JUN-12	R2376164
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	04-JUN-12	04-JUN-12	R2376273
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Arsenic (As)-Dissolved		0.00052		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Barium (Ba)-Dissolved		0.00329		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Boron (B)-Dissolved		<0.010		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved		2.43		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved		0.00048		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved		0.917		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved		0.00021		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved		0.00023		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-8 TPE-49-S							
Sampled By: CLIENT on 08-MAY-12 @ 11:29							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.605		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00085		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.134		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.880		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.0115		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.6		1.0	mg/L		29-MAY-12	R2373312
Fluoride by Ion Chromatography							
Fluoride	0.075		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	9.83		0.20	mg/L		23-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	10.7		0.30	mg/L		24-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0311		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0311		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.240		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	3.52		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.104		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	26.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	23-MAY-12	23-MAY-12	R2370296
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Arsenic (As)-Total	0.00051		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Barium (Ba)-Total	0.00385		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-8 TPE-49-S							
Sampled By: CLIENT on 08-MAY-12 @ 11:29							
Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Boron (B)-Total	<0.010		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-MAY-12	23-MAY-12	R2370296
Calcium (Ca)-Total	2.61		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Copper (Cu)-Total	0.00057		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Iron (Fe)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-MAY-12	23-MAY-12	R2370296
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Magnesium (Mg)-Total	1.01		0.010	mg/L	23-MAY-12	23-MAY-12	R2370296
Manganese (Mn)-Total	0.00067		0.00030	mg/L	23-MAY-12	23-MAY-12	R2370296
Molybdenum (Mo)-Total	0.00025		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-MAY-12	23-MAY-12	R2370296
Potassium (K)-Total	0.615		0.020	mg/L	23-MAY-12	23-MAY-12	R2370296
Rubidium (Rb)-Total	0.00086		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-MAY-12	23-MAY-12	R2370296
Silicon (Si)-Total	0.159		0.050	mg/L	23-MAY-12	23-MAY-12	R2370296
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Sodium (Na)-Total	0.926		0.030	mg/L	23-MAY-12	23-MAY-12	R2370296
Strontium (Sr)-Total	0.0123		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Tungsten (W)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-MAY-12	23-MAY-12	R2370296
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	23-MAY-12	23-MAY-12	R2370296
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-MAY-12	23-MAY-12	R2370296
Total Organic Carbon							
Total Organic Carbon	2.6		1.0	mg/L		29-MAY-12	R2373312
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		31-MAY-12	R2375246
Turbidity							
Turbidity	0.15		0.10	NTU		18-MAY-12	R2368289
pH							
pH	7.06		0.10	pH units		18-MAY-12	R2368180
Alkalinity							
Alkalinity, Total (as CaCO3)	9.6		1.0	mg/L		24-MAY-12	R2370909
Bicarbonate (HCO3)	11.7		1.2	mg/L		24-MAY-12	R2370909
Carbonate (CO3)	<0.60		0.60	mg/L		24-MAY-12	R2370909
Hydroxide (OH)	<0.34		0.34	mg/L		24-MAY-12	R2370909
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.31		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Phaeophytin a	0.14		0.10	ug/L	29-MAY-12	30-MAY-12	R2374082
Note: #REF!							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-9 TPN-48-S							
Sampled By: CLIENT on 08-MAY-12 @ 13:37							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		18-MAY-12	R2368180
Bicarbonate (HCO3)	<24		24	mg/L		18-MAY-12	R2368180
Carbonate (CO3)	<12		12	mg/L		18-MAY-12	R2368180
Hydroxide (OH)	<6.8		6.8	mg/L		18-MAY-12	R2368180
Ammonia by colour							
Ammonia, Total (as N)	0.012		0.010	mg/L		01-JUN-12	R2375034
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		19-MAY-12	R2368599
Chloride by Ion Chromatography							
Chloride	0.59		0.20	mg/L		19-MAY-12	R2368599
Conductivity							
Conductivity	23		20	umhos/cm		18-MAY-12	R2368180
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					04-JUN-12	R2376164
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	04-JUN-12	04-JUN-12	R2376273
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Barium (Ba)-Dissolved	0.00257		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Boron (B)-Dissolved	<0.010		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	1.70		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00036		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	0.693		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00078		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	0.00014		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.438		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00058		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.097		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.792		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.00801		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-9 TPN-48-S							
Sampled By: CLIENT on 08-MAY-12 @ 13:37							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.1		1.0	mg/L		29-MAY-12	R2373312
Fluoride by Ion Chromatography							
Fluoride	0.057		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	7.40		0.30	mg/L		25-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	7.10		0.20	mg/L		23-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0313		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0313		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.149		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	3.25		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.100		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	24-MAY-12	24-MAY-12	R2370965
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Arsenic (As)-Total	0.00048		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Barium (Ba)-Total	0.00309		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Boron (B)-Total	<0.010		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	24-MAY-12	24-MAY-12	R2370965
Calcium (Ca)-Total	1.82		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Copper (Cu)-Total	0.00045		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Iron (Fe)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Lead (Pb)-Total	<0.000090		0.000090	mg/L	24-MAY-12	24-MAY-12	R2370965
Lithium (Li)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Magnesium (Mg)-Total	0.693		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Manganese (Mn)-Total	0.00164		0.00030	mg/L	24-MAY-12	24-MAY-12	R2370965
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-9 TPN-48-S Sampled By: CLIENT on 08-MAY-12 @ 13:37 Matrix: WATER Total Metals by ICP-MS Phosphorus (P)-Total Potassium (K)-Total Rubidium (Rb)-Total Selenium (Se)-Total Silicon (Si)-Total Silver (Ag)-Total Sodium (Na)-Total Strontium (Sr)-Total Tellurium (Te)-Total Thallium (Tl)-Total Thorium (Th)-Total Tin (Sn)-Total Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Note: #REF!	<0.10 0.430 0.00059 <0.0010 0.110 <0.00010 0.826 0.00853 <0.00020 <0.00010 <0.00010 <0.00020 0.00024 <0.00010 <0.00010 <0.00020 <0.00020 <0.0020 <0.00040 2.4 <1.0 0.15 7.03 6.8 8.3 <0.60 <0.34 0.24 0.13			mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L	24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 29-MAY-12 31-MAY-12 18-MAY-12 18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 29-MAY-12 29-MAY-12	24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 29-MAY-12 31-MAY-12 18-MAY-12 18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 30-MAY-12 30-MAY-12	R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2373312 R2375246 R2368289 R2368180 R2370909 R2370909 R2370909 R2370909 R2374082 R2374082
L1149598-10 TPN-49-S Sampled By: CLIENT on 08-MAY-12 @ 13:37 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Conductivity	<20 <24 <12 <6.8 0.013 <0.10 0.79		20 24 12 6.8 0.010 0.10 0.20	mg/L mg/L mg/L mg/L mg/L mg/L mg/L		18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 01-JUN-12 19-MAY-12 19-MAY-12	R2368180 R2368180 R2368180 R2368180 R2375034 R2368599 R2368599

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-10 TPN-49-S							
Sampled By: CLIENT on 08-MAY-12 @ 13:37							
Matrix: WATER							
Conductivity							
Conductivity	30		20	umhos/cm		18-MAY-12	R2368180
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					04-JUN-12	R2376164
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	04-JUN-12	04-JUN-12	R2376273
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0025		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Barium (Ba)-Dissolved	0.00337		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Boron (B)-Dissolved	<0.010		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	2.35		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00047		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	0.924		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00120		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	0.00021		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.588		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00080		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.139		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	1.08		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.0109		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		29-MAY-12	R2373312
Fluoride by Ion Chromatography							
Fluoride	0.071		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	9.54		0.30	mg/L		25-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	9.66		0.20	mg/L		23-MAY-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-10 TPN-49-S							
Sampled By: CLIENT on 08-MAY-12 @ 13:37							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0405		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0405		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.185		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	4.33		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.104		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	24.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	24-MAY-12	24-MAY-12	R2370965
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Arsenic (As)-Total	0.00035		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Barium (Ba)-Total	0.00397		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Boron (B)-Total	<0.010		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	24-MAY-12	24-MAY-12	R2370965
Calcium (Ca)-Total	2.34		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Copper (Cu)-Total	0.00074		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Iron (Fe)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Lead (Pb)-Total	<0.000090		0.000090	mg/L	24-MAY-12	24-MAY-12	R2370965
Lithium (Li)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Magnesium (Mg)-Total	0.901		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Manganese (Mn)-Total	0.00161		0.00030	mg/L	24-MAY-12	24-MAY-12	R2370965
Molybdenum (Mo)-Total	0.00021		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Phosphorus (P)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Potassium (K)-Total	0.559		0.020	mg/L	24-MAY-12	24-MAY-12	R2370965
Rubidium (Rb)-Total	0.00076		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Selenium (Se)-Total	<0.0010		0.0010	mg/L	24-MAY-12	24-MAY-12	R2370965
Silicon (Si)-Total	0.123		0.050	mg/L	24-MAY-12	24-MAY-12	R2370965
Silver (Ag)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Sodium (Na)-Total	1.07		0.030	mg/L	24-MAY-12	24-MAY-12	R2370965
Strontium (Sr)-Total	0.0110		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Thorium (Th)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Tin (Sn)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-10 TPN-49-S Sampled By: CLIENT on 08-MAY-12 @ 13:37 Matrix: WATER Total Metals by ICP-MS Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Note: #REF!	0.00030 <0.00010 <0.00010 <0.00020 <0.0020 <0.00040 2.5 <1.0 0.13 7.08 8.5 10.4 <0.60 <0.34 0.24 0.13		0.00020 0.00010 0.00010 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 1.0 1.2 0.60 0.34 0.10 0.10	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L	24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 29-MAY-12 29-MAY-12	24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 29-MAY-12 31-MAY-12 18-MAY-12 18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 30-MAY-12 30-MAY-12	R2370965 R2370965 R2370965 R2370965 R2370965 R2370965 R2373312 R2375246 R2368289 R2368180 R2370909 R2370909 R2370909 R2370909 R2374082 R2374082
L1149598-11 CREMP-MAY-DUP-1 Sampled By: CLIENT on 10-MAY-12 @ 15:30 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved	<20 <24 <12 <6.8 <0.010 <0.10 0.67 32 FIELD <0.000010 0.0021 <0.00020 0.00031 0.00270 <0.00020 <0.00020 <0.010		20 24 12 6.8 0.010 0.10 0.20 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L	 04-JUN-12 04-JUN-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12	18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 01-JUN-12 19-MAY-12 19-MAY-12 18-MAY-12 04-JUN-12 04-JUN-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12 22-MAY-12	R2368180 R2368180 R2368180 R2368180 R2375034 R2368599 R2368599 R2368180 R2376164 R2376273 R2369105 R2369105 R2369105 R2369105 R2369105 R2369105 R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-11 CREMP-MAY-DUP-1							
Sampled By: CLIENT on 10-MAY-12 @ 15:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	18-MAY-12	22-MAY-12	R2369105
Calcium (Ca)-Dissolved	3.11		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Copper (Cu)-Dissolved	0.00061		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	18-MAY-12	22-MAY-12	R2369105
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	18-MAY-12	22-MAY-12	R2369105
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Magnesium (Mg)-Dissolved	1.01		0.010	mg/L	18-MAY-12	22-MAY-12	R2369105
Manganese (Mn)-Dissolved	0.00061		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Molybdenum (Mo)-Dissolved	0.00016		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	0.543		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	0.00073		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	0.327		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	0.694		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	0.0142		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.4		1.0	mg/L		29-MAY-12	R2373312
Fluoride by Ion Chromatography							
Fluoride	0.067		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	11.9		0.20	mg/L		23-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	12.2		0.30	mg/L		25-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0224		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0224		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.421	DLA	0.050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-11 CREMP-MAY-DUP-1							
Sampled By: CLIENT on 10-MAY-12 @ 15:30							
Matrix: WATER							
Sulfate by Ion Chromatography							
Sulfate	3.38		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.089		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	26.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0074		0.0050	mg/L	24-MAY-12	24-MAY-12	R2370965
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Arsenic (As)-Total	0.00048		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Barium (Ba)-Total	0.00340		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Boron (B)-Total	<0.010		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	24-MAY-12	24-MAY-12	R2370965
Calcium (Ca)-Total	3.21		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Copper (Cu)-Total	0.00081		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Iron (Fe)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Lead (Pb)-Total	<0.000090		0.000090	mg/L	24-MAY-12	24-MAY-12	R2370965
Lithium (Li)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Magnesium (Mg)-Total	1.03		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Manganese (Mn)-Total	0.00095		0.00030	mg/L	24-MAY-12	24-MAY-12	R2370965
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Phosphorus (P)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Potassium (K)-Total	0.537		0.020	mg/L	24-MAY-12	24-MAY-12	R2370965
Rubidium (Rb)-Total	0.00077		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Selenium (Se)-Total	<0.0010		0.0010	mg/L	24-MAY-12	24-MAY-12	R2370965
Silicon (Si)-Total	0.282		0.050	mg/L	24-MAY-12	24-MAY-12	R2370965
Silver (Ag)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Sodium (Na)-Total	0.787		0.030	mg/L	24-MAY-12	24-MAY-12	R2370965
Strontium (Sr)-Total	0.0145		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Thorium (Th)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Tin (Sn)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Titanium (Ti)-Total	0.00036		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Tungsten (W)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Uranium (U)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Vanadium (V)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	24-MAY-12	24-MAY-12	R2370965
Total Organic Carbon							
Total Organic Carbon	2.4		1.0	mg/L		29-MAY-12	R2373312
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		31-MAY-12	R2375246
Turbidity							
Turbidity	0.24		0.10	NTU		18-MAY-12	R2368289

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-11 CREMP-MAY-DUP-1 Sampled By: CLIENT on 10-MAY-12 @ 15:30 Matrix: WATER pH pH Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Note: #REF!	7.17 11.0 13.5 <0.60 <0.34 0.13 <0.10		0.10 1.0 1.2 0.60 0.34 0.10 0.10	pH units mg/L mg/L mg/L mg/L ug/L ug/L	 29-MAY-12 29-MAY-12	18-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 24-MAY-12 30-MAY-12 30-MAY-12	R2368180 R2370909 R2370909 R2370909 R2370909 R2374082 R2374082
L1149598-12 CREMP-MAY-EB-1 Sampled By: CLIENT on 12-MAY-12 @ 09:06 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved Cadmium (Cd)-Dissolved Calcium (Ca)-Dissolved Cesium (Cs)-Dissolved Chromium (Cr)-Dissolved Cobalt (Co)-Dissolved Copper (Cu)-Dissolved Iron (Fe)-Dissolved Lead (Pb)-Dissolved Lithium (Li)-Dissolved Magnesium (Mg)-Dissolved Manganese (Mn)-Dissolved Molybdenum (Mo)-Dissolved Nickel (Ni)-Dissolved	<20 <24 <12 <6.8 <0.010 <0.10 <0.20 <20 FIELD <0.000010 <0.0020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.010 <0.000010 <0.050 <0.00010 <0.0020 <0.00020 <0.00020 <0.00020 <0.00020 <0.010 <0.000090 <0.0020 <0.010 <0.00010 <0.00010 <0.0010		20 24 12 6.8 0.010 0.10 0.20 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010 0.000010 0.050 0.00010 0.0020 0.00020 0.00020 0.00020 0.010 0.000090 0.0020 0.010 0.00010 0.00010 0.0010	mg/L mg/L mg/L mg/L mg/L mg/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	 04-JUN-12 04-JUN-12 18-MAY-12	18-MAY-12 18-MAY-12 18-MAY-12 18-MAY-12 01-JUN-12 19-MAY-12 19-MAY-12 18-MAY-12 04-JUN-12 04-JUN-12 22-MAY-12	R2368180 R2368180 R2368180 R2368180 R2375821 R2368599 R2368599 R2368180 R2376164 R2376273 R2369105

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-12 CREMP-MAY-EB-1							
Sampled By: CLIENT on 12-MAY-12 @ 09:06							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	18-MAY-12	22-MAY-12	R2369105
Potassium (K)-Dissolved	<0.020		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	18-MAY-12	22-MAY-12	R2369105
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	18-MAY-12	22-MAY-12	R2369105
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	18-MAY-12	22-MAY-12	R2369105
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	18-MAY-12	22-MAY-12	R2369105
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	18-MAY-12	22-MAY-12	R2369105
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	18-MAY-12	22-MAY-12	R2369105
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.0		1.0	mg/L		29-MAY-12	R2373312
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		19-MAY-12	R2368599
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		23-MAY-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		25-MAY-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		19-MAY-12	R2368599
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		18-MAY-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		19-MAY-12	R2368599
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-MAY-12	R2369036
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-MAY-12	R2370123
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.0157		0.0050	mg/L		31-MAY-12	R2375128
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		19-MAY-12	R2368599
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	30-MAY-12	31-MAY-12	R2375035
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		22-MAY-12	R2369795
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-JUN-12	R2376273
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	24-MAY-12	24-MAY-12	R2370965
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Arsenic (As)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Barium (Ba)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1149598-12 CREMP-MAY-EB-1							
Sampled By: CLIENT on 12-MAY-12 @ 09:06							
Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Boron (B)-Total	<0.010		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	24-MAY-12	24-MAY-12	R2370965
Calcium (Ca)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	24-MAY-12	24-MAY-12	R2370965
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Copper (Cu)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Iron (Fe)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Lead (Pb)-Total	<0.000090		0.000090	mg/L	24-MAY-12	24-MAY-12	R2370965
Lithium (Li)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Magnesium (Mg)-Total	<0.010		0.010	mg/L	24-MAY-12	24-MAY-12	R2370965
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	24-MAY-12	24-MAY-12	R2370965
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Phosphorus (P)-Total	<0.10		0.10	mg/L	24-MAY-12	24-MAY-12	R2370965
Potassium (K)-Total	<0.020		0.020	mg/L	24-MAY-12	24-MAY-12	R2370965
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Selenium (Se)-Total	<0.0010		0.0010	mg/L	24-MAY-12	24-MAY-12	R2370965
Silicon (Si)-Total	<0.050		0.050	mg/L	24-MAY-12	24-MAY-12	R2370965
Silver (Ag)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Sodium (Na)-Total	<0.030		0.030	mg/L	24-MAY-12	24-MAY-12	R2370965
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Thorium (Th)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Tin (Sn)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Tungsten (W)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Uranium (U)-Total	<0.00010		0.00010	mg/L	24-MAY-12	24-MAY-12	R2370965
Vanadium (V)-Total	<0.00020		0.00020	mg/L	24-MAY-12	24-MAY-12	R2370965
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	24-MAY-12	24-MAY-12	R2370965
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	24-MAY-12	24-MAY-12	R2370965
Total Organic Carbon							
Total Organic Carbon	1.3		1.0	mg/L		30-MAY-12	R2374011
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		31-MAY-12	R2375246
Turbidity							
Turbidity	0.10		0.10	NTU		18-MAY-12	R2368289
pH							
pH	6.29		0.10	pH units		18-MAY-12	R2368180
Miscellaneous Parameters							
Conductivity	1.2		1.0	umhos/cm		24-MAY-12	R2370563
Alkalinity							
Alkalinity, Total (as CaCO3)	2.1		1.0	mg/L		24-MAY-12	R2370909
Bicarbonate (HCO3)	2.6		1.2	mg/L		24-MAY-12	R2370909
Carbonate (CO3)	<0.60		0.60	mg/L		24-MAY-12	R2370909
Hydroxide (OH)	<0.34		0.34	mg/L		24-MAY-12	R2370909

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Azimuth Consulting Group Inc.
ATTN: MAGGIE MCCONNELL
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 27-JUL-12
Report Date: 15-AUG-12 13:34 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1185335
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Gail Hill
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-1 SP - 51 - S							
Sampled By: CLIENT on 20-JUL-12 @ 14:20							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		27-JUL-12	R2407866
Bicarbonate (HCO3)	<24		24	mg/L		27-JUL-12	R2407866
Carbonate (CO3)	<12		12	mg/L		27-JUL-12	R2407866
Hydroxide (OH)	<6.8		6.8	mg/L		27-JUL-12	R2407866
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		07-AUG-12	R2412351
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		28-JUL-12	R2409084
Chloride by Ion Chromatography							
Chloride	0.53		0.20	mg/L		28-JUL-12	R2409084
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.41		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.16		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	29		20	umhos/cm		27-JUL-12	R2407866
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					31-JUL-12	R2408552
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	31-JUL-12	03-AUG-12	R2411028
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0030		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Arsenic (As)-Dissolved	0.00027		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Barium (Ba)-Dissolved	0.00239		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	2.68		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00068		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.849		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00181		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.394		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.294		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.543		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.0129		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-1 SP - 51 - S							
Sampled By: CLIENT on 20-JUL-12 @ 14:20							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.7		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography							
Fluoride	0.052		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated							
Hardness (as CaCO3)	11.5		0.30	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	11.5		0.20	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.421		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	2.72		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.090		0.050	mg/L	01-AUG-12	05-AUG-12	R2411466
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0167		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	0.00028		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00258		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	2.96		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00085		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.999		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-1	SP - 51 - S Sampled By: CLIENT on 20-JUL-12 @ 14:20 Matrix: WATER							
Total Metals by ICP-MS								
Manganese (Mn)-Total		0.00343		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total		<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total		0.438		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total		0.00069		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total		<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total		0.320		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total		0.631		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total		0.0130		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon								
Total Organic Carbon		2.9		1.0	mg/L		13-AUG-12	R2416031
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		31-JUL-12	R2409317
Turbidity								
Turbidity		0.54		0.10	NTU		27-JUL-12	R2406891
pH								
pH		7.27		0.10	pH units		27-JUL-12	R2407866
Alkalinity								
Alkalinity, Total (as CaCO3)		10.5		2.0	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)		12.8		2.4	mg/L		31-JUL-12	R2408621
Carbonate (CO3)		<1.2		1.2	mg/L		31-JUL-12	R2408621
Hydroxide (OH)		<0.68		0.68	mg/L		31-JUL-12	R2408621
L1185335-2	CREMP - JULY DUP 1 Sampled By: CLIENT on 20-JUL-12 @ 14:20 Matrix: WATER							
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		27-JUL-12	R2407866
Bicarbonate (HCO3)		<24		24	mg/L		27-JUL-12	R2407866
Carbonate (CO3)		<12		12	mg/L		27-JUL-12	R2407866
Hydroxide (OH)		<6.8		6.8	mg/L		27-JUL-12	R2407866
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		07-AUG-12	R2412351
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		28-JUL-12	R2409084
Chloride by Ion Chromatography								
Chloride		0.53		0.20	mg/L		28-JUL-12	R2409084
Chlorophyll a, Pheophytin by fluorometry								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-2 CREMP - JULY DUP 1							
Sampled By: CLIENT on 20-JUL-12 @ 14:20							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.42		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.21		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	28		20	umhos/cm		27-JUL-12	R2407866
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					31-JUL-12	R2408552
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	31-JUL-12	03-AUG-12	R2411028
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0025		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Arsenic (As)-Dissolved	0.00027		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Barium (Ba)-Dissolved	0.00237		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	2.66		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00064		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.844		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00181		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.400		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.275		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.539		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.0127		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.2		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated							
Hardness (as CaCO3)	11.7		0.30	mg/L		07-AUG-12	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-2 CREMP - JULY DUP 1							
Sampled By: CLIENT on 20-JUL-12 @ 14:20							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	11.7		0.20	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.420		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	2.71		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.095		0.050	mg/L	01-AUG-12	05-AUG-12	R2411466
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0143		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	0.00027		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00257		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	3.04		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00090		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	1.01		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00351		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.448		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00067		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.329		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.619		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.0131		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-2	CREMP - JULY DUP 1							
Sampled By: CLIENT on 20-JUL-12 @ 14:20								
Matrix: WATER								
Total Metals by ICP-MS								
Thorium (Th)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total		0.00054		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon								
Total Organic Carbon		2.4		1.0	mg/L		13-AUG-12	R2416031
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		31-JUL-12	R2409317
Turbidity								
Turbidity		0.52		0.10	NTU		27-JUL-12	R2406891
pH								
pH		7.27		0.10	pH units		27-JUL-12	R2407866
Alkalinity								
Alkalinity, Total (as CaCO3)		10.4		2.0	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)		12.7		2.4	mg/L		31-JUL-12	R2408621
Carbonate (CO3)		<1.2		1.2	mg/L		31-JUL-12	R2408621
Hydroxide (OH)		<0.68		0.68	mg/L		31-JUL-12	R2408621
L1185335-3	SP - 50 - S							
Sampled By: CLIENT on 20-JUL-12 @ 15:13								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		27-JUL-12	R2407866
Bicarbonate (HCO3)		<24		24	mg/L		27-JUL-12	R2407866
Carbonate (CO3)		<12		12	mg/L		27-JUL-12	R2407866
Hydroxide (OH)		<6.8		6.8	mg/L		27-JUL-12	R2407866
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		07-AUG-12	R2412351
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		28-JUL-12	R2409084
Chloride by Ion Chromatography								
Chloride		0.54		0.20	mg/L		28-JUL-12	R2409084
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.45		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a		0.19		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity								
Conductivity		28		20	umhos/cm		27-JUL-12	R2407866
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					31-JUL-12	R2408552
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	31-JUL-12	03-AUG-12	R2411028
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0027		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Arsenic (As)-Dissolved		0.00031		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Barium (Ba)-Dissolved		0.00246		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-3 SP - 50 - S Sampled By: CLIENT on 20-JUL-12 @ 15:13 Matrix: WATER							
Dissolved Metals by ICP-MS							
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	2.62		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00064		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.845		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00166		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	0.00013		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.401		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00066		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.253		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.549		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.0126		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated							
Hardness (as CaCO3)	11.4		0.20	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	11.4		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.490		0.0050	mg/L		08-AUG-12	R2414162

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-3 SP - 50 - S Sampled By: CLIENT on 20-JUL-12 @ 15:13 Matrix: WATER							
Sulfate by Ion Chromatography Sulfate	2.72		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.102		0.050	mg/L	01-AUG-12	05-AUG-12	R2411466
Total Dissolved Solids Total Dissolved Solids	16.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS Aluminum (Al)-Total	0.0163		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	0.00030		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00264		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	2.95		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00093		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.986		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00321		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.446		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00070		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.326		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.638		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.0130		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	0.00052		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon Total Organic Carbon	2.9		1.0	mg/L		13-AUG-12	R2416031
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<1.0		1.0	mg/L		31-JUL-12	R2409317
Turbidity Turbidity	0.56		0.10	NTU		27-JUL-12	R2406891

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-3 SP - 50 - S Sampled By: CLIENT on 20-JUL-12 @ 15:13 Matrix: WATER pH pH	7.28		0.10	pH units		27-JUL-12	R2407866
Alkalinity Alkalinity, Total (as CaCO3)	10.4		2.0	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)	12.6		2.4	mg/L		31-JUL-12	R2408621
Carbonate (CO3)	<1.2		1.2	mg/L		31-JUL-12	R2408621
Hydroxide (OH)	<0.68		0.68	mg/L		31-JUL-12	R2408621
L1185335-4 TPE - 51 - S Sampled By: CLIENT on 21-JUL-12 @ 15:00 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3)	<20		20	mg/L		27-JUL-12	R2407866
Bicarbonate (HCO3)	<24		24	mg/L		27-JUL-12	R2407866
Carbonate (CO3)	<12		12	mg/L		27-JUL-12	R2407866
Hydroxide (OH)	<6.8		6.8	mg/L		27-JUL-12	R2407866
Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		07-AUG-12	R2412351
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		28-JUL-12	R2409084
Chloride by Ion Chromatography Chloride	0.53		0.20	mg/L		28-JUL-12	R2409084
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.32		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.14		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity Conductivity	23		20	umhos/cm		27-JUL-12	R2407866
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					31-JUL-12	R2408552
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	31-JUL-12	03-AUG-12	R2411028
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0025		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Arsenic (As)-Dissolved	0.00045		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Barium (Ba)-Dissolved	0.00269		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	1.80		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00036		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.676		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00195		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	0.00017		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-4 TPE - 51 - S Sampled By: CLIENT on 21-JUL-12 @ 15:00 Matrix: WATER							
Dissolved Metals by ICP-MS							
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.410		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00066		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.113		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.621		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.00833		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.3		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography							
Fluoride	0.060		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated							
Hardness (as CaCO3)	8.05		0.30	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	8.05		0.20	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0207		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0207		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.197		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	2.59		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.072		0.050	mg/L	01-AUG-12	05-AUG-12	R2411466
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0096		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	0.00044		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00267		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-4	TPE - 51 - S							
Sampled By: CLIENT on 21-JUL-12 @ 15:00								
Matrix: WATER								
Total Metals by ICP-MS								
Bismuth (Bi)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total		<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total		<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total		1.98		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total		<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total		0.00058		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total		<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total		<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total		<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total		0.757		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total		0.00296		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total		<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total		0.441		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total		0.00065		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total		<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total		0.168		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total		0.703		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total		0.00845		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total		<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total		<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon								
Total Organic Carbon		2.5		1.0	mg/L		13-AUG-12	R2416031
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		31-JUL-12	R2409317
Turbidity								
Turbidity		0.34		0.10	NTU		27-JUL-12	R2406891
pH								
pH		7.14		0.10	pH units		27-JUL-12	R2407866
Alkalinity								
Alkalinity, Total (as CaCO3)		7.9		2.0	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)		9.7		2.4	mg/L		31-JUL-12	R2408621
Carbonate (CO3)		<1.2		1.2	mg/L		31-JUL-12	R2408621
Hydroxide (OH)		<0.68		0.68	mg/L		31-JUL-12	R2408621
L1185335-5	CREMP - JULY DUP 2							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-5 CREMP - JULY DUP 2							
Sampled By: CLIENT on 21-JUL-12 @ 15:00							
Matrix: WATER							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		27-JUL-12	R2407866
Bicarbonate (HCO3)	<24		24	mg/L		27-JUL-12	R2407866
Carbonate (CO3)	<12		12	mg/L		27-JUL-12	R2407866
Hydroxide (OH)	<6.8		6.8	mg/L		27-JUL-12	R2407866
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		07-AUG-12	R2412351
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		28-JUL-12	R2409084
Chloride by Ion Chromatography							
Chloride	0.53		0.20	mg/L		28-JUL-12	R2409084
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.63		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.17		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	23		20	umhos/cm		27-JUL-12	R2407866
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					31-JUL-12	R2408552
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	31-JUL-12	03-AUG-12	R2411028
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0024		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Arsenic (As)-Dissolved	0.00048		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Barium (Ba)-Dissolved	0.00271		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	1.88		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00051		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.686		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00202		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	0.00016		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.428		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00065		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.101		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.653		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.00860		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-5 CREMP - JULY DUP 2							
Sampled By: CLIENT on 21-JUL-12 @ 15:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.3		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography							
Fluoride	0.059		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated							
Hardness (as CaCO3)	8.60		0.30	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	8.60		0.20	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0205		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0205		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.0405		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	2.59		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.078		0.050	mg/L	01-AUG-12	05-AUG-12	R2411466
Total Dissolved Solids							
Total Dissolved Solids	14.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0099		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	0.00045		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00289		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	2.12		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00064		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.805		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00316		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-5	CREMP - JULY DUP 2							
Sampled By:	CLIENT on 21-JUL-12 @ 15:00							
Matrix:	WATER							
Total Metals by ICP-MS								
Molybdenum (Mo)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020			0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10			0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.470			0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00069			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010			0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.158			0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.755			0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00895			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	0.00156			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050			0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020			0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040			0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon								
Total Organic Carbon	2.5			1.0	mg/L		13-AUG-12	R2416031
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids	<1.0			1.0	mg/L		31-JUL-12	R2409317
Turbidity								
Turbidity	0.39			0.10	NTU		27-JUL-12	R2406891
pH								
pH	7.14			0.10	pH units		27-JUL-12	R2407866
Alkalinity								
Alkalinity, Total (as CaCO3)	7.8			2.0	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)	9.6			2.4	mg/L		31-JUL-12	R2408621
Carbonate (CO3)	<1.2			1.2	mg/L		31-JUL-12	R2408621
Hydroxide (OH)	<0.68			0.68	mg/L		31-JUL-12	R2408621
L1185335-6	TPE - 50 - S							
Sampled By:	CLIENT on 21-JUL-12 @ 15:50							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)	<20			20	mg/L		27-JUL-12	R2407866
Bicarbonate (HCO3)	<24			24	mg/L		27-JUL-12	R2407866
Carbonate (CO3)	<12			12	mg/L		27-JUL-12	R2407866
Hydroxide (OH)	<6.8			6.8	mg/L		27-JUL-12	R2407866
Ammonia by colour								
Ammonia, Total (as N)	<0.010			0.010	mg/L		07-AUG-12	R2412351
Bromide by Ion Chromatography								
Bromide (Br)	<0.10			0.10	mg/L		28-JUL-12	R2409084
Chloride by Ion Chromatography								
Chloride	0.54			0.20	mg/L		28-JUL-12	R2409084
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a	0.59			0.10	ug/L	07-AUG-12	08-AUG-12	R2412668

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-6 TPE - 50 - S Sampled By: CLIENT on 21-JUL-12 @ 15:50 Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry Phaeophytin a	0.17		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity Conductivity	24		20	umhos/cm		27-JUL-12	R2407866
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					31-JUL-12	R2408552
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	31-JUL-12	03-AUG-12	R2411028
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0025		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Arsenic (As)-Dissolved	0.00050		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Barium (Ba)-Dissolved	0.00267		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	1.83		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00043		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.684		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00224		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	0.00017		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.416		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00064		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.110		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.676		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.00858		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon Dissolved Organic Carbon	1.8		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography Fluoride	0.058		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated Hardness (as CaCO3)	8.43		0.20	mg/L		07-AUG-12	
Hardness Calculated							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-6 TPE - 50 - S							
Sampled By: CLIENT on 21-JUL-12 @ 15:50							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	8.43		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0234		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0234		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.143		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	2.73		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.082		0.050	mg/L	01-AUG-12	05-AUG-12	R2411466
Total Dissolved Solids							
Total Dissolved Solids	14.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0115		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	0.00048		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00285		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	2.05		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00063		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.804		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00339		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.468		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00068		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.167		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.776		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00899		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-7 TPN - 50 - S							
Sampled By: CLIENT on 21-JUL-12 @ 14:51							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	1.80		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00046		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.690		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00646		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	0.00020		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.420		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00060		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.114		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.927		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.00876		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.8		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography							
Fluoride	0.056		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated							
Hardness (as CaCO3)	8.12		0.20	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	8.12		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0447		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0447		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.144		0.0050	mg/L		08-AUG-12	R2414162

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-7 TPN - 50 - S							
Sampled By: CLIENT on 21-JUL-12 @ 14:51							
Matrix: WATER							
Sulfate by Ion Chromatography							
Sulfate	3.86		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.087		0.050	mg/L	01-AUG-12	02-AUG-12	R2410214
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0075		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00299		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	1.93		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00059		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.799		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00785		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.454		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00060		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.149		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	1.06		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00902		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon							
Total Organic Carbon	2.1		1.0	mg/L		13-AUG-12	R2416031
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		31-JUL-12	R2409317
Turbidity							
Turbidity	0.23		0.10	NTU		27-JUL-12	R2406891

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-7 TPN - 50 - S Sampled By: CLIENT on 21-JUL-12 @ 14:51 Matrix: WATER pH pH	7.06		0.10	pH units		27-JUL-12	R2407866
Alkalinity Alkalinity, Total (as CaCO3)	7.0		1.0	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)	8.5		1.2	mg/L		31-JUL-12	R2408621
Carbonate (CO3)	<0.60		0.60	mg/L		31-JUL-12	R2408621
Hydroxide (OH)	<0.34		0.34	mg/L		31-JUL-12	R2408621
L1185335-8 TPN - 51 - S Sampled By: CLIENT on 21-JUL-12 @ 15:22 Matrix: WATER Agnico Eagle Meadowbank Routine Water Alkalinity Alkalinity, Total (as CaCO3)	<20		20	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)	<24		24	mg/L		31-JUL-12	R2408621
Carbonate (CO3)	<12		12	mg/L		31-JUL-12	R2408621
Hydroxide (OH)	<6.8		6.8	mg/L		31-JUL-12	R2408621
Ammonia by colour Ammonia, Total (as N)	0.011		0.010	mg/L		07-AUG-12	R2412351
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		28-JUL-12	R2409084
Chloride by Ion Chromatography Chloride	0.59		0.20	mg/L		28-JUL-12	R2409084
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.60		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.20		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity Conductivity	25		20	umhos/cm		31-JUL-12	R2408621
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					31-JUL-12	R2408552
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	31-JUL-12	03-AUG-12	R2411028
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0040		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Barium (Ba)-Dissolved	0.00286		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-JUL-12	03-AUG-12	R2411716
Calcium (Ca)-Dissolved	1.75		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Copper (Cu)-Dissolved	0.00037		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-JUL-12	03-AUG-12	R2411716
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-JUL-12	03-AUG-12	R2411716
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Magnesium (Mg)-Dissolved	0.682		0.010	mg/L	27-JUL-12	03-AUG-12	R2411716
Manganese (Mn)-Dissolved	0.00569		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Molybdenum (Mo)-Dissolved	0.00019		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-8 TPN - 51 - S							
Sampled By: CLIENT on 21-JUL-12 @ 15:22							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-JUL-12	03-AUG-12	R2411716
Potassium (K)-Dissolved	0.418		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Rubidium (Rb)-Dissolved	0.00060		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-JUL-12	03-AUG-12	R2411716
Silicon (Si)-Dissolved	0.112		0.050	mg/L	27-JUL-12	03-AUG-12	R2411716
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Sodium (Na)-Dissolved	0.897		0.020	mg/L	27-JUL-12	03-AUG-12	R2411716
Strontium (Sr)-Dissolved	0.00857		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-JUL-12	03-AUG-12	R2411716
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-JUL-12	03-AUG-12	R2411716
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-JUL-12	03-AUG-12	R2411716
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-JUL-12	03-AUG-12	R2411716
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.2		1.0	mg/L		13-AUG-12	R2416031
Fluoride by Ion Chromatography							
Fluoride	0.057		0.020	mg/L		28-JUL-12	R2409084
Hardness Calculated							
Hardness (as CaCO3)	7.97		0.30	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.97		0.20	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0398		0.0050	mg/L		28-JUL-12	R2409084
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0398		0.0051	mg/L		08-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-JUL-12	R2409084
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		28-JUL-12	R2408168
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		31-JUL-12	R2408745
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.144		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	3.66		0.50	mg/L		28-JUL-12	R2409084
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.094		0.050	mg/L	01-AUG-12	02-AUG-12	R2410214
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		27-JUL-12	R2407295
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		03-AUG-12	R2411028
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0076		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00296		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1185335-8 TPN - 51 - S Sampled By: CLIENT on 21-JUL-12 @ 15:22 Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	1.89		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00055		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.789		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00676		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.450		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00061		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.148		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	1.02		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00885		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon							
Total Organic Carbon	2.1		1.0	mg/L		13-AUG-12	R2416031
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		31-JUL-12	R2409317
Turbidity							
Turbidity	0.21		0.10	NTU		27-JUL-12	R2406891
pH							
pH	7.19		0.10	pH units		31-JUL-12	R2408621
Alkalinity							
Alkalinity, Total (as CaCO3)	6.9		1.0	mg/L		31-JUL-12	R2408621
Bicarbonate (HCO3)	8.5		1.2	mg/L		31-JUL-12	R2408621
Carbonate (CO3)	<0.60		0.60	mg/L		31-JUL-12	R2408621
Hydroxide (OH)	<0.34		0.34	mg/L		31-JUL-12	R2408621

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.			
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.			
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourimetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



L1185335-COFC

COC # L1184335

Page 1 of 1

Report To			Repl...			Service Requested (Rush for routine analysis subject to availability)											
Company: Azimuth Consulting Group			☐ Standard ☐ Other			☒ Regular (Standard Turnaround Times - Business Days)											
Contact: Maggie McConnell / Gary Mann			☒ PDF ☒ Excel ☐ Digital ☐ Fax			☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT											
Address: 218 - 2902 West Broadway			Email 1: mmcconnell@azimuthgroup.ca			☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT											
Vancouver, BC, V6K 2G8			Email 2: gmann@azimuthgroup.ca			☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT											
Phone: 604-730-1220 Fax: 604-739-8511			Email 3: ryanengen@agnico-eagle.com			Analysis Request											
Invoice To Same as Report ? ☒ Yes ☐ No			Client / Project Information			Please indicate below Filtered, Preserved or both (F, P, F/P)											
Hardcopy of Invoice with Report? ☐ Yes ☒ No			Job #: Meadowbank CREMP 2012														
Company:			PO / AFE:														
Contact:			LSD:														
Address:																	
Phone: Fax:			Quote #: Q33259														
Lab Work Order # (lab use only)			ALS Contact: Judy Dalmaijer			Sampler:			AZM-AEM-MB-ROU-WP								
Sample #			Sample Identification (This description will appear on the report)			Date (dd-mmm-yy)						Time (hh:mm)			Sample Type		
			SP - 51 - S			20-Jul-12						14:20			Water		
			CREMP - JULY DUP 1			20-Jul-12						14:20			Water		
			SP - 50 - S			20-Jul-12						15:13			Water		
			TPE - 51 - S			21-Jul-12						15:00			Water		
			CREMP - JULY DUP 2			21-Jul-12						15:00			Water		
			TPE - 50 - S			21-Jul-12						15:50			Water		
			TPN - 50 - S			22-Jul-12						14:51			Water		
			TPN - 51 - S			22-Jul-12						15:22			Water		
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																	
*** (1) there are no Chlorophyll-a filters for samples with IDs including "EB-" and for "travel/trip blank" samples; however, all other analyses should be conducted on these samples. (2) 500 mL of water was filtered for all Chlorophyll-a sample filters included in this shipment.***																	
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																	
By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.																	
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																	
SHIPMENT RELEASE (client use)					SHIPMENT RECEPTION (lab use only)					SHIPMENT VERIFICATION (lab use only)							
Released by:		Date (dd-mmm-yy)		Time (hh-mm)	Received by:		Date:		Time:	Temperature:		Verified by:		Date:	Time:	Observations Yes / No ? If Yes add	
					Jones		27-Jul-12		10:49	19.2 °C							



Azimuth Consulting Group Inc.
ATTN: MAGGIE MCCONNELL / GARY MANN
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 01-AUG-12
Report Date: 17-AUG-12 12:30 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1187354
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-1 INUG-38-S							
Sampled By: CLIENT on 25-JUL-12 @ 10:45							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		01-AUG-12	R2409658
Bicarbonate (HCO3)	<24		24	mg/L		01-AUG-12	R2409658
Carbonate (CO3)	<12		12	mg/L		01-AUG-12	R2409658
Hydroxide (OH)	<6.8		6.8	mg/L		01-AUG-12	R2409658
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	0.59		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.47		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.19		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	<20		20	umhos/cm		01-AUG-12	R2409658
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0034		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.00182		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	0.945		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00039		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	0.671		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00180		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.330		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00042		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.231		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.500		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00542		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-1 INUG-38-S							
Sampled By: CLIENT on 25-JUL-12 @ 10:45							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.1		1.0	mg/L		15-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.048		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	5.12		0.20	mg/L		14-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	5.47		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.368		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	0.78		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.100		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	8.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0148		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00201		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	1.06		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00061		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.688		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-1	INUG-38-S							
Sampled By:	CLIENT on 25-JUL-12 @ 10:45							
Matrix:	WATER							
Total Metals by ICP-MS								
Manganese (Mn)-Total	0.00482			0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020			0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10			0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.361			0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00051			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010			0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.258			0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.560			0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00599			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050			0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020			0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040			0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon								
Total Organic Carbon	3.3			1.0	mg/L		15-AUG-12	R2417724
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids	<1.0			1.0	mg/L		03-AUG-12	R2411500
Turbidity								
Turbidity	0.39			0.10	NTU		01-AUG-12	R2409814
pH								
pH	7.07			0.10	pH units		01-AUG-12	R2409658
Miscellaneous Parameters								
Conductivity	12.0			1.0	umhos/cm		03-AUG-12	R2410739
Alkalinity								
Alkalinity, Total (as CaCO3)	6.2	DLMB		2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	7.6	DLMB		2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB		1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB		0.68	mg/L		04-AUG-12	R2411744
L1187354-2	INUG-39-S							
Sampled By:	CLIENT on 25-JUL-12 @ 11:10							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)	<20			20	mg/L		01-AUG-12	R2409658
Bicarbonate (HCO3)	<24			24	mg/L		01-AUG-12	R2409658
Carbonate (CO3)	<12			12	mg/L		01-AUG-12	R2409658
Hydroxide (OH)	<6.8			6.8	mg/L		01-AUG-12	R2409658
Ammonia by colour								
Ammonia, Total (as N)	<0.010			0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography								
Bromide (Br)	<0.10			0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography								
Chloride	0.59			0.20	mg/L		03-AUG-12	R2412129

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-2 INUG-39-S							
Sampled By: CLIENT on 25-JUL-12 @ 11:10							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.49		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.22		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	<20		20	umhos/cm		01-AUG-12	R2409658
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0031		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.00175		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	0.956		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00036		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	0.656		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00183		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.322		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00044		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.212		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.473		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00545		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.1		1.0	mg/L		15-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.049		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	5.09		0.20	mg/L		14-AUG-12	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-2 INUG-39-S							
Sampled By: CLIENT on 25-JUL-12 @ 11:10							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	5.58		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.367		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	0.76		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.107		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	10.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0133		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00201		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	1.09		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00070		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.696		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00499		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.365		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00051		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.257		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.559		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00609		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-2 INUG-39-S Sampled By: CLIENT on 25-JUL-12 @ 11:10 Matrix: WATER							
Total Metals by ICP-MS							
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon							
Total Organic Carbon	2.9		1.0	mg/L		15-AUG-12	R2417724
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	0.38		0.10	NTU		01-AUG-12	R2409814
pH							
pH	7.10		0.10	pH units		01-AUG-12	R2409658
Miscellaneous Parameters							
Conductivity	12.2		1.0	umhos/cm		03-AUG-12	R2410739
Alkalinity							
Alkalinity, Total (as CaCO3)	6.2	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	7.6	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1187354-3 TPS-33-S Sampled By: CLIENT on 25-JUL-12 @ 15:30 Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		01-AUG-12	R2409658
Bicarbonate (HCO3)	<24		24	mg/L		01-AUG-12	R2409658
Carbonate (CO3)	<12		12	mg/L		01-AUG-12	R2409658
Hydroxide (OH)	<6.8		6.8	mg/L		01-AUG-12	R2409658
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	0.58		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.37		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.17		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	24		20	umhos/cm		01-AUG-12	R2409658
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.00271		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-3 TPS-33-S Sampled By: CLIENT on 25-JUL-12 @ 15:30 Matrix: WATER							
Dissolved Metals by ICP-MS							
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	1.61		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00036		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	0.766		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00408		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	0.00018		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.408		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00055		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.116		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.854		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00789		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.4		1.0	mg/L		15-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.052		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	7.51		0.30	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.16		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0428		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0438		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-3 TPS-33-S							
Sampled By: CLIENT on 25-JUL-12 @ 15:30							
Matrix: WATER							
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.183		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	3.25		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.111		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0080		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.00299		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	1.78		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00051		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.742		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00526		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.435		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00061		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.154		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.956		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00827		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon							
Total Organic Carbon	2.4		1.0	mg/L		16-AUG-12	R2417724
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-3	TPS-33-S							
Sampled By:	CLIENT on 25-JUL-12 @ 15:30							
Matrix:	WATER							
Turbidity								
Turbidity		0.22		0.10	NTU		01-AUG-12	R2409814
pH								
pH		7.16		0.10	pH units		01-AUG-12	R2409658
Alkalinity								
Alkalinity, Total (as CaCO3)		6.8	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)		8.3	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1187354-4	TPS-34-S							
Sampled By:	CLIENT on 25-JUL-12 @ 16:00							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		01-AUG-12	R2409658
Bicarbonate (HCO3)		<24		24	mg/L		01-AUG-12	R2409658
Carbonate (CO3)		<12		12	mg/L		01-AUG-12	R2409658
Hydroxide (OH)		<6.8		6.8	mg/L		01-AUG-12	R2409658
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography								
Chloride		0.60		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.47		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a		0.23		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity								
Conductivity		24		20	umhos/cm		01-AUG-12	R2409658
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0025		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved		0.00270		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved		<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved		1.62		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved		0.00036		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved		0.756		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved		0.00372		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-4 TPS-34-S Sampled By: CLIENT on 25-JUL-12 @ 16:00 Matrix: WATER							
Dissolved Metals by ICP-MS							
Molybdenum (Mo)-Dissolved	0.00018		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.405		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00053		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.137		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.835		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00778		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	0.00046		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.3		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.053		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	7.14		0.20	mg/L		14-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	8.04		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0428		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0428		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.184		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	3.21		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.106		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0086		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-4 TPS-34-S Sampled By: CLIENT on 25-JUL-12 @ 16:00 Matrix: WATER							
Total Metals by ICP-MS							
Barium (Ba)-Total	0.00302		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	1.88		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00063		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	0.810		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00522		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.461		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00064		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.153		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.999		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.00887		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon							
Total Organic Carbon	2.5		1.0	mg/L		16-AUG-12	R2417724
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	0.22		0.10	NTU		01-AUG-12	R2409814
pH							
pH	7.11		0.10	pH units		01-AUG-12	R2409658
Alkalinity							
Alkalinity, Total (as CaCO3)	6.9		1.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	8.4		1.2	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<0.60		0.60	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.34		0.34	mg/L		04-AUG-12	R2411744

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-5 CREMP-JULY-EB1							
Sampled By: CLIENT on 25-JUL-12 @ 18:00							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		01-AUG-12	R2409658
Bicarbonate (HCO3)	<24		24	mg/L		01-AUG-12	R2409658
Carbonate (CO3)	<12		12	mg/L		01-AUG-12	R2409658
Hydroxide (OH)	<6.8		6.8	mg/L		01-AUG-12	R2409658
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	<0.20		0.20	mg/L		03-AUG-12	R2412129
Conductivity							
Conductivity	<20		20	umhos/cm		01-AUG-12	R2409658
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	<0.050		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	<0.020		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-5 CREMP-JULY-EB1							
Sampled By: CLIENT on 25-JUL-12 @ 18:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.4		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		14-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		08-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.0422		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	03-AUG-12	07-AUG-12	R2412345
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Barium (Ba)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	07-AUG-12	R2412345
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	07-AUG-12	R2412345
Calcium (Ca)-Total	<0.10		0.10	mg/L	03-AUG-12	07-AUG-12	R2412345
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	07-AUG-12	R2412345
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	07-AUG-12	R2412345
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Copper (Cu)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	07-AUG-12	R2412345
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	07-AUG-12	R2412345
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	07-AUG-12	R2412345
Magnesium (Mg)-Total	<0.010		0.010	mg/L	03-AUG-12	07-AUG-12	R2412345
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	03-AUG-12	07-AUG-12	R2412345
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	07-AUG-12	R2412345

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-5	CREMP-JULY-EB1						
Sampled By:	CLIENT on 25-JUL-12 @ 18:00						
Matrix:	WATER						
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	07-AUG-12	R2412345
Potassium (K)-Total	<0.020		0.020	mg/L	03-AUG-12	07-AUG-12	R2412345
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	07-AUG-12	R2412345
Silicon (Si)-Total	<0.050		0.050	mg/L	03-AUG-12	07-AUG-12	R2412345
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	07-AUG-12	R2412345
Sodium (Na)-Total	<0.030		0.030	mg/L	03-AUG-12	07-AUG-12	R2412345
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	03-AUG-12	07-AUG-12	R2412345
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	07-AUG-12	R2412345
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	07-AUG-12	R2412345
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	07-AUG-12	R2412345
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	07-AUG-12	R2412345
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	07-AUG-12	R2412345
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	07-AUG-12	R2412345
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	07-AUG-12	R2412345
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	07-AUG-12	R2412345
Total Organic Carbon							
Total Organic Carbon	1.3		1.0	mg/L		16-AUG-12	R2417724
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	<0.10		0.10	NTU		01-AUG-12	R2409814
pH							
pH	6.02		0.10	pH units		01-AUG-12	R2409658
Miscellaneous Parameters							
Conductivity	<1.0		1.0	umhos/cm		03-AUG-12	R2410739
Alkalinity							
Alkalinity, Total (as CaCO3)	2.0	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	2.5	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1187354-6	BAP-22-S						
Sampled By:	CLIENT on 27-JUL-12 @ 10:30						
Matrix:	WATER						
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		01-AUG-12	R2409658
Bicarbonate (HCO3)	<24		24	mg/L		01-AUG-12	R2409658
Carbonate (CO3)	<12		12	mg/L		01-AUG-12	R2409658
Hydroxide (OH)	<6.8		6.8	mg/L		01-AUG-12	R2409658
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	34.8		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.82		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.16		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-6 BAP-22-S Sampled By: CLIENT on 27-JUL-12 @ 10:30 Matrix: WATER							
Conductivity Conductivity	156		20	umhos/cm		01-AUG-12	R2409658
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0049		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	0.00024		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.0172		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	2.92		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00039		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	3.55		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00088		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	1.03		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00088		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.287		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	19.0		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.0289		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon Dissolved Organic Carbon	3.7		1.0	mg/L		16-AUG-12	R2418527
Fluoride by Ion Chromatography Fluoride	0.046		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated Hardness (as CaCO3)	23.6		0.30	mg/L		07-AUG-12	
Hardness Calculated Hardness (as CaCO3)	21.9		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-6 BAP-22-S							
Sampled By: CLIENT on 27-JUL-12 @ 10:30							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0285		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0285		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.459		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	5.33		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.169		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	90.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0161		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.0181		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	0.011		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	3.39		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00049		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	3.67		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00319		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	1.18		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00103		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.307		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	22.1		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.0315		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-7 BAP-21-S							
Sampled By: CLIENT on 27-JUL-12 @ 11:15							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Calcium (Ca)-Dissolved	2.88		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00052		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	3.41		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00089		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	1.01		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00085		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.305		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	18.4		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.0280		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.3		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.050		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	21.2		0.20	mg/L		14-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	23.2		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0293		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0293		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.380		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	5.48		0.50	mg/L		03-AUG-12	R2412129

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-7 BAP-21-S							
Sampled By: CLIENT on 27-JUL-12 @ 11:15							
Matrix: WATER							
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.168		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	82.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0161		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.0178		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	0.011		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	3.34		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00054		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	3.62		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00336		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	1.18		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00103		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.301		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	22.1		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.0307		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon							
Total Organic Carbon	4.4		1.0	mg/L		16-AUG-12	R2417724
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	0.30		0.10	NTU		01-AUG-12	R2409814
pH							
pH	7.27		0.10	pH units		01-AUG-12	R2409658

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-7 BAP-21-S Sampled By: CLIENT on 27-JUL-12 @ 11:15 Matrix: WATER							
Alkalinity							
Alkalinity, Total (as CaCO3)	10.5	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	12.8	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1187354-8 BPJ-21-S Sampled By: CLIENT on 27-JUL-12 @ 13:20 Matrix: WATER Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		02-AUG-12	R2410487
Bicarbonate (HCO3)	<24		24	mg/L		02-AUG-12	R2410487
Carbonate (CO3)	<12		12	mg/L		02-AUG-12	R2410487
Hydroxide (OH)	<6.8		6.8	mg/L		02-AUG-12	R2410487
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	3.25		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	1.48		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.32		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	34		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0108		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.0183		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	2.28		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00033		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	1.30		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00089		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.404		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-8 BPJ-21-S							
Sampled By: CLIENT on 27-JUL-12 @ 13:20							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Rubidium (Rb)-Dissolved	0.00071		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.353		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	1.57		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.0167		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.4		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.049		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	12.1		0.30	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	11.1		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0169		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0169		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.505		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	0.86		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.179		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	24.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0180		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.0193		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-9 BPJ-22-S							
Sampled By: CLIENT on 27-JUL-12 @ 13:45							
Matrix: WATER							
Alkalinity							
Bicarbonate (HCO3)	<24		24	mg/L		02-AUG-12	R2410487
Carbonate (CO3)	<12		12	mg/L		02-AUG-12	R2410487
Hydroxide (OH)	<6.8		6.8	mg/L		02-AUG-12	R2410487
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	3.05		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	1.34		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.25		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	33		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0056		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.0181		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	2.35		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00031		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	1.43		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00127		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.442		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00070		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.330		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	1.63	DLM	0.20	mg/L	01-AUG-12	14-AUG-12	R2417047
Strontium (Sr)-Dissolved	0.0172		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-9 BPJ-22-S							
Sampled By: CLIENT on 27-JUL-12 @ 13:45							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.8		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.048		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	11.7		0.20	mg/L		15-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	11.6		0.30	mg/L		07-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0163		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0163		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.481		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	0.84		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.196		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	24.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0149		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.0185		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	2.52		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00047		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	1.29		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00491		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-9	BPJ-22-S							
Sampled By:	CLIENT on 27-JUL-12 @ 13:45							
Matrix:	WATER							
Total Metals by ICP-MS								
Nickel (Ni)-Total	<0.0020			0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10			0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.440			0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00079			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010			0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.316			0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	1.99			0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.0176			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050			0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010			0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020			0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020			0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040			0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon								
Total Organic Carbon	4.4			1.0	mg/L		16-AUG-12	R2417724
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids	<1.0			1.0	mg/L		03-AUG-12	R2411500
Turbidity								
Turbidity	0.36			0.10	NTU		01-AUG-12	R2409814
pH								
pH	7.18			0.10	pH units		02-AUG-12	R2410487
Alkalinity								
Alkalinity, Total (as CaCO3)	10.6	DLMB		2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	12.9	DLMB		2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB		1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB		0.68	mg/L		04-AUG-12	R2411744
L1187354-10	BBD-21-S							
Sampled By:	CLIENT on 27-JUL-12 @ 14:23							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)	<20			20	mg/L		02-AUG-12	R2410487
Bicarbonate (HCO3)	<24			24	mg/L		02-AUG-12	R2410487
Carbonate (CO3)	<12			12	mg/L		02-AUG-12	R2410487
Hydroxide (OH)	<6.8			6.8	mg/L		02-AUG-12	R2410487
Ammonia by colour								
Ammonia, Total (as N)	<0.010			0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography								
Bromide (Br)	<0.10			0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography								
Chloride	1.41			0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a	1.35			0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.28			0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-10 BBD-21-S Sampled By: CLIENT on 27-JUL-12 @ 14:23 Matrix: WATER							
Conductivity Conductivity	27		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0058		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.0184		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	2.30		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00030		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	1.20		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00066		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.383		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00068		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.335		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.678		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.0157		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon Dissolved Organic Carbon	3.9		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography Fluoride	0.052		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated Hardness (as CaCO3)	11.2		0.30	mg/L		07-AUG-12	
Hardness Calculated Hardness (as CaCO3)	10.7		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-10 BBD-21-S							
Sampled By: CLIENT on 27-JUL-12 @ 14:23							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0175		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0175		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.505		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	0.61		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.201		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0155		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.0193		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	2.55		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00049		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	1.18		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00421		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.406		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00079		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.321		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.734		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.0172		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-11 CREMP-JULY-DUP 3							
Sampled By: CLIENT on 27-JUL-12 @ 14:23							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Calcium (Ca)-Dissolved	2.23		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00030		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	1.18		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00066		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.373		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00068		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.352		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.681		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.0158		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.8		1.0	mg/L		16-AUG-12	R2418527
Fluoride by Ion Chromatography							
Fluoride	0.048		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	11.2		0.30	mg/L		07-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	10.5		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0147		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0147		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.505		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	0.66		0.50	mg/L		03-AUG-12	R2412129

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-11 CREMP-JULY-DUP 3							
Sampled By: CLIENT on 27-JUL-12 @ 14:23							
Matrix: WATER							
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.173		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	20.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0155		0.0050	mg/L	03-AUG-12	03-AUG-12	R2411716
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Arsenic (As)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Barium (Ba)-Total	0.0186		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Boron (B)-Total	<0.010		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	03-AUG-12	03-AUG-12	R2411716
Calcium (Ca)-Total	2.53		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Copper (Cu)-Total	0.00050		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Iron (Fe)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Lead (Pb)-Total	<0.000090		0.000090	mg/L	03-AUG-12	03-AUG-12	R2411716
Lithium (Li)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Magnesium (Mg)-Total	1.19		0.010	mg/L	03-AUG-12	03-AUG-12	R2411716
Manganese (Mn)-Total	0.00423		0.00030	mg/L	03-AUG-12	03-AUG-12	R2411716
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Phosphorus (P)-Total	<0.10		0.10	mg/L	03-AUG-12	03-AUG-12	R2411716
Potassium (K)-Total	0.408		0.020	mg/L	03-AUG-12	03-AUG-12	R2411716
Rubidium (Rb)-Total	0.00078		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Selenium (Se)-Total	<0.0010		0.0010	mg/L	03-AUG-12	03-AUG-12	R2411716
Silicon (Si)-Total	0.308		0.050	mg/L	03-AUG-12	03-AUG-12	R2411716
Silver (Ag)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Sodium (Na)-Total	0.977		0.030	mg/L	03-AUG-12	03-AUG-12	R2411716
Strontium (Sr)-Total	0.0171		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Thorium (Th)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Tin (Sn)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	03-AUG-12	03-AUG-12	R2411716
Tungsten (W)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Uranium (U)-Total	<0.00010		0.00010	mg/L	03-AUG-12	03-AUG-12	R2411716
Vanadium (V)-Total	<0.00020		0.00020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	03-AUG-12	03-AUG-12	R2411716
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	03-AUG-12	03-AUG-12	R2411716
Total Organic Carbon							
Total Organic Carbon	4.9		1.0	mg/L		16-AUG-12	R2418527
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	0.37		0.10	NTU		01-AUG-12	R2409814
pH							
pH	7.20		0.10	pH units		02-AUG-12	R2410487

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-11 CREMP-JULY-DUP 3 Sampled By: CLIENT on 27-JUL-12 @ 14:23 Matrix: WATER							
Alkalinity							
Alkalinity, Total (as CaCO3)	10.6	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	12.9	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1187354-12 BBD-22-S Sampled By: CLIENT on 27-JUL-12 @ 14:50 Matrix: WATER Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		02-AUG-12	R2410487
Bicarbonate (HCO3)	<24		24	mg/L		02-AUG-12	R2410487
Carbonate (CO3)	<12		12	mg/L		02-AUG-12	R2410487
Hydroxide (OH)	<6.8		6.8	mg/L		02-AUG-12	R2410487
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		16-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	2.43		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	1.33		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	0.25		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	31		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0056		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.0182		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	2.27		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00034		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	1.24		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00085		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.392		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-12 BBD-22-S Sampled By: CLIENT on 27-JUL-12 @ 14:50 Matrix: WATER							
Dissolved Metals by ICP-MS							
Rubidium (Rb)-Dissolved	0.00070		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.354		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	1.18		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.0164		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	5.0		1.0	mg/L		16-AUG-12	R2418527
Fluoride by Ion Chromatography							
Fluoride	0.048		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	10.8		0.20	mg/L		14-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	11.1		0.30	mg/L		10-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0167		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0167		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.497		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	0.75		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.175		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	22.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0154		0.0050	mg/L	09-AUG-12	09-AUG-12	R2414077
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Arsenic (As)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Barium (Ba)-Total	0.0193		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Boron (B)-Total	<0.010		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-12 BBD-22-S							
Sampled By: CLIENT on 27-JUL-12 @ 14:50							
Matrix: WATER							
Total Metals by ICP-MS							
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	09-AUG-12	09-AUG-12	R2414077
Calcium (Ca)-Total	2.55		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Copper (Cu)-Total	0.00037		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Iron (Fe)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Lead (Pb)-Total	<0.000090		0.000090	mg/L	09-AUG-12	09-AUG-12	R2414077
Lithium (Li)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Magnesium (Mg)-Total	1.16		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Manganese (Mn)-Total	0.00473		0.00030	mg/L	09-AUG-12	09-AUG-12	R2414077
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Phosphorus (P)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Potassium (K)-Total	0.412		0.020	mg/L	09-AUG-12	09-AUG-12	R2414077
Rubidium (Rb)-Total	0.00073		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Selenium (Se)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Silicon (Si)-Total	0.306		0.050	mg/L	09-AUG-12	09-AUG-12	R2414077
Silver (Ag)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Sodium (Na)-Total	1.35		0.030	mg/L	09-AUG-12	09-AUG-12	R2414077
Strontium (Sr)-Total	0.0179		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Thorium (Th)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tin (Sn)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	09-AUG-12	09-AUG-12	R2414077
Tungsten (W)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Uranium (U)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Vanadium (V)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	09-AUG-12	09-AUG-12	R2414077
Total Organic Carbon							
Total Organic Carbon	5.2		1.0	mg/L		16-AUG-12	R2418527
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	0.25		0.10	NTU		01-AUG-12	R2409814
pH							
pH	7.19		0.10	pH units		02-AUG-12	R2410487
Alkalinity							
Alkalinity, Total (as CaCO3)	10.5	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	12.8	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1187354-13 TEFF-21-S							
Sampled By: CLIENT on 28-JUL-12 @ 10:30							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		02-AUG-12	R2410487

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-13 TEFF-21-S							
Sampled By: CLIENT on 28-JUL-12 @ 10:30							
Matrix: WATER							
Alkalinity							
Bicarbonate (HCO3)	<24		24	mg/L		02-AUG-12	R2410487
Carbonate (CO3)	<12		12	mg/L		02-AUG-12	R2410487
Hydroxide (OH)	<6.8		6.8	mg/L		02-AUG-12	R2410487
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		16-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	0.49		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.42		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a	<0.10		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	<20		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0023		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.00214		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	1.33		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00031		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	0.617		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00064		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.345		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00059		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.204		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.493		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00698		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-13 TEFF-21-S							
Sampled By: CLIENT on 28-JUL-12 @ 10:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.7		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.055		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	5.87		0.20	mg/L		14-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	6.29		0.30	mg/L		10-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.333		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	1.71		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.087		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	10.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0082		0.0050	mg/L	09-AUG-12	09-AUG-12	R2414077
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Arsenic (As)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Barium (Ba)-Total	0.00219		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Boron (B)-Total	<0.010		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	09-AUG-12	09-AUG-12	R2414077
Calcium (Ca)-Total	1.54		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Copper (Cu)-Total	0.00052		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Iron (Fe)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Lead (Pb)-Total	<0.000090		0.000090	mg/L	09-AUG-12	09-AUG-12	R2414077
Lithium (Li)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Magnesium (Mg)-Total	0.593		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Manganese (Mn)-Total	0.00169		0.00030	mg/L	09-AUG-12	09-AUG-12	R2414077
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-14 TEFF-22-S							
Sampled By: CLIENT on 28-JUL-12 @ 10:50							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Phaeophytin a	<0.10		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity							
Conductivity	<20		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0023		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.00203		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	1.28		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00033		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	0.594		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00063		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.335		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00061		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.186		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.489		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00688		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.7		1.0	mg/L		16-AUG-12	R2417724
Fluoride by Ion Chromatography							
Fluoride	0.050		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	5.65		0.20	mg/L		14-AUG-12	
Hardness Calculated							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-14 TEFF-22-S							
Sampled By: CLIENT on 28-JUL-12 @ 10:50							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	5.94		0.30	mg/L		10-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.153		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	1.68		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.071		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	10.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0077		0.0050	mg/L	09-AUG-12	09-AUG-12	R2414077
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Arsenic (As)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Barium (Ba)-Total	0.00221		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Boron (B)-Total	<0.010		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	09-AUG-12	09-AUG-12	R2414077
Calcium (Ca)-Total	1.43		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Copper (Cu)-Total	0.00041		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Iron (Fe)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Lead (Pb)-Total	<0.000090		0.000090	mg/L	09-AUG-12	09-AUG-12	R2414077
Lithium (Li)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Magnesium (Mg)-Total	0.575		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Manganese (Mn)-Total	0.00151		0.00030	mg/L	09-AUG-12	09-AUG-12	R2414077
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Phosphorus (P)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Potassium (K)-Total	0.365		0.020	mg/L	09-AUG-12	09-AUG-12	R2414077
Rubidium (Rb)-Total	0.00066		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Selenium (Se)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Silicon (Si)-Total	0.185		0.050	mg/L	09-AUG-12	09-AUG-12	R2414077
Silver (Ag)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Sodium (Na)-Total	0.548		0.030	mg/L	09-AUG-12	09-AUG-12	R2414077
Strontium (Sr)-Total	0.00756		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-15 TE-50-S							
Sampled By: CLIENT on 28-JUL-12 @ 11:20							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	1.74		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00042		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	0.725		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00079		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.360		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00059		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.235		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.510		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00877		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		16-AUG-12	R2418527
Fluoride by Ion Chromatography							
Fluoride	0.055		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	7.32		0.20	mg/L		14-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.93		0.30	mg/L		10-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-15 TE-50-S							
Sampled By: CLIENT on 28-JUL-12 @ 11:20							
Matrix: WATER							
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.358		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	1.99		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.085		0.050	mg/L	03-AUG-12	05-AUG-12	R2411479
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0111		0.0050	mg/L	09-AUG-12	09-AUG-12	R2414077
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Arsenic (As)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Barium (Ba)-Total	0.00241		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Boron (B)-Total	<0.010		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	09-AUG-12	09-AUG-12	R2414077
Calcium (Ca)-Total	2.01		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Copper (Cu)-Total	0.00059		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Iron (Fe)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Lead (Pb)-Total	<0.000090		0.000090	mg/L	09-AUG-12	09-AUG-12	R2414077
Lithium (Li)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Magnesium (Mg)-Total	0.709		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Manganese (Mn)-Total	0.00192		0.00030	mg/L	09-AUG-12	09-AUG-12	R2414077
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Phosphorus (P)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Potassium (K)-Total	0.394		0.020	mg/L	09-AUG-12	09-AUG-12	R2414077
Rubidium (Rb)-Total	0.00066		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Selenium (Se)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Silicon (Si)-Total	0.238		0.050	mg/L	09-AUG-12	09-AUG-12	R2414077
Silver (Ag)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Sodium (Na)-Total	0.587		0.030	mg/L	09-AUG-12	09-AUG-12	R2414077
Strontium (Sr)-Total	0.00972		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Thorium (Th)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tin (Sn)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	09-AUG-12	09-AUG-12	R2414077
Tungsten (W)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Uranium (U)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Vanadium (V)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	09-AUG-12	09-AUG-12	R2414077
Total Organic Carbon							
Total Organic Carbon	2.1		1.0	mg/L		16-AUG-12	R2418527
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-15	TE-50-S							
Sampled By: CLIENT on 28-JUL-12 @ 11:20								
Matrix: WATER								
Turbidity								
Turbidity		0.36		0.10	NTU		01-AUG-12	R2409814
pH								
pH		7.18		0.10	pH units		02-AUG-12	R2410487
Alkalinity								
Alkalinity, Total (as CaCO3)		7.9	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)		9.6	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1187354-16	TE-51-S							
Sampled By: CLIENT on 28-JUL-12 @ 11:50								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		02-AUG-12	R2410487
Bicarbonate (HCO3)		<24		24	mg/L		02-AUG-12	R2410487
Carbonate (CO3)		<12		12	mg/L		02-AUG-12	R2410487
Hydroxide (OH)		<6.8		6.8	mg/L		02-AUG-12	R2410487
Ammonia by colour								
Ammonia, Total (as N)		0.020		0.010	mg/L		16-AUG-12	R2418030
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography								
Chloride		0.49		0.20	mg/L		03-AUG-12	R2412129
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.33		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Phaeophytin a		<0.10		0.10	ug/L	07-AUG-12	08-AUG-12	R2412668
Conductivity								
Conductivity		21		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0027		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved		0.00200		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved		<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved		1.75		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved		0.00043		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved		0.733		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved		0.00082		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-16 TE-51-S							
Sampled By: CLIENT on 28-JUL-12 @ 11:50							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.363		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00059		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.249		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.516		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.00881		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		16-AUG-12	R2418527
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	7.81		0.30	mg/L		10-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.39		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Sulfate by Ion Chromatography							
Sulfate	1.97		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.090		0.050	mg/L	08-AUG-12	08-AUG-12	R2413466
Total Dissolved Solids							
Total Dissolved Solids	14.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0107		0.0050	mg/L	09-AUG-12	09-AUG-12	R2414077
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Arsenic (As)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Barium (Ba)-Total	0.00223		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-16 TE-51-S Sampled By: CLIENT on 28-JUL-12 @ 11:50 Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Boron (B)-Total	<0.010		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	09-AUG-12	09-AUG-12	R2414077
Calcium (Ca)-Total	1.97		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Copper (Cu)-Total	0.00061		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Iron (Fe)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Lead (Pb)-Total	<0.000090		0.000090	mg/L	09-AUG-12	09-AUG-12	R2414077
Lithium (Li)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Magnesium (Mg)-Total	0.702		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Manganese (Mn)-Total	0.00190		0.00030	mg/L	09-AUG-12	09-AUG-12	R2414077
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Phosphorus (P)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Potassium (K)-Total	0.394		0.020	mg/L	09-AUG-12	09-AUG-12	R2414077
Rubidium (Rb)-Total	0.00065		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Selenium (Se)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Silicon (Si)-Total	0.238		0.050	mg/L	09-AUG-12	09-AUG-12	R2414077
Silver (Ag)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Sodium (Na)-Total	0.581		0.030	mg/L	09-AUG-12	09-AUG-12	R2414077
Strontium (Sr)-Total	0.00959		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Thorium (Th)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tin (Sn)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	09-AUG-12	09-AUG-12	R2414077
Tungsten (W)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Uranium (U)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Vanadium (V)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	09-AUG-12	09-AUG-12	R2414077
Total Organic Carbon							
Total Organic Carbon	2.1		1.0	mg/L		16-AUG-12	R2418527
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	0.34		0.10	NTU		01-AUG-12	R2409814
pH							
pH	7.17		0.10	pH units		02-AUG-12	R2410487
Miscellaneous Parameters							
Silica, Reactive (as SiO2)	<1.0		1.0	mg/L		03-AUG-12	R2414055
Silica, Reactive (as SiO2)	0.292		0.0050	mg/L		08-AUG-12	R2414162
Alkalinity							
Alkalinity, Total (as CaCO3)	7.8	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	9.5	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-17 TRAVEL BLANKS							
Sampled By: CLIENT on 28-JUL-12							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Alkalinity							
Alkalinity, Total (as CaCO3)	<20		20	mg/L		02-AUG-12	R2410487
Bicarbonate (HCO3)	<24		24	mg/L		02-AUG-12	R2410487
Carbonate (CO3)	<12		12	mg/L		02-AUG-12	R2410487
Hydroxide (OH)	<6.8		6.8	mg/L		02-AUG-12	R2410487
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		15-AUG-12	R2418030
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		03-AUG-12	R2412129
Chloride by Ion Chromatography							
Chloride	<0.20		0.20	mg/L		03-AUG-12	R2412129
Conductivity							
Conductivity	<20		20	umhos/cm		02-AUG-12	R2410487
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					02-AUG-12	R2410350
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	02-AUG-12	09-AUG-12	R2413738
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	01-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	<0.050		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	01-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	01-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	01-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	01-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	<0.020		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	01-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	01-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	01-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	01-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	01-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-17 TRAVEL BLANKS							
Sampled By: CLIENT on 28-JUL-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	01-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	01-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		16-AUG-12	R2418527
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		03-AUG-12	R2412129
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		10-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		03-AUG-12	R2412129
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		03-AUG-12	R2412129
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-AUG-12	R2409985
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-AUG-12	R2410372
Reactive Silica by colour							
Silica, Reactive (as SiO2)	<0.0050		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		03-AUG-12	R2412129
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	10-AUG-12	14-AUG-12	R2416704
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		02-AUG-12	R2410956
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		09-AUG-12	R2413738
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	09-AUG-12	09-AUG-12	R2414077
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Arsenic (As)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Barium (Ba)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Boron (B)-Total	<0.010		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	09-AUG-12	09-AUG-12	R2414077
Calcium (Ca)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Copper (Cu)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Iron (Fe)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Lead (Pb)-Total	<0.000090		0.000090	mg/L	09-AUG-12	09-AUG-12	R2414077
Lithium (Li)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Magnesium (Mg)-Total	<0.010		0.010	mg/L	09-AUG-12	09-AUG-12	R2414077
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	09-AUG-12	09-AUG-12	R2414077
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1187354-17 TRAVEL BLANKS							
Sampled By: CLIENT on 28-JUL-12							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.10		0.10	mg/L	09-AUG-12	09-AUG-12	R2414077
Potassium (K)-Total	<0.020		0.020	mg/L	09-AUG-12	09-AUG-12	R2414077
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Selenium (Se)-Total	<0.0010		0.0010	mg/L	09-AUG-12	09-AUG-12	R2414077
Silicon (Si)-Total	<0.050		0.050	mg/L	09-AUG-12	09-AUG-12	R2414077
Silver (Ag)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Sodium (Na)-Total	<0.030		0.030	mg/L	09-AUG-12	09-AUG-12	R2414077
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Thorium (Th)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Tin (Sn)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	09-AUG-12	09-AUG-12	R2414077
Tungsten (W)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Uranium (U)-Total	<0.00010		0.00010	mg/L	09-AUG-12	09-AUG-12	R2414077
Vanadium (V)-Total	<0.00020		0.00020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	09-AUG-12	09-AUG-12	R2414077
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	09-AUG-12	09-AUG-12	R2414077
Total Organic Carbon							
Total Organic Carbon	<1.0		1.0	mg/L		16-AUG-12	R2418527
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		03-AUG-12	R2411500
Turbidity							
Turbidity	<0.10		0.10	NTU		01-AUG-12	R2409814
pH							
pH	6.03		0.10	pH units		02-AUG-12	R2410487
Miscellaneous Parameters							
Conductivity	<1.0		1.0	umhos/cm		03-AUG-12	R2410739
Alkalinity							
Alkalinity, Total (as CaCO3)	<2.0	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)	<2.4	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)	<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)	<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects
DLMB	Detection Limit increased due to background in Method Blank.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



L1187354-COFC

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC #

Page 1 of 2

Report To			Report Format / Distribution			Service Requested (Rush for routine analysis subject to availability)														
Company: Azimuth Consulting Group			☐ Standard ☐ Other			☒ Regular (Standard Turnaround Times - Business Days)														
Contact: Maggie McConnell / Gary Mann			☒ PDF ☒ Excel ☐ Digital ☐ Fax			☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT														
Address: 218 - 2902 West Broadway			Email 1: mmcconnell@azimuthgroup.ca			☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT														
Vancouver, BC, V6K 2G8			Email 2: gmann@azimuthgroup.ca			☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT														
Phone: 604-730-1220 Fax: 604-739-8511			Email 3: rvanengen@agnico-eagle.com			Analysis Request														
Invoice To Same as Report? ☒ Yes ☐ No			Client / Project Information			Please indicate below Filtered, Preserved or both (F, P, F/P)														
Hardcopy of Invoice with Report? ☐ Yes ☒ No			Job #: Meadowbank CREMP 2012																	
Company:			PO / AFE:			AZM-AEM-MB-ROU-WP														
Contact:			LSD:																	
Address:																				
Phone: Fax:			Quote #: Q33259																	
Lab Work Order # (lab use only)			ALS Contact: Judy Dalmajjer		Sampler:															
Sample #	Sample Identification (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)	Sample Type															
1	INUG - 38 - S		25-Jul-12	10:45	Water	x														
2	INUG - 39 - S		25-Jul-12	11:10	Water	x														
3	TPS - 33 - S		25-Jul-12	15:30	Water	x														
4	TPS - 34 - S		25-Jul-12	16:00	Water	x														
5	CREMP - JULY - EB1		25-Jul-12	18:00	Water	x														
6	BAP - 22 - S		27-Jul-12	10:30	Water	x														
7	BAP - 21 - S		27-Jul-12	11:15	Water	x														
8	BPJ - 21 - S		27-Jul-12	13:20	Water	x														
9	BPJ - 22 - S		27-Jul-12	13:45	Water	x														
10	BBD - 21 - S		27-Jul-12	14:23	Water	x														
11	CREMP - JULY - DUP 3		27-Jul-12	14:23	Water	x														
12	BBD - 22 - S		27-Jul-12	14:50	Water	x														
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																				
*** (1) there are no Chlorophyll-a filters for samples with IDs including "EB-" and for "travel/trip blank" samples; however, all other analyses should be conducted on these samples. (2) 500 mL of water was filtered for all Chlorophyll-a sample filters included in this shipment. ***																				
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																				
By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.																				
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																				
SHIPMENT RELEASE (client use)						SHIPMENT RECEPTION (lab use only)						SHIPMENT VERIFICATION (lab use only)								
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observation Yes / No ? If Yes add										
				1-Aug	10:37	20.5°C														



L1187354-COFC

Chain of Custody / Analytical Request Form
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COC #

Page 2 of 2

[illegible]



Azimuth Consulting Group Inc.
ATTN: MAGGIE MCCONNELL
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 03-AUG-12
Report Date: 22-AUG-12 08:14 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1188968
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-1	WAL-21-S							
Sampled By: CLIENT on 29-JUL-12 @ 10:00								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		03-AUG-12	R2411164
Bicarbonate (HCO3)		<24		24	mg/L		03-AUG-12	R2411164
Carbonate (CO3)		<12		12	mg/L		03-AUG-12	R2411164
Hydroxide (OH)		<6.8		6.8	mg/L		03-AUG-12	R2411164
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		17-AUG-12	R2419707
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		07-AUG-12	R2412697
Chloride by Ion Chromatography								
Chloride		0.48		0.20	mg/L		07-AUG-12	R2412697
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.42		0.10	ug/L	13-AUG-12	14-AUG-12	R2417838
Phaeophytin a		<0.10		0.10	ug/L	13-AUG-12	14-AUG-12	R2417838
Conductivity								
Conductivity		30		20	umhos/cm		03-AUG-12	R2411164
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					06-AUG-12	R2411521
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	06-AUG-12	10-AUG-12	R2414638
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0023		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved		0.00023		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved		0.00166		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved		<0.010		0.010	mg/L	03-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	03-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved		3.00		0.050	mg/L	03-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved		0.00082		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	03-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	03-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved		0.987		0.010	mg/L	03-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved		0.00061		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	03-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	03-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved		0.340		0.020	mg/L	03-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved		0.00051		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	03-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved		0.444		0.050	mg/L	03-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved		0.447		0.020	mg/L	03-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved		0.0155		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-1	WAL-21-S							
Sampled By: CLIENT on 29-JUL-12 @ 10:00								
Matrix: WATER								
Dissolved Metals by ICP-MS								
Titanium (Ti)-Dissolved		<0.00050		0.00050	mg/L	03-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved		<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved		<0.00040		0.00040	mg/L	03-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon								
Dissolved Organic Carbon		2.6		1.0	mg/L		17-AUG-12	R2419713
Fluoride by Ion Chromatography								
Fluoride		0.052		0.020	mg/L		07-AUG-12	R2412697
Hardness Calculated								
Hardness (as CaCO3)		12.6		0.30	mg/L		13-AUG-12	
Hardness Calculated								
Hardness (as CaCO3)		11.6		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography								
Nitrate-N		<0.0050		0.0050	mg/L		07-AUG-12	R2412697
Nitrate+Nitrite								
Nitrate and Nitrite as N		<0.0051		0.0051	mg/L		21-AUG-12	
Nitrite as N by Ion Chromatography								
Nitrite-N		<0.0010		0.0010	mg/L		07-AUG-12	R2412697
Phosphorus, Total								
Phosphorus (P)-Total		<0.010		0.010	mg/L		14-AUG-12	R2417681
Phosphorus, Total Reactive in Water								
Phosphorus (P)-Total Reactive		<0.010		0.010	mg/L		14-AUG-12	R2417661
Reactive Silica by colour								
Silica, Reactive (as SiO2)		0.783	DLA	0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography								
Sulfate		2.17		0.50	mg/L		07-AUG-12	R2412697
TKN in Water by Fluorescence								
Total Kjeldahl Nitrogen		0.124		0.050	mg/L	08-AUG-12	08-AUG-12	R2413466
Total Dissolved Solids								
Total Dissolved Solids		13.0		5.0	mg/L		07-AUG-12	R2412090
Total Mercury in Water by CVAFS(Low)								
Mercury (Hg)-Total		<0.000010		0.000010	mg/L		15-AUG-12	R2417597
Total Metals by ICP-MS								
Aluminum (Al)-Total		0.0108		0.0050	mg/L	10-AUG-12	10-AUG-12	R2415164
Antimony (Sb)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Arsenic (As)-Total		0.00022		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Barium (Ba)-Total		0.00183		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Beryllium (Be)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Bismuth (Bi)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Boron (B)-Total		<0.010		0.010	mg/L	10-AUG-12	10-AUG-12	R2415164
Cadmium (Cd)-Total		<0.000010		0.000010	mg/L	10-AUG-12	10-AUG-12	R2415164
Calcium (Ca)-Total		3.39		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Cesium (Cs)-Total		<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Chromium (Cr)-Total		<0.0010		0.0010	mg/L	10-AUG-12	10-AUG-12	R2415164
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Copper (Cu)-Total		0.00106		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Iron (Fe)-Total		<0.10		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Lead (Pb)-Total		<0.000090		0.000090	mg/L	10-AUG-12	10-AUG-12	R2415164
Lithium (Li)-Total		<0.0020		0.0020	mg/L	10-AUG-12	10-AUG-12	R2415164

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

[illegible]

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-2 WAL-22-S							
Sampled By: CLIENT on 29-JUL-12 @ 10:34							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.45		0.10	ug/L	13-AUG-12	14-AUG-12	R2417838
Phaeophytin a	<0.10		0.10	ug/L	13-AUG-12	14-AUG-12	R2417838
Conductivity							
Conductivity	30		20	umhos/cm		03-AUG-12	R2411164
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					06-AUG-12	R2411521
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-AUG-12	10-AUG-12	R2414638
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0022		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved	0.00023		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved	0.00160		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved	<0.010		0.010	mg/L	03-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	03-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved	3.10		0.050	mg/L	03-AUG-12	13-AUG-12	R2416087
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	0.00084		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	03-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	03-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	1.00		0.010	mg/L	03-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	0.00041		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	03-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	03-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	0.336		0.020	mg/L	03-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	0.00049		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	03-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	0.403		0.050	mg/L	03-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	0.443		0.020	mg/L	03-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	0.0160		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	03-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	03-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		17-AUG-12	R2419713
Fluoride by Ion Chromatography							
Fluoride	0.036		0.020	mg/L		07-AUG-12	R2412697
Hardness Calculated							
Hardness (as CaCO3)	11.9		0.20	mg/L		14-AUG-12	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-2	WAL-22-S							
Sampled By: CLIENT on 29-JUL-12 @ 10:34								
Matrix: WATER								
Hardness Calculated								
Hardness (as CaCO3)		12.8		0.30	mg/L		13-AUG-12	
Nitrate as N by Ion Chromatography								
Nitrate-N		<0.0050		0.0050	mg/L		07-AUG-12	R2412697
Nitrate+Nitrite								
Nitrate and Nitrite as N		<0.0051		0.0051	mg/L		21-AUG-12	
Nitrite as N by Ion Chromatography								
Nitrite-N		<0.0010		0.0010	mg/L		07-AUG-12	R2412697
Phosphorus, Total								
Phosphorus (P)-Total		<0.010		0.010	mg/L		14-AUG-12	R2417681
Phosphorus, Total Reactive in Water								
Phosphorus (P)-Total Reactive		<0.010		0.010	mg/L		14-AUG-12	R2417661
Reactive Silica by colour								
Silica, Reactive (as SiO2)		0.740	DLA	0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography								
Sulfate		2.20		0.50	mg/L		07-AUG-12	R2412697
TKN in Water by Fluorescence								
Total Kjeldahl Nitrogen		0.108		0.050	mg/L	08-AUG-12	08-AUG-12	R2413466
Total Dissolved Solids								
Total Dissolved Solids		22.0		5.0	mg/L		07-AUG-12	R2412090
Total Mercury in Water by CVAFS(Low)								
Mercury (Hg)-Total		<0.000010		0.000010	mg/L		15-AUG-12	R2417597
Total Metals by ICP-MS								
Aluminum (Al)-Total		0.0063		0.0050	mg/L	10-AUG-12	10-AUG-12	R2415164
Antimony (Sb)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Arsenic (As)-Total		0.00023		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Barium (Ba)-Total		0.00179		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Beryllium (Be)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Bismuth (Bi)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Boron (B)-Total		<0.010		0.010	mg/L	10-AUG-12	10-AUG-12	R2415164
Cadmium (Cd)-Total		<0.000010		0.000010	mg/L	10-AUG-12	10-AUG-12	R2415164
Calcium (Ca)-Total		3.47		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Cesium (Cs)-Total		<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Chromium (Cr)-Total		<0.0010		0.0010	mg/L	10-AUG-12	10-AUG-12	R2415164
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Copper (Cu)-Total		0.00099		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Iron (Fe)-Total		<0.10		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Lead (Pb)-Total		<0.000090		0.000090	mg/L	10-AUG-12	10-AUG-12	R2415164
Lithium (Li)-Total		<0.0020		0.0020	mg/L	10-AUG-12	10-AUG-12	R2415164
Magnesium (Mg)-Total		1.01		0.010	mg/L	10-AUG-12	10-AUG-12	R2415164
Manganese (Mn)-Total		0.00122		0.00030	mg/L	10-AUG-12	10-AUG-12	R2415164
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	10-AUG-12	10-AUG-12	R2415164
Phosphorus (P)-Total		<0.10		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Potassium (K)-Total		0.366		0.020	mg/L	10-AUG-12	10-AUG-12	R2415164
Rubidium (Rb)-Total		0.00054		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Selenium (Se)-Total		<0.0010		0.0010	mg/L	10-AUG-12	10-AUG-12	R2415164
Silicon (Si)-Total		0.415		0.050	mg/L	10-AUG-12	10-AUG-12	R2415164
Silver (Ag)-Total		<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Sodium (Na)-Total		0.488		0.030	mg/L	10-AUG-12	10-AUG-12	R2415164
Strontium (Sr)-Total		0.0171		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-2	WAL-22-S							
Sampled By: CLIENT on 29-JUL-12 @ 10:34								
Matrix: WATER								
Total Metals by ICP-MS								
Thorium (Th)-Total		<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Tin (Sn)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	10-AUG-12	10-AUG-12	R2415164
Tungsten (W)-Total		<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Uranium (U)-Total		<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Vanadium (V)-Total		<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	10-AUG-12	10-AUG-12	R2415164
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	10-AUG-12	10-AUG-12	R2415164
Total Organic Carbon								
Total Organic Carbon		2.4		1.0	mg/L		17-AUG-12	R2419713
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		06-AUG-12	R2411830
Turbidity								
Turbidity		0.45		0.10	NTU		03-AUG-12	R2412362
pH								
pH		7.42		0.10	pH units		03-AUG-12	R2411164
Alkalinity								
Alkalinity, Total (as CaCO3)		12.2	DLMB	2.0	mg/L		04-AUG-12	R2411744
Bicarbonate (HCO3)		14.9	DLMB	2.4	mg/L		04-AUG-12	R2411744
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		04-AUG-12	R2411744
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		04-AUG-12	R2411744
L1188968-3	CREMP-JULY EB2							
Sampled By: CLIENT on 30-JUL-12 @ 09:00								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Alkalinity								
Alkalinity, Total (as CaCO3)		<20		20	mg/L		03-AUG-12	R2411164
Bicarbonate (HCO3)		<24		24	mg/L		03-AUG-12	R2411164
Carbonate (CO3)		<12		12	mg/L		03-AUG-12	R2411164
Hydroxide (OH)		<6.8		6.8	mg/L		03-AUG-12	R2411164
Ammonia by colour								
Ammonia, Total (as N)		0.031		0.010	mg/L		17-AUG-12	R2419707
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		07-AUG-12	R2412697
Chloride by Ion Chromatography								
Chloride		<0.20		0.20	mg/L		07-AUG-12	R2412697
Conductivity								
Conductivity		<20		20	umhos/cm		03-AUG-12	R2411164
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					06-AUG-12	R2411521
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	06-AUG-12	10-AUG-12	R2414638
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Barium (Ba)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Boron (B)-Dissolved		<0.010		0.010	mg/L	03-AUG-12	13-AUG-12	R2416087
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	03-AUG-12	13-AUG-12	R2416087
Calcium (Ca)-Dissolved		<0.050		0.050	mg/L	03-AUG-12	13-AUG-12	R2416087

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-3 CREMP-JULY EB2							
Sampled By: CLIENT on 30-JUL-12 @ 09:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	03-AUG-12	13-AUG-12	R2416087
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	03-AUG-12	13-AUG-12	R2416087
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	03-AUG-12	13-AUG-12	R2416087
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	03-AUG-12	13-AUG-12	R2416087
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	03-AUG-12	13-AUG-12	R2416087
Potassium (K)-Dissolved	<0.020		0.020	mg/L	03-AUG-12	13-AUG-12	R2416087
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	03-AUG-12	13-AUG-12	R2416087
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	03-AUG-12	13-AUG-12	R2416087
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	03-AUG-12	13-AUG-12	R2416087
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	03-AUG-12	13-AUG-12	R2416087
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	03-AUG-12	13-AUG-12	R2416087
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	03-AUG-12	13-AUG-12	R2416087
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	03-AUG-12	13-AUG-12	R2416087
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	03-AUG-12	13-AUG-12	R2416087
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		20-AUG-12	R2420399
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		07-AUG-12	R2412697
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		13-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		14-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		07-AUG-12	R2412697
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		21-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		07-AUG-12	R2412697
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		14-AUG-12	R2417681
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		14-AUG-12	R2417661
Reactive Silica by colour							
Silica, Reactive (as SiO2)	0.0825		0.0050	mg/L		08-AUG-12	R2414162
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		07-AUG-12	R2412697
TKN in Water by Fluorescence							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-3 CREMP-JULY EB2							
Sampled By: CLIENT on 30-JUL-12 @ 09:00							
Matrix: WATER							
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	08-AUG-12	08-AUG-12	R2413466
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		07-AUG-12	R2412090
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		15-AUG-12	R2417597
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	10-AUG-12	10-AUG-12	R2415164
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Arsenic (As)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Barium (Ba)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Boron (B)-Total	<0.010		0.010	mg/L	10-AUG-12	10-AUG-12	R2415164
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	10-AUG-12	10-AUG-12	R2415164
Calcium (Ca)-Total	<0.10		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	10-AUG-12	10-AUG-12	R2415164
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Copper (Cu)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Iron (Fe)-Total	<0.10		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Lead (Pb)-Total	<0.000090		0.000090	mg/L	10-AUG-12	10-AUG-12	R2415164
Lithium (Li)-Total	<0.0020		0.0020	mg/L	10-AUG-12	10-AUG-12	R2415164
Magnesium (Mg)-Total	<0.010		0.010	mg/L	10-AUG-12	10-AUG-12	R2415164
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	10-AUG-12	10-AUG-12	R2415164
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	10-AUG-12	10-AUG-12	R2415164
Phosphorus (P)-Total	<0.10		0.10	mg/L	10-AUG-12	10-AUG-12	R2415164
Potassium (K)-Total	<0.020		0.020	mg/L	10-AUG-12	10-AUG-12	R2415164
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Selenium (Se)-Total	<0.0010		0.0010	mg/L	10-AUG-12	10-AUG-12	R2415164
Silicon (Si)-Total	<0.050		0.050	mg/L	10-AUG-12	10-AUG-12	R2415164
Silver (Ag)-Total	<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Sodium (Na)-Total	<0.030		0.030	mg/L	10-AUG-12	10-AUG-12	R2415164
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Thorium (Th)-Total	<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Tin (Sn)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	10-AUG-12	10-AUG-12	R2415164
Tungsten (W)-Total	<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Uranium (U)-Total	<0.00010		0.00010	mg/L	10-AUG-12	10-AUG-12	R2415164
Vanadium (V)-Total	<0.00020		0.00020	mg/L	10-AUG-12	10-AUG-12	R2415164
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	10-AUG-12	10-AUG-12	R2415164
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	10-AUG-12	10-AUG-12	R2415164
Total Organic Carbon							
Total Organic Carbon	1.2		1.0	mg/L		20-AUG-12	R2420399
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		06-AUG-12	R2411830
Turbidity							
Turbidity	0.14		0.10	NTU		03-AUG-12	R2412362
pH							
pH	6.01		0.10	pH units		03-AUG-12	R2411164

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1188968-3 CREMP-JULY EB2 Sampled By: CLIENT on 30-JUL-12 @ 09:00 Matrix: WATER Miscellaneous Parameters Conductivity Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	<1.0 2.1 2.6 <1.2 <0.68	 	1.0 2.0 2.4 1.2 0.68	umhos/cm mg/L mg/L mg/L mg/L	 	08-AUG-12 04-AUG-12 04-AUG-12 04-AUG-12 04-AUG-12	R2412638 R2411744 R2411744 R2411744 R2411744

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution
DLMB	Detection Limit increased due to background in Method Blank.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D. This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified) Turbidity in aqueous matrices is determined by the nephelometric method.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



**Quest Form
9878**

COC #

Page of

[illegible]



Azimuth Consulting Group Inc.
ATTN: MAGGIE MCCONNELL / Gary Mann
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 21-AUG-12
Report Date: 10-SEP-12 15:00 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1197113
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-1	WAL-23-S							
Sampled By: MM,MF on 17-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		24-AUG-12	R2424510
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		22-AUG-12	R2423333
Chloride by Ion Chromatography								
Chloride		0.49		0.20	mg/L		22-AUG-12	R2423333
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.51		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Phaeophytin a		<0.10		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Conductivity								
Conductivity		31		20	umhos/cm		21-AUG-12	R2421140
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					24-AUG-12	R2423401
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	24-AUG-12	30-AUG-12	R2427021
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Barium (Ba)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Boron (B)-Dissolved		<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	21-AUG-12	29-AUG-12	R2426621
Calcium (Ca)-Dissolved		<0.050		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved		<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621
Potassium (K)-Dissolved		<0.020		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Rubidium (Rb)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved		<0.050		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Sodium (Na)-Dissolved		<0.020		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Strontium (Sr)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Thallium (Tl)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved		<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-1 WAL-23-S Sampled By: MM,MF on 17-AUG-12 Matrix: WATER							
Dissolved Metals by ICP-MS Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon Dissolved Organic Carbon	2.2		1.0	mg/L		30-AUG-12	R2427433
Fluoride by Ion Chromatography Fluoride	0.039		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated Hardness (as CaCO3)	<0.20		0.20	mg/L		30-AUG-12	
Hardness Calculated Hardness (as CaCO3)	12.7		0.30	mg/L		24-AUG-12	
Nitrate as N by Ion Chromatography Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography Sulfate	2.53		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.103		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids Total Dissolved Solids	17.0		5.0	mg/L		22-AUG-12	R2422280
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		30-AUG-12	R2427021
Total Metals by ICP-MS Aluminum (Al)-Total	0.0060		0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	0.00026		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	0.00169		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	3.42		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total	0.00093		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Magnesium (Mg)-Total	1.00		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total	0.00120		0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total	0.369		0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total	0.00053		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-1	WAL-23-S							
Sampled By: MM,MF on 17-AUG-12								
Matrix: WATER								
Total Metals by ICP-MS								
Silicon (Si)-Total		0.382		0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total		0.484		0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total		0.0171		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Thorium (Th)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tin (Sn)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	23-AUG-12	23-AUG-12	R2422957
Tungsten (W)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Uranium (U)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Vanadium (V)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	23-AUG-12	23-AUG-12	R2422957
Total Organic Carbon								
Total Organic Carbon		2.4		1.0	mg/L		29-AUG-12	R2427433
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		24-AUG-12	R2424249
Turbidity								
Turbidity		0.27		0.10	NTU		21-AUG-12	R2421162
pH								
pH		7.34		0.10	pH units		21-AUG-12	R2421140
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.743		0.0050	mg/L		28-AUG-12	R2425321
Alkalinity								
Alkalinity, Total (as CaCO3)		12.6	DLMB	2.0	mg/L		28-AUG-12	R2425818
Bicarbonate (HCO3)		15.4	DLMB	2.4	mg/L		28-AUG-12	R2425818
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		28-AUG-12	R2425818
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		28-AUG-12	R2425818
L1197113-2	WAL-24-S							
Sampled By: MM,MF on 17-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		24-AUG-12	R2424510
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		22-AUG-12	R2423333
Chloride by Ion Chromatography								
Chloride		0.52		0.20	mg/L		22-AUG-12	R2423333
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.57		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Pheophytin a		<0.10		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Conductivity								
Conductivity		31		20	umhos/cm		21-AUG-12	R2421140
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					24-AUG-12	R2423401
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	24-AUG-12	30-AUG-12	R2427021
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Arsenic (As)-Dissolved		0.00023		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-2 WAL-24-S Sampled By: MM,MF on 17-AUG-12 Matrix: WATER							
Dissolved Metals by ICP-MS							
Barium (Ba)-Dissolved	0.0022	DLM	0.0020	mg/L	21-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Boron (B)-Dissolved	<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	21-AUG-12	29-AUG-12	R2426621
Calcium (Ca)-Dissolved	3.71		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved	0.00083		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved	0.953		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved	0.00013		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved	0.00016		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621
Potassium (K)-Dissolved	0.382		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Rubidium (Rb)-Dissolved	0.00052		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved	0.492		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Sodium (Na)-Dissolved	0.503		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Strontium (Sr)-Dissolved	0.0179		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.4		1.0	mg/L		29-AUG-12	R2427433
Fluoride by Ion Chromatography							
Fluoride	0.040		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated							
Hardness (as CaCO3)	12.5		0.30	mg/L		24-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	13.2		0.20	mg/L		31-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-2 WAL-24-S Sampled By: MM,MF on 17-AUG-12 Matrix: WATER							
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography Sulfate	2.48		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.110		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids Total Dissolved Solids	19.0		5.0	mg/L		22-AUG-12	R2422280
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		30-AUG-12	R2427021
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0069		0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	0.00024		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	0.0021		0.0020	mg/L	23-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	3.36		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total	0.00114		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Magnesium (Mg)-Total	0.993		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total	0.00154		0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total	0.372		0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total	0.00054		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Silicon (Si)-Total	0.404		0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total	0.484		0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total	0.0166		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	23-AUG-12	23-AUG-12	R2422957
Tungsten (W)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-AUG-12	23-AUG-12	R2422957
Total Organic Carbon Total Organic Carbon	2.5		1.0	mg/L		29-AUG-12	R2427433
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<1.0		1.0	mg/L		24-AUG-12	R2424249

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-2	WAL-24-S							
Sampled By:	MM,MF on 17-AUG-12							
Matrix:	WATER							
Turbidity								
Turbidity		0.28		0.10	NTU		21-AUG-12	R2421162
pH								
pH		7.32		0.10	pH units		21-AUG-12	R2421140
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.776		0.0050	mg/L		28-AUG-12	R2425321
Alkalinity								
Alkalinity, Total (as CaCO3)		12.4	DLMB	2.0	mg/L		28-AUG-12	R2425818
Bicarbonate (HCO3)		15.2	DLMB	2.4	mg/L		28-AUG-12	R2425818
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		28-AUG-12	R2425818
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		28-AUG-12	R2425818
L1197113-3	TE-52-S							
Sampled By:	MM,MF on 18-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		24-AUG-12	R2424510
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		22-AUG-12	R2423333
Chloride by Ion Chromatography								
Chloride		0.53		0.20	mg/L		22-AUG-12	R2423333
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.28		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Phaeophytin a		<0.10		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Conductivity								
Conductivity		22		20	umhos/cm		21-AUG-12	R2421140
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					24-AUG-12	R2423401
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	24-AUG-12	30-AUG-12	R2427021
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Barium (Ba)-Dissolved		0.00242		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Boron (B)-Dissolved		<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	21-AUG-12	29-AUG-12	R2426621
Calcium (Ca)-Dissolved		2.13		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved		0.00040		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved		0.658		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved		0.00013		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved		0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-3 TE-52-S							
Sampled By: MM,MF on 18-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved	0.238		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Sodium (Na)-Dissolved	0.558		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Strontium (Sr)-Dissolved	0.0104		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.9		1.0	mg/L		29-AUG-12	R2427433
Fluoride by Ion Chromatography							
Fluoride	0.056		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated							
Hardness (as CaCO3)	8.03		0.20	mg/L		30-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.33		0.30	mg/L		24-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography							
Sulfate	2.16		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.086		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids							
Total Dissolved Solids	12.0		5.0	mg/L		22-AUG-12	R2422280
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		30-AUG-12	R2427021
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0104		0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	0.00205		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	1.83		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-3	TE-52-S							
Sampled By:	MM,MF on 18-AUG-12							
Matrix:	WATER							
Total Metals by ICP-MS								
Cesium (Cs)-Total	<0.00010			0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Chromium (Cr)-Total	<0.0010			0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total	<0.00020			0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total	0.00043			0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total	<0.10			0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total	<0.000090			0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total	<0.0020			0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Magnesium (Mg)-Total	0.670			0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total	0.00160			0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total	<0.00020			0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total	<0.0020			0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total	<0.10			0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total	0.367			0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total	0.00065			0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total	<0.0010			0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Silicon (Si)-Total	0.208			0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total	<0.00010			0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total	0.532			0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total	0.00890			0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tellurium (Te)-Total	<0.00020			0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Thallium (Tl)-Total	<0.00010			0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Thorium (Th)-Total	<0.00010			0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tin (Sn)-Total	<0.00020			0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Titanium (Ti)-Total	<0.00050			0.00050	mg/L	23-AUG-12	23-AUG-12	R2422957
Tungsten (W)-Total	<0.00010			0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Uranium (U)-Total	<0.00010			0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Vanadium (V)-Total	<0.00020			0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zinc (Zn)-Total	<0.0020			0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zirconium (Zr)-Total	<0.00040			0.00040	mg/L	23-AUG-12	23-AUG-12	R2422957
Total Organic Carbon								
Total Organic Carbon	1.8			1.0	mg/L		29-AUG-12	R2427433
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids	<1.0			1.0	mg/L		24-AUG-12	R2424249
Turbidity								
Turbidity	0.44			0.10	NTU		21-AUG-12	R2421162
pH								
pH	7.16			0.10	pH units		21-AUG-12	R2421140
Miscellaneous Parameters								
Silica, Reactive (as SiO2)	0.282			0.0050	mg/L		28-AUG-12	R2425321
Alkalinity								
Alkalinity, Total (as CaCO3)	7.8	DLMB		2.0	mg/L		28-AUG-12	R2425818
Bicarbonate (HCO3)	9.5	DLMB		2.4	mg/L		28-AUG-12	R2425818
Carbonate (CO3)	<1.2	DLMB		1.2	mg/L		28-AUG-12	R2425818
Hydroxide (OH)	<0.68	DLMB		0.68	mg/L		28-AUG-12	R2425818
L1197113-4	TE-53-S							
Sampled By:	MM,MF on 18-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-4 TE-53-S							
Sampled By: MM,MF on 18-AUG-12							
Matrix: WATER							
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		22-AUG-12	R2423333
Chloride by Ion Chromatography							
Chloride	0.54		0.20	mg/L		22-AUG-12	R2423333
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.35		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Phaeophytin a	0.11		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Conductivity							
Conductivity	25		20	umhos/cm		21-AUG-12	R2421140
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					24-AUG-12	R2423401
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	24-AUG-12	30-AUG-12	R2427021
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Barium (Ba)-Dissolved	0.00249		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Boron (B)-Dissolved	<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	21-AUG-12	29-AUG-12	R2426621
Calcium (Ca)-Dissolved	2.23		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved	0.00043		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved	0.696		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved	0.00018		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved	0.00012		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621
Potassium (K)-Dissolved	0.396		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved	0.277		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Sodium (Na)-Dissolved	0.566		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Strontium (Sr)-Dissolved	0.0109		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.9		1.0	mg/L		29-AUG-12	R2427433

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-4 TE-53-S Sampled By: MM,MF on 18-AUG-12 Matrix: WATER							
Fluoride by Ion Chromatography							
Fluoride	0.060		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated							
Hardness (as CaCO3)	8.18		0.30	mg/L		24-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	8.44		0.20	mg/L		30-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography							
Sulfate	2.26		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.091		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids							
Total Dissolved Solids	14.0		5.0	mg/L		22-AUG-12	R2422280
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		30-AUG-12	R2427021
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0195		0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	0.00218		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	2.05		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total	0.00050		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Magnesium (Mg)-Total	0.745		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total	0.00195		0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total	0.394		0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total	0.00067		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Silicon (Si)-Total	0.262		0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total	0.559		0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total	0.00970		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-5 TEFF-23-S							
Sampled By: MM,MF on 18-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved	0.00021		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved	0.519		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621
Potassium (K)-Dissolved	0.357		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Rubidium (Rb)-Dissolved	0.00061		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved	0.173		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Sodium (Na)-Dissolved	0.503		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Strontium (Sr)-Dissolved	0.00795		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.5		1.0	mg/L		29-AUG-12	R2427433
Fluoride by Ion Chromatography							
Fluoride	0.049		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated							
Hardness (as CaCO3)	5.94		0.20	mg/L		31-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	5.74		0.30	mg/L		24-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography							
Sulfate	1.73		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.074		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-5 TEFF-23-S Sampled By: MM,MF on 18-AUG-12 Matrix: WATER							
Total Dissolved Solids Total Dissolved Solids	<5.0		5.0	mg/L		22-AUG-12	R2422280
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		30-AUG-12	R2427021
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0076	DLM	0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	0.0026		0.0020	mg/L	23-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	1.37		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total	0.00034		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Magnesium (Mg)-Total	0.564		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total	0.00120		0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total	0.354		0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total	0.00069		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Silicon (Si)-Total	0.172		0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total	0.519		0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total	0.00703		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	23-AUG-12	23-AUG-12	R2422957
Tungsten (W)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-AUG-12	23-AUG-12	R2422957
Total Organic Carbon Total Organic Carbon	1.5		1.0	mg/L		29-AUG-12	R2427433
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<1.0		1.0	mg/L		24-AUG-12	R2424249
Turbidity Turbidity	0.34		0.10	NTU		21-AUG-12	R2421162
pH pH	7.07		0.10	pH units		21-AUG-12	R2421140
Miscellaneous Parameters Conductivity	12.0		1.0	umhos/cm		28-AUG-12	R2425809

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-5	TEFF-23-S							
Sampled By:	MM,MF on 18-AUG-12							
Matrix:	WATER							
Silica, Reactive (as SiO2)		0.205		0.0050	mg/L		28-AUG-12	R2425321
Alkalinity								
Alkalinity, Total (as CaCO3)		6.2	DLMB	2.0	mg/L		28-AUG-12	R2425818
Bicarbonate (HCO3)		7.5	DLMB	2.4	mg/L		28-AUG-12	R2425818
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		28-AUG-12	R2425818
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		28-AUG-12	R2425818
L1197113-6	TEFF-24-S							
Sampled By:	MM,MF on 18-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		24-AUG-12	R2424510
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		22-AUG-12	R2423333
Chloride by Ion Chromatography								
Chloride		0.53		0.20	mg/L		22-AUG-12	R2423333
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.19		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Phaeophytin a		<0.10		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					24-AUG-12	R2423401
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	24-AUG-12	30-AUG-12	R2427021
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Barium (Ba)-Dissolved		0.00249		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Boron (B)-Dissolved		<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	21-AUG-12	29-AUG-12	R2426621
Calcium (Ca)-Dissolved		1.47		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved		0.00025		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved		0.514		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621
Potassium (K)-Dissolved		0.341		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Rubidium (Rb)-Dissolved		0.00061		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved		0.172		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	21-AUG		

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-6 TEFF-24-S Sampled By: MM,MF on 18-AUG-12 Matrix: WATER							
Dissolved Metals by ICP-MS							
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.8		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography							
Fluoride	0.051		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated							
Hardness (as CaCO3)	5.79		0.20	mg/L		31-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	5.62		0.30	mg/L		24-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography							
Sulfate	1.84		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.074		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids							
Total Dissolved Solids	8.0		5.0	mg/L		22-AUG-12	R2422280
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		30-AUG-12	R2427021
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0078		0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	0.0024		0.0020	mg/L	23-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	1.33		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total	0.00046		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-6	TEFF-24-S							
Sampled By:	MM,MF on 18-AUG-12							
Matrix:	WATER							
Total Metals by ICP-MS								
Magnesium (Mg)-Total		0.557		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total		0.00127		0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total		<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total		0.369		0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total		0.00065		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total		<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Silicon (Si)-Total		0.161		0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total		0.511		0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total		0.00694		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Thorium (Th)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tin (Sn)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	23-AUG-12	23-AUG-12	R2422957
Tungsten (W)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Uranium (U)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Vanadium (V)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	23-AUG-12	23-AUG-12	R2422957
Total Organic Carbon								
Total Organic Carbon		2.2		1.0	mg/L		04-SEP-12	R2429488
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		24-AUG-12	R2424249
Turbidity								
Turbidity		0.28		0.10	NTU		21-AUG-12	R2421162
pH								
pH		7.07		0.10	pH units		21-AUG-12	R2421140
Miscellaneous Parameters								
Conductivity		11.9		1.0	umhos/cm		28-AUG-12	R2425809
Silica, Reactive (as SiO2)		0.164		0.0050	mg/L		28-AUG-12	R2425321
Alkalinity								
Alkalinity, Total (as CaCO3)		6.1	DLMB	2.0	mg/L		28-AUG-12	R2425818
Bicarbonate (HCO3)		7.4	DLMB	2.4	mg/L		28-AUG-12	R2425818
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		28-AUG-12	R2425818
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		28-AUG-12	R2425818
L1197113-7	CREMP-AUG-DUP-1							
Sampled By:	MM,MF on 18-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		24-AUG-12	R2424510
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		22-AUG-12	R2423333
Chloride by Ion Chromatography								
Chloride		0.55		0.20	mg/L		22-AUG-12	R2423333
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.36		0.10	ug/L	27-AUG-12	27-AUG-12	R2425191
Phaeophytin a		<0.10		0.10	ug/L	27-AUG-12	27-AUG-12	R242519

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-7 CREMP-AUG-DUP-1							
Sampled By: MM,MF on 18-AUG-12							
Matrix: WATER							
Conductivity							
Conductivity	22		20	umhos/cm		21-AUG-12	R2421140
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					24-AUG-12	R2423401
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	24-AUG-12	30-AUG-12	R2427021
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Barium (Ba)-Dissolved	0.00249		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Boron (B)-Dissolved	<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	21-AUG-12	29-AUG-12	R2426621
Calcium (Ca)-Dissolved	2.04		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved	0.00035		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved	0.634		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved	0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621
Potassium (K)-Dissolved	0.372		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved	0.239		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Sodium (Na)-Dissolved	0.532		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Strontium (Sr)-Dissolved	0.0102		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.7		1.0	mg/L		29-AUG-12	R2427433
Fluoride by Ion Chromatography							
Fluoride	0.057		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated							
Hardness (as CaCO3)	7.51		0.30	mg/L		24-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.69		0.20	mg/L		30-AUG-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-7 CREMP-AUG-DUP-1							
Sampled By: MM,MF on 18-AUG-12							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography							
Sulfate	2.17		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.076		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		22-AUG-12	R2422280
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		30-AUG-12	R2427021
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0112		0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	0.00208		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	1.87		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total	0.00048		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Magnesium (Mg)-Total	0.689		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total	0.00167		0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total	0.382		0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total	0.00065		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Silicon (Si)-Total	0.215		0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total	0.546		0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total	0.00903		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	23-AUG-12	23-AUG-12	R2422957
Tungsten (W)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-7	CREMP-AUG-DUP-1							
Sampled By: MM,MF on 18-AUG-12								
Matrix: WATER								
Total Metals by ICP-MS								
Uranium (U)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Vanadium (V)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	23-AUG-12	23-AUG-12	R2422957
Total Organic Carbon								
Total Organic Carbon		1.7		1.0	mg/L		29-AUG-12	R2427433
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		24-AUG-12	R2424249
Turbidity								
Turbidity		0.46		0.10	NTU		21-AUG-12	R2421162
pH								
pH		7.11		0.10	pH units		21-AUG-12	R2421140
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.252		0.0050	mg/L		28-AUG-12	R2425321
Alkalinity								
Alkalinity, Total (as CaCO3)		7.8	DLMB	2.0	mg/L		28-AUG-12	R2425818
Bicarbonate (HCO3)		9.5	DLMB	2.4	mg/L		28-AUG-12	R2425818
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		28-AUG-12	R2425818
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		28-AUG-12	R2425818
L1197113-8	TRIP BLANKS							
Sampled By: MM,MF on 18-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		24-AUG-12	R2424510
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		22-AUG-12	R2423333
Chloride by Ion Chromatography								
Chloride		<0.20		0.20	mg/L		22-AUG-12	R2423333
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Barium (Ba)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Boron (B)-Dissolved		<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	21-AUG-12	29-AUG-12	R2426621
Calcium (Ca)-Dissolved		<0.050		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Copper (Cu)-Dissolved		<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	21-AUG-12	29-AUG-12	R2426621
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	21-AUG-12	29-AUG-12	R2426621
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Magnesium (Mg)-Dissolved		<0.010		0.010	mg/L	21-AUG-12	29-AUG-12	R2426621
Manganese (Mn)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	21-AUG-12	29-AUG-12	R2426621

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-8 TRIP BLANKS							
Sampled By: MM,MF on 18-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Potassium (K)-Dissolved	<0.020		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	21-AUG-12	29-AUG-12	R2426621
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	21-AUG-12	29-AUG-12	R2426621
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	21-AUG-12	29-AUG-12	R2426621
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	21-AUG-12	29-AUG-12	R2426621
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	21-AUG-12	29-AUG-12	R2426621
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	21-AUG-12	29-AUG-12	R2426621
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	21-AUG-12	29-AUG-12	R2426621
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		29-AUG-12	R2427433
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		22-AUG-12	R2423333
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		30-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		24-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		22-AUG-12	R2423333
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		24-AUG-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		22-AUG-12	R2423333
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		22-AUG-12	R2421271
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		23-AUG-12	R2422017
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		22-AUG-12	R2423333
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	27-AUG-12	28-AUG-12	R2426288
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		22-AUG-12	R2422280
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	23-AUG-12	23-AUG-12	R2422957
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Barium (Ba)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Boron (B)-Total	<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-AUG-12	23-AUG-12	R2422957
Calcium (Ca)-Total	<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1197113-8 TRIP BLANKS								
Sampled By: MM,MF on 18-AUG-12								
Matrix: WATER								
Total Metals by ICP-MS								
Chromium (Cr)-Total		<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Copper (Cu)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Iron (Fe)-Total		<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Lead (Pb)-Total		<0.000090		0.000090	mg/L	23-AUG-12	23-AUG-12	R2422957
Lithium (Li)-Total		<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Magnesium (Mg)-Total		<0.010		0.010	mg/L	23-AUG-12	23-AUG-12	R2422957
Manganese (Mn)-Total		<0.00030		0.00030	mg/L	23-AUG-12	23-AUG-12	R2422957
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Phosphorus (P)-Total		<0.10		0.10	mg/L	23-AUG-12	23-AUG-12	R2422957
Potassium (K)-Total		<0.020		0.020	mg/L	23-AUG-12	23-AUG-12	R2422957
Rubidium (Rb)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Selenium (Se)-Total		<0.0010		0.0010	mg/L	23-AUG-12	23-AUG-12	R2422957
Silicon (Si)-Total		<0.050		0.050	mg/L	23-AUG-12	23-AUG-12	R2422957
Silver (Ag)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Sodium (Na)-Total		<0.030		0.030	mg/L	23-AUG-12	23-AUG-12	R2422957
Strontium (Sr)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Thorium (Th)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Tin (Sn)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	23-AUG-12	23-AUG-12	R2422957
Tungsten (W)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Uranium (U)-Total		<0.00010		0.00010	mg/L	23-AUG-12	23-AUG-12	R2422957
Vanadium (V)-Total		<0.00020		0.00020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	23-AUG-12	23-AUG-12	R2422957
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	23-AUG-12	23-AUG-12	R2422957
Total Organic Carbon								
Total Organic Carbon		<1.0		1.0	mg/L		29-AUG-12	R2427433
Turbidity								
Turbidity		<0.10		0.10	NTU		21-AUG-12	R2421162
pH								
pH		6.03		0.10	pH units		21-AUG-12	R2421140
Miscellaneous Parameters								
Conductivity		<1.0		1.0	umhos/cm		28-AUG-12	R2425809
Silica, Reactive (as SiO2)		<0.0050		0.0050	mg/L		28-AUG-12	R2425321
Alkalinity								
Alkalinity, Total (as CaCO3)		1.9	DLMB	2.0	mg/L		28-AUG-12	R2425818
Bicarbonate (HCO3)		2.3	DLMB	2.4	mg/L		28-AUG-12	R2425818
Carbonate (CO3)		<1.2	DLMB	1.2	mg/L		28-AUG-12	R2425818
Hydroxide (OH)		<0.68	DLMB	0.68	mg/L		28-AUG-12	R2425818

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects
DLMB	Detection Limit increased due to background in Method Blank.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourimetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



L1197113-COFC

COC # L1197113

Page 1 of 1

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GENF 18.01 Front



Azimuth Consulting Group Inc.
ATTN: MAGGIE MCCONNELL/GARY MANN
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 27-AUG-12
Report Date: 12-SEP-12 07:48 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1200175
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-1	SP-52-S							
Sampled By: MM, MF on 20-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		30-AUG-12	R2426919
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		30-AUG-12	R2427749
Chloride by Ion Chromatography								
Chloride		0.57		0.20	mg/L		30-AUG-12	R2427749
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.38		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Phaeophytin a		0.14		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Conductivity								
Conductivity		28		20	umhos/cm		28-AUG-12	R2425783
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					29-AUG-12	R2425729
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	29-AUG-12	07-SEP-12	R2433179
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0062		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Arsenic (As)-Dissolved		0.00030		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Barium (Ba)-Dissolved		0.00254		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Boron (B)-Dissolved		<0.010		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	27-AUG-12	30-AUG-12	R2427525
Calcium (Ca)-Dissolved		2.73		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Copper (Cu)-Dissolved		0.00059		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	27-AUG-12	30-AUG-12	R2427525
Lead (Pb)-Dissolved		0.000129		0.000090	mg/L	27-AUG-12	30-AUG-12	R2427525
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Magnesium (Mg)-Dissolved		0.837		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Manganese (Mn)-Dissolved		0.00238		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Molybdenum (Mo)-Dissolved		0.00012		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved		0.409		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved		0.00060		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Silicon (Si)-Dissolved		0.245		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved		0.565		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Strontium (Sr)-Dissolved		0.0124		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Thallium (Tl)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved		<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-1 SP-52-S Sampled By: MM, MF on 20-AUG-12 Matrix: WATER							
Dissolved Metals by ICP-MS Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon Dissolved Organic Carbon	2.0		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography Fluoride	0.059		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated Hardness (as CaCO3)	10.3		0.20	mg/L		31-AUG-12	
Hardness Calculated Hardness (as CaCO3)	9.41		0.30	mg/L		29-AUG-12	
Nitrate as N by Ion Chromatography Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography Nitrite-N	0.0014		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography Sulfate	3.02		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.085		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids Total Dissolved Solids	15.0		5.0	mg/L		28-AUG-12	R2425885
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS Aluminum (Al)-Total	0.0088		0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total	0.00029		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total	0.00235		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total	2.55		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total	0.00082		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Magnesium (Mg)-Total	0.739		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Manganese (Mn)-Total	0.00296		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total	0.383		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total	0.00066		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-1	SP-52-S							
Sampled By:	MM, MF on 20-AUG-12							
Matrix:	WATER							
Total Metals by ICP-MS								
Silicon (Si)-Total		0.216		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total		0.497		0.030	mg/L	27-AUG-12	28-AUG-12	R2425834
Strontium (Sr)-Total		0.0136		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Uranium (U)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Vanadium (V)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	27-AUG-12	28-AUG-12	R2425834
Total Organic Carbon								
Total Organic Carbon		2.3		1.0	mg/L		04-SEP-12	R2429488
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		29-AUG-12	R2427195
Turbidity								
Turbidity		0.42		0.10	NTU		27-AUG-12	R2425020
pH								
pH		7.26		0.10	pH units		28-AUG-12	R2425783
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.443		0.0050	mg/L		30-AUG-12	R2427484
Alkalinity								
Alkalinity, Total (as CaCO3)		10.4		1.0	mg/L		29-AUG-12	R2426611
Bicarbonate (HCO3)		12.7		1.2	mg/L		29-AUG-12	R2426611
Carbonate (CO3)		<0.60		0.60	mg/L		29-AUG-12	R2426611
Hydroxide (OH)		<0.34		0.34	mg/L		29-AUG-12	R2426611
L1200175-2	SP-53-S							
Sampled By:	MM, MF on 20-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		30-AUG-12	R2426919
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		30-AUG-12	R2427749
Chloride by Ion Chromatography								
Chloride		0.56		0.20	mg/L		30-AUG-12	R2427749
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.27		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Phaeophytin a		0.14		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Conductivity								
Conductivity		28		20	umhos/cm		28-AUG-12	R2425783
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					29-AUG-12	R2425729
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	29-AUG-12	07-SEP-12	R2433179
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0065		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Arsenic (As)-Dissolved		0.00031		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-2 SP-53-S Sampled By: MM, MF on 20-AUG-12 Matrix: WATER							
Dissolved Metals by ICP-MS							
Barium (Ba)-Dissolved	0.00242		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-AUG-12	30-AUG-12	R2427525
Calcium (Ca)-Dissolved	2.82		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Copper (Cu)-Dissolved	0.00075		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-AUG-12	30-AUG-12	R2427525
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-AUG-12	30-AUG-12	R2427525
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Magnesium (Mg)-Dissolved	0.866		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Manganese (Mn)-Dissolved	0.00201		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Molybdenum (Mo)-Dissolved	0.00012		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved	0.425		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved	0.00063		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Silicon (Si)-Dissolved	0.269		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved	0.581		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Strontium (Sr)-Dissolved	0.0129		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography							
Fluoride	0.059		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated							
Hardness (as CaCO3)	9.50		0.30	mg/L		29-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	10.6		0.20	mg/L		04-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-2 SP-53-S							
Sampled By: MM, MF on 20-AUG-12							
Matrix: WATER							
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography							
Sulfate	2.99		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.085		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		28-AUG-12	R2425885
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0090		0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total	0.00029		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total	0.0024	DLM	0.0020	mg/L	27-AUG-12	31-AUG-12	R2428582
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total	2.59		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total	0.00068		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Magnesium (Mg)-Total	0.738		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Manganese (Mn)-Total	0.00266		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total	0.377		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total	0.00068		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Silicon (Si)-Total	0.220		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total	0.486		0.030	mg/L	27-AUG-12	28-AUG-12	R2425834
Strontium (Sr)-Total	0.0140		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Uranium (U)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Vanadium (V)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	27-AUG-12	28-AUG-12	R2425834
Total Organic Carbon							
Total Organic Carbon	2.0		1.0	mg/L		04-SEP-12	R2429488
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		29-AUG-12	R2427195

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-2	SP-53-S							
Sampled By: MM, MF on 20-AUG-12								
Matrix: WATER								
Turbidity								
Turbidity		0.40		0.10	NTU		27-AUG-12	R2425020
pH								
pH		7.24		0.10	pH units		28-AUG-12	R2425783
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.441		0.0050	mg/L		30-AUG-12	R2427484
Alkalinity								
Alkalinity, Total (as CaCO3)		10.5		1.0	mg/L		29-AUG-12	R2426611
Bicarbonate (HCO3)		12.8		1.2	mg/L		29-AUG-12	R2426611
Carbonate (CO3)		<0.60		0.60	mg/L		29-AUG-12	R2426611
Hydroxide (OH)		<0.34		0.34	mg/L		29-AUG-12	R2426611
L1200175-3	INUG-40-S							
Sampled By: MM, MF on 21-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		30-AUG-12	R2426919
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		30-AUG-12	R2427749
Chloride by Ion Chromatography								
Chloride		0.66		0.20	mg/L		30-AUG-12	R2427749
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.38		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Phaeophytin a		0.18		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					29-AUG-12	R2425729
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	29-AUG-12	07-SEP-12	R2433179
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0030		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Barium (Ba)-Dissolved		0.00185		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Boron (B)-Dissolved		<0.010		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	27-AUG-12	30-AUG-12	R2427525
Calcium (Ca)-Dissolved		1.03		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Copper (Cu)-Dissolved		0.00035		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	27-AUG-12	30-AUG-12	R2427525
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	27-AUG-12	30-AUG-12	R2427525
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Magnesium (Mg)-Dissolved		0.54	DLM	0.10	mg/L	27-AUG-12	31-AUG-12	R2428582
Manganese (Mn)-Dissolved		0.00077		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved		0.347		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved		0.00046		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-3 INUG-40-S							
Sampled By: MM, MF on 21-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Silicon (Si)-Dissolved	0.177	DLM	0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved	0.35		0.20	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Dissolved	0.00564		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.2		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography							
Fluoride	0.055		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated							
Hardness (as CaCO3)	5.10		0.20	mg/L		04-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	4.24		0.30	mg/L		29-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography							
Sulfate	0.86		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.086		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		28-AUG-12	R2425885
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0083	DLM	0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total	0.0021		0.0020	mg/L	27-AUG-12	31-AUG-12	R2428582
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total	0.90		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-3	INUG-40-S							
Sampled By:	MM, MF on 21-AUG-12							
Matrix:	WATER							
Total Metals by ICP-MS								
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total		0.00039		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total		<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total		<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Magnesium (Mg)-Total		0.61	DLM	0.10	mg/L	27-AUG-12	31-AUG-12	R2428582
Manganese (Mn)-Total		0.00275		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total		<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total		0.292		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total		0.00050		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total		<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Silicon (Si)-Total		0.184		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total		0.40	DLM	0.30	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Total		0.00613		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Uranium (U)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Vanadium (V)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	27-AUG-12	28-AUG-12	R2425834
Total Organic Carbon								
Total Organic Carbon		2.1		1.0	mg/L		04-SEP-12	R2429488
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		29-AUG-12	R2427195
Turbidity								
Turbidity		0.38		0.10	NTU		27-AUG-12	R2425020
pH								
pH		6.95		0.10	pH units		28-AUG-12	R2425783
Miscellaneous Parameters								
Conductivity		10.5		1.0	umhos/cm		29-AUG-12	R2425928
Silica, Reactive (as SiO2)		0.296		0.0050	mg/L		30-AUG-12	R2427484
Alkalinity								
Alkalinity, Total (as CaCO3)		6.3		1.0	mg/L		29-AUG-12	R2426611
Bicarbonate (HCO3)		7.7		1.2	mg/L		29-AUG-12	R2426611
Carbonate (CO3)		<0.60		0.60	mg/L		29-AUG-12	R2426611
Hydroxide (OH)		<0.34		0.34	mg/L		29-AUG-12	R2426611
L1200175-4	INUG-41-S							
Sampled By:	MM, MF on 21-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		30-AUG-12	R2426919
Bromide								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-4 INUG-41-S							
Sampled By: MM, MF on 21-AUG-12							
Matrix: WATER							
Chloride by Ion Chromatography							
Chloride	0.68		0.20	mg/L		30-AUG-12	R2427749
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.46		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Phaeophytin a	0.16		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					29-AUG-12	R2425729
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	29-AUG-12	07-SEP-12	R2433179
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0036		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Barium (Ba)-Dissolved	0.00184		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-AUG-12	30-AUG-12	R2427525
Calcium (Ca)-Dissolved	1.01		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Copper (Cu)-Dissolved	0.00037		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-AUG-12	30-AUG-12	R2427525
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-AUG-12	30-AUG-12	R2427525
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Magnesium (Mg)-Dissolved	0.592		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Manganese (Mn)-Dissolved	0.00119		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved	0.349		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved	0.00047		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Silicon (Si)-Dissolved	0.181		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved	0.36	DLM	0.20	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Dissolved	0.00574		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.2		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography							
Fluoride	0.056		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated							
Hardness (as CaCO3)	4.24		0.30	mg/L		29-AUG-12	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-4 INUG-41-S							
Sampled By: MM, MF on 21-AUG-12							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	4.97		0.20	mg/L		04-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography							
Sulfate	0.86		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.079		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		28-AUG-12	R2425885
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0081		0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total	0.0020	DLM	0.0020	mg/L	27-AUG-12	31-AUG-12	R2428582
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total	0.90		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total	0.00062		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Magnesium (Mg)-Total	0.486		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Manganese (Mn)-Total	0.00282		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total	0.297		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total	0.00050		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Silicon (Si)-Total	0.172		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total	0.389		0.030	mg/L	27-AUG-12	28-AUG-12	R2425834
Strontium (Sr)-Total	0.00633		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-4	INUG-41-S							
Sampled By:	MM, MF on 21-AUG-12							
Matrix:	WATER							
Total Metals by ICP-MS								
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Uranium (U)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Vanadium (V)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	27-AUG-12	28-AUG-12	R2425834
Total Organic Carbon								
Total Organic Carbon		2.2		1.0	mg/L		04-SEP-12	R2429488
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		29-AUG-12	R2427195
Turbidity								
Turbidity		0.37		0.10	NTU		27-AUG-12	R2425020
pH								
pH		6.96		0.10	pH units		28-AUG-12	R2425783
Miscellaneous Parameters								
Conductivity		10.6		1.0	umhos/cm		29-AUG-12	R2425928
Silica, Reactive (as SiO2)		0.192		0.0050	mg/L		30-AUG-12	R2427484
Alkalinity								
Alkalinity, Total (as CaCO3)		6.3		1.0	mg/L		29-AUG-12	R2426611
Bicarbonate (HCO3)		7.7		1.2	mg/L		29-AUG-12	R2426611
Carbonate (CO3)		<0.60		0.60	mg/L		29-AUG-12	R2426611
Hydroxide (OH)		<0.34		0.34	mg/L		29-AUG-12	R2426611
L1200175-5	PDL-23-S							
Sampled By:	MM, MF on 22-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		30-AUG-12	R2426919
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		30-AUG-12	R2427749
Chloride by Ion Chromatography								
Chloride		0.58		0.20	mg/L		30-AUG-12	R2427749
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.29		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Phaeophytin a		0.10		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Conductivity								
Conductivity		22		20	umhos/cm		28-AUG-12	R2425783
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					29-AUG-12	R2425729
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	29-AUG-12	07-SEP-12	R2433179
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Barium (Ba)-Dissolved		0.0022		0.0020	mg/L	27-AUG-12	31-AUG-12	R2428582
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Boron (B)-Dissolved		<0.010		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	27-AUG-12	30-AUG-12	R2427525
Calcium (Ca)-Dissolved		2.06		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-5 PDL-23-S Sampled By: MM, MF on 22-AUG-12 Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020	DLM	0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Copper (Cu)-Dissolved	0.00042		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-AUG-12	30-AUG-12	R2427525
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-AUG-12	30-AUG-12	R2427525
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Magnesium (Mg)-Dissolved	0.57		0.10	mg/L	27-AUG-12	31-AUG-12	R2428582
Manganese (Mn)-Dissolved	0.00056		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved	<0.030	DLM	0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved	0.324		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved	0.00039		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Silicon (Si)-Dissolved	0.167		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved	0.32		0.20	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Dissolved	0.00837		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.9		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography							
Fluoride	0.034		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated							
Hardness (as CaCO3)	6.89		0.30	mg/L		29-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.49		0.20	mg/L		04-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography							
Sulfate	1.58		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.067		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids							
Total Dissolved Solids	12.0		5.0	mg/L		28-AUG-12	R2425885

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-5	PDL-23-S							
Sampled By:	MM, MF on 22-AUG-12							
Matrix:	WATER							
Total Mercury in Water by CVAFS(Low)								
Mercury (Hg)-Total		<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS								
Aluminum (Al)-Total		<0.0050		0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total		0.00147		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Beryllium (Be)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Bismuth (Bi)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total		<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total		<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total		1.86		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total		<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total		0.00046		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total		<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total		<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Magnesium (Mg)-Total		0.547		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Manganese (Mn)-Total		0.00118		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total		<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total		0.279		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total		0.00043		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total		<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Silicon (Si)-Total		0.160		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total		0.340		0.030	mg/L	27-AUG-12	28-AUG-12	R2425834
Strontium (Sr)-Total		0.00935		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Uranium (U)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Vanadium (V)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	27-AUG-12	28-AUG-12	R2425834
Total Organic Carbon								
Total Organic Carbon		2.2		1.0	mg/L		04-SEP-12	R2429488
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		29-AUG-12	R2427195
Turbidity								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-5	PDL-23-S							
Sampled By:	MM, MF on 22-AUG-12							
Matrix:	WATER							
Alkalinity								
Bicarbonate (HCO3)		10.7		1.2	mg/L		29-AUG-12	R2426611
Carbonate (CO3)		<0.60		0.60	mg/L		29-AUG-12	R2426611
Hydroxide (OH)		<0.34		0.34	mg/L		29-AUG-12	R2426611
L1200175-6	PDL-24-S							
Sampled By:	MM, MF on 22-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		30-AUG-12	R2426919
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		30-AUG-12	R2427749
Chloride by Ion Chromatography								
Chloride		0.57		0.20	mg/L		30-AUG-12	R2427749
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.51		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Phaeophytin a		<0.10		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Conductivity								
Conductivity		22		20	umhos/cm		28-AUG-12	R2425783
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					29-AUG-12	R2425729
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	29-AUG-12	07-SEP-12	R2433179
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Barium (Ba)-Dissolved		0.00194		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Boron (B)-Dissolved		<0.010		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	27-AUG-12	30-AUG-12	R2427525
Calcium (Ca)-Dissolved		2.02		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Copper (Cu)-Dissolved		0.00041		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	27-AUG-12	30-AUG-12	R2427525
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	27-AUG-12	30-AUG-12	R2427525
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Magnesium (Mg)-Dissolved		0.60	DLM	0.10	mg/L	27-AUG-12	31-AUG-12	R2428582
Manganese (Mn)-Dissolved		0.00051		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved		0.326		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved		0.00038		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Silicon (Si)-Dissolved		0.170		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved		0.32	DLM	0.20	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Dissolved		0.00829		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-6 PDL-24-S Sampled By: MM, MF on 22-AUG-12 Matrix: WATER							
Dissolved Metals by ICP-MS							
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.8		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography							
Fluoride	0.033		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated							
Hardness (as CaCO3)	6.69		0.30	mg/L		29-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	7.95		0.20	mg/L		04-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography							
Sulfate	1.57		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.069		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids							
Total Dissolved Solids	12.0		5.0	mg/L		28-AUG-12	R2425885
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total	0.0022		0.0020	mg/L	27-AUG-12	31-AUG-12	R2428582
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total	1.79		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total	0.00047		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-6	PDL-24-S							
Sampled By: MM, MF on 22-AUG-12								
Matrix: WATER								
Total Metals by ICP-MS								
Magnesium (Mg)-Total		0.71	DLM	0.10	mg/L	27-AUG-12	31-AUG-12	R2428582
Manganese (Mn)-Total		0.00110		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total		<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total		0.270		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total		0.00042		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total		<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Silicon (Si)-Total		0.160		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total		<0.00010	DLM	0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total		0.35		0.30	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Total		0.00908		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Uranium (U)-Total		<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Vanadium (V)-Total		<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	27-AUG-12	28-AUG-12	R2425834
Total Organic Carbon								
Total Organic Carbon		1.8		1.0	mg/L		04-SEP-12	R2429488
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		29-AUG-12	R2427195
Turbidity								
Turbidity		0.27		0.10	NTU		27-AUG-12	R2425020
pH								
pH		7.15		0.10	pH units		28-AUG-12	R2425783
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.200		0.0050	mg/L		30-AUG-12	R2427484
Alkalinity								
Alkalinity, Total (as CaCO3)		8.7		1.0	mg/L		29-AUG-12	R2426611
Bicarbonate (HCO3)		10.7		1.2	mg/L		29-AUG-12	R2426611
Carbonate (CO3)		<0.60		0.60	mg/L		29-AUG-12	R2426611
Hydroxide (OH)		<0.34		0.34	mg/L		29-AUG-12	R2426611
L1200175-7	CREMP-AUG-DUP-2							
Sampled By: MM, MF								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		30-AUG-12	R2426919
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		30-AUG-12	R2427749
Chloride by Ion Chromatography								
Chloride		0.55		0.20	mg/L		30-AUG-12	R2427749
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.34		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Phaeophytin a		0.14		0.10	ug/L	05-SEP-12	06-SEP-12	R2431303
Conductivity								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-7 CREMP-AUG-DUP-2							
Sampled By: MM, MF							
Matrix: WATER							
Conductivity							
Conductivity	28		20	umhos/cm		28-AUG-12	R2425783
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					29-AUG-12	R2425729
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	29-AUG-12	07-SEP-12	R2433179
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0057		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Arsenic (As)-Dissolved	0.00032		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Barium (Ba)-Dissolved	0.0024	DLM	0.0020	mg/L	27-AUG-12	31-AUG-12	R2428582
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-AUG-12	30-AUG-12	R2427525
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-AUG-12	30-AUG-12	R2427525
Calcium (Ca)-Dissolved	2.80		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Copper (Cu)-Dissolved	0.00062		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-AUG-12	30-AUG-12	R2427525
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-AUG-12	30-AUG-12	R2427525
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Magnesium (Mg)-Dissolved	0.70	DLM	0.10	mg/L	27-AUG-12	31-AUG-12	R2428582
Manganese (Mn)-Dissolved	0.00199		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Molybdenum (Mo)-Dissolved	0.00014		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved	0.432		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved	0.00064		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Silicon (Si)-Dissolved	0.264		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved	0.38	DLM	0.20	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Dissolved	0.0131		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.8		1.0	mg/L		04-SEP-12	R2429488
Fluoride by Ion Chromatography							
Fluoride	0.060		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated							
Hardness (as CaCO3)	8.77		0.30	mg/L		29-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	10.8		0.20	mg/L		04-SEP-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-7 CREMP-AUG-DUP-2							
Sampled By: MM, MF							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography							
Sulfate	2.94		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		28-AUG-12	R2425885
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0090		0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total	0.00031		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total	0.0044	DLM	0.0020	mg/L	27-AUG-12	31-AUG-12	R2428582
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total	2.39		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total	0.00067		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Magnesium (Mg)-Total	0.92	DLM	0.10	mg/L	27-AUG-12	31-AUG-12	R2428582
Manganese (Mn)-Total	0.00261		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total	0.365		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total	0.00070		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Silicon (Si)-Total	0.229		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total	0.50	DLM	0.30	mg/L	27-AUG-12	31-AUG-12	R2428582
Strontium (Sr)-Total	0.0142		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-7 CREMP-AUG-DUP-2 Sampled By: MM, MF Matrix: WATER Total Metals by ICP-MS Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Miscellaneous Parameters Silica, Reactive (as SiO2) Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	<0.00010 <0.00020 <0.0020 <0.00040 1.9 <1.0 0.37 7.27 0.294 10.5 12.8 <0.60 <0.34		0.00010 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 0.0050 1.0 1.2 0.60 0.34	mg/L mg/L mg/L mg/L mg/L mg/L NTU pH units mg/L mg/L mg/L mg/L	27-AUG-12 27-AUG-12 27-AUG-12 27-AUG-12 28-AUG-12 29-AUG-12 27-AUG-12 28-AUG-12 28-AUG-12 29-AUG-12 29-AUG-12 29-AUG-12 29-AUG-12	28-AUG-12 28-AUG-12 28-AUG-12 28-AUG-12 04-SEP-12 29-AUG-12 27-AUG-12 28-AUG-12 28-AUG-12 29-AUG-12 29-AUG-12 29-AUG-12 29-AUG-12	R2425834 R2425834 R2425834 R2425834 R2429488 R2427195 R2425020 R2425783 R2425321 R2426611 R2426611 R2426611 R2426611
L1200175-8 CREMP-AUG-EB-1 Sampled By: MM, MF on 20-AUG-12 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved Cadmium (Cd)-Dissolved Calcium (Ca)-Dissolved Cesium (Cs)-Dissolved Chromium (Cr)-Dissolved Cobalt (Co)-Dissolved Copper (Cu)-Dissolved Iron (Fe)-Dissolved Lead (Pb)-Dissolved Lithium (Li)-Dissolved Magnesium (Mg)-Dissolved Manganese (Mn)-Dissolved	<0.010 <0.10 <0.20 FIELD <0.000010 <0.0020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.010 <0.000010 <0.050 <0.00010 <0.0020 <0.00020 <0.00020 <0.10 <0.000090 <0.0020 <0.010 <0.00010		0.010 0.10 0.20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010 0.000010 0.050 0.00010 0.0020 0.00020 0.00020 0.10 0.000090 0.0020 0.010 0.00010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	27-AUG-12 27-AUG-12	30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 29-AUG-12 07-SEP-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12 30-AUG-12	R2426919 R2427749 R2427749 R2425729 R2433179 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525 R2427525

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-8 CREMP-AUG-EB-1							
Sampled By: MM, MF on 20-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-AUG-12	30-AUG-12	R2427525
Potassium (K)-Dissolved	<0.020		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-AUG-12	30-AUG-12	R2427525
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	27-AUG-12	30-AUG-12	R2427525
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	27-AUG-12	30-AUG-12	R2427525
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-AUG-12	30-AUG-12	R2427525
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-AUG-12	30-AUG-12	R2427525
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-AUG-12	30-AUG-12	R2427525
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-AUG-12	30-AUG-12	R2427525
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		05-SEP-12	R2430485
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		30-AUG-12	R2427749
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		31-AUG-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		29-AUG-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		30-AUG-12	R2427749
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		04-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		30-AUG-12	R2427749
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		29-AUG-12	R2426026
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		29-AUG-12	R2426094
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		30-AUG-12	R2427749
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.090		0.050	mg/L	04-SEP-12	05-SEP-12	R2430209
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		28-AUG-12	R2425885
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		07-SEP-12	R2433179
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	27-AUG-12	28-AUG-12	R2425834
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Arsenic (As)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Barium (Ba)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1200175-8 CREMP-AUG-EB-1							
Sampled By: MM, MF on 20-AUG-12							
Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Boron (B)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	27-AUG-12	28-AUG-12	R2425834
Calcium (Ca)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Copper (Cu)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Iron (Fe)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Lead (Pb)-Total	<0.000090		0.000090	mg/L	27-AUG-12	28-AUG-12	R2425834
Lithium (Li)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Magnesium (Mg)-Total	<0.010		0.010	mg/L	27-AUG-12	28-AUG-12	R2425834
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	27-AUG-12	28-AUG-12	R2425834
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Phosphorus (P)-Total	<0.10		0.10	mg/L	27-AUG-12	28-AUG-12	R2425834
Potassium (K)-Total	<0.020		0.020	mg/L	27-AUG-12	28-AUG-12	R2425834
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Selenium (Se)-Total	<0.0010		0.0010	mg/L	27-AUG-12	28-AUG-12	R2425834
Silicon (Si)-Total	<0.050		0.050	mg/L	27-AUG-12	28-AUG-12	R2425834
Silver (Ag)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Sodium (Na)-Total	<0.030		0.030	mg/L	27-AUG-12	28-AUG-12	R2425834
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Thorium (Th)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Tin (Sn)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	27-AUG-12	28-AUG-12	R2425834
Tungsten (W)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Uranium (U)-Total	<0.00010		0.00010	mg/L	27-AUG-12	28-AUG-12	R2425834
Vanadium (V)-Total	<0.00020		0.00020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	27-AUG-12	28-AUG-12	R2425834
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	27-AUG-12	28-AUG-12	R2425834
Total Organic Carbon							
Total Organic Carbon	<1.0		1.0	mg/L		05-SEP-12	R2430485
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		29-AUG-12	R2427195
Turbidity							
Turbidity	<0.10		0.10	NTU		27-AUG-12	R2425020
pH							
pH	5.86		0.10	pH units		28-AUG-12	R2425783
Miscellaneous Parameters							
Conductivity	<1.0		1.0	umhos/cm		29-AUG-12	R2425928
Silica, Reactive (as SiO2)	<0.0050		0.0050	mg/L		28-AUG-12	R2425321
Alkalinity							
Alkalinity, Total (as CaCO3)	2.0		1.0	mg/L		29-AUG-12	R2426611
Bicarbonate (HCO3)	2.4		1.2	mg/L		29-AUG-12	R2426611
Carbonate (CO3)	<0.60		0.60	mg/L		29-AUG-12	R2426611
Hydroxide (OH)	<0.34		0.34	mg/L		29-AUG-12	R2426611

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

[illegible]



Azimuth Consulting Group Inc.
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VANCOUVER BC V6K 2G8

Date Received: 04-SEP-12
Report Date: 19-SEP-12 16:25 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1203660
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

CRAIG RIDDELL
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-1 BBD-23-S							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography							
Chloride	1.44		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.99		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a	0.63		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity							
Conductivity	28		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0080		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved	0.0203		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	2.37		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00034		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	1.05		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00132		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	0.0015		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.377		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00068		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.253		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.683		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.0164		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-1 BBD-23-S							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.1		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.041		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	11.2		0.30	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	11.2		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0089		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0089		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	0.62		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.159		0.050	mg/L	11-SEP-12	13-SEP-12	R2435966
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0120		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.0216		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	2.58		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	0.00032		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	1.16		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	0.00250		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	0.412		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	0.00076		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-1	BBD-23-S							
Sampled By: MM / MF on 25-AUG-12								
Matrix: WATER								
Total Metals by ICP-MS								
Silicon (Si)-Total		0.266		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total		0.768		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total		0.0184		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon								
Total Organic Carbon		4.1		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity								
Turbidity		0.42		0.10	NTU		05-SEP-12	R2430480
pH								
pH		7.10		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.406	DLA	0.025	mg/L		10-SEP-12	R2433262
Alkalinity								
Alkalinity, Total (as CaCO3)		10.5		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		12.8		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-2	BBD-24-S							
Sampled By: MM / MF on 25-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography								
Chloride		1.49		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		1.17		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a		0.42		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity								
Conductivity		28		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0066		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-2 BBD-24-S							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Barium (Ba)-Dissolved	0.0209		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	2.34		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00029		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	1.08		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00137		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.382		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00070		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.249		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.700		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.0166		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.2		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.044		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	10.3		0.30	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	10.3		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0106		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0106		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-2 BBD-24-S							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	0.61		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.147		0.050	mg/L	11-SEP-12	13-SEP-12	R2435966
Total Dissolved Solids							
Total Dissolved Solids	17.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0106		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.0203		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	2.34		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	0.00029		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	1.07		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	0.00238		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	0.373		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	0.00071		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Total	0.217		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total	0.681		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total	0.0173		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon							
Total Organic Carbon	4.3		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-SEP-12	R2431347

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-2	BBD-24-S							
Sampled By:	MM / MF on 25-AUG-12							
Matrix:	WATER							
Turbidity								
Turbidity		0.41		0.10	NTU		05-SEP-12	R2430480
pH								
pH		7.11		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.370		0.025	mg/L		10-SEP-12	R2433262
Alkalinity								
Alkalinity, Total (as CaCO3)		10.5		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		12.8		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-3	BPJ-23-S							
Sampled By:	MM / MF on 25-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography								
Chloride		2.70		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.67		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a		0.34		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity								
Conductivity		32		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					17-SEP-12	R2437421
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	17-SEP-12	18-SEP-12	R2438056
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0073		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved		0.0204		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved		<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved		2.36		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved		0.00028		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved		1.13		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved		0.00148		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved		0.403		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-3 BPJ-23-S							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Rubidium (Rb)-Dissolved	0.00069		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.250		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	1.27		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.0167		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.5		1.0	mg/L		07-SEP-12	R2433240
Note: Dissolved Organic Carbon greater than Total Organic Carbon but within analytical error.							
Fluoride by Ion Chromatography							
Fluoride	0.044		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	11.0		0.30	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	11.0		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0115		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0115		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	0.76		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.153		0.050	mg/L	11-SEP-12	13-SEP-12	R2435966
Total Dissolved Solids							
Total Dissolved Solids	21.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0111		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.0202		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421

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ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-4 BPJ-24-S							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography							
Chloride	1.84		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.76		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a	0.42		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity							
Conductivity	29		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0070		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved	0.0204		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	2.37		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00029		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	1.10		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00123		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.396		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00070		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.247		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.941		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.0168		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-4 BPJ-24-S Sampled By: MM / MF on 25-AUG-12 Matrix: WATER							
Dissolved Organic Carbon Dissolved Organic Carbon	4.2		1.0	mg/L		07-SEP-12	R2433240
Note: Dissolved Organic Carbon greater than Total Organic Carbon but within analytical error.							
Fluoride by Ion Chromatography Fluoride	0.043		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated Hardness (as CaCO3)	10.8		0.30	mg/L		06-SEP-12	
Hardness Calculated Hardness (as CaCO3)	10.8		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography Nitrate-N	0.0106		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite Nitrate and Nitrite as N	0.0106		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography Sulfate	0.65		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.158		0.050	mg/L	11-SEP-12	13-SEP-12	R2435966
Total Dissolved Solids Total Dissolved Solids	16.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0117		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.0210		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	2.45		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	0.00043		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	1.14		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	0.00242		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	0.396		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	0.00075		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-4	BPJ-24-S							
Sampled By: MM / MF on 25-AUG-12								
Matrix: WATER								
Total Metals by ICP-MS								
Silicon (Si)-Total		0.231		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total		0.962		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total		0.0185		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon								
Total Organic Carbon		3.8		1.0	mg/L		07-SEP-12	R2433240
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity								
Turbidity		0.41		0.10	NTU		05-SEP-12	R2430480
pH								
pH		7.12		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.305		0.025	mg/L		10-SEP-12	R2433262
Alkalinity								
Alkalinity, Total (as CaCO3)		10.5		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		12.8		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-5	BAP-23-S							
Sampled By: MM / MF on 24-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography								
Chloride		25.4		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.61		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Pheophytin a		0.32		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity								
Conductivity		120		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0058		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-5 BAP-23-S							
Sampled By: MM / MF on 24-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Barium (Ba)-Dissolved	0.0198		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	2.92		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00034		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	2.58		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00098		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.868		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00087		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.252		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	13.8		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.0268		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.9		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.049		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	17.9		0.20	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	17.9		0.30	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0155		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0155		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-5 BAP-23-S							
Sampled By: MM / MF on 24-AUG-12							
Matrix: WATER							
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	3.98		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.136		0.050	mg/L	11-SEP-12	13-SEP-12	R2435966
Total Dissolved Solids							
Total Dissolved Solids	67.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0142		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.0197		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	3.02		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	0.00037		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	2.68		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	0.00248		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	0.921		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	0.00089		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Total	0.243		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total	14.6		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total	0.0281		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon							
Total Organic Carbon	4.0		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-SEP-12	R2431347

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-5	BAP-23-S							
Sampled By:	MM / MF on 24-AUG-12							
Matrix:	WATER							
Turbidity								
Turbidity		0.34		0.10	NTU		05-SEP-12	R2430480
pH								
pH		7.06		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.306		0.025	mg/L		10-SEP-12	R2433262
Alkalinity								
Alkalinity, Total (as CaCO3)		10.6		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		13.0		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-6	BAP-24-S							
Sampled By:	MM / MF on 24-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography								
Chloride		24.4		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.57		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a		0.21		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity								
Conductivity		116		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0047		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved		0.0199		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved		<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved		2.87		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	06-SEP-12	R2431307
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved		2.64		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved		0.00069		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved		0.851		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-6 BAP-24-S							
Sampled By: MM / MF on 24-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Rubidium (Rb)-Dissolved	0.00084		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.239		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	13.8		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.0259		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.9		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.049		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	18.9		0.20	mg/L		07-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	18.9		0.30	mg/L		07-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0143		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0143		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	3.84		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.141		0.050	mg/L	11-SEP-12	13-SEP-12	R2435966
Total Dissolved Solids							
Total Dissolved Solids	64.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0159		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.0202		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	3.03		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-6	BAP-24-S							
Sampled By:	MM / MF on 24-AUG-12							
Matrix:	WATER							
Total Metals by ICP-MS								
Cesium (Cs)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total		<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total		<0.00020		0.00020	mg/L	05-SEP-12	06-SEP-12	R2431307
Iron (Fe)-Total		<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total		<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total		<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total		2.75		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total		0.00258		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total		<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total		0.893		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total		0.00095		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total		<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Total		0.265		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total		14.8		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total		0.0289		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon								
Total Organic Carbon		4.0		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity								
Turbidity		0.32		0.10	NTU		05-SEP-12	R2430480
pH								
pH		7.12		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.321		0.025	mg/L		10-SEP-12	R2433262
Alkalinity								
Alkalinity, Total (as CaCO3)		10.7		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		13.1		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-7	CREMP-AUG-DUP-3							
Sampled By:	MM / MF on 25-AUG-12							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour					</			

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-7 CREMP-AUG-DUP-3							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography							
Chloride	1.53		0.20	mg/L		05-SEP-12	R2431661
Conductivity							
Conductivity	28		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0069		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved	0.0205		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	2.42		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00029		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	1.13		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00114		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.402		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00071		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.260		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.726		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.0167		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.1		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.043		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-7 CREMP-AUG-DUP-3							
Sampled By: MM / MF on 25-AUG-12							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	10.9		0.30	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	10.9		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0118		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0118		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	0.61		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.157		0.050	mg/L	11-SEP-12	13-SEP-12	R2435966
Total Dissolved Solids							
Total Dissolved Solids	17.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0123		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.0208		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	2.47		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	0.00041		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	1.16		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	0.00258		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	0.393		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	0.00074		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Total	0.260		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total	0.748		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total	0.0179		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-7 CREMP-AUG-DUP-3								
Sampled By: MM / MF on 25-AUG-12								
Matrix: WATER								
Total Metals by ICP-MS								
Thorium (Th)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total		<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total		<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon								
Total Organic Carbon		4.1		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity								
Turbidity		0.32		0.10	NTU		05-SEP-12	R2430480
pH								
pH		7.08		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.411		0.025	mg/L		10-SEP-12	R2433262
Alkalinity								
Alkalinity, Total (as CaCO3)		10.6		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		12.9		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.51		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a		0.27		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
L1203660-8 TRIP BLANKS								
Sampled By: MM / MF								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography								
Chloride		<0.20		0.20	mg/L		05-SEP-12	R2431661
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved		<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved		<0.050		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-8 TRIP BLANKS							
Sampled By: MM / MF							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	<0.020		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		05-SEP-12	R2430611
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-8 TRIP BLANKS							
Sampled By: MM / MF							
Matrix: WATER							
Total Metals by ICP-MS							
Barium (Ba)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	<0.020		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Total	<0.050		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total	<0.030		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon							
Total Organic Carbon	<1.0		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity							
Turbidity	0.22		0.10	NTU		05-SEP-12	R2430480
pH							
pH	5.86		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters							
Conductivity	<1.0		1.0	umhos/cm		11-SEP-12	R2434212
Silica, Reactive (as SiO2)	<0.0050		0.0050	mg/L		12-SEP-12	R2434583
Alkalinity							
Alkalinity, Total (as CaCO3)	1.8		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)	2.2		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)	<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)	<0.34		0.34	mg/L		05-SEP-12	R2430440

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-9 CREMP-AUG-EB-2							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography							
Chloride	<0.20		0.20	mg/L		05-SEP-12	R2431661
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	<0.050		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	<0.020		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		05-SEP-12	R2431661

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-9 CREMP-AUG-EB-2							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	<0.20		0.20	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	<0.050		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106
Total Dissolved Solids							
Total Dissolved Solids	5.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	<0.020		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Total	<0.050		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total	<0.030		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-9 CREMP-AUG-EB-2 Sampled By: MM / MF on 26-AUG-12 Matrix: WATER Total Metals by ICP-MS Thorium (Th)-Total Tin (Sn)-Total Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Miscellaneous Parameters Conductivity Silica, Reactive (as SiO2) Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	<0.00010 <0.00020 <0.00050 <0.00010 <0.00010 <0.00020 <0.0020 <0.00040 <1.0 <1.0 0.19 5.68 <1.0 12.7 1.9 2.3 <0.60 <0.34		0.00010 0.00020 0.00050 0.00010 0.00010 0.00020 0.0020 0.00040 1.0 1.0 1.0 1.2 0.60 0.34	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L umhos/cm mg/L mg/L mg/L mg/L mg/L	05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 04-SEP-12	05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 06-SEP-12 07-SEP-12 05-SEP-12 04-SEP-12	R2430421 R2430421 R2430421 R2430421 R2430421 R2430421 R2430421 R2430421 R2431342 R2431347 R2430480 R2429450
L1203660-10 TPN-52-S Sampled By: MM / MF on 26-AUG-12 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved Cadmium (Cd)-Dissolved	<0.010 <0.10 0.57 0.46 0.14 25 FIELD <0.000010 0.0029 <0.00020 <0.00020 0.00305 <0.00020 <0.00020 <0.010 <0.000010		0.010 0.10 0.20 0.10 0.10 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010 0.000010	mg/L mg/L mg/L ug/L ug/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L	 13-SEP-12 13-SEP-12 06-SEP-12 04-SEP-12 04-SEP-12 04-SEP-12 04-SEP-12 04-SEP-12 04-SEP-12 04-SEP-12	05-SEP-12 05-SEP-12 05-SEP-12 13-SEP-12 13-SEP-12 04-SEP-12 06-SEP-12 13-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12 05-SEP-12	R2430418 R2431661 R2431661 R2435988 R2435988 R2429450 R2431221 R2435440 R2430421 R2430421 R2430421 R2430421 R2430421 R2430421 R2430421 R2430421 R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-10 TPN-52-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Calcium (Ca)-Dissolved	1.86		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00039		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	0.000132		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	0.747		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00425		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	0.00022		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.441		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00060		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.095		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.946		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.00949		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.1		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	7.90		0.20	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	7.90		0.30	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0469		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0469		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	3.67		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.100		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-10 TPN-52-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0070		0.0050	mg/L	05-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Total	0.00310		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Boron (B)-Total	<0.010		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	05-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Total	1.92		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Total	0.00043		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Total	<0.000090		0.000090	mg/L	05-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Total	0.756		0.010	mg/L	05-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Total	0.00538		0.00030	mg/L	05-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Total	<0.10		0.10	mg/L	05-SEP-12	05-SEP-12	R2430421
Potassium (K)-Total	0.437		0.020	mg/L	05-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Total	0.00062		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Total	<0.0010		0.0010	mg/L	05-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Total	0.100		0.050	mg/L	05-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Total	0.954		0.030	mg/L	05-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Total	0.00994		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	05-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Uranium (U)-Total	<0.00010		0.00010	mg/L	05-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Total	<0.00020		0.00020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	05-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	05-SEP-12	05-SEP-12	R2430421
Total Organic Carbon							
Total Organic Carbon	2.4		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity							
Turbidity	0.35		0.10	NTU		05-SEP-12	R2430480
pH							
pH	7.01		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters							
Silica, Reactive (as SiO2)	0.147		0.0050	mg/L		10-SEP-12	R2433262

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-10 TPN-52-S								
Sampled By: MM / MF on 26-AUG-12								
Matrix: WATER								
Alkalinity								
Alkalinity, Total (as CaCO3)		6.9		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		8.4		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-11 TPN-53-S								
Sampled By: MM / MF on 26-AUG-12								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography								
Chloride		0.59		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.42		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a		0.13		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity								
Conductivity		25		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0028		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved		0.00302		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved		<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved		1.85		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved		0.00039		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved		0.751		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved		0.00400		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved		0.00020		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved		0.432		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved		0.00058		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved		0.096		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved		0.942		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved		0.00934		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-11 TPN-53-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	7.70		0.20	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	8.13		0.30	mg/L		07-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0415		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0415		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	3.67		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.094		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106
Total Dissolved Solids							
Total Dissolved Solids	14.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0077		0.0050	mg/L	06-SEP-12	06-SEP-12	R2431307
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Arsenic (As)-Total	0.00026		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Barium (Ba)-Total	0.00292		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Boron (B)-Total	<0.010		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	06-SEP-12	06-SEP-12	R2431307
Calcium (Ca)-Total	1.99		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Copper (Cu)-Total	0.00056		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Iron (Fe)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Lead (Pb)-Total	<0.000090		0.000090	mg/L	06-SEP-12	06-SEP-12	R2431307

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-11 TPN-53-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Total Metals by ICP-MS							
Lithium (Li)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Magnesium (Mg)-Total	0.770		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Manganese (Mn)-Total	0.00514		0.00030	mg/L	06-SEP-12	06-SEP-12	R2431307
Molybdenum (Mo)-Total	0.00021		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Phosphorus (P)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Potassium (K)-Total	0.441		0.020	mg/L	06-SEP-12	06-SEP-12	R2431307
Rubidium (Rb)-Total	0.00064		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Selenium (Se)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Silicon (Si)-Total	0.127		0.050	mg/L	06-SEP-12	06-SEP-12	R2431307
Silver (Ag)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Sodium (Na)-Total	1.03		0.030	mg/L	06-SEP-12	06-SEP-12	R2431307
Strontium (Sr)-Total	0.0102		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Thorium (Th)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tin (Sn)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	06-SEP-12	06-SEP-12	R2431307
Tungsten (W)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Uranium (U)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Vanadium (V)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	06-SEP-12	06-SEP-12	R2431307
Total Organic Carbon							
Total Organic Carbon	2.2		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity							
Turbidity	0.38		0.10	NTU		05-SEP-12	R2430480
pH							
pH	7.03		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters							
Silica, Reactive (as SiO2)	0.141		0.025	mg/L		10-SEP-12	R2433262
Alkalinity							
Alkalinity, Total (as CaCO3)	6.9		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)	8.4		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)	<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)	<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-12 TPE-52-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography							
Chloride	0.52		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.37		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Pheophytin a	0.13		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-12 TPE-52-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Conductivity							
Conductivity	25		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0042		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved	0.00062		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved	0.00275		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	2.04		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00041		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	0.789		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00167		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	0.00019		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.464		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00068		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.104		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.720		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.00968		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.1		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.059		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	8.57		0.30	mg/L		07-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	8.34		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-12 TPE-52-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0077		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0077		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	2.70		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.087		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106
Total Dissolved Solids							
Total Dissolved Solids	14.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0125		0.0050	mg/L	06-SEP-12	06-SEP-12	R2431307
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Arsenic (As)-Total	0.00067		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Barium (Ba)-Total	0.00270		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Boron (B)-Total	<0.010		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	06-SEP-12	06-SEP-12	R2431307
Calcium (Ca)-Total	2.11		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Copper (Cu)-Total	0.00067		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Iron (Fe)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Lead (Pb)-Total	0.000124		0.000090	mg/L	06-SEP-12	06-SEP-12	R2431307
Lithium (Li)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Magnesium (Mg)-Total	0.802		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Manganese (Mn)-Total	0.00275		0.00030	mg/L	06-SEP-12	06-SEP-12	R2431307
Molybdenum (Mo)-Total	0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Phosphorus (P)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Potassium (K)-Total	0.459		0.020	mg/L	06-SEP-12	06-SEP-12	R2431307
Rubidium (Rb)-Total	0.00076		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Selenium (Se)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Silicon (Si)-Total	0.126		0.050	mg/L	06-SEP-12	06-SEP-12	R2431307
Silver (Ag)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Sodium (Na)-Total	0.792		0.030	mg/L	06-SEP-12	06-SEP-12	R2431307
Strontium (Sr)-Total	0.0106		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Thorium (Th)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tin (Sn)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	06-SEP-12	06-SEP-12	R2431307
Tungsten (W)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-13 TPE-53-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	0.748		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00166		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	0.00017		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.437		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00064		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.098		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.699		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.00927		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.1		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.060		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	8.51		0.30	mg/L		07-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	7.82		0.20	mg/L		06-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0065		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0065		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	2.79		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.091		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-13 TPE-53-S							
Sampled By: MM / MF on 26-AUG-12							
Matrix: WATER							
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0134		0.0050	mg/L	06-SEP-12	06-SEP-12	R2431307
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Arsenic (As)-Total	0.00061		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Barium (Ba)-Total	0.00276		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Boron (B)-Total	<0.010		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	06-SEP-12	06-SEP-12	R2431307
Calcium (Ca)-Total	2.09		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Copper (Cu)-Total	0.00100		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Iron (Fe)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Lead (Pb)-Total	<0.000090		0.000090	mg/L	06-SEP-12	06-SEP-12	R2431307
Lithium (Li)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Magnesium (Mg)-Total	0.800		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Manganese (Mn)-Total	0.00275		0.00030	mg/L	06-SEP-12	06-SEP-12	R2431307
Molybdenum (Mo)-Total	0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Phosphorus (P)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Potassium (K)-Total	0.468		0.020	mg/L	06-SEP-12	06-SEP-12	R2431307
Rubidium (Rb)-Total	0.00073		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Selenium (Se)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Silicon (Si)-Total	0.134		0.050	mg/L	06-SEP-12	06-SEP-12	R2431307
Silver (Ag)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Sodium (Na)-Total	0.819		0.030	mg/L	06-SEP-12	06-SEP-12	R2431307
Strontium (Sr)-Total	0.0104		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Thorium (Th)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tin (Sn)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	06-SEP-12	06-SEP-12	R2431307
Tungsten (W)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Uranium (U)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Vanadium (V)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	06-SEP-12	06-SEP-12	R2431307
Total Organic Carbon							
Total Organic Carbon	2.2		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity							
Turbidity	0.47		0.10	NTU		05-SEP-12	R2430480
pH							
pH	7.10		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters							
Silica, Reactive (as SiO2)	0.141		0.025	mg/L		10-SEP-12	R2433262
Alkalinity							
Alkalinity, Total (as CaCO3)	8.0		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)	9.8		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)	<0.60		0.60	mg/L		05-SEP-12	R2430440

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-13 TPE-53-S Sampled By: MM / MF on 26-AUG-12 Matrix: WATER Alkalinity Hydroxide (OH)	<0.34		0.34	mg/L		05-SEP-12	R2430440
L1203660-14 TPS-35-S Sampled By: MM / MF on 27-AUG-12 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		05-SEP-12	R2430418
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		05-SEP-12	R2431661
Chloride by Ion Chromatography Chloride	0.57		0.20	mg/L		05-SEP-12	R2431661
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.27		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Phaeophytin a	<0.10		0.10	ug/L	13-SEP-12	13-SEP-12	R2435988
Conductivity Conductivity	24		20	umhos/cm		04-SEP-12	R2429450
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0039		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved	0.00304		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	1.76		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00041		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	0.738		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00371		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	0.00017		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.431		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00059		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.096		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.894		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.00896		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-14 TPS-35-S							
Sampled By: MM / MF on 27-AUG-12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.1		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	7.44		0.20	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	7.68		0.30	mg/L		07-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0416		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0416		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	3.49		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.091		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106
Total Dissolved Solids							
Total Dissolved Solids	13.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0076		0.0050	mg/L	06-SEP-12	06-SEP-12	R2431307
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Arsenic (As)-Total	0.00022		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Barium (Ba)-Total	0.00291		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Boron (B)-Total	<0.010		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	06-SEP-12	06-SEP-12	R2431307
Calcium (Ca)-Total	1.85		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Copper (Cu)-Total	0.00070		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Iron (Fe)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Lead (Pb)-Total	<0.000090		0.000090	mg/L	06-SEP-12	06-SEP-12	R2431307
Lithium (Li)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Magnesium (Mg)-Total	0.743		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Manganese (Mn)-Total	0.00427		0.00030	mg/L	06-SEP-12	06-SEP-12	R2431307

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-14 TPS-35-S Sampled By: MM / MF on 27-AUG-12 Matrix: WATER Total Metals by ICP-MS Molybdenum (Mo)-Total Nickel (Ni)-Total Phosphorus (P)-Total Potassium (K)-Total Rubidium (Rb)-Total Selenium (Se)-Total Silicon (Si)-Total Silver (Ag)-Total Sodium (Na)-Total Strontium (Sr)-Total Tellurium (Te)-Total Thallium (Tl)-Total Thorium (Th)-Total Tin (Sn)-Total Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Miscellaneous Parameters Silica, Reactive (as SiO2) Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	<0.00020 <0.0020 <0.10 0.428 0.00060 <0.0010 0.121 <0.00010 0.946 0.00945 <0.00020 <0.00010 <0.00010 <0.00020 <0.00050 <0.00010 <0.00010 <0.00020 <0.00010 <0.00020 <0.00040 2.1 <1.0 0.29 7.03 0.160 6.8 8.3 <0.60 <0.34		0.00020 0.0020 0.10 0.020 0.00020 0.0010 0.050 0.00010 0.030 0.00010 0.00020 0.00010 0.00010 0.00020 0.00050 0.00010 0.00010 0.00020 0.00020 0.0020 0.00040	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	06-SEP-12 06-SEP-12	06-SEP-12 06-SEP-12	R2431307 R2431307
L1203660-15 TPS-36-S Sampled By: MM / MF on 27-AUG-12 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low)	<0.010 <0.10 0.56 0.49 0.16 24		0.010 0.10 0.20 0.10 0.10 20	mg/L mg/L mg/L ug/L ug/L umhos/cm	 13-SEP-12 13-SEP-12 04-SEP-12	05-SEP-12 05-SEP-12 05-SEP-12 13-SEP-12 13-SEP-12 04-SEP-12	R2430418 R2431661 R2431661 R2435988 R2435988 R2429450

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-15 TPS-36-S							
Sampled By: MM / MF on 27-AUG-12							
Matrix: WATER							
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					06-SEP-12	R2431221
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	06-SEP-12	13-SEP-12	R2435440
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0047		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Barium (Ba)-Dissolved	0.00292		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Boron (B)-Dissolved	<0.010		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	04-SEP-12	05-SEP-12	R2430421
Calcium (Ca)-Dissolved	1.80		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Copper (Cu)-Dissolved	0.00046		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	04-SEP-12	05-SEP-12	R2430421
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	04-SEP-12	05-SEP-12	R2430421
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Magnesium (Mg)-Dissolved	0.751		0.010	mg/L	04-SEP-12	05-SEP-12	R2430421
Manganese (Mn)-Dissolved	0.00385		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Molybdenum (Mo)-Dissolved	0.00018		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Nickel (Ni)-Dissolved	0.0011		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	04-SEP-12	05-SEP-12	R2430421
Potassium (K)-Dissolved	0.440		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Rubidium (Rb)-Dissolved	0.00059		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	04-SEP-12	05-SEP-12	R2430421
Silicon (Si)-Dissolved	0.107		0.050	mg/L	04-SEP-12	05-SEP-12	R2430421
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Sodium (Na)-Dissolved	0.929		0.020	mg/L	04-SEP-12	05-SEP-12	R2430421
Strontium (Sr)-Dissolved	0.00907		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	04-SEP-12	05-SEP-12	R2430421
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	04-SEP-12	05-SEP-12	R2430421
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	04-SEP-12	05-SEP-12	R2430421
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	04-SEP-12	05-SEP-12	R2430421
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		06-SEP-12	R2431342
Fluoride by Ion Chromatography							
Fluoride	0.053		0.020	mg/L		05-SEP-12	R2431661
Hardness Calculated							
Hardness (as CaCO3)	7.60		0.20	mg/L		06-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	7.64		0.30	mg/L		07-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0417		0.0050	mg/L		05-SEP-12	R2431661
Nitrate+Nitrite							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-15 TPS-36-S							
Sampled By: MM / MF on 27-AUG-12							
Matrix: WATER							
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0417		0.0051	mg/L		07-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		05-SEP-12	R2431661
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		05-SEP-12	R2429662
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		06-SEP-12	R2430502
Sulfate by Ion Chromatography							
Sulfate	3.42		0.50	mg/L		05-SEP-12	R2431661
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.097		0.050	mg/L	01-SEP-12	12-SEP-12	R2435106
Total Dissolved Solids							
Total Dissolved Solids	13.0		5.0	mg/L		05-SEP-12	R2430611
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		13-SEP-12	R2435440
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0076		0.0050	mg/L	06-SEP-12	06-SEP-12	R2431307
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Arsenic (As)-Total	0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Barium (Ba)-Total	0.00291		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Boron (B)-Total	<0.010		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	06-SEP-12	06-SEP-12	R2431307
Calcium (Ca)-Total	1.84		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Copper (Cu)-Total	0.00060		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Iron (Fe)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Lead (Pb)-Total	<0.000090		0.000090	mg/L	06-SEP-12	06-SEP-12	R2431307
Lithium (Li)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Magnesium (Mg)-Total	0.737		0.010	mg/L	06-SEP-12	06-SEP-12	R2431307
Manganese (Mn)-Total	0.00411		0.00030	mg/L	06-SEP-12	06-SEP-12	R2431307
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Phosphorus (P)-Total	<0.10		0.10	mg/L	06-SEP-12	06-SEP-12	R2431307
Potassium (K)-Total	0.445		0.020	mg/L	06-SEP-12	06-SEP-12	R2431307
Rubidium (Rb)-Total	0.00063		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Selenium (Se)-Total	<0.0010		0.0010	mg/L	06-SEP-12	06-SEP-12	R2431307
Silicon (Si)-Total	0.135		0.050	mg/L	06-SEP-12	06-SEP-12	R2431307
Silver (Ag)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Sodium (Na)-Total	0.975		0.030	mg/L	06-SEP-12	06-SEP-12	R2431307
Strontium (Sr)-Total	0.00955		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Thorium (Th)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Tin (Sn)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	06-SEP-12	06-SEP-12	R2431307
Tungsten (W)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Uranium (U)-Total	<0.00010		0.00010	mg/L	06-SEP-12	06-SEP-12	R2431307
Vanadium (V)-Total	<0.00020		0.00020	mg/L	06-SEP-12	06-SEP-12	R2431307

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1203660-15	TPS-36-S							
Sampled By:	MM / MF on 27-AUG-12							
Matrix:	WATER							
Total Metals by ICP-MS								
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	06-SEP-12	06-SEP-12	R2431307
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	06-SEP-12	06-SEP-12	R2431307
Total Organic Carbon								
Total Organic Carbon		4.8		1.0	mg/L		06-SEP-12	R2431342
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		07-SEP-12	R2431347
Turbidity								
Turbidity		0.27		0.10	NTU		05-SEP-12	R2430480
pH								
pH		6.98		0.10	pH units		04-SEP-12	R2429450
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.158		0.025	mg/L		10-SEP-12	R2433262
Alkalinity								
Alkalinity, Total (as CaCO3)		6.8		1.0	mg/L		05-SEP-12	R2430440
Bicarbonate (HCO3)		8.3		1.2	mg/L		05-SEP-12	R2430440
Carbonate (CO3)		<0.60		0.60	mg/L		05-SEP-12	R2430440
Hydroxide (OH)		<0.34		0.34	mg/L		05-SEP-12	R2430440

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

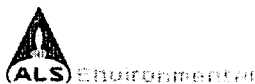
D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



L1203660-COFC

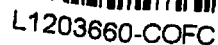
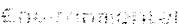
COC # _____

Page 1 of 2

L1203660

Report To		Report Format / Distribution		Service Requested (Rush for routine analysis subject to availability)															
Company: Azimuth Consulting Group		☐ Standard ☐ Other		☒ Regular (Standard Turnaround Times - Business Days)															
Contact: Maggie McConnell / Gary Mann		☒ PDF ☒ Excel ☐ Digital ☐ Fax		☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT															
Address: 218 - 2902 West Broadway		Email 1: mmcconnell@azimuthgroup.ca		☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT															
Vancouver, BC, V6K 2G8		Email 2: gmenn@azimuthgroup.ca		☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT															
Phone: 604-730-1220 Fax: 604-739-8511		Email 3: rvanengen@agnico-eagle.com		Analysis Request															
Invoice To Same as Report? ☒ Yes ☐ No		Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)															
Hardcopy of Invoice with Report? ☐ Yes ☒ No		Job #: Meadowbank CREMP 2012																	
Company:		PO / AFE:																	
Contact:		LSD:																	
Address:																			
Phone: Fax:		Quote #: Q33259																	
Lab Work Order # (lab use only)		ALS Contact: Judy Dalmaijer		Sampler: MM, MF															
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Number of Containers														
	BBD-23-S	25-Aug-12		Water	x													10	+ filter
	BBD-24-S	25-Aug-12		Water	x													10	+ filter
	BPJ-23-S	25-Aug-12		Water	x													10	+ filter
	BPJ-24-S	25-Aug-12		Water	x													10	+ filter
	BAP-23-S	24-Aug-12		Water	x													10	+ filter
	BAP-24-S	24-Aug-12		Water	x													10	+ filter
	CREMP-AUG-DUP-3	25-Aug-12		Water	x													10	+ filter
	Trip Blanks	-		Water	x													7	
	CREMP-AUG-EB-2	26-Aug-12		Water	x													10	
	TPN-52-S	26-Aug-12		Water	x													10	+ filter
	TPN-53-S	26-Aug-12		Water	x													10	+ filter
	TPE-52-S	26-Aug-12		Water	x													10	+ filter
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																			
*** (1) there are no Chlorophyll-a filters for samples with IDs including "EB-" and for "travel/trip blank" samples; however, all other analyses should be conducted on these samples. (2) 500 mL of water were filtered for all Chlorophyll-a sample filters included in this shipment.***																			
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																			
By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.																			
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																			
SHIPMENT RELEASE (client use)				SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)											
Released by: Maggie McConnell	Date (dd-mmm-yy): 30-Aug-12	Time (hh-mm):	Received by:	Date: 04 Sep 12	Time: 12:51	Temperature: 19.6 °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF									

GENF 18.01 Front



COC #

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GENF 18.01 Front



Azimuth Consulting Group Inc.
ATTN: MAGGIE MCCONNELL
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 24-SEP-12
Report Date: 19-OCT-12 10:19 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1213604
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-1	WAL - 26 -S							
Sampled By: CLIENT on 12-SEP-12 @ 14:48								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		25-SEP-12	R2443679
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		25-SEP-12	R2443847
Chloride by Ion Chromatography								
Chloride		0.46		0.20	mg/L		25-SEP-12	R2443847
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.10		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Phaeophytin a		<0.10		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Conductivity								
Conductivity		33		20	umhos/cm		24-SEP-12	R2442339
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					17-OCT-12	R2456454
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	17-OCT-12	18-OCT-12	R2457975
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0028		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Arsenic (As)-Dissolved		0.00031		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Barium (Ba)-Dissolved		0.00214		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved		<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved		3.91		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved		0.00148		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved		0.000204		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved		1.21		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved		0.00146		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved		0.00023		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved		0.0012		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved		0.466		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved		0.00061		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved		0.474		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved		0.699		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved		0.0193		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved		<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved		0.0671		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-1 WAL - 26 -S Sampled By: CLIENT on 12-SEP-12 @ 14:48 Matrix: WATER							
Dissolved Metals by ICP-MS Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon Dissolved Organic Carbon	3.7		1.0	mg/L		28-SEP-12	R2446365
Fluoride by Ion Chromatography Fluoride	0.036		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated Hardness (as CaCO3)	16.5		0.30	mg/L		27-SEP-12	
Hardness Calculated Hardness (as CaCO3)	14.7		0.20	mg/L		01-OCT-12	
Nitrate as N by Ion Chromatography Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography Nitrite-N	0.0011		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography Sulfate	2.52		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.113		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids Total Dissolved Solids	24.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS Aluminum (Al)-Total	<0.0050		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	0.00027		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00199		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	4.57		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00148		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	0.000196		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	1.22		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00145		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	0.00021		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.443		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00064		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

[illegible]

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-2 WAL - 25 - S							
Sampled By: CLIENT on 12-SEP-12 @ 15:10							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Barium (Ba)-Dissolved	0.00204		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved	<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved	3.70		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved	0.00147		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved	0.000116		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved	1.07		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved	0.00108		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved	0.00013		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved	0.403		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved	0.00058		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.450		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.539		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.0178		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	0.0043		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.2		1.0	mg/L		28-SEP-12	R2446365
Fluoride by Ion Chromatography							
Fluoride	0.039		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	15.6		0.30	mg/L		27-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	13.6		0.20	mg/L		01-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-2 WAL - 25 - S							
Sampled By: CLIENT on 12-SEP-12 @ 15:10							
Matrix: WATER							
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography							
Sulfate	2.51		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.111		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0303		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	0.00029		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00205		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	0.000011		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	4.35		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00178		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	0.000128		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	1.16		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00135		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.445		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00061		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Silicon (Si)-Total	0.506		0.050	mg/L	26-SEP-12	26-SEP-12	R2444325
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Sodium (Na)-Total	0.527		0.030	mg/L	26-SEP-12	26-SEP-12	R2444325
Strontium (Sr)-Total	0.0188		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Titanium (Ti)-Total	0.00072		0.00050	mg/L	26-SEP-12	26-SEP-12	R2444325
Tungsten (W)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zinc (Zn)-Total	0.0041		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-12	26-SEP-12	R2444325
Total Organic Carbon							
Total Organic Carbon	3.9		1.0	mg/L		28-SEP-12	R2446365
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		28-SEP-12	R2446748

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-2	WAL - 25 - S							
Sampled By:	CLIENT on 12-SEP-12 @ 15:10							
Matrix:	WATER							
Turbidity								
Turbidity		0.47		0.10	NTU		24-SEP-12	R2442445
pH								
pH		7.35		0.10	pH units		24-SEP-12	R2442339
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.468		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity								
Alkalinity, Total (as CaCO3)		13.0		1.0	mg/L		25-SEP-12	R2443229
Bicarbonate (HCO3)		15.8		1.2	mg/L		25-SEP-12	R2443229
Carbonate (CO3)		<0.60		0.60	mg/L		25-SEP-12	R2443229
Hydroxide (OH)		<0.34		0.34	mg/L		25-SEP-12	R2443229
L1213604-3	TPE - 54 - S							
Sampled By:	CLIENT on 14-SEP-12 @ 10:00							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		25-SEP-12	R2443679
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		25-SEP-12	R2443847
Chloride by Ion Chromatography								
Chloride		0.53		0.20	mg/L		25-SEP-12	R2443847
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.37		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Phaeophytin a		0.14		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Conductivity								
Conductivity		24		20	umhos/cm		24-SEP-12	R2442339
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					17-OCT-12	R2456454
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	17-OCT-12	18-OCT-12	R2457975
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0032		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Arsenic (As)-Dissolved		0.00059		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Barium (Ba)-Dissolved		0.00278		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved		<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved		2.73		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved		0.00046		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved		0.784		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved		0.00186		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved		0.00020		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-3 TPE - 54 - S							
Sampled By: CLIENT on 14-SEP-12 @ 10:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Rubidium (Rb)-Dissolved	0.00068		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.072		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.758		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.00970		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.2		1.0	mg/L		28-SEP-12	R2446365
Fluoride by Ion Chromatography							
Fluoride	0.062		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	12.4		0.30	mg/L		27-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	10.0		0.20	mg/L		01-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography							
Sulfate	2.80		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.096		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0056		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	0.00058		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00264		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	3.31		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-4 TPE - 55 - S Sampled By: CLIENT on 14-SEP-12 @ 10:25 Matrix: WATER							
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		25-SEP-12	R2443847
Chloride by Ion Chromatography Chloride	0.53		0.20	mg/L		25-SEP-12	R2443847
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.74		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Phaeophytin a	0.27		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Conductivity Conductivity	24		20	umhos/cm		24-SEP-12	R2442339
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					17-OCT-12	R2456454
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	17-OCT-12	18-OCT-12	R2457975
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0041		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Arsenic (As)-Dissolved	0.00066		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Barium (Ba)-Dissolved	0.00271		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved	<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved	2.16		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved	0.00043		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved	0.833		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved	0.00190		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved	0.00020		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved	0.475		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved	0.00069		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.080		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.779		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.00958		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon Dissolved Organic Carbon	2.3		1.0	mg/L		28-SEP-12	R2446365

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-4 TPE - 55 - S Sampled By: CLIENT on 14-SEP-12 @ 10:25 Matrix: WATER							
Fluoride by Ion Chromatography							
Fluoride	0.059		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	8.82		0.20	mg/L		01-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	9.47		0.30	mg/L		27-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography							
Sulfate	2.79		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.113		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0054		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	0.00061		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00251		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	2.32		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00053		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	0.896		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00185		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.466		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00067		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Silicon (Si)-Total	0.124		0.050	mg/L	26-SEP-12	26-SEP-12	R2444325
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Sodium (Na)-Total	0.788		0.030	mg/L	26-SEP-12	26-SEP-12	R2444325
Strontium (Sr)-Total	0.00914		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-5 INUG - 43 - S							
Sampled By: CLIENT on 16-SEP-12 @ 09:40							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved	0.00043		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved	0.667		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved	0.00087		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved	0.354		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved	0.00050		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.169		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.532		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.00609		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		28-SEP-12	R2446365
Fluoride by Ion Chromatography							
Fluoride	0.051		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	5.39		0.20	mg/L		01-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	6.03		0.30	mg/L		27-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography							
Sulfate	0.75		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.101		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-5 INUG - 43 - S							
Sampled By: CLIENT on 16-SEP-12 @ 09:40							
Matrix: WATER							
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0059		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00178		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	1.25		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00054		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	0.707		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00083		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.375		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00050		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Silicon (Si)-Total	0.227		0.050	mg/L	26-SEP-12	26-SEP-12	R2444325
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Sodium (Na)-Total	0.545		0.030	mg/L	26-SEP-12	26-SEP-12	R2444325
Strontium (Sr)-Total	0.00611		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	26-SEP-12	26-SEP-12	R2444325
Tungsten (W)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-12	26-SEP-12	R2444325
Total Organic Carbon							
Total Organic Carbon	2.7		1.0	mg/L		28-SEP-12	R2446365
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	1.1		1.0	mg/L		28-SEP-12	R2446748
Turbidity							
Turbidity	0.48		0.10	NTU		24-SEP-12	R2442445
pH							
pH	7.03		0.10	pH units		24-SEP-12	R2442339
Miscellaneous Parameters							
Conductivity	10.5		1.0	umhos/cm		25-SEP-12	R2442843

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-5	INUG - 43 - S							
Sampled By: CLIENT on 16-SEP-12 @ 09:40								
Matrix: WATER								
Silica, Reactive (as SiO2)		0.174		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity								
Alkalinity, Total (as CaCO3)		6.3		1.0	mg/L		25-SEP-12	R2443229
Bicarbonate (HCO3)		7.7		1.2	mg/L		25-SEP-12	R2443229
Carbonate (CO3)		<0.60		0.60	mg/L		25-SEP-12	R2443229
Hydroxide (OH)		<0.34		0.34	mg/L		25-SEP-12	R2443229
L1213604-6	INUG - 42 - S							
Sampled By: CLIENT on 16-SEP-12 @ 10:05								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		25-SEP-12	R2443679
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		25-SEP-12	R2443847
Chloride by Ion Chromatography								
Chloride		0.61		0.20	mg/L		25-SEP-12	R2443847
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.48		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Phaeophytin a		0.18		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					17-OCT-12	R2456454
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	17-OCT-12	18-OCT-12	R2457975
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0040		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Barium (Ba)-Dissolved		0.00173		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved		<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved		1.07		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved		0.00044		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved		0.662		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved		0.00113		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved		0.364		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved		0.00049		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved		0.156		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved		0.529		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved		0.00610		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-6 INUG - 42 - S							
Sampled By: CLIENT on 16-SEP-12 @ 10:05							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.6		1.0	mg/L		28-SEP-12	R2446365
Fluoride by Ion Chromatography							
Fluoride	0.050		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	6.48		0.30	mg/L		27-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	5.39		0.20	mg/L		01-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography							
Sulfate	0.75		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.103		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids							
Total Dissolved Solids	13.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0057		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00173		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	1.25		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00051		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-6 INUG - 42 - S Sampled By: CLIENT on 16-SEP-12 @ 10:05 Matrix: WATER							
Total Metals by ICP-MS							
Magnesium (Mg)-Total	0.817		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00115		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.369		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00055		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Silicon (Si)-Total	0.212		0.050	mg/L	26-SEP-12	26-SEP-12	R2444325
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Sodium (Na)-Total	0.591		0.030	mg/L	26-SEP-12	26-SEP-12	R2444325
Strontium (Sr)-Total	0.00620		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	26-SEP-12	26-SEP-12	R2444325
Tungsten (W)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-12	26-SEP-12	R2444325
Total Organic Carbon							
Total Organic Carbon	2.8		1.0	mg/L		28-SEP-12	R2446365
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		28-SEP-12	R2446748
Turbidity							
Turbidity	0.46		0.10	NTU		24-SEP-12	R2442445
pH							
pH	7.05		0.10	pH units		24-SEP-12	R2442339
Miscellaneous Parameters							
Conductivity	10.6		1.0	umhos/cm		25-SEP-12	R2442843
Silica, Reactive (as SiO2)	0.286		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity							
Alkalinity, Total (as CaCO3)	6.5		1.0	mg/L		25-SEP-12	R2443229
Bicarbonate (HCO3)	7.9		1.2	mg/L		25-SEP-12	R2443229
Carbonate (CO3)	<0.60		0.60	mg/L		25-SEP-12	R2443229
Hydroxide (OH)	<0.34		0.34	mg/L		25-SEP-12	R2443229
L1213604-7 TE - 55 - S Sampled By: CLIENT on 17-SEP-12 @ 08:04 Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		25-SEP-12	R2443679
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		25-SEP-12	R2443847
Chloride by Ion Chromatography							
Chloride	0.51		0.20	mg/L		25-SEP-12	R2443847
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.47		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Phaeophytin a	0.13		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-7 TE - 55 - S Sampled By: CLIENT on 17-SEP-12 @ 08:04 Matrix: WATER							
Conductivity Conductivity	23		20	umhos/cm		24-SEP-12	R2442339
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					17-OCT-12	R2456454
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	17-OCT-12	18-OCT-12	R2457975
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0050		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Barium (Ba)-Dissolved	0.00217		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved	<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved	2.07		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved	0.00045		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved	0.755		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved	0.00092		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved	0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved	0.411		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved	0.00070		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.173		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.589		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.0105		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon Dissolved Organic Carbon	2.2		1.0	mg/L		28-SEP-12	R2446365
Fluoride by Ion Chromatography Fluoride	0.056		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated Hardness (as CaCO3)	8.27		0.20	mg/L		01-OCT-12	
Hardness Calculated Hardness (as CaCO3)	10.4		0.30	mg/L		27-SEP-12	
Nitrate as N by Ion Chromatography							

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-7 TE - 55 - S Sampled By: CLIENT on 17-SEP-12 @ 08:04 Matrix: WATER							
Nitrate as N by Ion Chromatography Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography Sulfate	2.16		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.095		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids Total Dissolved Solids	16.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS Aluminum (Al)-Total	0.0077		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00198		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	2.53		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00056		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	0.981		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00101		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.403		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00080		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Silicon (Si)-Total	0.258		0.050	mg/L	26-SEP-12	26-SEP-12	R2444325
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Sodium (Na)-Total	0.633		0.030	mg/L	26-SEP-12	26-SEP-12	R2444325
Strontium (Sr)-Total	0.0109		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	26-SEP-12	26-SEP-12	R2444325
Tungsten (W)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-8 TE - 54 - S							
Sampled By: CLIENT on 17-SEP-12 @ 08:33							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved	0.799		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved	0.00125		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved	0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved	0.411		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved	0.00068		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.217		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.579		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.0108		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.1		1.0	mg/L		28-SEP-12	R2446365
Fluoride by Ion Chromatography							
Fluoride	0.056		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	10.4		0.30	mg/L		27-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	8.78		0.20	mg/L		01-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography							
Sulfate	2.25		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.122		0.050	mg/L	01-OCT-12	03-OCT-12	R2448659
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-8	TE - 54 - S						
Sampled By:	CLIENT on 17-SEP-12 @ 08:33						
Matrix:	WATER						
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0137		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00210		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	2.60		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00053		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	0.950		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00129		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.407		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00072		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Silicon (Si)-Total	0.275		0.050	mg/L	26-SEP-12	26-SEP-12	R2444325
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Sodium (Na)-Total	0.610		0.030	mg/L	26-SEP-12	26-SEP-12	R2444325
Strontium (Sr)-Total	0.0106		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	26-SEP-12	26-SEP-12	R2444325
Tungsten (W)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-12	26-SEP-12	R2444325
Total Organic Carbon							
Total Organic Carbon	2.3		1.0	mg/L		28-SEP-12	R2446365
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		28-SEP-12	R2446748
Turbidity							
Turbidity	0.50		0.10	NTU		24-SEP-12	R2442445
pH							
pH	7.21		0.10	pH units		24-SEP-12	R2442339
Miscellaneous Parameters							
Silica, Reactive (as SiO2)	0.236		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity							
Alkalinity, Total (as CaCO3)	8.8		1.0	mg/L		25-SEP-12	R2443229
Bicarbonate (HCO3)	10.7		1.2	mg/L		25-SEP-12	R244322

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-8 TE - 54 - S Sampled By: CLIENT on 17-SEP-12 @ 08:33 Matrix: WATER Alkalinity Hydroxide (OH)	<0.34		0.34	mg/L		25-SEP-12	R2443229
L1213604-9 TEFF - 25 - S Sampled By: CLIENT on 17-SEP-12 @ 16:30 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		25-SEP-12	R2443679
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		25-SEP-12	R2443847
Chloride by Ion Chromatography Chloride	0.48		0.20	mg/L		25-SEP-12	R2443847
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.14		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Phaeophytin a	0.11		0.10	ug/L	09-OCT-12	09-OCT-12	R2451886
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					17-OCT-12	R2456454
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	17-OCT-12	18-OCT-12	R2457975
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Barium (Ba)-Dissolved	0.00197		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved	<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved	1.33		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved	0.00029		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved	0.565		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved	0.00028		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved	0.354		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved	0.00069		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.135		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.525		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.00739		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-9 TEFF - 25 - S							
Sampled By: CLIENT on 17-SEP-12 @ 16:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.3		1.0	mg/L		01-OCT-12	R2447182
Fluoride by Ion Chromatography							
Fluoride	0.047		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	5.64		0.20	mg/L		01-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	6.50		0.30	mg/L		27-SEP-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography							
Sulfate	1.68		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.078		0.050	mg/L	01-OCT-12	04-OCT-12	R2450048
Total Dissolved Solids							
Total Dissolved Solids	9.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00186		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	1.54		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00038		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	0.645		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00031		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-10 TEFF - 26 - S							
Sampled By: CLIENT on 17-SEP-12 @ 16:58							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Barium (Ba)-Dissolved	0.00205		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Boron (B)-Dissolved	<0.010		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	24-SEP-12	27-SEP-12	R2445677
Calcium (Ca)-Dissolved	1.32		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Copper (Cu)-Dissolved	0.00030		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	24-SEP-12	27-SEP-12	R2445677
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	24-SEP-12	27-SEP-12	R2445677
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Magnesium (Mg)-Dissolved	0.548		0.010	mg/L	24-SEP-12	27-SEP-12	R2445677
Manganese (Mn)-Dissolved	0.00025		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	24-SEP-12	27-SEP-12	R2445677
Potassium (K)-Dissolved	0.349		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Rubidium (Rb)-Dissolved	0.00067		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	24-SEP-12	27-SEP-12	R2445677
Silicon (Si)-Dissolved	0.107		0.050	mg/L	24-SEP-12	27-SEP-12	R2445677
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Sodium (Na)-Dissolved	0.492		0.020	mg/L	24-SEP-12	27-SEP-12	R2445677
Strontium (Sr)-Dissolved	0.00731		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	24-SEP-12	27-SEP-12	R2445677
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	24-SEP-12	27-SEP-12	R2445677
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	24-SEP-12	27-SEP-12	R2445677
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	24-SEP-12	27-SEP-12	R2445677
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		29-SEP-12	R2446365
Fluoride by Ion Chromatography							
Fluoride	0.049		0.020	mg/L		25-SEP-12	R2443847
Hardness Calculated							
Hardness (as CaCO3)	6.61		0.30	mg/L		27-SEP-12	
Hardness Calculated							
Hardness (as CaCO3)	5.55		0.20	mg/L		01-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		25-SEP-12	R2443847
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		26-SEP-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		25-SEP-12	R2443847

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-10 TEFF - 26 - S Sampled By: CLIENT on 17-SEP-12 @ 16:58 Matrix: WATER							
Phosphorus, Total Phosphorus (P)-Total	<0.010		0.010	mg/L		27-SEP-12	R2444350
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		25-SEP-12	R2442808
Sulfate by Ion Chromatography Sulfate	1.70		0.50	mg/L		25-SEP-12	R2443847
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.069		0.050	mg/L	01-OCT-12	04-OCT-12	R2449499
Total Dissolved Solids Total Dissolved Solids	9.0		5.0	mg/L		25-SEP-12	R2443239
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		18-OCT-12	R2457975
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	26-SEP-12	26-SEP-12	R2444325
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Arsenic (As)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Barium (Ba)-Total	0.00197		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-12	26-SEP-12	R2444325
Calcium (Ca)-Total	1.58		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Copper (Cu)-Total	0.00042		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-12	26-SEP-12	R2444325
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Magnesium (Mg)-Total	0.646		0.010	mg/L	26-SEP-12	26-SEP-12	R2444325
Manganese (Mn)-Total	0.00032		0.00030	mg/L	26-SEP-12	26-SEP-12	R2444325
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Phosphorus (P)-Total	<0.10		0.10	mg/L	26-SEP-12	26-SEP-12	R2444325
Potassium (K)-Total	0.367		0.020	mg/L	26-SEP-12	26-SEP-12	R2444325
Rubidium (Rb)-Total	0.00073		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-12	26-SEP-12	R2444325
Silicon (Si)-Total	0.164		0.050	mg/L	26-SEP-12	26-SEP-12	R2444325
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Sodium (Na)-Total	0.524		0.030	mg/L	26-SEP-12	26-SEP-12	R2444325
Strontium (Sr)-Total	0.00765		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	26-SEP-12	26-SEP-12	R2444325
Tungsten (W)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-12	26-SEP-12	R2444325
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	26-SEP-12	26-SEP-12	R2444325
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-12	26-SEP-12	R2444325
Total Organic Carbon Total Organic Carbon	2.0		1.0	mg/L		29-SEP-12	R2446365

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213604-10	TEFF - 26 - S							
Sampled By:	CLIENT on 17-SEP-12 @ 16:58							
Matrix:	WATER							
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		28-SEP-12	R2446748
Turbidity								
Turbidity		0.29		0.10	NTU		24-SEP-12	R2442445
pH								
pH		7.05		0.10	pH units		24-SEP-12	R2442339
Miscellaneous Parameters								
Conductivity		11.7		1.0	umhos/cm		25-SEP-12	R2442843
Silica, Reactive (as SiO2)		0.243		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity								
Alkalinity, Total (as CaCO3)		6.3		1.0	mg/L		25-SEP-12	R2443229
Bicarbonate (HCO3)		7.7		1.2	mg/L		25-SEP-12	R2443229
Carbonate (CO3)		<0.60		0.60	mg/L		25-SEP-12	R2443229
Hydroxide (OH)		<0.34		0.34	mg/L		25-SEP-12	R2443229

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.			
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.			
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



L1213604-COFC

COC # 21213604

Page 1 of 1

Report To				Re		Service Requested (Rush for routine analysis subject to availability)															
Company: Azimuth Consulting Group				☐ Summary ☐ Other		☒ Regular (Standard Turnaround Times - Business Days)															
Contact: Maggie McConnell / Gary Mann				☒ PDF ☒ Excel ☐ Digital ☐ Fax		☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT															
Address: 218 - 2902 West Broadway				Email 1: <u>mmcconnell@azimuthgroup.ca</u>		☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT															
Vancouver, BC, V6K 2G8				Email 2: <u>gmenn@azimuthgroup.ca</u>		☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT															
Phone: 604-730-1220 Fax: 604-739-8511				Email 3: <u>ryanengen@agnico-eagle.com</u>		Analysis Request															
Invoice To Same as Report? ☒ Yes ☐ No				Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)															
Hardcopy of Invoice with Report? ☐ Yes ☒ No				Job #: <u>Meadowbank CREMP 2012</u>																	
Company:				PO / AFE:																	
Contact:				LSD:																	
Address:																					
Phone:				Quote #: <u>Q33259</u>																	
Fax:																					
Lab Work Order # (lab use only)				ALS Contact: <u>Judy Dalmaier</u>		Sampler:		AZM-AEM-MB-ROU-WP													
Sample #		Sample Identification (This description will appear on the report)		Date (dd-mm-yy)		Time (hh:mm)								Sample Type							
1		WAL - 26 - S		12-Sep-12		14:48								Water		x					
2		WAL - 25 - S		12-Sep-12		15:10								Water		x					
3		TPE - 54 - S		14-Sep-12		10:00								Water		x					
4		TPE - 55 - S		14-Sep-12		10:25								Water		x					
5		INUG - 43 - S		16-Sep-12		9:40								Water		x					
6		INUG - 42 - S		16-Sep-12		10:05								Water		x					
7		TE - 55 - S		17-Sep-12		8:04								Water		x					
8		TE - 54 - S		17-Sep-12		8:33								Water		x					
9		TEFF - 25 - S		17-Sep-12		16:30		Water		x											
10		TEFF - 26 - S		17-Sep-12		16:58		Water		x											

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

*** (1) there are no Chlorophyll-a filters for samples with IDs including "EB-" and for "travel/trip blank" samples; however, all other analyses should be conducted on these samples. (2) 500 mL of water was filtered for all Chlorophyll-a sample filters included in this shipment.***

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)				
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations Yes / No ? If Yes add
			<u>SA</u>	<u>21/24/12</u>	<u>12:30 PM</u>	<u>0C</u>				



Azimuth Consulting Group Inc.
ATTN: MAGGIE MCCONNELL
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 27-SEP-12
Report Date: 25-OCT-12 12:02 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1215974
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Gail Hill
Account Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-1 SP-54-S							
Sampled By: CLIENT on 18-SEP-12 @ 15:17							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		28-SEP-12	R2446300
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography							
Chloride	0.55		0.20	mg/L		28-SEP-12	R2446716
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.33		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a	0.14		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity							
Conductivity	29		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved	0.00035		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved	0.00261		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	3.04		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00055		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	0.947		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00155		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.452		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00068		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.186		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	0.604		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0137		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0028		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-1 SP-54-S							
Sampled By: CLIENT on 18-SEP-12 @ 15:17							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		03-OCT-12	R2449058
Fluoride by Ion Chromatography							
Fluoride	0.056		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	11.5		0.20	mg/L		09-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	12.1		0.30	mg/L		15-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	2.83		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.107		0.050	mg/L	04-OCT-12	08-OCT-12	R2451493
Total Dissolved Solids							
Total Dissolved Solids	22.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0100		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	0.00031		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00250		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	3.18		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00072		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.02		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00281		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.462		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00075		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-2 SP-55-S Sampled By: CLIENT on 18-SEP-12 @ 15:39 Matrix: WATER							
Dissolved Metals by ICP-MS							
Barium (Ba)-Dissolved	0.00232		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	10-OCT-12	R2453446
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	10-OCT-12	R2453446
Calcium (Ca)-Dissolved	2.67		0.050	mg/L	27-SEP-12	10-OCT-12	R2453446
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	10-OCT-12	R2453446
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Copper (Cu)-Dissolved	0.00066		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	10-OCT-12	R2453446
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	10-OCT-12	R2453446
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	10-OCT-12	R2453446
Magnesium (Mg)-Dissolved	1.06		0.010	mg/L	27-SEP-12	10-OCT-12	R2453446
Manganese (Mn)-Dissolved	0.00150		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Molybdenum (Mo)-Dissolved	0.00014		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	10-OCT-12	R2453446
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	10-OCT-12	R2453446
Potassium (K)-Dissolved	0.411		0.020	mg/L	27-SEP-12	10-OCT-12	R2453446
Rubidium (Rb)-Dissolved	0.00069		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	10-OCT-12	R2453446
Silicon (Si)-Dissolved	0.201		0.050	mg/L	27-SEP-12	10-OCT-12	R2453446
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Sodium (Na)-Dissolved	0.629		0.020	mg/L	27-SEP-12	10-OCT-12	R2453446
Strontium (Sr)-Dissolved	0.0134		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	10-OCT-12	R2453446
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	10-OCT-12	R2453446
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	10-OCT-12	R2453446
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	10-OCT-12	R2453446
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	10-OCT-12	R2453446
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		04-OCT-12	R2449058
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	11.0		0.20	mg/L		11-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	12.1		0.30	mg/L		15-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-2 SP-55-S Sampled By: CLIENT on 18-SEP-12 @ 15:39 Matrix: WATER							
Phosphorus, Total Reactive in Water Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography Sulfate	2.78		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence Total Kjeldahl Nitrogen	0.134		0.050	mg/L	04-OCT-12	08-OCT-12	R2451493
Total Dissolved Solids Total Dissolved Solids	21.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS Aluminum (Al)-Total	0.0101		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	0.00030		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00252		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	3.13		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00080		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.04		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00289		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.462		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00071		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.251		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	0.736		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.0140		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon Total Organic Carbon	2.6		1.0	mg/L		04-OCT-12	R2449058
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<1.0		1.0	mg/L		07-OCT-12	R2451300

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-2	SP-55-S							
Sampled By: CLIENT on 18-SEP-12 @ 15:39								
Matrix: WATER								
Turbidity								
Turbidity		0.21		0.10	NTU		28-SEP-12	R2446325
pH								
pH		7.21		0.10	pH units		28-SEP-12	R2445998
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.437		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity								
Alkalinity, Total (as CaCO3)		10.6		1.0	mg/L		01-OCT-12	R2447279
Bicarbonate (HCO3)		12.9		1.2	mg/L		01-OCT-12	R2447279
Carbonate (CO3)		<0.60		0.60	mg/L		01-OCT-12	R2447279
Hydroxide (OH)		<0.34		0.34	mg/L		01-OCT-12	R2447279
L1215974-3	PDL-26-S							
Sampled By: CLIENT on 18-SEP-12 @ 11:14								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		28-SEP-12	R2446300
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography								
Chloride		0.56		0.20	mg/L		28-SEP-12	R2446716
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.43		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a		0.14		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity								
Conductivity		21		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved		0.00023		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved		0.00222		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved		<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved		2.22		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved		0.00046		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved		0.760		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved		0.00021		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved		0.358		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-3 PDL-26-S							
Sampled By: CLIENT on 18-SEP-12 @ 11:14							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Rubidium (Rb)-Dissolved	0.00043		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.128		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	0.480		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.00881		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0026		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.4		1.0	mg/L		04-OCT-12	R2449058
Fluoride by Ion Chromatography							
Fluoride	0.030		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	8.67		0.20	mg/L		09-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	8.84		0.30	mg/L		25-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	1.44		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.086		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0059		0.0050	mg/L	11-OCT-12	24-OCT-12	R2462014
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	24-OCT-12	R2462014
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	24-OCT-12	R2462014
Barium (Ba)-Total	0.00215		0.00020	mg/L	11-OCT-12	24-OCT-12	R2462014
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	24-OCT-12	R2462014
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	24-OCT-12	R2462014
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	24-OCT-12	R2462014
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	24-OCT-12	R2462014
Calcium (Ca)-Total	2.28		0.10	mg/L	11-OCT-12	24-OCT-12	R2462014

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-4 PDL-25-S Sampled By: CLIENT on 18-SEP-12 @ 11:30 Matrix: WATER							
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography Chloride	0.56		0.20	mg/L		28-SEP-12	R2446716
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.22		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a	<0.10		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity Conductivity	22		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved	0.00021		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved	0.00202		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	2.23		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00042		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	0.770		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00024		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.354		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00044		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.119		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	0.470		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.00904		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0023		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon Dissolved Organic Carbon	2.5		1.0	mg/L		04-OCT-12	R2449058

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-4 PDL-25-S Sampled By: CLIENT on 18-SEP-12 @ 11:30 Matrix: WATER							
Fluoride by Ion Chromatography							
Fluoride	0.030		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	9.07		0.30	mg/L		15-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	8.74		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	1.45		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.085		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	17.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0058		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00204		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.29		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00057		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	0.812		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00133		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.362		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00045		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.179		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	0.565		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.00890		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-5 TPS-38-S							
Sampled By: CLIENT on 18-SEP-12 @ 10:40							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	1.96		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00040		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	0.735		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00265		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	0.00021		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.449		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00061		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	0.891		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.00902		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0032		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.2		1.0	mg/L		04-OCT-12	R2449058
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	8.38		0.30	mg/L		15-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	7.92		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0373		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0373		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	3.57		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-5 TPS-38-S							
Sampled By: CLIENT on 18-SEP-12 @ 10:40							
Matrix: WATER							
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.088		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0071		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00304		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.07		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00052		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	0.781		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00396		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	0.00022		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.494		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00065		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.098		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	1.10		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.00930		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon							
Total Organic Carbon	2.2		1.0	mg/L		04-OCT-12	R2449058
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-OCT-12	R2451300
Turbidity							
Turbidity	0.35		0.10	NTU		28-SEP-12	R2446325
pH							
pH	6.99		0.10	pH units		28-SEP-12	R2445998

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-6 TPS-37-S Sampled By: CLIENT on 18-SEP-12 @ 11:20 Matrix: WATER							
Dissolved Metals by ICP-MS							
Sodium (Na)-Dissolved	0.942		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.00931		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0036		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.3		1.0	mg/L		04-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	0.053		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	8.18		0.30	mg/L		15-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	8.11		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0384		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0384		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	3.58		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.086		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	18.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0074		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00303		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	1.98		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00049		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-6	TPS-37-S							
Sampled By:	CLIENT on 18-SEP-12 @ 11:20							
Matrix:	WATER							
Total Metals by ICP-MS								
Iron (Fe)-Total		<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total		<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total		<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total		0.787		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total		0.00394		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total		<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total		<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total		0.486		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total		0.00066		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total		<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total		0.086		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total		<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total		1.09		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total		0.00913		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total		<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total		<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total		<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total		<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total		<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon								
Total Organic Carbon		2.7		1.0	mg/L		04-OCT-12	R2450111
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		07-OCT-12	R2451300
Turbidity								
Turbidity		0.21		0.10	NTU		28-SEP-12	R2446325
pH								
pH		6.99		0.10	pH units		28-SEP-12	R2445998
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.112		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity								
Alkalinity, Total (as CaCO3)		6.9		1.0	mg/L		01-OCT-12	R2447279
Bicarbonate (HCO3)		8.4		1.2	mg/L		01-OCT-12	R2447279
Carbonate (CO3)		<0.60		0.60	mg/L		01-OCT-12	R2447279
Hydroxide (OH)		<0.34		0.34	mg/L		01-OCT-12	R2447279
L1215974-7	TPN-54-S							
Sampled By:	CLIENT on 18-SEP-12 @ 11:39							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		28-SEP-12	R2446300
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography								
Chloride		0.61		0.20	mg/L		28-SEP-12	R2446716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-7 TPN-54-S							
Sampled By: CLIENT on 18-SEP-12 @ 11:39							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.37		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a	0.15		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity							
Conductivity	25		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0023		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved	0.00024		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved	0.00314		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	2.00		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00056		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	0.758		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00299		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	0.00019		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.469		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00064		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	0.954		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.00928		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0027		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		04-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	8.64		0.30	mg/L		15-OCT-12	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-7 TPN-54-S							
Sampled By: CLIENT on 18-SEP-12 @ 11:39							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	8.11		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0508		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0508		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	3.75		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.098		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	16.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0073		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	0.00072		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00304		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.09		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00055		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	0.0744		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	0.834		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00420		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.491		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00064		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.092		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	1.10		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.00954		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-7 TPN-54-S Sampled By: CLIENT on 18-SEP-12 @ 11:39 Matrix: WATER Total Metals by ICP-MS Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Miscellaneous Parameters Silica, Reactive (as SiO2) Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	<0.00050 <0.00010 <0.00010 <0.00020 <0.0020 <0.00040 2.6 <1.0 0.30 7.01 0.0623 7.0 8.6 <0.60 <0.34		0.00050 0.00010 0.00010 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 0.0050 1.0 1.2 0.60 0.34	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	11-OCT-12 11-OCT-12 11-OCT-12 11-OCT-12 11-OCT-12 11-OCT-12 01-OCT-12 01-OCT-12 01-OCT-12 01-OCT-12	12-OCT-12 12-OCT-12 12-OCT-12 12-OCT-12 12-OCT-12 12-OCT-12 04-OCT-12 07-OCT-12 28-SEP-12 28-SEP-12 02-OCT-12 01-OCT-12 01-OCT-12 01-OCT-12 01-OCT-12	R2455078 R2455078 R2455078 R2455078 R2455078 R2455078 R2450111 R2451300 R2446325 R2445998 R2447755 R2447279 R2447279 R2447279 R2447279
L1215974-8 TPN-55-S Sampled By: CLIENT on 18-SEP-12 @ 12:00 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Phaeophytin a Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved Cadmium (Cd)-Dissolved Calcium (Ca)-Dissolved Cesium (Cs)-Dissolved Chromium (Cr)-Dissolved	<0.010 <0.10 0.61 0.55 0.33 25 FIELD <0.000010 0.0020 <0.00020 0.00023 0.00321 <0.00020 <0.00020 <0.010 <0.000010 2.07 <0.00010 <0.0020		0.010 0.10 0.20 0.10 0.10 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010 0.000010 0.050 0.00010 0.0020	mg/L mg/L mg/L ug/L ug/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	 11-OCT-12 11-OCT-12 30-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12 27-SEP-12	28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12 12-OCT-12 12-OCT-12 28-SEP-12 30-SEP-12 08-OCT-12 28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12 28-SEP-12	R2446300 R2446716 R2446716 R2454193 R2454193 R2445998 R2446201 R2451172 R2447455 R2447455 R2447455 R2447455 R2447455 R2447455 R2447455 R2447455 R2447455 R2447455 R2447455 R2447455

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-8 TPN-55-S							
Sampled By: CLIENT on 18-SEP-12 @ 12:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00041		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	0.768		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00292		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	0.00022		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.463		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00062		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	0.901		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.00940		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0031		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.4		1.0	mg/L		04-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	0.053		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	8.57		0.30	mg/L		15-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	8.32		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0487		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0487		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	3.74		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.095		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-8 TPN-55-S Sampled By: CLIENT on 18-SEP-12 @ 12:00 Matrix: WATER Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS Aluminum (Al)-Total	0.0075		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00331		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.13		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00049		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	0.791		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00415		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	0.00021		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.490		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00068		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.094		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	1.07		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.00958		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon Total Organic Carbon	2.9		1.0	mg/L		04-OCT-12	R2450111
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<1.0		1.0	mg/L		07-OCT-12	R2451300
Turbidity Turbidity	0.38		0.10	NTU		28-SEP-12	R2446325
pH pH	7.00		0.10	pH units		28-SEP-12	R2445998
Miscellaneous Parameters Silica, Reactive (as SiO2)	0.0719		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity Alkalinity, Total (as CaCO3)	7.0		1.0	mg/L		01-OCT-12	R2447279

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-8	TPN-55-S							
Sampled By: CLIENT on 18-SEP-12 @ 12:00								
Matrix: WATER								
Alkalinity								
Bicarbonate (HCO3)		8.5		1.2	mg/L		01-OCT-12	R2447279
Carbonate (CO3)		<0.60		0.60	mg/L		01-OCT-12	R2447279
Hydroxide (OH)		<0.34		0.34	mg/L		01-OCT-12	R2447279
L1215974-9	SEP-EB-1							
Sampled By: CLIENT on 18-SEP-12 @ 09:00								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		28-SEP-12	R2446300
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography								
Chloride		<0.20		0.20	mg/L		28-SEP-12	R2446716
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.30		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a		0.15		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity								
Conductivity		21		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved		0.00203		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved		<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved		2.23		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved		0.00049		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved		0.747		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved		0.00020		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved		0.355		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved		0.00044		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved		0.107		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved		0.475		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved		0.00912		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-9 SEP-EB-1 Sampled By: CLIENT on 18-SEP-12 @ 09:00 Matrix: WATER							
Dissolved Metals by ICP-MS							
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0029		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.8		1.0	mg/L		04-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	8.65		0.20	mg/L		09-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		19-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.058		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	17.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	<0.00020		0.00020	mg/L	11-OCT-12	18-OCT-12	R2458362
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	0.236		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	<0.10		0.10	mg/L	11-OCT-12	18-OCT-12	R2458362
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00042		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	0.000533		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-9	SEP-EB-1							
Sampled By:	CLIENT on 18-SEP-12 @ 09:00							
Matrix:	WATER							
Total Metals by ICP-MS								
Magnesium (Mg)-Total	<0.010			0.010	mg/L	11-OCT-12	18-OCT-12	R2458362
Manganese (Mn)-Total	0.00035			0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020			0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020			0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10			0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	<0.020			0.020	mg/L	11-OCT-12	18-OCT-12	R2458362
Rubidium (Rb)-Total	<0.00020			0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010			0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	3.51			0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010			0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	<0.030			0.030	mg/L	11-OCT-12	18-OCT-12	R2458362
Strontium (Sr)-Total	<0.00010			0.00010	mg/L	11-OCT-12	18-OCT-12	R2458362
Tellurium (Te)-Total	<0.00020			0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010			0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010			0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	0.00025			0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050			0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010			0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010			0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020			0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total	0.0020			0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total	<0.00040			0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon								
Total Organic Carbon	2.7			1.0	mg/L		04-OCT-12	R2450111
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids	<1.0			1.0	mg/L		07-OCT-12	R2451300
Turbidity								
Turbidity	0.79			0.10	NTU		28-SEP-12	R2446325
pH								
pH	7.12			0.10	pH units		28-SEP-12	R2445998
Miscellaneous Parameters								
Silica, Reactive (as SiO2)	0.194			0.0050	mg/L		02-OCT-12	R2447755
Alkalinity								
Alkalinity, Total (as CaCO3)	8.7			1.0	mg/L		01-OCT-12	R2447279
Bicarbonate (HCO3)	10.6			1.2	mg/L		01-OCT-12	R2447279
Carbonate (CO3)	<0.60			0.60	mg/L		01-OCT-12	R2447279
Hydroxide (OH)	<0.34			0.34	mg/L		01-OCT-12	R2447279
L1215974-10	BAP-26-S							
Sampled By:	CLIENT on 18-SEP-12 @ 08:42							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)	<0.010			0.010	mg/L		28-SEP-12	R2446300
Bromide by Ion Chromatography								
Bromide (Br)	<0.10			0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography								
Chloride	11.3			0.20	mg/L		28-SEP-12	R2446716
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a	1.02			0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a	0.51			0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-10 BAP-26-S							
Sampled By: CLIENT on 18-SEP-12 @ 08:42							
Matrix: WATER							
Conductivity							
Conductivity	63		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0042		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved	0.0207		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	2.71		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00029		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	1.67		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00017		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.590		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00078		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.165		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	5.62		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0199		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0031		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.2		1.0	mg/L		04-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	0.040		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	13.7		0.20	mg/L		09-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	14.8		0.30	mg/L		15-OCT-12	
Nitrate as N by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-10 BAP-26-S							
Sampled By: CLIENT on 18-SEP-12 @ 08:42							
Matrix: WATER							
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0126		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0126		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	1.89		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.157		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	44.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0102		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.0193		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.84		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00054		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.88		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00182		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.647		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00081		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.198		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	7.06		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.0202		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-11 BAP-25-S							
Sampled By: CLIENT on 18-SEP-12 @ 09:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	1.36		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00019		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.494		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00074		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.142		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	3.39		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0176		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0026		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.5		1.0	mg/L		04-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	0.041		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	12.0		0.20	mg/L		09-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	13.1		0.30	mg/L		15-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0118		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0118		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	1.44		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.157		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	33.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-11 BAP-25-S							
Sampled By: CLIENT on 18-SEP-12 @ 09:00							
Matrix: WATER							
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0101		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.0191		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.71		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00054		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.54		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00190		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.550		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00079		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.195		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	4.50		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.0190		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon							
Total Organic Carbon	4.4		1.0	mg/L		04-OCT-12	R2450111
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-OCT-12	R2451300
Turbidity							
Turbidity	0.38		0.10	NTU		28-SEP-12	R2446325
pH							
pH	7.16		0.10	pH units		28-SEP-12	R2445998
Miscellaneous Parameters							
Silica, Reactive (as SiO2)	0.309		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity							
Alkalinity, Total (as CaCO3)	10.4		1.0	mg/L		01-OCT-12	R2447279
Bicarbonate (HCO3)	12.7		1.2	mg/L		01-OCT-12	R2447279
Carbonate (CO3)	<0.60		0.60	mg/L		01-OCT-12	R2447279

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-11 BAP-25-S Sampled By: CLIENT on 18-SEP-12 @ 09:00 Matrix: WATER Alkalinity Hydroxide (OH)	<0.34		0.34	mg/L		01-OCT-12	R2447279
L1215974-12 BPJ-25-S Sampled By: CLIENT on 18-SEP-12 @ 09:20 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N)	0.022		0.010	mg/L		28-SEP-12	R2446300
Bromide by Ion Chromatography Bromide (Br)	<0.10		0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography Chloride	8.05		0.20	mg/L		28-SEP-12	R2446716
Chlorophyll a, Pheophytin by fluorometry Chlorophyll a	0.73		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a	0.55		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity Conductivity	51		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	0.0042		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved	0.0203		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	2.51		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00035		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	1.37		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00022		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.489		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00075		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.148		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	3.49		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0182		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-12 BPJ-25-S							
Sampled By: CLIENT on 18-SEP-12 @ 09:20							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0024		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.9		1.0	mg/L		04-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	0.042		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	13.3		0.30	mg/L		15-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	11.9		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0112		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0112		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	1.45		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.148		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	34.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0135		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.0190		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.72		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00046		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.59		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00194		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-13 BPJ-26-S							
Sampled By: CLIENT on 18-SEP-12 @ 09:35							
Matrix: WATER							
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0043		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved	0.0207		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	2.60		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00029		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	1.32		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00022		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.472		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00074		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.148		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	3.00		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0178		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0030		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	3.8		1.0	mg/L		05-OCT-12	R2451620
Fluoride by Ion Chromatography							
Fluoride	0.042		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	13.0		0.30	mg/L		15-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	11.9		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0113		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-13 BPJ-26-S							
Sampled By: CLIENT on 18-SEP-12 @ 09:35							
Matrix: WATER							
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0113		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	1.18		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.159		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	32.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0105		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.0200		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.72		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00041		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.51		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00189		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.553		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00079		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.185		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	3.79		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.0187		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-14 BBD-26-S							
Sampled By: CLIENT on 18-SEP-12 @ 10:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.436		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00072		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.156		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	1.62		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0168		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0038		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.4		1.0	mg/L		05-OCT-12	R2450111
Fluoride by Ion Chromatography							
Fluoride	0.041		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	11.5		0.30	mg/L		15-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	11.0		0.20	mg/L		09-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0106		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0106		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	0.78		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.146		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	26.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0114		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.0188		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-14 BBD-26-S Sampled By: CLIENT on 18-SEP-12 @ 10:00 Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.54		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00068		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.26		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00194		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.464		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00074		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.188		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	1.87		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.0173		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon							
Total Organic Carbon	4.7		1.0	mg/L		05-OCT-12	R2450111
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-OCT-12	R2451300
Turbidity							
Turbidity	0.17		0.10	NTU		28-SEP-12	R2446325
pH							
pH	7.15		0.10	pH units		28-SEP-12	R2445998
Miscellaneous Parameters							
Silica, Reactive (as SiO2)	0.135		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity							
Alkalinity, Total (as CaCO3)	10.4		1.0	mg/L		01-OCT-12	R2447279
Bicarbonate (HCO3)	12.7		1.2	mg/L		01-OCT-12	R2447279
Carbonate (CO3)	<0.60		0.60	mg/L		01-OCT-12	R2447279
Hydroxide (OH)	<0.34		0.34	mg/L		01-OCT-12	R2447279
L1215974-15 BBD-25-S Sampled By: CLIENT on 1							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-15 BBD-25-S							
Sampled By: CLIENT on 18-SEP-12 @ 10:15							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		28-SEP-12	R2446300
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		28-SEP-12	R2446716
Chloride by Ion Chromatography							
Chloride	2.79		0.20	mg/L		28-SEP-12	R2446716
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.62		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Phaeophytin a	0.39		0.10	ug/L	11-OCT-12	12-OCT-12	R2454193
Conductivity							
Conductivity	31		20	umhos/cm		28-SEP-12	R2445998
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					30-SEP-12	R2446201
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	30-SEP-12	08-OCT-12	R2451172
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0044		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Barium (Ba)-Dissolved	0.0200		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	2.48		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00030		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	1.14		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00033		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.427		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00071		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.121		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	1.32		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0164		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0022		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-15 BBD-25-S							
Sampled By: CLIENT on 18-SEP-12 @ 10:15							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	4.4		1.0	mg/L		05-OCT-12	R2451620
Fluoride by Ion Chromatography							
Fluoride	0.041		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	10.9		0.20	mg/L		09-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	11.8		0.30	mg/L		15-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0105		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0105		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							
Sulfate	0.72		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.168		0.050	mg/L	05-OCT-12	09-OCT-12	R2451827
Total Dissolved Solids							
Total Dissolved Solids	24.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0113		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.0190		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	2.60		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00053		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	1.29		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00192		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.458		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00074		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-16 SEP-EB-2							
Sampled By: CLIENT on 18-SEP-12 @ 08:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Boron (B)-Dissolved	<0.010		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	27-SEP-12	28-SEP-12	R2447455
Calcium (Ca)-Dissolved	3.06		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Copper (Cu)-Dissolved	0.00065		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	27-SEP-12	28-SEP-12	R2447455
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	27-SEP-12	28-SEP-12	R2447455
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Magnesium (Mg)-Dissolved	0.910		0.010	mg/L	27-SEP-12	28-SEP-12	R2447455
Manganese (Mn)-Dissolved	0.00158		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Molybdenum (Mo)-Dissolved	0.00012		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	27-SEP-12	28-SEP-12	R2447455
Potassium (K)-Dissolved	0.458		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Rubidium (Rb)-Dissolved	0.00066		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	27-SEP-12	28-SEP-12	R2447455
Silicon (Si)-Dissolved	0.206		0.050	mg/L	27-SEP-12	28-SEP-12	R2447455
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	05-OCT-12	R2451677
Sodium (Na)-Dissolved	0.621		0.020	mg/L	27-SEP-12	28-SEP-12	R2447455
Strontium (Sr)-Dissolved	0.0137		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	27-SEP-12	28-SEP-12	R2447455
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	27-SEP-12	28-SEP-12	R2447455
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zinc (Zn)-Dissolved	0.0031		0.0020	mg/L	27-SEP-12	28-SEP-12	R2447455
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	27-SEP-12	28-SEP-12	R2447455
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.9		1.0	mg/L		05-OCT-12	R2451620
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		28-SEP-12	R2446716
Hardness Calculated							
Hardness (as CaCO3)	11.4		0.20	mg/L		09-OCT-12	
Hardness Calculated							
Hardness (as CaCO3)	12.1		0.30	mg/L		15-OCT-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		28-SEP-12	R2446716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		01-OCT-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		28-SEP-12	R2446716
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		02-OCT-12	R2448090
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		02-OCT-12	R2447376
Sulfate by Ion Chromatography							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-16 SEP-EB-2							
Sampled By: CLIENT on 18-SEP-12 @ 08:30							
Matrix: WATER							
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		28-SEP-12	R2446716
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.063		0.050	mg/L	05-OCT-12	09-OCT-12	R2452334
Total Dissolved Solids							
Total Dissolved Solids	5.0		5.0	mg/L		29-SEP-12	R2446525
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		04-OCT-12	R2449669
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0096		0.0050	mg/L	11-OCT-12	12-OCT-12	R2455078
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Arsenic (As)-Total	0.00032		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Barium (Ba)-Total	0.00250		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Boron (B)-Total	<0.010		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-OCT-12	12-OCT-12	R2455078
Calcium (Ca)-Total	3.18		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Copper (Cu)-Total	0.00073		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Iron (Fe)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-OCT-12	12-OCT-12	R2455078
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Magnesium (Mg)-Total	0.997		0.010	mg/L	11-OCT-12	12-OCT-12	R2455078
Manganese (Mn)-Total	0.00264		0.00030	mg/L	11-OCT-12	12-OCT-12	R2455078
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-OCT-12	12-OCT-12	R2455078
Potassium (K)-Total	0.488		0.020	mg/L	11-OCT-12	12-OCT-12	R2455078
Rubidium (Rb)-Total	0.00073		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-OCT-12	12-OCT-12	R2455078
Silicon (Si)-Total	0.247		0.050	mg/L	11-OCT-12	12-OCT-12	R2455078
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Sodium (Na)-Total	0.713		0.030	mg/L	11-OCT-12	12-OCT-12	R2455078
Strontium (Sr)-Total	0.0141		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-OCT-12	12-OCT-12	R2455078
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-OCT-12	12-OCT-12	R2455078
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-OCT-12	12-OCT-12	R2455078
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-OCT-12	12-OCT-12	R2455078
Total Organic Carbon							
Total Organic Carbon	2.7		1.0	mg/L		05-OCT-12	R2451620
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		07-OCT-12	R2451300
Turbidity							
Turbidity	0.24		0.10	NTU		28-SEP-12	R2446325

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1215974-16	SEP-EB-2							
Sampled By:	CLIENT on 18-SEP-12 @ 08:30							
Matrix:	WATER							
pH								
pH		5.81		0.10	pH units		28-SEP-12	R2445998
Miscellaneous Parameters								
Conductivity		1.2		1.0	umhos/cm		01-OCT-12	R2447310
Silica, Reactive (as SiO2)		0.345		0.0050	mg/L		02-OCT-12	R2447755
Alkalinity								
Alkalinity, Total (as CaCO3)		1.8		1.0	mg/L		01-OCT-12	R2447306
Bicarbonate (HCO3)		2.2		1.2	mg/L		01-OCT-12	R2447306
Carbonate (CO3)		<0.60		0.60	mg/L		01-OCT-12	R2447306
Hydroxide (OH)		<0.34		0.34	mg/L		01-OCT-12	R2447306

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D. This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified) Turbidity in aqueous matrices is determined by the nephelometric method.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

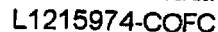
D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

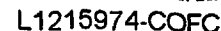
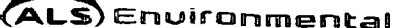
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Page 1 of 1

GENF 18.01 Front



Page 2 of 2

GENF 18.01 Front



Azimuth Consulting Group Inc.
ATTN: Laura Bekar
218 - 2902 WEST BROADWAY
VANCOUVER BC V6K 2G8

Date Received: 10-DEC-12
Report Date: 27-DEC-12 11:38 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1247482
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers:
Legal Site Desc:

Comments: All portions of samples arrived at the lab frozen solid. The samples have been thawed and analyzed as per client's request.
Most analytical results should not be compromised, however we cannot predict the impact that freezing might have had on the Alkalinity, pH, Conductivity, Turbidity or Total Suspended Solids results.

Gail Hill
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-1 SP-57-S							
Sampled By: CLIENT on 29-NOV-12 @ 10:00							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		11-DEC-12	R2496227
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		11-DEC-12	R2496216
Chloride by Ion Chromatography							
Chloride	0.52		0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Phaeophytin a	0.62		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Conductivity							
Conductivity	28		20	umhos/cm		11-DEC-12	R2496300
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					11-DEC-12	R2496276
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved	0.00125		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved	<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	1.65		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	0.00042		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.525		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00031		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.243		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00034		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	0.111		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.342		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00690		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-1 SP-57-S							
Sampled By: CLIENT on 29-NOV-12 @ 10:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.7		1.0	mg/L		18-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	0.057		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	9.23		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	2.88		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.088		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	17.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0054		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00169		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	2.38		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	0.797		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00094		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	0.339		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	0.00043		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.249		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-1	SP-57-S							
Sampled By: CLIENT on 29-NOV-12 @ 10:00								
Matrix: WATER								
Total Metals by ICP-MS								
Sodium (Na)-Total		0.498		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total		0.00975		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total		<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904
Tungsten (W)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Uranium (U)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Vanadium (V)-Total		<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904
Total Organic Carbon								
Total Organic Carbon		3.9		1.0	mg/L		18-DEC-12	R2499905
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		11-DEC-12	R2496409
Turbidity								
Turbidity		0.22		0.10	NTU		11-DEC-12	R2495954
pH								
pH		7.17		0.10	pH units		11-DEC-12	R2496300
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.353		0.0050	mg/L		18-DEC-12	R2499372
Alkalinity								
Alkalinity, Total (as CaCO3)		9.9		1.0	mg/L		17-DEC-12	R2499076
Bicarbonate (HCO3)		12.1		1.2	mg/L		17-DEC-12	R2499076
Carbonate (CO3)		<0.60		0.60	mg/L		17-DEC-12	R2499076
Hydroxide (OH)		<0.34		0.34	mg/L		17-DEC-12	R2499076
L1247482-2	SP-56-S							
Sampled By: CLIENT on 29-NOV-12 @ 10:55								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		11-DEC-12	R2496227
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		11-DEC-12	R2496216
Chloride by Ion Chromatography								
Chloride		0.37		0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		<0.10		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Phaeophytin a		0.66		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Conductivity								
Conductivity		24		20	umhos/cm		11-DEC-12	R2496300
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					11-DEC-12	R2496276
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved		0.00162		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-2 SP-56-S Sampled By: CLIENT on 29-NOV-12 @ 10:55 Matrix: WATER							
Dissolved Metals by ICP-MS							
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved	<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	2.63		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	0.00054		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.789		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00039		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.321		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00050		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	0.195		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.533		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.0106		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	0.0033		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.8		1.0	mg/L		20-DEC-12	R2502453
Fluoride by Ion Chromatography							
Fluoride	0.053		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	20.8		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	2.14		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-2 SP-56-S							
Sampled By: CLIENT on 29-NOV-12 @ 10:55							
Matrix: WATER							
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.109		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0066		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	0.00035		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00354		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	5.43		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	0.00048		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	1.77		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00173		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	0.664		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	0.00089		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.515		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total	1.04		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total	0.0215		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904
Total Organic Carbon							
Total Organic Carbon	2.9		1.0	mg/L		20-DEC-12	R2502453
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		11-DEC-12	R2496409
Turbidity							
Turbidity	0.21		0.10	NTU		11-DEC-12	R2495954
pH							
pH	7.14		0.10	pH units		11-DEC-12	R2496300

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-3 TPE-57-S							
Sampled By: CLIENT on 30-NOV-12 @ 13:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Sodium (Na)-Dissolved	0.397		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00464		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		18-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	0.067		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	11.4		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0076		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0076		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	3.10		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.101		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	17.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0105		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	0.00061		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00332		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	0.000038		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	2.77		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	0.000117		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-3	TPE-57-S Sampled By: CLIENT on 30-NOV-12 @ 13:30 Matrix: WATER							
Total Metals by ICP-MS								
Lithium (Li)-Total		<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total		1.09		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total		0.00193		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total		0.00022		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total		<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total		<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total		0.590		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total		0.00070		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total		<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total		0.153		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total		1.04		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total		0.0109		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total		<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Titanium (Ti)-Total		<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904
Tungsten (W)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Uranium (U)-Total		<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Vanadium (V)-Total		<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904
Total Organic Carbon								
Total Organic Carbon		2.2		1.0	mg/L		18-DEC-12	R2499905
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		11-DEC-12	R2496409
Turbidity								
Turbidity		0.30		0.10	NTU		11-DEC-12	R2495954
pH								
pH		7.11		0.10	pH units		11-DEC-12	R2496300
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.0966		0.0050	mg/L		18-DEC-12	R2499372
Alkalinity								
Alkalinity, Total (as CaCO3)		8.3		1.0	mg/L		17-DEC-12	R2499076
Bicarbonate (HCO3)		10.1		1.2	mg/L		17-DEC-12	R2499076
Carbonate (CO3)		<0.60		0.60	mg/L		17-DEC-12	R2499076
Hydroxide (OH)		<0.34		0.34	mg/L		17-DEC-12	R2499076
L1247482-4	TPE-56-S Sampled By: CLIENT on 30-NOV-12 @ 14:15 Matrix: WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		11-DEC-12	R2496227
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		11-DEC-12	R2496216
Chloride by Ion Chromatography								
Chloride		0.55		0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		<0.10		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Phaeophytin a		0.78		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-4 TPE-56-S Sampled By: CLIENT on 30-NOV-12 @ 14:15 Matrix: WATER							
Conductivity Conductivity	26		20	umhos/cm		11-DEC-12	R2496300
Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location	FIELD					11-DEC-12	R2496276
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved	0.00041		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved	0.00242		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved	<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	0.000011		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	2.03		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	0.00044		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.684		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00033		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	0.00016		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.416		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00060		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	0.059		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.769		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00742		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon Dissolved Organic Carbon	2.1		1.0	mg/L		18-DEC-12	R2499905
Fluoride by Ion Chromatography Fluoride	0.062		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated Hardness (as CaCO3)	10.1		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography Nitrate-N	0.0188		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-4 TPE-56-S							
Sampled By: CLIENT on 30-NOV-12 @ 14:15							
Matrix: WATER							
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0188		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	3.19		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.069		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	19.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0087		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	0.00038		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00295		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	2.48		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	0.954		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00178		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	0.500		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	0.00065		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.139		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total	0.960		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total	0.0101		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-4	TPE-56-S							
Sampled By: CLIENT on 30-NOV-12 @ 14:15								
Matrix: WATER								
Total Metals by ICP-MS								
Zinc (Zn)-Total		<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zirconium (Zr)-Total		<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904
Total Organic Carbon								
Total Organic Carbon		3.2		1.0	mg/L		18-DEC-12	R2499905
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids		<1.0		1.0	mg/L		11-DEC-12	R2496409
Turbidity								
Turbidity		0.35		0.10	NTU		11-DEC-12	R2495954
pH								
pH		7.05		0.10	pH units		11-DEC-12	R2496300
Miscellaneous Parameters								
Silica, Reactive (as SiO2)		0.0903		0.0050	mg/L		18-DEC-12	R2499372
Alkalinity								
Alkalinity, Total (as CaCO3)		7.7		1.0	mg/L		17-DEC-12	R2499076
Bicarbonate (HCO3)		9.4		1.2	mg/L		17-DEC-12	R2499076
Carbonate (CO3)		<0.60		0.60	mg/L		17-DEC-12	R2499076
Hydroxide (OH)		<0.34		0.34	mg/L		17-DEC-12	R2499076
L1247482-5	TPN-57-S							
Sampled By: CLIENT on 30-NOV-12 @ 15:20								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		0.046		0.010	mg/L		11-DEC-12	R2496227
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		11-DEC-12	R2496216
Chloride by Ion Chromatography								
Chloride		0.63		0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.22		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Phaeophytin a		0.22		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Conductivity								
Conductivity		28		20	umhos/cm		11-DEC-12	R2496300
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					11-DEC-12	R2496276
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved		0.00144		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved		<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved		1.04		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved		0.00027		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-5 TPN-57-S							
Sampled By: CLIENT on 30-NOV-12 @ 15:20							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.376		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00090		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.233		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00030		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.514		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00446		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	0.0036		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	1.9		1.0	mg/L		18-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	0.059		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	9.00		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0483		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0483		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	3.94		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.104		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	20.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0073		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00304		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-5	TPN-57-S							
Sampled By:	CLIENT on 30-NOV-12 @ 15:20							
Matrix:	WATER							
Total Metals by ICP-MS								
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Calcium (Ca)-Total	2.19		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904	
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904	
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904	
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Magnesium (Mg)-Total	0.861		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Manganese (Mn)-Total	0.00249		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904	
Molybdenum (Mo)-Total	0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904	
Potassium (K)-Total	0.508		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Rubidium (Rb)-Total	0.00059		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Silicon (Si)-Total	0.155		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904	
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Sodium (Na)-Total	1.07		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904	
Strontium (Sr)-Total	0.00955		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904	
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Zirconium (Zr)-Total	0.00054		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904	
Total Organic Carbon								
Total Organic Carbon	2.0		1.0	mg/L		18-DEC-12	R2499905	
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids	<1.0		1.0	mg/L		11-DEC-12	R2496409	
Turbidity								
Turbidity	0.20		0.10	NTU		11-DEC-12	R2495954	
pH								
pH	6.99		0.10	pH units		11-DEC-12	R2496300	
Miscellaneous Parameters								
Silica, Reactive (as SiO2)	0.105		0.0050	mg/L		18-DEC-12	R2499372	
Alkalinity								
Alkalinity, Total (as CaCO3)	7.5		1.0	mg/L		17-DEC-12	R2499076	
Bicarbonate (HCO3)	9.1		1.2	mg/L		17-DEC-12	R2499076	
Carbonate (CO3)	<0.60		0.60	mg/L		17-DEC-12	R2499076	
Hydroxide (OH)	<0.34		0.34	mg/L		17-DEC-12		

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-6 CREMP DUP 1							
Sampled By: CLIENT on 30-NOV-12 @ 15:20							
Matrix: WATER							
Agnico Eagle Meadowbank Routine Water							
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		11-DEC-12	R2496227
Bromide by Ion Chromatography							
Bromide (Br)	<0.10		0.10	mg/L		11-DEC-12	R2496216
Chloride by Ion Chromatography							
Chloride	0.37		0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Phaeophytin a	0.53		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					11-DEC-12	R2496276
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0113		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved	0.00221		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved	<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	1.69		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	0.00033		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.574		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00128		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	0.00015		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.338		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00045		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.818		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00647		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-6 CREMP DUP 1							
Sampled By: CLIENT on 30-NOV-12 @ 15:20							
Matrix: WATER							
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		18-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	0.050		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	15.2		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0283		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0283		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	2.40		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.107		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0087		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	0.00026		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00485		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	0.000012		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	3.71		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	1.43		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00418		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	0.00031		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	0.785		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	0.00095		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.196		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total	1.72		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total	0.0153		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-6 CREMP DUP 1 Sampled By: CLIENT on 30-NOV-12 @ 15:20 Matrix: WATER Total Metals by ICP-MS Tellurium (Te)-Total Thallium (Tl)-Total Thorium (Th)-Total Tin (Sn)-Total Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Miscellaneous Parameters Conductivity Silica, Reactive (as SiO2) Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	<0.00020 <0.00010 <0.00010 <0.00020 <0.00050 <0.00010 <0.00010 <0.00020 <0.0020 <0.00040 2.0 <1.0 0.18 6.89 12.3 0.0517 8.4 10.2 <0.60 <0.34			mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L NTU pH units umhos/cm mg/L mg/L mg/L mg/L mg/L	11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 14-DEC-12 18-DEC-12 17-DEC-12 17-DEC-12 17-DEC-12 17-DEC-12	11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 18-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 17-DEC-12 17-DEC-12 17-DEC-12 17-DEC-12	R2496904 R2496904 R2496904 R2496904 R2496904 R2496904 R2496904 R2496904 R2496904 R2496904 R2499905 R2496409 R2495954 R2496300 R2497698 R2499372 R2499076 R2499076 R2499076 R2499076
L1247482-7 TPN-56-S Sampled By: CLIENT on 30-NOV-12 @ 16:16 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Chlorophyll a, Pheophytin by fluorometry Chlorophyll a Pheophytin a Conductivity Conductivity Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved	<0.010 <0.10 0.64 0.63 0.29 27 FIELD <0.000010 0.0026 <0.00020 <0.00020 0.00185 <0.00020 <0.00020		0.010 0.10 0.20 0.10 0.10 20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020	mg/L mg/L mg/L ug/L ug/L umhos/cm mg/L mg/L mg/L mg/L mg/L mg/L	 17-DEC-12 17-DEC-12 11-DEC-12 11-DEC-12 19-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12	11-DEC-12 11-DEC-12 11-DEC-12 17-DEC-12 17-DEC-12 11-DEC-12 11-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12	R2496227 R2496216 R2496216 R2498903 R2498903 R2496300 R2496276 R2500293 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-7 TPN-56-S							
Sampled By: CLIENT on 30-NOV-12 @ 16:16							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Boron (B)-Dissolved	<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	1.24		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	0.00035		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.439		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00115		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	0.00014		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.266		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00037		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	0.073		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.600		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00536		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.4		1.0	mg/L		20-DEC-12	R2502453
Fluoride by Ion Chromatography							
Fluoride	0.061		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	9.76		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	0.0511		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.0511		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	4.02		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.108		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-7 TPN-56-S Sampled By: CLIENT on 30-NOV-12 @ 16:16 Matrix: WATER							
Total Dissolved Solids Total Dissolved Solids	20.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low) Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS Aluminum (Al)-Total	0.0068		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00322		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	2.33		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	0.000092		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	0.956		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00288		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	0.00022		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	0.529		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	0.00064		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.146		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total	1.16		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total	0.0100		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total	0.00075		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904
Total Organic Carbon Total Organic Carbon	2.4		1.0	mg/L		20-DEC-12	R2502453
Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids	<1.0		1.0	mg/L		11-DEC-12	R2496409
Turbidity Turbidity	0.20		0.10	NTU		11-DEC-12	R2495954
pH pH	7.01		0.10	pH units		11-DEC-12	R2496300
Miscellaneous Parameters Silica, Reactive (as SiO2)	0.101		0.0050	mg/L		18-DEC-12	R2499372

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-7	TPN-56-S							
Sampled By: CLIENT on 30-NOV-12 @ 16:16								
Matrix: WATER								
Alkalinity								
Alkalinity, Total (as CaCO3)		7.5		1.0	mg/L		17-DEC-12	R2499076
Bicarbonate (HCO3)		9.2		1.2	mg/L		17-DEC-12	R2499076
Carbonate (CO3)		<0.60		0.60	mg/L		17-DEC-12	R2499076
Hydroxide (OH)		<0.34		0.34	mg/L		17-DEC-12	R2499076
L1247482-8	INUG-45-S							
Sampled By: CLIENT on 03-DEC-12 @ 12:50								
Matrix: WATER								
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)		<0.010		0.010	mg/L		11-DEC-12	R2496227
Bromide by Ion Chromatography								
Bromide (Br)		<0.10		0.10	mg/L		11-DEC-12	R2496216
Chloride by Ion Chromatography								
Chloride		0.63		0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a		0.44		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Pheophytin a		0.30		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location		FIELD					11-DEC-12	R2496276
Mercury (Hg)-Dissolved		<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved		0.0021		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved		0.00176		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved		<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved		<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved		1.20		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved		<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved		<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved		0.00040		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved		<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved		<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved		<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved		0.685		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved		0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved		<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved		<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved		<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved		0.378		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved		0.00051		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved		<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved		0.157		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved		<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved		0.587		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved		0.00591		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved		<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-8 INUG-45-S							
Sampled By: CLIENT on 03-DEC-12 @ 12:50							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.7		1.0	mg/L		18-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	0.055		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	6.42		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	0.82		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.120		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	6.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0068		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00193		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	1.35		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	0.743		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00121		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-8	INUG-45-S							
Sampled By:	CLIENT on 03-DEC-12 @ 12:50							
Matrix:	WATER							
Total Metals by ICP-MS								
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904	
Potassium (K)-Total	0.422		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Rubidium (Rb)-Total	0.00046		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Silicon (Si)-Total	0.226		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904	
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Sodium (Na)-Total	0.590		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904	
Strontium (Sr)-Total	0.00635		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904	
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904	
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904	
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904	
Total Organic Carbon								
Total Organic Carbon	2.9		1.0	mg/L		18-DEC-12	R2499905	
Total Suspended Solids by Grav. (1 mg/L)								
Total Suspended Solids	<1.0		1.0	mg/L		11-DEC-12	R2496409	
Turbidity								
Turbidity	0.20		0.10	NTU		11-DEC-12	R2495954	
pH								
pH	6.95		0.10	pH units		11-DEC-12	R2496300	
Miscellaneous Parameters								
Conductivity	11.9		1.0	umhos/cm		14-DEC-12	R2497698	
Silica, Reactive (as SiO2)	0.237		0.0050	mg/L		18-DEC-12	R2499372	
Alkalinity								
Alkalinity, Total (as CaCO3)	6.3		1.0	mg/L		17-DEC-12	R2499076	
Bicarbonate (HCO3)	7.7		1.2	mg/L		17-DEC-12	R2499076	
Carbonate (CO3)	<0.60		0.60	mg/L		17-DEC-12	R2499076	
Hydroxide (OH)	<0.34		0.34	mg/L		17-DEC-12	R2499076	
L1247482-9	INUG-44-S							
Sampled By:	CLIENT on 03-DEC-12 @ 14:44							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)	<0.010		0.010	mg/L		11-DEC-12	R2496227	
Bromide by Ion Chromatography								
Bromide (Br)	<0.10		0.10	mg/L		11-DEC-12	R2496216	
Chloride by Ion Chromatography								
Chloride	0.58		0.20	mg/L		11-DEC-12	R2496216	
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a	0.45		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903	
Phaeophytin a	0.23		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903	
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location	FIELD					11-DEC-12	R2496276	
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-9 INUG-44-S							
Sampled By: CLIENT on 03-DEC-12 @ 14:44							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved	0.00086		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved	<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	0.578		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.323		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.165		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00023		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	0.060		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.257		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00280		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.9		1.0	mg/L		20-DEC-12	R2502453
Fluoride by Ion Chromatography							
Fluoride	0.054		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	9.04		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-9 INUG-44-S							
Sampled By: CLIENT on 03-DEC-12 @ 14:44							
Matrix: WATER							
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	0.76		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.150		0.050	mg/L	14-DEC-12	17-DEC-12	R2499020
Total Dissolved Solids							
Total Dissolved Solids	10.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0087		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00270		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	1.84		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	0.000095		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	1.08		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00165		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	0.541		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	0.00066		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.309		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total	0.851		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total	0.00870		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904
Total Organic Carbon							
Total Organic Carbon	2.9		1.0	mg/L		20-DEC-12	R2502453
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		11-DEC-12	R2496409

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-9	INUG-44-S							
Sampled By:	CLIENT on 03-DEC-12 @ 14:44							
Matrix:	WATER							
Turbidity								
Turbidity	0.21			0.10	NTU		11-DEC-12	R2495954
pH								
pH	6.96			0.10	pH units		11-DEC-12	R2496300
Miscellaneous Parameters								
Conductivity	11.0			1.0	umhos/cm		14-DEC-12	R2497698
Silica, Reactive (as SiO2)	0.165			0.0050	mg/L		18-DEC-12	R2499372
Alkalinity								
Alkalinity, Total (as CaCO3)	6.0			1.0	mg/L		17-DEC-12	R2499076
Bicarbonate (HCO3)	7.3			1.2	mg/L		17-DEC-12	R2499076
Carbonate (CO3)	<0.60			0.60	mg/L		17-DEC-12	R2499076
Hydroxide (OH)	<0.34			0.34	mg/L		17-DEC-12	R2499076
L1247482-10	TE-56-S							
Sampled By:	CLIENT on 05-DEC-12 @ 10:23							
Matrix:	WATER							
Agnico Eagle Meadowbank Routine Water								
Ammonia by colour								
Ammonia, Total (as N)	<0.010			0.010	mg/L		11-DEC-12	R2496227
Bromide by Ion Chromatography								
Bromide (Br)	<0.10			0.10	mg/L		11-DEC-12	R2496216
Chloride by Ion Chromatography								
Chloride	0.53			0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry								
Chlorophyll a	0.59			0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Phaeophytin a	0.23			0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Dissolved Mercury in Water by CVAFS(Low)								
Dissolved Metals Filtration Location	FIELD						11-DEC-12	R2496276
Mercury (Hg)-Dissolved	<0.000010			0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS								
Aluminum (Al)-Dissolved	<0.0020			0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved	<0.00020			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved	<0.00020			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved	0.00228			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved	<0.00020			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved	<0.00020			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved	<0.010			0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	<0.000010			0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	1.94			0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010			0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020			0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	0.00047			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10			0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090			0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020			0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.653			0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00018			0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	<0.00010			0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010			0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030			0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.429			0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00074			0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-10 TE-56-S							
Sampled By: CLIENT on 05-DEC-12 @ 10:23							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	0.147		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.683		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00890		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.0		1.0	mg/L		19-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	0.059		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	8.06		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	2.03		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.089		0.050	mg/L	14-DEC-12	17-DEC-12	R2499391
Total Dissolved Solids							
Total Dissolved Solids	9.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0051		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00227		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	2.02		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-11 TE-57-S							
Sampled By: CLIENT on 05-DEC-12 @ 10:53							
Matrix: WATER							
Chloride by Ion Chromatography							
Chloride	0.69		0.20	mg/L		11-DEC-12	R2496216
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.38		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Phaeophytin a	0.15		0.10	ug/L	17-DEC-12	17-DEC-12	R2498903
Conductivity							
Conductivity	25		20	umhos/cm		11-DEC-12	R2496300
Dissolved Mercury in Water by CVAFS(Low)							
Dissolved Metals Filtration Location	FIELD					11-DEC-12	R2496276
Mercury (Hg)-Dissolved	<0.000010		0.000010	mg/L	11-DEC-12	19-DEC-12	R2500293
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Barium (Ba)-Dissolved	0.00217		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Boron (B)-Dissolved	<0.010		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	10-DEC-12	12-DEC-12	R2497936
Calcium (Ca)-Dissolved	1.80		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Copper (Cu)-Dissolved	0.00035		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	10-DEC-12	12-DEC-12	R2497936
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	10-DEC-12	12-DEC-12	R2497936
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Magnesium (Mg)-Dissolved	0.628		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	0.00012		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	0.370		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	0.00074		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	0.156		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.609		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00816		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	2.5		1.0	mg/L		19-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	0.065		0.020	mg/L		11-DEC-12	R2496216

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-11 TE-57-S							
Sampled By: CLIENT on 05-DEC-12 @ 10:53							
Matrix: WATER							
Hardness Calculated							
Hardness (as CaCO3)	7.98		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	2.47		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.098		0.050	mg/L	14-DEC-12	17-DEC-12	R2499391
Total Dissolved Solids							
Total Dissolved Solids	15.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0063		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	0.00225		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	1.92		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	0.775		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	0.00072		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	0.415		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	0.00068		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.246		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total	0.659		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total	0.00894		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-11 TE-57-S Sampled By: CLIENT on 05-DEC-12 @ 10:53 Matrix: WATER Total Metals by ICP-MS Titanium (Ti)-Total Tungsten (W)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Zirconium (Zr)-Total Total Organic Carbon Total Organic Carbon Total Suspended Solids by Grav. (1 mg/L) Total Suspended Solids Turbidity Turbidity pH pH Miscellaneous Parameters Silica, Reactive (as SiO2) Alkalinity Alkalinity, Total (as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	<0.00050 <0.00010 <0.00010 <0.00020 <0.0020 <0.00040 2.4 <1.0 0.23 7.07 0.264 8.2 10.0 <0.60 <0.34		0.00050 0.00010 0.00010 0.00020 0.0020 0.00040 1.0 1.0 0.10 0.10 0.0050 1.0 1.2 0.60 0.34	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L NTU pH units mg/L mg/L mg/L mg/L	11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 18-DEC-12 17-DEC-12 17-DEC-12 17-DEC-12 17-DEC-12	11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 19-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12	R2496904 R2496904 R2496904 R2496904 R2496904 R2496904 R2499905 R2496409 R2495954 R2496300 R2499372 R2499076 R2499076 R2499076 R2499076
L1247482-12 CREMP EB 1 Sampled By: CLIENT on 05-DEC-12 @ 14:45 Matrix: WATER Agnico Eagle Meadowbank Routine Water Ammonia by colour Ammonia, Total (as N) Bromide by Ion Chromatography Bromide (Br) Chloride by Ion Chromatography Chloride Dissolved Mercury in Water by CVAFS(Low) Dissolved Metals Filtration Location Mercury (Hg)-Dissolved Dissolved Metals by ICP-MS Aluminum (Al)-Dissolved Antimony (Sb)-Dissolved Arsenic (As)-Dissolved Barium (Ba)-Dissolved Beryllium (Be)-Dissolved Bismuth (Bi)-Dissolved Boron (B)-Dissolved Cadmium (Cd)-Dissolved Calcium (Ca)-Dissolved Cesium (Cs)-Dissolved Chromium (Cr)-Dissolved Cobalt (Co)-Dissolved Copper (Cu)-Dissolved Iron (Fe)-Dissolved Lead (Pb)-Dissolved Lithium (Li)-Dissolved	<0.010 <0.10 <0.20 FIELD <0.000010 <0.0020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.00020 <0.010 <0.000010 <0.050 <0.00010 <0.0020 <0.00020 <0.00020 <0.10 <0.000090 <0.0020		0.010 0.10 0.20 0.000010 0.0020 0.00020 0.00020 0.00020 0.00020 0.00020 0.010 0.000010 0.050 0.00010 0.0020 0.00020 0.00020 0.10 0.000090 0.0020	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 19-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12 10-DEC-12	11-DEC-12 11-DEC-12 11-DEC-12 11-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12 12-DEC-12	R2496227 R2496216 R2496216 R2496276 R2500293 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936 R2497936

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-12 CREMP EB 1							
Sampled By: CLIENT on 05-DEC-12 @ 14:45							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Magnesium (Mg)-Dissolved	0.013		0.010	mg/L	10-DEC-12	12-DEC-12	R2497936
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Phosphorus (P)-Dissolved	<0.030		0.030	mg/L	10-DEC-12	12-DEC-12	R2497936
Potassium (K)-Dissolved	<0.020		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	10-DEC-12	12-DEC-12	R2497936
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	10-DEC-12	12-DEC-12	R2497936
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Sodium (Na)-Dissolved	0.026		0.020	mg/L	10-DEC-12	12-DEC-12	R2497936
Strontium (Sr)-Dissolved	0.00020		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Titanium (Ti)-Dissolved	<0.00050		0.00050	mg/L	10-DEC-12	12-DEC-12	R2497936
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	10-DEC-12	12-DEC-12	R2497936
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	10-DEC-12	12-DEC-12	R2497936
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	10-DEC-12	12-DEC-12	R2497936
Dissolved Organic Carbon							
Dissolved Organic Carbon	<1.0		1.0	mg/L		19-DEC-12	R2499905
Fluoride by Ion Chromatography							
Fluoride	<0.020		0.020	mg/L		11-DEC-12	R2496216
Hardness Calculated							
Hardness (as CaCO3)	<0.30		0.30	mg/L		13-DEC-12	
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.0050		0.0050	mg/L		11-DEC-12	R2496216
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.0051		0.0051	mg/L		12-DEC-12	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.0010		0.0010	mg/L		11-DEC-12	R2496216
Phosphorus, Total							
Phosphorus (P)-Total	<0.010		0.010	mg/L		12-DEC-12	R2496623
Phosphorus, Total Reactive in Water							
Phosphorus (P)-Total Reactive	<0.010		0.010	mg/L		11-DEC-12	R2495983
Sulfate by Ion Chromatography							
Sulfate	<0.50		0.50	mg/L		11-DEC-12	R2496216
TKN in Water by Fluorescence							
Total Kjeldahl Nitrogen	0.066		0.050	mg/L	14-DEC-12	17-DEC-12	R2499391
Total Dissolved Solids							
Total Dissolved Solids	<5.0		5.0	mg/L		11-DEC-12	R2496424
Total Mercury in Water by CVAFS(Low)							
Mercury (Hg)-Total	<0.000010		0.000010	mg/L		19-DEC-12	R2500293
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	11-DEC-12	11-DEC-12	R2496904
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Arsenic (As)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Barium (Ba)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1247482-12 CREMP EB 1							
Sampled By: CLIENT on 05-DEC-12 @ 14:45							
Matrix: WATER							
Total Metals by ICP-MS							
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Boron (B)-Total	<0.010		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	11-DEC-12	11-DEC-12	R2496904
Calcium (Ca)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Copper (Cu)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Iron (Fe)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Lead (Pb)-Total	<0.000090		0.000090	mg/L	11-DEC-12	11-DEC-12	R2496904
Lithium (Li)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Magnesium (Mg)-Total	0.012		0.010	mg/L	11-DEC-12	11-DEC-12	R2496904
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	11-DEC-12	11-DEC-12	R2496904
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Phosphorus (P)-Total	<0.10		0.10	mg/L	11-DEC-12	11-DEC-12	R2496904
Potassium (K)-Total	<0.020		0.020	mg/L	11-DEC-12	11-DEC-12	R2496904
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Selenium (Se)-Total	<0.0010		0.0010	mg/L	11-DEC-12	11-DEC-12	R2496904
Silicon (Si)-Total	0.079		0.050	mg/L	11-DEC-12	11-DEC-12	R2496904
Silver (Ag)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Sodium (Na)-Total	<0.030		0.030	mg/L	11-DEC-12	11-DEC-12	R2496904
Strontium (Sr)-Total	0.00011		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Thorium (Th)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Tin (Sn)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Titanium (Ti)-Total	<0.00050		0.00050	mg/L	11-DEC-12	11-DEC-12	R2496904
Tungsten (W)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Uranium (U)-Total	<0.00010		0.00010	mg/L	11-DEC-12	11-DEC-12	R2496904
Vanadium (V)-Total	<0.00020		0.00020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zinc (Zn)-Total	<0.0020		0.0020	mg/L	11-DEC-12	11-DEC-12	R2496904
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	11-DEC-12	11-DEC-12	R2496904
Total Organic Carbon							
Total Organic Carbon	<1.0		1.0	mg/L		19-DEC-12	R2499905
Total Suspended Solids by Grav. (1 mg/L)							
Total Suspended Solids	<1.0		1.0	mg/L		11-DEC-12	R2496409
Turbidity							
Turbidity	<0.10		0.10	NTU		11-DEC-12	R2495954
pH							
pH	5.77		0.10	pH units		11-DEC-12	R2496300
Miscellaneous Parameters							
Conductivity	<1.0		1.0	umhos/cm		14-DEC-12	R2497698
Silica, Reactive (as SiO2)	<0.0050		0.0050	mg/L		18-DEC-12	R2499372
Alkalinity							
Alkalinity, Total (as CaCO3)	1.8		1.0	mg/L		17-DEC-12	R2499076
Bicarbonate (HCO3)	2.2		1.2	mg/L		17-DEC-12	R2499076
Carbonate (CO3)	<0.60		0.60	mg/L		17-DEC-12	R2499076
Hydroxide (OH)	<0.34		0.34	mg/L		17-DEC-12	R2499076

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-T-L-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO ₃ ⁻ and H ₂ CO ₃ endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.			
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.			
The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.			
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-L-IC-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
EC-L-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-L-IC-WP	Water	Fluoride by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
HG-DIS-LOW-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS(Low)	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analysis of metals by inductively coupled-mass spectrometry.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-L-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-L-IC-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-L-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
P-TR-COL-WP	Water	Phosphorus, Total Reactive in Water	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Reactive Phosphorus is determined colourimetrically.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540 C (modified)
Total dissolved solids in aqueous matrices is determined gravimetrically after evaporation of the filtrate at 180°C.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-LOW-VA	Water	Total Suspended Solids by Grav. (1 mg/L)	APHA 2540 Gravimetric

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

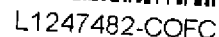
D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Page 1 of 1

GENF 18.01 Front



AZIMUTH CONSULTING GROUP INC.
ATTN: Maggie McConnell
218 - 2902 West Broadway
Vancouver BC V6K 2G8

Date Received: 07-SEP-12
Report Date: 17-SEP-12 18:15 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1206097
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9
Legal Site Desc:

Brent Mack
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-1 SEDIMENT 16-AUG-12	L1206097-2 SEDIMENT 16-AUG-12	L1206097-3 SEDIMENT 16-AUG-12	L1206097-4 SEDIMENT 16-AUG-12	L1206097-5 SEDIMENT 16-AUG-12
		TPE-1	TPE-2	TPE-3	TPE-4	TPE-5
		Grouping	Analyte			
SOIL						
Physical Tests	Moisture (%)	88.2	85.8	88.8	87.4	87.1
	pH (1:2 soil:water) (pH)	6.01	6.59	6.57	6.44	6.06
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10	<0.10	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)	4.23	1.80	1.65	2.36	5.67
	% Silt (0.063mm - 4um) (%)	72.9	70.0	73.7	77.1	81.1
	% Clay (<4um) (%)	22.9	28.2	24.7	20.5	13.2
	Texture	Silt loam	Silt loam	Silt loam	Silt loam	Silt
Organic / Inorganic Carbon	Total Organic Carbon (%)	4.33	3.81	4.60	3.87	3.70
Metals	Aluminum (Al) (mg/kg)	22700	23200	20800	22200	22900
	Antimony (Sb) (mg/kg)	0.24	0.24	0.23	0.26	0.23
	Arsenic (As) (mg/kg)	18.2	18.4	18.8	17.4	18.8
	Barium (Ba) (mg/kg)	118	126	110	107	108
	Beryllium (Be) (mg/kg)	1.54	1.66	1.46	1.57	1.63
	Bismuth (Bi) (mg/kg)	2.16	2.26	1.93	2.14	2.22
	Cadmium (Cd) (mg/kg)	0.288	0.434	0.333	0.248	0.184
	Calcium (Ca) (mg/kg)	2420	2070	2280	2190	2000
	Chromium (Cr) (mg/kg)	124	111	135	118	114
	Cobalt (Co) (mg/kg)	16.0	16.0	15.2	15.7	15.2
	Copper (Cu) (mg/kg)	47.6	49.3	43.6	46.8	51.3
	Iron (Fe) (mg/kg)	40100	41300	39000	40300	42800
	Lead (Pb) (mg/kg)	20.3	19.8	18.7	18.8	19.1
	Lithium (Li) (mg/kg)	39.4	42.8	36.2	39.9	43.1
	Magnesium (Mg) (mg/kg)	9880	9590	9860	9740	9720
	Manganese (Mn) (mg/kg)	2140	2720	1970	2000	1680
	Mercury (Hg) (mg/kg)	0.0241	0.0201	0.0237	0.0176	0.0194
	Molybdenum (Mo) (mg/kg)	3.43	3.74	3.42	3.54	3.80
	Nickel (Ni) (mg/kg)	90.0	114	96.7	78.9	66.9
	Phosphorus (P) (mg/kg)	435	386	429	384	407
	Potassium (K) (mg/kg)	4210	4180	3750	4020	4250
	Selenium (Se) (mg/kg)	0.81	0.80	0.80	0.76	0.85
	Silver (Ag) (mg/kg)	0.12	<0.10	0.12	<0.10	<0.10
	Sodium (Na) (mg/kg)	170	170	150	150	150
	Strontium (Sr) (mg/kg)	19.5	17.9	17.8	17.9	17.4
	Thallium (Tl) (mg/kg)	0.406	0.451	0.355	0.374	0.353
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	834	827	757	845	902
	Uranium (U) (mg/kg)	14.1	15.2	12.9	14.6	15.6

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-6 SEDIMENT 16-AUG-12	L1206097-7 SEDIMENT 17-AUG-12	L1206097-8 SEDIMENT 17-AUG-12	L1206097-9 SEDIMENT 17-AUG-12	L1206097-10 SEDIMENT 17-AUG-12
		TPE-COMP	WAL-1	WAL-2	WAL-3	WAL-4
		Grouping	Analyte			
SOIL						
Physical Tests	Moisture (%)	87.5	92.5	91.9	89.6	90.3
	pH (1:2 soil:water) (pH)		6.50	6.53	6.39	6.68
Particle Size	% Gravel (>2mm) (%)		<0.10	<0.10	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)		1.08	0.81	2.93	2.40
	% Silt (0.063mm - 4um) (%)		91.3	88.7	88.9	83.4
	% Clay (<4um) (%)		7.60	10.5	8.17	14.2
	Texture		Silt	Silt	Silt	Silt
Organic / Inorganic Carbon	Total Organic Carbon (%)		11.8	10.0	7.66	8.61
Metals	Aluminum (Al) (mg/kg)		15200	18700	17500	19300
	Antimony (Sb) (mg/kg)		0.35	0.40	0.35	0.36
	Arsenic (As) (mg/kg)		31.7	36.4	30.0	36.5
	Barium (Ba) (mg/kg)		89.9	109	100	103
	Beryllium (Be) (mg/kg)		1.23	1.48	1.37	1.45
	Bismuth (Bi) (mg/kg)		1.57	1.95	1.85	2.06
	Cadmium (Cd) (mg/kg)		0.380	0.450	0.386	0.398
	Calcium (Ca) (mg/kg)		3990	4070	3700	3880
	Chromium (Cr) (mg/kg)		48.2	56.3	51.1	53.5
	Cobalt (Co) (mg/kg)		8.01	8.79	8.40	8.77
	Copper (Cu) (mg/kg)		117	148	119	128
	Iron (Fe) (mg/kg)		27400	33200	31000	35500
	Lead (Pb) (mg/kg)		28.1	32.3	28.7	31.7
	Lithium (Li) (mg/kg)		26.1	30.4	31.1	32.4
	Magnesium (Mg) (mg/kg)		6470	7410	6970	6980
	Manganese (Mn) (mg/kg)		341	296	331	498
	Mercury (Hg) (mg/kg)		0.0677	0.0630	0.0466	0.0590
	Molybdenum (Mo) (mg/kg)		6.53	9.25	7.18	8.10
	Nickel (Ni) (mg/kg)		47.0	51.7	46.3	49.1
	Phosphorus (P) (mg/kg)		769	683	702	679
	Potassium (K) (mg/kg)		2720	3160	2980	3220
	Selenium (Se) (mg/kg)		0.73	0.89	0.74	0.79
	Silver (Ag) (mg/kg)		0.53	0.67	0.47	0.51
	Sodium (Na) (mg/kg)		150	170	150	150
	Strontium (Sr) (mg/kg)		24.4	25.6	24.0	26.4
	Thallium (Tl) (mg/kg)		0.250	0.299	0.272	0.300
	Tin (Sn) (mg/kg)		<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)		427	525	574	512
	Uranium (U) (mg/kg)		12.6	16.0	14.0	14.9

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-11 SEDIMENT 17-AUG-12 WAL-5	L1206097-12 SEDIMENT 17-AUG-12 WAL-COMP	L1206097-13 SEDIMENT 19-AUG-12 TE-1	L1206097-14 SEDIMENT 19-AUG-12 TE-2	L1206097-15 SEDIMENT 19-AUG-12 TE-3
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	91.0	91.6	71.0	80.3	79.9
	pH (1:2 soil:water) (pH)	6.48		6.06	6.23	6.56
Particle Size	% Gravel (>2mm) (%)	<0.10		0.55	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)	1.90		48.6	8.77	6.09
	% Silt (0.063mm - 4um) (%)	87.3		44.1	77.6	68.3
	% Clay (<4um) (%)	10.8		6.80	13.7	25.6
	Texture	Silt		Sandy loam	Silt	Silt loam
Organic / Inorganic Carbon	Total Organic Carbon (%)	7.88		1.46	3.01	2.89
Metals	Aluminum (Al) (mg/kg)	21000		13100	18600	21100
	Antimony (Sb) (mg/kg)	0.39		0.10	0.17	0.16
	Arsenic (As) (mg/kg)	31.9		6.72	17.0	15.8
	Barium (Ba) (mg/kg)	120		65.0	99.9	102
	Beryllium (Be) (mg/kg)	1.59		1.14	1.65	1.74
	Bismuth (Bi) (mg/kg)	2.28		1.19	1.92	2.04
	Cadmium (Cd) (mg/kg)	0.490		0.106	0.227	0.152
	Calcium (Ca) (mg/kg)	3730		1600	1700	1770
	Chromium (Cr) (mg/kg)	60.4		33.7	49.3	53.2
	Cobalt (Co) (mg/kg)	8.98		6.20	10.8	12.4
	Copper (Cu) (mg/kg)	154		32.0	51.7	51.9
	Iron (Fe) (mg/kg)	35100		22900	57300	44700
	Lead (Pb) (mg/kg)	34.2		12.9	18.7	19.2
	Lithium (Li) (mg/kg)	34.9		28.2	37.2	41.8
	Magnesium (Mg) (mg/kg)	7770		5770	7150	7730
	Manganese (Mn) (mg/kg)	343		382	2020	2230
	Mercury (Hg) (mg/kg)	0.0477		0.0141	0.0222	0.0176
	Molybdenum (Mo) (mg/kg)	8.46		1.62	7.24	4.54
	Nickel (Ni) (mg/kg)	55.2		24.4	39.1	40.9
	Phosphorus (P) (mg/kg)	657		642	535	472
	Potassium (K) (mg/kg)	3540		2560	3590	4160
	Selenium (Se) (mg/kg)	0.91		0.31	0.67	0.59
	Silver (Ag) (mg/kg)	0.56		<0.10	0.13	<0.10
	Sodium (Na) (mg/kg)	170		110	140	170
	Strontium (Sr) (mg/kg)	26.1		12.3	15.1	16.1
	Thallium (Tl) (mg/kg)	0.316		0.207	0.326	0.351
	Tin (Sn) (mg/kg)	<2.0		<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	594		620	716	867
	Uranium (U) (mg/kg)	16.8		11.2	17.8	18.9

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-16 SEDIMENT 19-AUG-12 TE-4	L1206097-17 SEDIMENT 19-AUG-12 TE-5	L1206097-18 SEDIMENT 19-AUG-12 TE-COMP	L1206097-19 SEDIMENT 18-AUG-12 TEFF-1	L1206097-20 SEDIMENT 18-AUG-12 TEFF-2
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)	80.3	82.3	80.3	85.6	86.8	
	pH (1:2 soil:water) (pH)	5.74	6.32		6.54	6.16	
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10		<0.10	<0.10	
	% Sand (2.0mm - 0.063mm) (%)	5.91	2.58		1.42	1.54	
	% Silt (0.063mm - 4um) (%)	78.8	78.8		76.0	69.0	
	% Clay (<4um) (%)	15.3	18.7		22.6	29.5	
	Texture	Silt	Silt loam		Silt loam	Silt loam	
Organic / Inorganic Carbon	Total Organic Carbon (%)	2.82	3.52		3.62	4.26	
Metals	Aluminum (Al) (mg/kg)	20500	22200		19900	22300	
	Antimony (Sb) (mg/kg)	0.18	0.18		0.16	0.18	
	Arsenic (As) (mg/kg)	42.2	26.7		14.8	11.6	
	Barium (Ba) (mg/kg)	110	113		155	112	
	Beryllium (Be) (mg/kg)	1.70	1.96		1.49	1.86	
	Bismuth (Bi) (mg/kg)	1.91	2.12		1.66	1.80	
	Cadmium (Cd) (mg/kg)	0.164	0.237		0.391	0.204	
	Calcium (Ca) (mg/kg)	1790	2060		1540	2110	
	Chromium (Cr) (mg/kg)	50.4	54.5		46.1	53.2	
	Cobalt (Co) (mg/kg)	9.93	11.7		14.3	12.5	
	Copper (Cu) (mg/kg)	52.3	57.6		52.0	51.4	
	Iron (Fe) (mg/kg)	77600	60000		80500	39700	
	Lead (Pb) (mg/kg)	18.0	19.7		17.2	19.9	
	Lithium (Li) (mg/kg)	40.5	43.1		38.2	47.3	
	Magnesium (Mg) (mg/kg)	7320	7690		6660	7600	
	Manganese (Mn) (mg/kg)	1060	2060		6340	2480	
	Mercury (Hg) (mg/kg)	0.0170	0.0214		0.0185	0.0197	
	Molybdenum (Mo) (mg/kg)	9.29	7.05		9.57	4.50	
	Nickel (Ni) (mg/kg)	40.3	45.7		60.2	39.8	
	Phosphorus (P) (mg/kg)	1370	772		891	476	
	Potassium (K) (mg/kg)	4070	4290		3940	4310	
	Selenium (Se) (mg/kg)	0.64	0.81		0.89	0.66	
	Silver (Ag) (mg/kg)	0.12	0.13		0.12	<0.10	
	Sodium (Na) (mg/kg)	170	170		180	190	
	Strontium (Sr) (mg/kg)	16.8	18.0		16.0	18.7	
	Thallium (Tl) (mg/kg)	0.340	0.376		0.436	0.393	
	Tin (Sn) (mg/kg)	<2.0	<2.0		<2.0	<2.0	
	Titanium (Ti) (mg/kg)	840	839		725	788	
	Uranium (U) (mg/kg)	18.2	19.6		19.6	21.7	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-21 SEDIMENT 18-AUG-12 TEFF-3	L1206097-22 SEDIMENT 18-AUG-12 TEFF-4	L1206097-23 SEDIMENT 18-AUG-12 TEFF-5	L1206097-24 SEDIMENT 18-AUG-12 TEFF-COMP	L1206097-25 SEDIMENT 20-AUG-12 SP-1
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)		85.6	82.7	86.1	86.1	81.8
	pH (1:2 soil:water) (pH)		6.17	6.09	6.07		6.15
Particle Size	% Gravel (>2mm) (%)		<0.10	<0.10	<0.10		<0.10
	% Sand (2.0mm - 0.063mm) (%)		2.72	9.93	2.96		1.69
	% Silt (0.063mm - 4um) (%)		67.8	69.7	74.5		75.2
	% Clay (<4um) (%)		29.5	20.3	22.5		23.1
	Texture		Silt loam	Silt loam	Silt loam		Silt loam
Organic / Inorganic Carbon	Total Organic Carbon (%)		4.10	3.11	4.00		3.97
Metals	Aluminum (Al) (mg/kg)		21700	17600	21400		22200
	Antimony (Sb) (mg/kg)		0.15	0.16	0.18		0.23
	Arsenic (As) (mg/kg)		11.8	15.4	11.0		33.9
	Barium (Ba) (mg/kg)		111	93.2	102		111
	Beryllium (Be) (mg/kg)		1.77	1.47	1.81		1.71
	Bismuth (Bi) (mg/kg)		1.79	1.51	1.80		2.10
	Cadmium (Cd) (mg/kg)		0.222	0.146	0.124		0.215
	Calcium (Ca) (mg/kg)		1960	1600	1920		2210
	Chromium (Cr) (mg/kg)		52.6	44.4	53.6		75.4
	Cobalt (Co) (mg/kg)		11.9	9.44	11.9		13.9
	Copper (Cu) (mg/kg)		52.4	45.2	50.1		65.2
	Iron (Fe) (mg/kg)		43100	56700	38300		69800
	Lead (Pb) (mg/kg)		19.2	16.6	20.0		19.2
	Lithium (Li) (mg/kg)		47.7	37.0	48.5		37.3
	Magnesium (Mg) (mg/kg)		7520	6430	7540		8550
	Manganese (Mn) (mg/kg)		2680	1550	1760		1740
	Mercury (Hg) (mg/kg)		0.0181	0.0150	0.0174		0.0255
	Molybdenum (Mo) (mg/kg)		4.53	6.99	4.02		7.56
	Nickel (Ni) (mg/kg)		44.4	32.6	34.1		58.3
	Phosphorus (P) (mg/kg)		509	730	431		602
	Potassium (K) (mg/kg)		4150	3430	4090		4040
	Selenium (Se) (mg/kg)		0.63	0.79	0.57		0.70
	Silver (Ag) (mg/kg)		<0.10	<0.10	<0.10		0.14
	Sodium (Na) (mg/kg)		170	140	170		170
	Strontium (Sr) (mg/kg)		17.4	14.3	17.3		18.4
	Thallium (Tl) (mg/kg)		0.381	0.305	0.367		0.317
	Tin (Sn) (mg/kg)		<2.0	<2.0	<2.0		<2.0
	Titanium (Ti) (mg/kg)		749	683	783		757
	Uranium (U) (mg/kg)		22.0	18.3	22.5		16.8

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-26 SEDIMENT 20-AUG-12 SP-2	L1206097-27 SEDIMENT 20-AUG-12 SP-3	L1206097-28 SEDIMENT 20-AUG-12 SP-4	L1206097-29 SEDIMENT 20-AUG-12 SP-5	L1206097-30 SEDIMENT 20-AUG-12 SP-COMP
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	83.8	83.7	84.6	83.9	88.8
	pH (1:2 soil:water) (pH)	6.33	6.39	6.23	6.67	
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10	<0.10	<0.10	
	% Sand (2.0mm - 0.063mm) (%)	1.67	1.70	1.88	1.25	
	% Silt (0.063mm - 4um) (%)	74.4	71.4	72.8	72.6	
	% Clay (<4um) (%)	23.9	26.9	25.4	26.1	
	Texture	Silt loam	Silt loam	Silt loam	Silt loam	
Organic / Inorganic Carbon	Total Organic Carbon (%)	4.51	4.04	4.37	4.29	
Metals	Aluminum (Al) (mg/kg)	23000	23600	23800	23600	
	Antimony (Sb) (mg/kg)	0.26	0.24	0.24	0.27	
	Arsenic (As) (mg/kg)	32.7	24.3	30.1	32.4	
	Barium (Ba) (mg/kg)	129	110	115	112	
	Beryllium (Be) (mg/kg)	1.62	1.89	1.82	1.85	
	Bismuth (Bi) (mg/kg)	2.07	2.19	2.18	2.21	
	Cadmium (Cd) (mg/kg)	0.274	0.199	0.240	0.198	
	Calcium (Ca) (mg/kg)	2880	2190	2420	2310	
	Chromium (Cr) (mg/kg)	98.6	76.7	89.4	84.3	
	Cobalt (Co) (mg/kg)	17.4	14.2	15.6	14.1	
	Copper (Cu) (mg/kg)	66.6	65.9	67.7	66.2	
	Iron (Fe) (mg/kg)	66900	49400	52700	58500	
	Lead (Pb) (mg/kg)	20.2	19.4	19.8	20.1	
	Lithium (Li) (mg/kg)	38.4	39.8	39.2	39.1	
	Magnesium (Mg) (mg/kg)	9470	8750	9100	8840	
	Manganese (Mn) (mg/kg)	5520	1710	2850	2700	
	Mercury (Hg) (mg/kg)	0.0326	0.0273	0.0279	0.0277	
	Molybdenum (Mo) (mg/kg)	6.12	5.39	5.58	6.07	
	Nickel (Ni) (mg/kg)	77.8	58.2	68.1	61.0	
	Phosphorus (P) (mg/kg)	612	501	523	512	
	Potassium (K) (mg/kg)	4060	4200	4120	4050	
	Selenium (Se) (mg/kg)	0.76	0.58	0.58	0.60	
	Silver (Ag) (mg/kg)	0.21	<0.10	0.14	0.13	
	Sodium (Na) (mg/kg)	180	160	170	170	
	Strontium (Sr) (mg/kg)	22.5	18.7	20.0	19.3	
	Thallium (Tl) (mg/kg)	0.350	0.328	0.343	0.338	
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	
	Titanium (Ti) (mg/kg)	747	756	756	727	
	Uranium (U) (mg/kg)	15.8	18.1	17.9	18.2	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-31 SEDIMENT 21-AUG-12	L1206097-32 SEDIMENT 21-AUG-12	L1206097-33 SEDIMENT 21-AUG-12	L1206097-34 SEDIMENT 21-AUG-12	L1206097-35 SEDIMENT 21-AUG-12
		INUG-1	INUG-2	INUG-3	INUG-4	INUG-5
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	81.0	86.3	81.1	71.4	81.0
	pH (1:2 soil:water) (pH)	6.14	5.85	5.77	6.18	6.22
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10	<0.10	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)	11.9	2.76	1.35	1.57	11.1
	% Silt (0.063mm - 4um) (%)	64.8	77.3	87.3	84.4	70.1
	% Clay (<4um) (%)	23.3	19.9	11.3	14.0	18.8
	Texture	Silt loam	Silt loam	Silt	Silt	Silt loam
	Organic / Inorganic Carbon	Total Organic Carbon (%)	2.91	4.84	4.00	4.58
Metals	Aluminum (Al) (mg/kg)	19700	19300	13300	14300	19900
	Antimony (Sb) (mg/kg)	0.11	0.18	0.13	0.17	0.15
	Arsenic (As) (mg/kg)	6.01	24.8	190	74.6	12.7
	Barium (Ba) (mg/kg)	106	116	81.7	93.8	93.6
	Beryllium (Be) (mg/kg)	1.19	1.22	0.86	0.85	1.17
	Bismuth (Bi) (mg/kg)	1.11	1.16	0.77	0.88	1.15
	Cadmium (Cd) (mg/kg)	0.109	0.248	0.118	0.157	0.130
	Calcium (Ca) (mg/kg)	1900	2160	1360	1690	1730
	Chromium (Cr) (mg/kg)	102	100	65.9	72.1	104
	Cobalt (Co) (mg/kg)	9.12	11.1	11.9	18.1	14.4
	Copper (Cu) (mg/kg)	38.6	44.9	28.7	32.1	41.6
	Iron (Fe) (mg/kg)	24900	50500	136000	119000	40000
	Lead (Pb) (mg/kg)	11.4	13.8	8.64	10.6	11.9
	Lithium (Li) (mg/kg)	26.8	22.9	15.7	17.5	26.1
	Magnesium (Mg) (mg/kg)	9200	8580	5820	6430	9020
	Manganese (Mn) (mg/kg)	339	837	1440	3910	1200
	Mercury (Hg) (mg/kg)	0.0159	0.0297	0.0200	0.0281	0.0169
	Molybdenum (Mo) (mg/kg)	1.60	3.94	12.7	7.14	2.88
	Nickel (Ni) (mg/kg)	68.5	77.6	51.3	71.5	71.4
	Phosphorus (P) (mg/kg)	752	1280	2470	1290	551
	Potassium (K) (mg/kg)	3050	3040	2060	2310	3170
	Selenium (Se) (mg/kg)	0.39	0.68	0.52	0.61	0.46
	Silver (Ag) (mg/kg)	0.12	0.18	0.10	0.12	<0.10
	Sodium (Na) (mg/kg)	140	150	<100	110	140
	Strontium (Sr) (mg/kg)	20.9	22.6	16.1	18.6	22.5
	Thallium (Tl) (mg/kg)	0.172	0.189	0.119	0.156	0.198
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	540	551	358	387	592
	Uranium (U) (mg/kg)	14.1	15.1	9.69	10.7	14.7

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-36 SEDIMENT 21-AUG-12 INUG-COMP	L1206097-37 SEDIMENT 22-AUG-12 PDL-1	L1206097-38 SEDIMENT 22-AUG-12 PDL-2	L1206097-39 SEDIMENT 22-AUG-12 PDL-3	L1206097-40 SEDIMENT 22-AUG-12 PDL-4
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)		86.2	77.8	73.8	79.2	77.8
	pH (1:2 soil:water) (pH)			6.34	6.07	6.42	6.49
Particle Size	% Gravel (>2mm) (%)			<0.10	<0.10	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)			13.0	7.40	5.31	5.60
	% Silt (0.063mm - 4um) (%)			68.2	75.2	73.8	76.8
	% Clay (<4um) (%)			18.8	17.4	20.9	17.6
	Texture			Silt loam	Silt	Silt loam	Silt
Organic / Inorganic Carbon	Total Organic Carbon (%)			2.52	2.16	2.89	2.98
Metals	Aluminum (Al) (mg/kg)			18900	20700	18300	17700
	Antimony (Sb) (mg/kg)			0.26	0.26	0.25	0.25
	Arsenic (As) (mg/kg)			28.5	38.9	47.5	34.3
	Barium (Ba) (mg/kg)			78.2	94.7	76.5	75.0
	Beryllium (Be) (mg/kg)			0.92	0.96	0.87	0.86
	Bismuth (Bi) (mg/kg)			0.92	1.01	0.92	0.94
	Cadmium (Cd) (mg/kg)			0.107	0.381	0.127	0.168
	Calcium (Ca) (mg/kg)			1980	1830	1870	1940
	Chromium (Cr) (mg/kg)			129	140	128	127
	Cobalt (Co) (mg/kg)			16.1	21.8	19.2	16.6
	Copper (Cu) (mg/kg)			44.3	55.6	46.4	46.2
	Iron (Fe) (mg/kg)			37100	42500	47800	38800
	Lead (Pb) (mg/kg)			14.3	14.6	13.5	13.9
	Lithium (Li) (mg/kg)			26.3	28.3	24.2	23.4
	Magnesium (Mg) (mg/kg)			10100	10800	9710	9950
	Manganese (Mn) (mg/kg)			1080	2390	1590	1580
	Mercury (Hg) (mg/kg)			0.0110	0.0107	0.0110	0.0133
	Molybdenum (Mo) (mg/kg)			2.50	3.74	3.19	2.79
	Nickel (Ni) (mg/kg)			78.2	119	80.7	88.8
	Phosphorus (P) (mg/kg)			428	416	509	484
	Potassium (K) (mg/kg)			2690	2820	2460	2370
	Selenium (Se) (mg/kg)			0.33	0.29	0.42	0.37
	Silver (Ag) (mg/kg)			<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)			<100	<100	<100	<100
	Strontium (Sr) (mg/kg)			20.4	20.1	18.7	18.3
	Thallium (Tl) (mg/kg)			0.182	0.253	0.166	0.166
	Tin (Sn) (mg/kg)			<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)			522	545	456	401
	Uranium (U) (mg/kg)			8.22	9.96	8.68	8.38

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-41 SEDIMENT 22-AUG-12 PDL-5	L1206097-42 SEDIMENT 22-AUG-12 PDL-COMP	L1206097-43 SEDIMENT 23-AUG-12 BBD-1	L1206097-44 SEDIMENT 23-AUG-12 BBD-2	L1206097-45 SEDIMENT 23-AUG-12 BBD-3
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)	73.8	80.6	37.0	33.8	28.3	
	pH (1:2 soil:water) (pH)	6.51		6.37	6.53	6.49	
Particle Size	% Gravel (>2mm) (%)	<0.10		<0.10	0.59	<0.10	
	% Sand (2.0mm - 0.063mm) (%)	8.65		46.7	56.5	48.2	
	% Silt (0.063mm - 4um) (%)	76.0		47.7	38.1	45.3	
	% Clay (<4um) (%)	15.4		5.62	4.81	6.51	
	Texture	Silt		Sandy loam	Sandy loam	Sandy loam	
Organic / Inorganic Carbon	Total Organic Carbon (%)	2.31		0.45	0.39	0.24	
Metals	Aluminum (Al) (mg/kg)	18000		5780	5700	6040	
	Antimony (Sb) (mg/kg)	0.24		<0.10	<0.10	<0.10	
	Arsenic (As) (mg/kg)	36.0		16.6	12.9	5.09	
	Barium (Ba) (mg/kg)	77.8		83.8	78.4	60.6	
	Beryllium (Be) (mg/kg)	0.86		0.27	0.23	0.25	
	Bismuth (Bi) (mg/kg)	0.90		<0.20	<0.20	<0.20	
	Cadmium (Cd) (mg/kg)	0.185		<0.050	<0.050	<0.050	
	Calcium (Ca) (mg/kg)	1760		2160	2050	2130	
	Chromium (Cr) (mg/kg)	135		14.3	14.9	15.0	
	Cobalt (Co) (mg/kg)	19.3		4.50	4.53	4.65	
	Copper (Cu) (mg/kg)	49.1		6.87	5.85	6.19	
	Iron (Fe) (mg/kg)	39400		15200	14300	11900	
	Lead (Pb) (mg/kg)	13.4		6.05	5.56	8.36	
	Lithium (Li) (mg/kg)	24.1		7.7	7.7	7.9	
	Magnesium (Mg) (mg/kg)	10700		3350	3300	3550	
	Manganese (Mn) (mg/kg)	1760		373	355	234	
	Mercury (Hg) (mg/kg)	0.0107		0.0061	0.0054	0.0050	
	Molybdenum (Mo) (mg/kg)	2.88		0.62	0.60	0.62	
	Nickel (Ni) (mg/kg)	94.7		8.52	9.44	9.38	
	Phosphorus (P) (mg/kg)	468		837	714	687	
	Potassium (K) (mg/kg)	2490		990	980	1160	
	Selenium (Se) (mg/kg)	0.28		<0.20	<0.20	<0.20	
	Silver (Ag) (mg/kg)	<0.10		<0.10	<0.10	<0.10	
	Sodium (Na) (mg/kg)	<100		<100	<100	<100	
	Strontium (Sr) (mg/kg)	18.2		34.1	34.7	37.7	
	Thallium (Tl) (mg/kg)	0.165		<0.050	<0.050	<0.050	
	Tin (Sn) (mg/kg)	<2.0		<2.0	<2.0	<2.0	
	Titanium (Ti) (mg/kg)	483		327	301	349	
	Uranium (U) (mg/kg)	8.37		1.20	1.09	1.24	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-46 SEDIMENT 23-AUG-12 BBD-4	L1206097-47 SEDIMENT 23-AUG-12 BBD-5	L1206097-48 SEDIMENT 23-AUG-12 BBD-COMP	L1206097-49 SEDIMENT 24-AUG-12 BPJ-1	L1206097-50 SEDIMENT 24-AUG-12 BPJ-2
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)		24.6	29.3	42.6	48.2	42.8
	pH (1:2 soil:water) (pH)		6.35	6.33		7.39	6.41
Particle Size	% Gravel (>2mm) (%)		1.23	<0.10		<0.10	0.45
	% Sand (2.0mm - 0.063mm) (%)		66.4	81.5		39.4	17.6
	% Silt (0.063mm - 4um) (%)		28.6	16.1		52.2	69.3
	% Clay (<4um) (%)		3.82	2.41		8.39	12.6
	Texture		Sandy loam	Loamy sand		Silt loam	Silt loam
Organic / Inorganic Carbon	Total Organic Carbon (%)		0.14	0.20		0.62	0.36
Metals	Aluminum (Al) (mg/kg)		5390	4450		7420	9260
	Antimony (Sb) (mg/kg)		<0.10	<0.10		0.11	0.13
	Arsenic (As) (mg/kg)		4.34	5.62		14.5	20.7
	Barium (Ba) (mg/kg)		50.9	51.5		135	102
	Beryllium (Be) (mg/kg)		0.23	<0.20		0.34	0.43
	Bismuth (Bi) (mg/kg)		<0.20	<0.20		<0.20	0.23
	Cadmium (Cd) (mg/kg)		0.050	<0.050		0.088	0.053
	Calcium (Ca) (mg/kg)		1660	1400		2260	2720
	Chromium (Cr) (mg/kg)		13.4	9.74		18.3	21.1
	Cobalt (Co) (mg/kg)		3.95	3.33		6.74	6.85
	Copper (Cu) (mg/kg)		5.98	6.60		7.86	9.20
	Iron (Fe) (mg/kg)		11100	10700		18500	20700
	Lead (Pb) (mg/kg)		5.13	3.58		8.06	9.43
	Lithium (Li) (mg/kg)		7.5	6.6		9.5	12.6
	Magnesium (Mg) (mg/kg)		3300	2780		4190	4970
	Manganese (Mn) (mg/kg)		199	206		4240	1510
	Mercury (Hg) (mg/kg)		<0.0050	<0.0050		0.0104	0.0098
	Molybdenum (Mo) (mg/kg)		0.52	<0.50		2.32	1.91
	Nickel (Ni) (mg/kg)		8.60	6.57		12.4	13.1
	Phosphorus (P) (mg/kg)		561	497		843	1010
	Potassium (K) (mg/kg)		900	720		1370	1610
	Selenium (Se) (mg/kg)		<0.20	<0.20		<0.20	<0.20
	Silver (Ag) (mg/kg)		<0.10	<0.10		<0.10	<0.10
	Sodium (Na) (mg/kg)		<100	<100		120	180
	Strontium (Sr) (mg/kg)		30.1	27.0		44.2	50.8
	Thallium (Tl) (mg/kg)		<0.050	<0.050		0.062	0.074
	Tin (Sn) (mg/kg)		<2.0	<2.0		<2.0	<2.0
	Titanium (Ti) (mg/kg)		260	213		355	402
	Uranium (U) (mg/kg)		0.937	0.747		1.65	1.97

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1206097-51	L1206097-52	L1206097-53	L1206097-54	L1206097-55
		Description	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
		Sampled Date	24-AUG-12	24-AUG-12	24-AUG-12	24-AUG-12	24-AUG-12
		Sampled Time					
		Client ID	BPJ-3	BPJ-4	BPJ-5	BPJ-COMP	BAP-1
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)	46.7	44.8	50.8	52.5	27.7	
	pH (1:2 soil:water) (pH)	6.75	6.53	6.85		6.53	
Particle Size	% Gravel (>2mm) (%)	0.35	0.15	0.61		0.40	
	% Sand (2.0mm - 0.063mm) (%)	15.5	15.8	17.1		80.2	
	% Silt (0.063mm - 4um) (%)	74.9	72.4	70.1		17.1	
	% Clay (<4um) (%)	9.24	11.7	12.2		2.27	
	Texture	Silt loam	Silt loam	Silt loam		Loamy sand	
Organic / Inorganic Carbon	Total Organic Carbon (%)	0.30	0.35	0.69		0.21	
Metals	Aluminum (Al) (mg/kg)	8370	8850	9530		4110	
	Antimony (Sb) (mg/kg)	0.14	0.12	0.17		0.12	
	Arsenic (As) (mg/kg)	24.4	6.73	56.9		4.03	
	Barium (Ba) (mg/kg)	106	83.5	180		266	
	Beryllium (Be) (mg/kg)	0.39	0.41	0.52		0.28	
	Bismuth (Bi) (mg/kg)	0.22	0.22	0.25		<0.20	
	Cadmium (Cd) (mg/kg)	0.055	0.076	0.094		<0.050	
	Calcium (Ca) (mg/kg)	2410	2410	2700		1870	
	Chromium (Cr) (mg/kg)	20.1	20.2	22.5		14.2	
	Cobalt (Co) (mg/kg)	6.37	6.26	10.6		3.20	
	Copper (Cu) (mg/kg)	8.63	9.66	11.5		3.78	
	Iron (Fe) (mg/kg)	24000	17200	34500		11000	
	Lead (Pb) (mg/kg)	8.90	9.31	11.0		3.89	
	Lithium (Li) (mg/kg)	10.8	11.5	13.3		7.2	
	Magnesium (Mg) (mg/kg)	4560	4860	5280		2640	
	Manganese (Mn) (mg/kg)	1190	559	3360		126	
	Mercury (Hg) (mg/kg)	0.0091	0.0104	0.0111		<0.0050	
	Molybdenum (Mo) (mg/kg)	0.71	0.53	4.17		<0.50	
	Nickel (Ni) (mg/kg)	12.6	13.3	15.7		8.21	
	Phosphorus (P) (mg/kg)	1530	864	1840		606	
	Potassium (K) (mg/kg)	1450	1610	1750		890	
	Selenium (Se) (mg/kg)	<0.20	<0.20	0.21		<0.20	
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10		<0.10	
	Sodium (Na) (mg/kg)	160	160	180		<100	
	Strontium (Sr) (mg/kg)	42.8	43.6	50.9		35.2	
	Thallium (Tl) (mg/kg)	0.064	0.069	0.081		<0.050	
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0		<2.0	
	Titanium (Ti) (mg/kg)	340	382	341		216	
	Uranium (U) (mg/kg)	1.82	1.83	2.58		1.08	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1206097-56	L1206097-57	L1206097-58	L1206097-59	L1206097-60
		Description	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
		Sampled Date	24-AUG-12	24-AUG-12	24-AUG-12	24-AUG-12	24-AUG-12
		Sampled Time					
		Client ID	BAP-2	BAP-3	BAP-4	BAP-5	BAP-COMP
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)	28.4	40.1	33.1	36.6	43.6	
	pH (1:2 soil:water) (pH)	6.58	6.40	6.27	6.68		
Particle Size	% Gravel (>2mm) (%)	0.26	<0.10	<0.10	0.20		
	% Sand (2.0mm - 0.063mm) (%)	76.3	61.3	65.5	70.4		
	% Silt (0.063mm - 4um) (%)	21.0	34.6	31.0	25.5		
	% Clay (<4um) (%)	2.44	4.14	3.50	3.83		
	Texture	Loamy sand	Sandy loam	Sandy loam	Loamy sand		
Organic / Inorganic Carbon	Total Organic Carbon (%)	0.15	0.50	0.42	0.37		
Metals	Aluminum (Al) (mg/kg)	4110	6160	5360	5310		
	Antimony (Sb) (mg/kg)	0.13	0.13	0.14	0.12		
	Arsenic (As) (mg/kg)	8.53	13.2	3.01	5.19		
	Barium (Ba) (mg/kg)	334	325	327	254		
	Beryllium (Be) (mg/kg)	0.31	0.36	0.32	0.34		
	Bismuth (Bi) (mg/kg)	<0.20	<0.20	<0.20	<0.20		
	Cadmium (Cd) (mg/kg)	<0.050	<0.050	<0.050	<0.050		
	Calcium (Ca) (mg/kg)	2010	2250	2260	2060		
	Chromium (Cr) (mg/kg)	12.5	17.3	15.6	15.2		
	Cobalt (Co) (mg/kg)	3.27	4.87	4.09	4.53		
	Copper (Cu) (mg/kg)	3.43	6.43	6.19	5.13		
	Iron (Fe) (mg/kg)	12000	16300	13000	14900		
	Lead (Pb) (mg/kg)	3.91	5.80	4.97	5.19		
	Lithium (Li) (mg/kg)	6.2	9.6	8.5	8.7		
	Magnesium (Mg) (mg/kg)	2530	3640	3250	3190		
	Manganese (Mn) (mg/kg)	251	286	134	412		
	Mercury (Hg) (mg/kg)	<0.0050	0.0079	<0.0050	0.0074		
	Molybdenum (Mo) (mg/kg)	0.57	0.73	<0.50	0.70		
	Nickel (Ni) (mg/kg)	7.49	11.0	9.95	9.40		
	Phosphorus (P) (mg/kg)	672	786	771	704		
	Potassium (K) (mg/kg)	930	1420	1260	1150		
	Selenium (Se) (mg/kg)	<0.20	<0.20	<0.20	<0.20		
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10	<0.10		
	Sodium (Na) (mg/kg)	<100	110	<100	<100		
	Strontium (Sr) (mg/kg)	37.2	43.7	40.6	40.1		
	Thallium (Tl) (mg/kg)	0.056	0.065	0.056	0.052		
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0		
	Titanium (Ti) (mg/kg)	253	348	321	262		
	Uranium (U) (mg/kg)	1.10	1.68	1.53	1.36		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-61 SEDIMENT 25-AUG-12 BES-1	L1206097-62 SEDIMENT 25-AUG-12 BES-2	L1206097-63 SEDIMENT 25-AUG-12 BES-3	L1206097-64 SEDIMENT 25-AUG-12 BES-4	L1206097-65 SEDIMENT 25-AUG-12 BES-5
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	39.8	43.6	50.9	48.3	53.4
	pH (1:2 soil:water) (pH)	7.55	7.40	7.15	7.32	7.36
Particle Size	% Gravel (>2mm) (%)	1.59	<0.10	<0.10	<0.10	1.29
	% Sand (2.0mm - 0.063mm) (%)	69.6	73.1	57.0	66.1	59.4
	% Silt (0.063mm - 4um) (%)	25.2	23.0	36.4	29.3	34.9
	% Clay (<4um) (%)	3.63	3.94	6.60	4.62	4.40
	Texture	Loamy sand	Loamy sand	Sandy loam	Sandy loam	Sandy loam
Organic / Inorganic Carbon	Total Organic Carbon (%)	0.29	0.38	0.48	0.44	0.44
Metals	Aluminum (Al) (mg/kg)	6060	6110	7700	6260	6370
	Antimony (Sb) (mg/kg)	0.18	0.21	0.22	0.19	0.19
	Arsenic (As) (mg/kg)	3.36	3.21	4.24	3.45	3.72
	Barium (Ba) (mg/kg)	162	148	107	116	119
	Beryllium (Be) (mg/kg)	0.31	0.33	0.43	0.36	0.33
	Bismuth (Bi) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Cadmium (Cd) (mg/kg)	<0.050	<0.050	0.051	0.052	<0.050
	Calcium (Ca) (mg/kg)	2070	2160	2460	2280	2280
	Chromium (Cr) (mg/kg)	18.7	18.8	21.6	18.0	19.0
	Cobalt (Co) (mg/kg)	4.72	4.81	5.65	4.99	5.04
	Copper (Cu) (mg/kg)	4.86	4.67	6.40	5.56	6.11
	Iron (Fe) (mg/kg)	13400	13300	15800	13600	13800
	Lead (Pb) (mg/kg)	4.62	4.74	6.56	5.12	5.29
	Lithium (Li) (mg/kg)	9.0	9.1	11.3	9.6	9.7
	Magnesium (Mg) (mg/kg)	3820	3760	4350	3760	3820
	Manganese (Mn) (mg/kg)	454	381	568	459	436
	Mercury (Hg) (mg/kg)	0.0060	0.0059	0.0102	0.0078	0.0072
	Molybdenum (Mo) (mg/kg)	<0.50	<0.50	0.65	0.59	<0.50
	Nickel (Ni) (mg/kg)	11.4	11.5	13.0	11.2	11.4
	Phosphorus (P) (mg/kg)	717	682	688	641	688
	Potassium (K) (mg/kg)	1270	1290	1590	1290	1340
	Selenium (Se) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)	<100	100	130	<100	110
	Strontium (Sr) (mg/kg)	37.5	39.0	45.7	41.0	39.7
	Thallium (Tl) (mg/kg)	0.051	0.061	0.065	0.055	0.052
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	324	357	361	374	323
	Uranium (U) (mg/kg)	1.18	1.16	1.53	1.32	1.32

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-66 SEDIMENT 25-AUG-12 BES-COMP	L1206097-67 SEDIMENT 27-AUG-12 TPS-1	L1206097-68 SEDIMENT 27-AUG-12 TPS-2	L1206097-69 SEDIMENT 27-AUG-12 TPS-3	L1206097-70 SEDIMENT 27-AUG-12 TPS-4
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	48.5	86.0	85.7	85.4	83.9
	pH (1:2 soil:water) (pH)		6.24	6.04	6.24	5.84
Particle Size	% Gravel (>2mm) (%)		<0.10	<0.10	<0.10	0.27
	% Sand (2.0mm - 0.063mm) (%)		5.49	3.36	2.84	12.9
	% Silt (0.063mm - 4um) (%)		74.9	72.9	74.0	64.4
	% Clay (<4um) (%)		19.6	23.8	23.2	22.5
	Texture		Silt loam	Silt loam	Silt loam	Silt loam
Organic / Inorganic Carbon	Total Organic Carbon (%)		4.17	3.87	4.30	2.95
Metals	Aluminum (Al) (mg/kg)		19300	19600	16400	21600
	Antimony (Sb) (mg/kg)		0.21	0.20	0.20	0.17
	Arsenic (As) (mg/kg)		16.9	13.9	22.3	10.7
	Barium (Ba) (mg/kg)		89.2	86.5	74.8	89.9
	Beryllium (Be) (mg/kg)		1.19	1.23	1.11	1.19
	Bismuth (Bi) (mg/kg)		1.38	1.44	1.26	1.45
	Cadmium (Cd) (mg/kg)		0.213	0.125	0.200	0.091
	Calcium (Ca) (mg/kg)		1860	1440	1230	1620
	Chromium (Cr) (mg/kg)		96.1	99.4	83.9	111
	Cobalt (Co) (mg/kg)		11.4	12.3	17.0	13.2
	Copper (Cu) (mg/kg)		54.0	55.5	51.2	53.6
	Iron (Fe) (mg/kg)		27400	25500	31100	27800
	Lead (Pb) (mg/kg)		17.5	16.6	15.4	17.4
	Lithium (Li) (mg/kg)		29.8	30.5	24.8	37.4
	Magnesium (Mg) (mg/kg)		7910	8100	6910	9820
	Manganese (Mn) (mg/kg)		490	534	1290	410
	Mercury (Hg) (mg/kg)		0.0175	0.0128	0.0167	0.0141
	Molybdenum (Mo) (mg/kg)		2.77	2.92	4.16	1.92
	Nickel (Ni) (mg/kg)		63.3	64.1	59.6	69.0
	Phosphorus (P) (mg/kg)		441	378	375	391
	Potassium (K) (mg/kg)		3260	3260	2640	3690
	Selenium (Se) (mg/kg)		0.62	0.55	0.64	0.43
	Silver (Ag) (mg/kg)		0.16	0.12	<0.10	0.10
	Sodium (Na) (mg/kg)		140	130	100	130
	Strontium (Sr) (mg/kg)		15.5	13.9	12.2	15.1
	Thallium (Tl) (mg/kg)		0.236	0.239	0.222	0.265
	Tin (Sn) (mg/kg)		<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)		595	599	503	726
	Uranium (U) (mg/kg)		14.6	15.6	13.7	15.4

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-71 SEDIMENT 27-AUG-12 TPS-5	L1206097-72 SEDIMENT 27-AUG-12 TPS-COMP	L1206097-73 SEDIMENT 27-AUG-12 TPN-1	L1206097-74 SEDIMENT 27-AUG-12 TPN-2	L1206097-75 SEDIMENT 27-AUG-12 TPN-3
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	85.5	86.5	55.3	40.2	65.7
	pH (1:2 soil:water) (pH)	5.60		6.34	6.45	6.07
Particle Size	% Gravel (>2mm) (%)	<0.10		9.44	4.19	1.01
	% Sand (2.0mm - 0.063mm) (%)	9.34		27.9	43.5	33.6
	% Silt (0.063mm - 4um) (%)	68.0		45.8	32.8	51.8
	% Clay (<4um) (%)	22.6		16.9	19.5	13.6
	Texture	Silt loam		Silt loam	Loam	Silt loam
Organic / Inorganic Carbon	Total Organic Carbon (%)	4.55		0.75	0.25	1.30
Metals	Aluminum (Al) (mg/kg)	17200		17800	15700	20400
	Antimony (Sb) (mg/kg)	0.22		0.13	<0.10	0.13
	Arsenic (As) (mg/kg)	12.7		11.2	7.87	10.3
	Barium (Ba) (mg/kg)	85.9		79.5	71.0	79.3
	Beryllium (Be) (mg/kg)	1.15		0.89	0.68	1.11
	Bismuth (Bi) (mg/kg)	1.24		0.95	0.79	1.24
	Cadmium (Cd) (mg/kg)	0.388		0.089	0.073	0.064
	Calcium (Ca) (mg/kg)	1500		1460	1280	1370
	Chromium (Cr) (mg/kg)	88.7		89.6	78.3	121
	Cobalt (Co) (mg/kg)	13.6		13.2	10.8	11.0
	Copper (Cu) (mg/kg)	49.6		30.1	21.6	48.5
	Iron (Fe) (mg/kg)	26100		29100	25400	28200
	Lead (Pb) (mg/kg)	17.0		12.4	10.3	14.9
	Lithium (Li) (mg/kg)	27.9		35.8	32.5	36.3
	Magnesium (Mg) (mg/kg)	7700		8810	7920	9360
	Manganese (Mn) (mg/kg)	558		761	575	331
	Mercury (Hg) (mg/kg)	0.0198		0.0053	<0.0050	0.0082
	Molybdenum (Mo) (mg/kg)	2.87		2.47	1.73	2.59
	Nickel (Ni) (mg/kg)	66.9		64.3	55.6	62.4
	Phosphorus (P) (mg/kg)	586		278	190	297
	Potassium (K) (mg/kg)	2820		3190	2820	3200
	Selenium (Se) (mg/kg)	0.59		<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)	0.15		<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)	110		190	130	100
	Strontium (Sr) (mg/kg)	13.1		14.7	13.7	14.9
	Thallium (Tl) (mg/kg)	0.239		0.257	0.225	0.235
	Tin (Sn) (mg/kg)	<2.0		<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	512		800	767	708
	Uranium (U) (mg/kg)	13.7		10.2	8.54	15.6

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-76 SEDIMENT 27-AUG-12 TPN-4	L1206097-77 SEDIMENT 27-AUG-12 TPN-5	L1206097-78 SEDIMENT 27-AUG-12 TPN-COMP	L1206097-79 SEDIMENT 17-AUG-12 DUP-1	L1206097-81 SEDIMENT 19-AUG-12 DUP-2
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	86.5	81.8	72.7	91.6	69.5
	pH (1:2 soil:water) (pH)	6.02	5.82		6.32	6.03
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10		<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)	17.3	28.7		1.82	48.9
	% Silt (0.063mm - 4um) (%)	78.5	64.7		92.6	46.9
	% Clay (<4um) (%)	4.21	6.63		5.59	4.19
	Texture	Silt loam / Silt	Silt loam		Silt	Sandy loam
Organic / Inorganic Carbon	Total Organic Carbon (%)	4.22	2.26		11.7	3.61
Metals	Aluminum (Al) (mg/kg)	16500	16400		16900	14100
	Antimony (Sb) (mg/kg)	0.21	0.15		0.40	<0.10
	Arsenic (As) (mg/kg)	20.6	12.9		32.4	7.80
	Barium (Ba) (mg/kg)	71.7	69.1		94.7	69.1
	Beryllium (Be) (mg/kg)	1.02	0.93		1.30	1.31
	Bismuth (Bi) (mg/kg)	1.12	1.01		1.54	1.31
	Cadmium (Cd) (mg/kg)	0.136	0.084		0.408	0.121
	Calcium (Ca) (mg/kg)	1510	1360		4080	1680
	Chromium (Cr) (mg/kg)	122	117		50.2	35.8
	Cobalt (Co) (mg/kg)	13.3	10.2		8.44	6.37
	Copper (Cu) (mg/kg)	56.7	40.6		123	34.9
	Iron (Fe) (mg/kg)	37700	25600		28700	25000
	Lead (Pb) (mg/kg)	14.7	13.2		29.0	14.2
	Lithium (Li) (mg/kg)	25.3	27.3		28.7	30.0
	Magnesium (Mg) (mg/kg)	8720	8390		6610	5570
	Manganese (Mn) (mg/kg)	625	405		347	395
	Mercury (Hg) (mg/kg)	0.0171	0.0136		0.0721	0.0182
	Molybdenum (Mo) (mg/kg)	3.68	2.09		7.21	1.85
	Nickel (Ni) (mg/kg)	64.7	58.9		50.0	26.1
	Phosphorus (P) (mg/kg)	889	348		773	607
	Potassium (K) (mg/kg)	2670	2700		2950	2640
	Selenium (Se) (mg/kg)	0.73	0.32		0.80	0.35
	Silver (Ag) (mg/kg)	0.16	<0.10		0.55	<0.10
	Sodium (Na) (mg/kg)	130	110		190	120
	Strontium (Sr) (mg/kg)	14.2	14.0		26.3	12.8
	Thallium (Tl) (mg/kg)	0.197	0.183		0.263	0.220
	Tin (Sn) (mg/kg)	<2.0	<2.0		<2.0	<2.0
	Titanium (Ti) (mg/kg)	540	564		478	639
	Uranium (U) (mg/kg)	14.4	12.4		13.1	12.7

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-83 SEDIMENT 18-AUG-12	L1206097-85 SEDIMENT 21-AUG-12	L1206097-87 SEDIMENT 20-AUG-12	L1206097-89 SEDIMENT 22-AUG-12	L1206097-91 SEDIMENT 24-AUG-12
		DUP-3	DUP-4	DUP-5	DUP-6	DUP-7
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	84.6	80.2	83.4	73.5	40.2
	pH (1:2 soil:water) (pH)	6.59	6.06	6.21	5.96	6.28
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10	<0.10	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)	2.41	11.8	1.89	8.47	61.1
	% Silt (0.063mm - 4um) (%)	84.0	75.3	82.1	75.2	35.4
	% Clay (<4um) (%)	13.6	12.9	16.0	16.3	3.54
	Texture	Silt	Silt loam / Silt	Silt	Silt	Sandy loam
Organic / Inorganic Carbon	Total Organic Carbon (%)	3.64	2.97	4.03	2.25	0.49
Metals	Aluminum (Al) (mg/kg)	19900	20400	24300	21200	4460
	Antimony (Sb) (mg/kg)	0.17	0.12	0.24	0.25	0.13
	Arsenic (As) (mg/kg)	14.9	5.58	36.4	39.9	8.60
	Barium (Ba) (mg/kg)	169	110	119	89.9	232
	Beryllium (Be) (mg/kg)	1.65	1.23	1.92	1.10	0.34
	Bismuth (Bi) (mg/kg)	1.67	1.05	2.19	1.05	1.26
	Cadmium (Cd) (mg/kg)	0.433	0.102	0.254	0.283	<0.050
	Calcium (Ca) (mg/kg)	1490	1900	2220	1870	2060
	Chromium (Cr) (mg/kg)	47.6	102	79.8	141	12.9
	Cobalt (Co) (mg/kg)	15.1	9.13	15.0	21.5	3.52
	Copper (Cu) (mg/kg)	54.3	38.6	69.6	54.3	4.88
	Iron (Fe) (mg/kg)	81800	24700	75300	43600	11800
	Lead (Pb) (mg/kg)	18.2	11.5	21.1	15.5	5.39
	Lithium (Li) (mg/kg)	40.6	27.3	41.6	30.9	8.2
	Magnesium (Mg) (mg/kg)	6720	8980	9150	11100	2550
	Manganese (Mn) (mg/kg)	6980	333	1860	1990	202
	Mercury (Hg) (mg/kg)	0.0216	0.0162	0.0281	0.0115	0.0073
	Molybdenum (Mo) (mg/kg)	10.2	1.59	8.38	4.06	0.68
	Nickel (Ni) (mg/kg)	65.4	67.9	62.2	110	8.07
	Phosphorus (P) (mg/kg)	880	677	547	411	558
	Potassium (K) (mg/kg)	3760	3240	4140	2840	990
	Selenium (Se) (mg/kg)	0.89	0.38	0.81	0.26	<0.20
	Silver (Ag) (mg/kg)	0.13	0.11	0.15	<0.10	<0.10
	Sodium (Na) (mg/kg)	170	190	180	<100	<100
	Strontium (Sr) (mg/kg)	15.8	22.7	19.4	21.0	38.5
	Thallium (Tl) (mg/kg)	0.446	0.180	0.340	0.233	0.058
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	703	598	774	536	237
	Uranium (U) (mg/kg)	21.2	14.3	18.6	10.6	1.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-93 SEDIMENT 23-AUG-12 DUP-8				
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)	36.8					
	pH (1:2 soil:water) (pH)	6.38					
Particle Size	% Gravel (>2mm) (%)	<0.10					
	% Sand (2.0mm - 0.063mm) (%)	46.2					
	% Silt (0.063mm - 4um) (%)	50.1					
	% Clay (<4um) (%)	3.80					
	Texture	Sandy loam					
Organic / Inorganic Carbon	Total Organic Carbon (%)	0.47					
Metals	Aluminum (Al) (mg/kg)	6050					
	Antimony (Sb) (mg/kg)	<0.10					
	Arsenic (As) (mg/kg)	17.7					
	Barium (Ba) (mg/kg)	86.4					
	Beryllium (Be) (mg/kg)	0.28					
	Bismuth (Bi) (mg/kg)	<0.20					
	Cadmium (Cd) (mg/kg)	<0.050					
	Calcium (Ca) (mg/kg)	2040					
	Chromium (Cr) (mg/kg)	14.9					
	Cobalt (Co) (mg/kg)	4.82					
	Copper (Cu) (mg/kg)	7.07					
	Iron (Fe) (mg/kg)	15500					
	Lead (Pb) (mg/kg)	6.55					
	Lithium (Li) (mg/kg)	7.9					
	Magnesium (Mg) (mg/kg)	3620					
	Manganese (Mn) (mg/kg)	386					
	Mercury (Hg) (mg/kg)	0.0066					
	Molybdenum (Mo) (mg/kg)	0.72					
	Nickel (Ni) (mg/kg)	9.22					
	Phosphorus (P) (mg/kg)	840					
	Potassium (K) (mg/kg)	960					
	Selenium (Se) (mg/kg)	<0.20					
	Silver (Ag) (mg/kg)	<0.10					
	Sodium (Na) (mg/kg)	110					
	Strontium (Sr) (mg/kg)	31.9					
	Thallium (Tl) (mg/kg)	<0.050					
	Tin (Sn) (mg/kg)	<2.0					
	Titanium (Ti) (mg/kg)	279					
	Uranium (U) (mg/kg)	1.29					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-1 SEDIMENT 16-AUG-12 TPE-1	L1206097-2 SEDIMENT 16-AUG-12 TPE-2	L1206097-3 SEDIMENT 16-AUG-12 TPE-3	L1206097-4 SEDIMENT 16-AUG-12 TPE-4	L1206097-5 SEDIMENT 16-AUG-12 TPE-5
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	38.8	38.9	37.5	39.1	40.3
	Zinc (Zn) (mg/kg)	102	107	97.2	100	102
Aggregate Organics	Mineral Oil and Grease (mg/kg)					
Hydrocarbons	EPH10-19 (mg/kg)					
	EPH19-32 (mg/kg)					
	LEPH (mg/kg)					
	HEPH (mg/kg)					
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)					
	Acenaphthylene (mg/kg)					
	Anthracene (mg/kg)					
	Benz(a)anthracene (mg/kg)					
	Benzo(a)pyrene (mg/kg)					
	Benzo(b)fluoranthene (mg/kg)					
	Benzo(b+j+k)fluoranthene (mg/kg)					
	Benzo(g,h,i)perylene (mg/kg)					
	Benzo(k)fluoranthene (mg/kg)					
	Chrysene (mg/kg)					
	Dibenz(a,h)anthracene (mg/kg)					
	Fluoranthene (mg/kg)					
	Fluorene (mg/kg)					
	Indeno(1,2,3-c,d)pyrene (mg/kg)					
	2-Methylnaphthalene (mg/kg)					
	Naphthalene (mg/kg)					
	Phenanthrene (mg/kg)					
	Pyrene (mg/kg)					
	Surrogate: Acenaphthene d10 (%)					
	Surrogate: Chrysene d12 (%)					
	Surrogate: Naphthalene d8 (%)					
	Surrogate: Phenanthrene d10 (%)					
	B(a)P Total Potency Equivalent (mg/kg)					
	IACR (CCME) (mg/kg)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-6 SEDIMENT 16-AUG-12 TPE-COMP	L1206097-7 SEDIMENT 17-AUG-12 WAL-1	L1206097-8 SEDIMENT 17-AUG-12 WAL-2	L1206097-9 SEDIMENT 17-AUG-12 WAL-3	L1206097-10 SEDIMENT 17-AUG-12 WAL-4
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)		24.3	28.9	27.8	28.6
	Zinc (Zn) (mg/kg)		109	122	106	112
Aggregate Organics	Mineral Oil and Grease (mg/kg)	<1700				
Hydrocarbons	EPH10-19 (mg/kg)	<700 ^{DLHM}				
	EPH19-32 (mg/kg)	<700 ^{DLHM}				
	LEPH (mg/kg)	<700				
	HEPH (mg/kg)	<700 ^{DLHM}				
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.020				
	Acenaphthylene (mg/kg)	<0.020 ^{DLHM}				
	Anthracene (mg/kg)	<0.020 ^{DLHM}				
	Benz(a)anthracene (mg/kg)	<0.020 ^{DLHM}				
	Benzo(a)pyrene (mg/kg)	<0.020 ^{DLHM}				
	Benzo(b)fluoranthene (mg/kg)	<0.020 ^{DLHM}				
	Benzo(b+j+k)fluoranthene (mg/kg)	<0.028				
	Benzo(g,h,i)perylene (mg/kg)	<0.020 ^{DLHM}				
	Benzo(k)fluoranthene (mg/kg)	<0.020 ^{DLHM}				
	Chrysene (mg/kg)	<0.020 ^{DLHM}				
	Dibenz(a,h)anthracene (mg/kg)	<0.020 ^{DLHM}				
	Fluoranthene (mg/kg)	<0.020 ^{DLHM}				
	Fluorene (mg/kg)	<0.020 ^{DLHM}				
	Indeno(1,2,3-c,d)pyrene (mg/kg)	<0.020 ^{DLHM}				
	2-Methylnaphthalene (mg/kg)	<0.020 ^{DLHM}				
	Naphthalene (mg/kg)	<0.020 ^{DLHM}				
	Phenanthrene (mg/kg)	<0.020 ^{DLHM}				
	Pyrene (mg/kg)	<0.020 ^{DLHM}				
	Surrogate: Acenaphthene d10 (%)	101.0				
	Surrogate: Chrysene d12 (%)	112.6				
	Surrogate: Naphthalene d8 (%)	90.5				
	Surrogate: Phenanthrene d10 (%)	105.3				
	B(a)P Total Potency Equivalent (mg/kg)	<0.024				
	IACR (CCME) (mg/kg)	<0.24				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-11 SEDIMENT 17-AUG-12 WAL-5	L1206097-12 SEDIMENT 17-AUG-12 WAL-COMP	L1206097-13 SEDIMENT 19-AUG-12 TE-1	L1206097-14 SEDIMENT 19-AUG-12 TE-2	L1206097-15 SEDIMENT 19-AUG-12 TE-3
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	33.2		22.7	31.4	34.4
	Zinc (Zn) (mg/kg)	120		66.5	98.4	102
Aggregate Organics	Mineral Oil and Grease (mg/kg)		<2400			
Hydrocarbons	EPH10-19 (mg/kg)		<1100 ^{DLHM}			
	EPH19-32 (mg/kg)		<1100 ^{DLHM}			
	LEPH (mg/kg)		<1100			
	HEPH (mg/kg)		<1100 ^{DLHM}			
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		<0.030 ^{DLHM}			
	Acenaphthylene (mg/kg)		<0.030 ^{DLHM}			
	Anthracene (mg/kg)		<0.030 ^{DLHM}			
	Benz(a)anthracene (mg/kg)		<0.030 ^{DLHM}			
	Benzo(a)pyrene (mg/kg)		<0.030 ^{DLHM}			
	Benzo(b)fluoranthene (mg/kg)		<0.030 ^{DLHM}			
	Benzo(b+j+k)fluoranthene (mg/kg)		<0.042 ^{DLHM}			
	Benzo(g,h,i)perylene (mg/kg)		<0.030 ^{DLHM}			
	Benzo(k)fluoranthene (mg/kg)		<0.030 ^{DLHM}			
	Chrysene (mg/kg)		<0.030 ^{DLHM}			
	Dibenz(a,h)anthracene (mg/kg)		<0.030 ^{DLHM}			
	Fluoranthene (mg/kg)		<0.030 ^{DLHM}			
	Fluorene (mg/kg)		<0.030 ^{DLHM}			
	Indeno(1,2,3-c,d)pyrene (mg/kg)		<0.030 ^{DLHM}			
	2-Methylnaphthalene (mg/kg)		<0.030 ^{DLHM}			
	Naphthalene (mg/kg)		<0.030 ^{DLHM}			
	Phenanthrene (mg/kg)		<0.030 ^{DLHM}			
	Pyrene (mg/kg)		<0.030 ^{DLHM}			
	Surrogate: Acenaphthene d10 (%)		87.2			
	Surrogate: Chrysene d12 (%)		102.5			
	Surrogate: Naphthalene d8 (%)		75.0			
	Surrogate: Phenanthrene d10 (%)		91.6			
	B(a)P Total Potency Equivalent (mg/kg)		<0.036			
	IACR (CCME) (mg/kg)		<0.35			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-16 SEDIMENT 19-AUG-12 TE-4	L1206097-17 SEDIMENT 19-AUG-12 TE-5	L1206097-18 SEDIMENT 19-AUG-12 TE-COMP	L1206097-19 SEDIMENT 18-AUG-12 TEFF-1	L1206097-20 SEDIMENT 18-AUG-12 TEFF-2
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	32.7	34.4		31.2	34.4
	Zinc (Zn) (mg/kg)	101	107		104	105
Aggregate Organics	Mineral Oil and Grease (mg/kg)			<900		
Hydrocarbons	EPH10-19 (mg/kg)			<490 ^{DLHM}		
	EPH19-32 (mg/kg)			<490 ^{DLHM}		
	LEPH (mg/kg)			<490		
	HEPH (mg/kg)			<490		
				<0.013 ^{DLHM}		
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)			<0.013 ^{DLHM}		
	Acenaphthylene (mg/kg)			<0.013 ^{DLHM}		
	Anthracene (mg/kg)			<0.013 ^{DLHM}		
	Benz(a)anthracene (mg/kg)			<0.013 ^{DLHM}		
	Benzo(a)pyrene (mg/kg)			<0.013 ^{DLHM}		
	Benzo(b)fluoranthene (mg/kg)			<0.013 ^{DLHM}		
	Benzo(b+j+k)fluoranthene (mg/kg)			<0.018 ^{DLHM}		
	Benzo(g,h,i)perylene (mg/kg)			<0.013 ^{DLHM}		
	Benzo(k)fluoranthene (mg/kg)			<0.013 ^{DLHM}		
	Chrysene (mg/kg)			<0.013 ^{DLHM}		
	Dibenz(a,h)anthracene (mg/kg)			<0.013 ^{DLHM}		
	Fluoranthene (mg/kg)			<0.013 ^{DLHM}		
	Fluorene (mg/kg)			<0.013 ^{DLHM}		
	Indeno(1,2,3-c,d)pyrene (mg/kg)			<0.013 ^{DLHM}		
	2-Methylnaphthalene (mg/kg)			<0.013 ^{DLHM}		
	Naphthalene (mg/kg)			<0.013 ^{DLHM}		
	Phenanthrene (mg/kg)			<0.013 ^{DLHM}		
	Pyrene (mg/kg)			<0.013 ^{DLHM}		
	Surrogate: Acenaphthene d10 (%)			90.4		
	Surrogate: Chrysene d12 (%)			102.0		
	Surrogate: Naphthalene d8 (%)			82.9		
	Surrogate: Phenanthrene d10 (%)			94.7		
	B(a)P Total Potency Equivalent (mg/kg)			<0.020		
	IACR (CCME) (mg/kg)			<0.15		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-21 SEDIMENT 18-AUG-12 TEFF-3	L1206097-22 SEDIMENT 18-AUG-12 TEFF-4	L1206097-23 SEDIMENT 18-AUG-12 TEFF-5	L1206097-24 SEDIMENT 18-AUG-12 TEFF-COMP	L1206097-25 SEDIMENT 20-AUG-12 SP-1
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	34.3	30.3	34.5		36.3
	Zinc (Zn) (mg/kg)	104	92.0	102		110
Aggregate Organics	Mineral Oil and Grease (mg/kg)				<1500	
Hydrocarbons	EPH10-19 (mg/kg)				410	
	EPH19-32 (mg/kg)				290	
	LEPH (mg/kg)				410	
	HEPH (mg/kg)				290	
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)				DLHM <0.020	
	Acenaphthylene (mg/kg)				DLHM <0.020	
	Anthracene (mg/kg)				DLHM <0.020	
	Benz(a)anthracene (mg/kg)				DLHM <0.020	
	Benzo(a)pyrene (mg/kg)				DLHM <0.020	
	Benzo(b)fluoranthene (mg/kg)				DLHM <0.020	
	Benzo(b+j+k)fluoranthene (mg/kg)				<0.028	
	Benzo(g,h,i)perylene (mg/kg)				DLHM <0.020	
	Benzo(k)fluoranthene (mg/kg)				DLHM <0.020	
	Chrysene (mg/kg)				DLHM <0.020	
	Dibenz(a,h)anthracene (mg/kg)				DLHM <0.020	
	Fluoranthene (mg/kg)				DLHM <0.020	
	Fluorene (mg/kg)				DLHM <0.020	
	Indeno(1,2,3-c,d)pyrene (mg/kg)				DLHM <0.020	
	2-Methylnaphthalene (mg/kg)				DLHM <0.020	
	Naphthalene (mg/kg)				DLHM <0.020	
	Phenanthrene (mg/kg)				DLHM <0.020	
	Pyrene (mg/kg)				DLHM <0.020	
	Surrogate: Acenaphthene d10 (%)				88.6	
	Surrogate: Chrysene d12 (%)				114.9	
	Surrogate: Naphthalene d8 (%)				95.2	
	Surrogate: Phenanthrene d10 (%)				120.0	
	B(a)P Total Potency Equivalent (mg/kg)				<0.024	
	IACR (CCME) (mg/kg)				<0.24	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-26 SEDIMENT 20-AUG-12 SP-2	L1206097-27 SEDIMENT 20-AUG-12 SP-3	L1206097-28 SEDIMENT 20-AUG-12 SP-4	L1206097-29 SEDIMENT 20-AUG-12 SP-5	L1206097-30 SEDIMENT 20-AUG-12 SP-COMP
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	37.5	36.9	37.6	36.6	
	Zinc (Zn) (mg/kg)	109	109	109	109	
Aggregate Organics	Mineral Oil and Grease (mg/kg)					<1800
Hydrocarbons	EPH10-19 (mg/kg)					<200
	EPH19-32 (mg/kg)					<200
	LEPH (mg/kg)					<200
	HEPH (mg/kg)					<200
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)					<0.020 ^{DLHM}
	Acenaphthylene (mg/kg)					<0.020 ^{DLHM}
	Anthracene (mg/kg)					<0.020 ^{DLHM}
	Benz(a)anthracene (mg/kg)					<0.020 ^{DLHM}
	Benzo(a)pyrene (mg/kg)					<0.020 ^{DLHM}
	Benzo(b)fluoranthene (mg/kg)					<0.020 ^{DLHM}
	Benzo(b+j+k)fluoranthene (mg/kg)					<0.028 ^{DLHM}
	Benzo(g,h,i)perylene (mg/kg)					<0.020 ^{DLHM}
	Benzo(k)fluoranthene (mg/kg)					<0.020 ^{DLHM}
	Chrysene (mg/kg)					<0.020 ^{DLHM}
	Dibenz(a,h)anthracene (mg/kg)					<0.020 ^{DLHM}
	Fluoranthene (mg/kg)					<0.020 ^{DLHM}
	Fluorene (mg/kg)					<0.020 ^{DLHM}
	Indeno(1,2,3-c,d)pyrene (mg/kg)					<0.020 ^{DLHM}
	2-Methylnaphthalene (mg/kg)					<0.020 ^{DLHM}
	Naphthalene (mg/kg)					<0.020 ^{DLHM}
	Phenanthrene (mg/kg)					<0.020 ^{DLHM}
	Pyrene (mg/kg)					<0.020 ^{DLHM}
	Surrogate: Acenaphthene d10 (%)					90.4
	Surrogate: Chrysene d12 (%)					107.0
	Surrogate: Naphthalene d8 (%)					90.8
	Surrogate: Phenanthrene d10 (%)					107.8
	B(a)P Total Potency Equivalent (mg/kg)					<0.024
	IACR (CCME) (mg/kg)					<0.24

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-31 SEDIMENT 21-AUG-12 INUG-1	L1206097-32 SEDIMENT 21-AUG-12 INUG-2	L1206097-33 SEDIMENT 21-AUG-12 INUG-3	L1206097-34 SEDIMENT 21-AUG-12 INUG-4	L1206097-35 SEDIMENT 21-AUG-12 INUG-5
Grouping	Analyte						
SOIL							
Metals	Vanadium (V) (mg/kg)		33.1	32.6	21.4	23.3	33.0
	Zinc (Zn) (mg/kg)		79.4	90.6	60.0	66.7	82.7
Aggregate Organics	Mineral Oil and Grease (mg/kg)						
Hydrocarbons	EPH10-19 (mg/kg)						
	EPH19-32 (mg/kg)						
	LEPH (mg/kg)						
	HEPH (mg/kg)						
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)						
	Acenaphthylene (mg/kg)						
	Anthracene (mg/kg)						
	Benz(a)anthracene (mg/kg)						
	Benzo(a)pyrene (mg/kg)						
	Benzo(b)fluoranthene (mg/kg)						
	Benzo(b+j+k)fluoranthene (mg/kg)						
	Benzo(g,h,i)perylene (mg/kg)						
	Benzo(k)fluoranthene (mg/kg)						
	Chrysene (mg/kg)						
	Dibenz(a,h)anthracene (mg/kg)						
	Fluoranthene (mg/kg)						
	Fluorene (mg/kg)						
	Indeno(1,2,3-c,d)pyrene (mg/kg)						
	2-Methylnaphthalene (mg/kg)						
	Naphthalene (mg/kg)						
	Phenanthrene (mg/kg)						
	Pyrene (mg/kg)						
	Surrogate: Acenaphthene d10 (%)						
	Surrogate: Chrysene d12 (%)						
	Surrogate: Naphthalene d8 (%)						
	Surrogate: Phenanthrene d10 (%)						
	B(a)P Total Potency Equivalent (mg/kg)						
	IACR (CCME) (mg/kg)						

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-36 SEDIMENT 21-AUG-12 INUG-COMP	L1206097-37 SEDIMENT 22-AUG-12 PDL-1	L1206097-38 SEDIMENT 22-AUG-12 PDL-2	L1206097-39 SEDIMENT 22-AUG-12 PDL-3	L1206097-40 SEDIMENT 22-AUG-12 PDL-4
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)		34.2	37.4	32.7	33.2
	Zinc (Zn) (mg/kg)		77.6	88.1	76.9	79.0
Aggregate Organics	Mineral Oil and Grease (mg/kg)	<1600				
Hydrocarbons	EPH10-19 (mg/kg)	<200				
	EPH19-32 (mg/kg)	<200				
	LEPH (mg/kg)	<200				
	HEPH (mg/kg)	<200				
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	^{DLHM} <0.017				
	Acenaphthylene (mg/kg)	^{DLHM} <0.017				
	Anthracene (mg/kg)	^{DLHM} <0.017				
	Benz(a)anthracene (mg/kg)	^{DLHM} <0.017				
	Benzo(a)pyrene (mg/kg)	^{DLHM} <0.017				
	Benzo(b)fluoranthene (mg/kg)	^{DLHM} <0.017				
	Benzo(b+j+k)fluoranthene (mg/kg)	<0.024				
	Benzo(g,h,i)perylene (mg/kg)	^{DLHM} <0.017				
	Benzo(k)fluoranthene (mg/kg)	^{DLHM} <0.017				
	Chrysene (mg/kg)	^{DLHM} <0.017				
	Dibenz(a,h)anthracene (mg/kg)	^{DLHM} <0.017				
	Fluoranthene (mg/kg)	^{DLHM} <0.017				
	Fluorene (mg/kg)	^{DLHM} <0.017				
	Indeno(1,2,3-c,d)pyrene (mg/kg)	^{DLHM} <0.017				
	2-Methylnaphthalene (mg/kg)	^{DLHM} <0.017				
	Naphthalene (mg/kg)	^{DLHM} <0.017				
	Phenanthrene (mg/kg)	^{DLHM} <0.017				
	Pyrene (mg/kg)	^{DLHM} <0.017				
	Surrogate: Acenaphthene d10 (%)	88.7				
	Surrogate: Chrysene d12 (%)	113.2				
	Surrogate: Naphthalene d8 (%)	90.2				
	Surrogate: Phenanthrene d10 (%)	99.3				
	B(a)P Total Potency Equivalent (mg/kg)	<0.021				
	IACR (CCME) (mg/kg)	<0.20				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-41 SEDIMENT 22-AUG-12 PDL-5	L1206097-42 SEDIMENT 22-AUG-12 PDL-COMP	L1206097-43 SEDIMENT 23-AUG-12 BBD-1	L1206097-44 SEDIMENT 23-AUG-12 BBD-2	L1206097-45 SEDIMENT 23-AUG-12 BBD-3
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	35.8		15.9	15.6	17.0
	Zinc (Zn) (mg/kg)	81.3		26.0	39.7	30.7
Aggregate Organics	Mineral Oil and Grease (mg/kg)		<1100			
Hydrocarbons	EPH10-19 (mg/kg)		<200			
	EPH19-32 (mg/kg)		<200			
	LEPH (mg/kg)		<200			
	HEPH (mg/kg)		<200			
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		^{DLHM} <0.013			
	Acenaphthylene (mg/kg)		^{DLHM} <0.013			
	Anthracene (mg/kg)		^{DLHM} <0.013			
	Benz(a)anthracene (mg/kg)		^{DLHM} <0.013			
	Benzo(a)pyrene (mg/kg)		^{DLHM} <0.013			
	Benzo(b)fluoranthene (mg/kg)		^{DLHM} <0.013			
	Benzo(b+j+k)fluoranthene (mg/kg)		<0.018			
	Benzo(g,h,i)perylene (mg/kg)		^{DLHM} <0.013			
	Benzo(k)fluoranthene (mg/kg)		^{DLHM} <0.013			
	Chrysene (mg/kg)		^{DLHM} <0.013			
	Dibenz(a,h)anthracene (mg/kg)		^{DLHM} <0.013			
	Fluoranthene (mg/kg)		^{DLHM} <0.013			
	Fluorene (mg/kg)		^{DLHM} <0.013			
	Indeno(1,2,3-c,d)pyrene (mg/kg)		^{DLHM} <0.013			
	2-Methylnaphthalene (mg/kg)		^{DLHM} <0.013			
	Naphthalene (mg/kg)		^{DLHM} <0.013			
	Phenanthrene (mg/kg)		^{DLHM} <0.013			
	Pyrene (mg/kg)		^{DLHM} <0.013			
	Surrogate: Acenaphthene d10 (%)		95.9			
	Surrogate: Chrysene d12 (%)		102.5			
	Surrogate: Naphthalene d8 (%)		111.9			
	Surrogate: Phenanthrene d10 (%)		110.2			
	B(a)P Total Potency Equivalent (mg/kg)		<0.020			
	IACR (CCME) (mg/kg)		<0.15			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-46 SEDIMENT 23-AUG-12 BBD-4	L1206097-47 SEDIMENT 23-AUG-12 BBD-5	L1206097-48 SEDIMENT 23-AUG-12 BBD-COMP	L1206097-49 SEDIMENT 24-AUG-12 BPJ-1	L1206097-50 SEDIMENT 24-AUG-12 BPJ-2
Grouping	Analyte						
SOIL							
Metals	Vanadium (V) (mg/kg)		14.3	11.8		21.6	24.2
	Zinc (Zn) (mg/kg)		24.6	20.3		36.4	37.9
Aggregate Organics	Mineral Oil and Grease (mg/kg)				<500		
Hydrocarbons	EPH10-19 (mg/kg)				<200		
	EPH19-32 (mg/kg)				<200		
	LEPH (mg/kg)				<200		
	HEPH (mg/kg)				<200		
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)				<0.0050		
	Acenaphthylene (mg/kg)				<0.0050		
	Anthracene (mg/kg)				<0.0040		
	Benz(a)anthracene (mg/kg)				<0.010		
	Benzo(a)pyrene (mg/kg)				<0.010		
	Benzo(b)fluoranthene (mg/kg)				<0.010		
	Benzo(b+j+k)fluoranthene (mg/kg)				<0.015		
	Benzo(g,h,i)perylene (mg/kg)				<0.010		
	Benzo(k)fluoranthene (mg/kg)				<0.010		
	Chrysene (mg/kg)				<0.010		
	Dibenz(a,h)anthracene (mg/kg)				<0.0050		
	Fluoranthene (mg/kg)				<0.010		
	Fluorene (mg/kg)				<0.010		
	Indeno(1,2,3-c,d)pyrene (mg/kg)				<0.010		
	2-Methylnaphthalene (mg/kg)				<0.010		
	Naphthalene (mg/kg)				<0.010		
	Phenanthrene (mg/kg)				<0.010		
	Pyrene (mg/kg)				<0.010		
	Surrogate: Acenaphthene d10 (%)				86.3		
	Surrogate: Chrysene d12 (%)				102.6		
	Surrogate: Naphthalene d8 (%)				94.9		
	Surrogate: Phenanthrene d10 (%)				102.6		
	B(a)P Total Potency Equivalent (mg/kg)				<0.020		
	IACR (CCME) (mg/kg)				<0.15		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-51 SEDIMENT 24-AUG-12 BPJ-3	L1206097-52 SEDIMENT 24-AUG-12 BPJ-4	L1206097-53 SEDIMENT 24-AUG-12 BPJ-5	L1206097-54 SEDIMENT 24-AUG-12 BPJ-COMP	L1206097-55 SEDIMENT 24-AUG-12 BAP-1
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	23.4	23.0	28.5		16.1
	Zinc (Zn) (mg/kg)	36.8	38.2	45.3		17.9
Aggregate Organics	Mineral Oil and Grease (mg/kg)				<500	
Hydrocarbons	EPH10-19 (mg/kg)				<200	
	EPH19-32 (mg/kg)				<200	
	LEPH (mg/kg)				<200	
	HEPH (mg/kg)				<200	
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)				<0.0050	
	Acenaphthylene (mg/kg)				<0.0050	
	Anthracene (mg/kg)				<0.0050 ^{DLHM}	
	Benz(a)anthracene (mg/kg)				<0.010	
	Benzo(a)pyrene (mg/kg)				<0.010	
	Benzo(b)fluoranthene (mg/kg)				<0.010	
	Benzo(b+j+k)fluoranthene (mg/kg)				<0.015	
	Benzo(g,h,i)perylene (mg/kg)				<0.010	
	Benzo(k)fluoranthene (mg/kg)				<0.010	
	Chrysene (mg/kg)				<0.010	
	Dibenz(a,h)anthracene (mg/kg)				<0.0050	
	Fluoranthene (mg/kg)				<0.010	
	Fluorene (mg/kg)				<0.010	
	Indeno(1,2,3-c,d)pyrene (mg/kg)				<0.010	
	2-Methylnaphthalene (mg/kg)				<0.010	
	Naphthalene (mg/kg)				<0.010	
	Phenanthrene (mg/kg)				<0.010	
	Pyrene (mg/kg)				<0.010	
	Surrogate: Acenaphthene d10 (%)				97.8	
	Surrogate: Chrysene d12 (%)				93.0	
	Surrogate: Naphthalene d8 (%)				111.5	
	Surrogate: Phenanthrene d10 (%)				110.4	
	B(a)P Total Potency Equivalent (mg/kg)				<0.020	
	IACR (CCME) (mg/kg)				<0.15	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-56 SEDIMENT 24-AUG-12 BAP-2	L1206097-57 SEDIMENT 24-AUG-12 BAP-3	L1206097-58 SEDIMENT 24-AUG-12 BAP-4	L1206097-59 SEDIMENT 24-AUG-12 BAP-5	L1206097-60 SEDIMENT 24-AUG-12 BAP-COMP
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	16.4	22.1	20.1	19.4	
	Zinc (Zn) (mg/kg)	17.0	26.4	23.7	22.9	
Aggregate Organics	Mineral Oil and Grease (mg/kg)					<500
Hydrocarbons	EPH10-19 (mg/kg)					<200
	EPH19-32 (mg/kg)					<200
	LEPH (mg/kg)					<200
	HEPH (mg/kg)					<200
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)					<0.0050
	Acenaphthylene (mg/kg)					<0.0050
	Anthracene (mg/kg)					<0.0040
	Benz(a)anthracene (mg/kg)					<0.010
	Benzo(a)pyrene (mg/kg)					<0.010
	Benzo(b)fluoranthene (mg/kg)					<0.010
	Benzo(b+j+k)fluoranthene (mg/kg)					<0.015
	Benzo(g,h,i)perylene (mg/kg)					<0.010
	Benzo(k)fluoranthene (mg/kg)					<0.010
	Chrysene (mg/kg)					<0.010
	Dibenz(a,h)anthracene (mg/kg)					<0.0050
	Fluoranthene (mg/kg)					<0.010
	Fluorene (mg/kg)					<0.010
	Indeno(1,2,3-c,d)pyrene (mg/kg)					<0.010
	2-Methylnaphthalene (mg/kg)					<0.010
	Naphthalene (mg/kg)					<0.010
	Phenanthrene (mg/kg)					<0.010
	Pyrene (mg/kg)					<0.010
	Surrogate: Acenaphthene d10 (%)					88.8
	Surrogate: Chrysene d12 (%)					104.3
	Surrogate: Naphthalene d8 (%)					91.8
	Surrogate: Phenanthrene d10 (%)					99.0
	B(a)P Total Potency Equivalent (mg/kg)					<0.020
	IACR (CCME) (mg/kg)					<0.15

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-61 SEDIMENT 25-AUG-12 BES-1	L1206097-62 SEDIMENT 25-AUG-12 BES-2	L1206097-63 SEDIMENT 25-AUG-12 BES-3	L1206097-64 SEDIMENT 25-AUG-12 BES-4	L1206097-65 SEDIMENT 25-AUG-12 BES-5
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	19.3	19.9	22.4	19.3	19.6
	Zinc (Zn) (mg/kg)	26.7	26.3	31.6	27.2	27.7
Aggregate Organics	Mineral Oil and Grease (mg/kg)					
Hydrocarbons	EPH10-19 (mg/kg)					
	EPH19-32 (mg/kg)					
	LEPH (mg/kg)					
	HEPH (mg/kg)					
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)					
	Acenaphthylene (mg/kg)					
	Anthracene (mg/kg)					
	Benz(a)anthracene (mg/kg)					
	Benzo(a)pyrene (mg/kg)					
	Benzo(b)fluoranthene (mg/kg)					
	Benzo(b+j+k)fluoranthene (mg/kg)					
	Benzo(g,h,i)perylene (mg/kg)					
	Benzo(k)fluoranthene (mg/kg)					
	Chrysene (mg/kg)					
	Dibenz(a,h)anthracene (mg/kg)					
	Fluoranthene (mg/kg)					
	Fluorene (mg/kg)					
	Indeno(1,2,3-c,d)pyrene (mg/kg)					
	2-Methylnaphthalene (mg/kg)					
	Naphthalene (mg/kg)					
	Phenanthrene (mg/kg)					
	Pyrene (mg/kg)					
	Surrogate: Acenaphthene d10 (%)					
	Surrogate: Chrysene d12 (%)					
	Surrogate: Naphthalene d8 (%)					
	Surrogate: Phenanthrene d10 (%)					
	B(a)P Total Potency Equivalent (mg/kg)					
	IACR (CCME) (mg/kg)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-66 SEDIMENT 25-AUG-12 BES-COMP	L1206097-67 SEDIMENT 27-AUG-12 TPS-1	L1206097-68 SEDIMENT 27-AUG-12 TPS-2	L1206097-69 SEDIMENT 27-AUG-12 TPS-3	L1206097-70 SEDIMENT 27-AUG-12 TPS-4
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)		33.3	34.3	30.7	37.4
	Zinc (Zn) (mg/kg)		84.3	84.1	75.6	96.8
Aggregate Organics	Mineral Oil and Grease (mg/kg)	<500				
Hydrocarbons	EPH10-19 (mg/kg)	<200				
	EPH19-32 (mg/kg)	<200				
	LEPH (mg/kg)	<200				
	HEPH (mg/kg)	<200				
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.0050				
	Acenaphthylene (mg/kg)	<0.0050				
	Anthracene (mg/kg)	<0.0040				
	Benz(a)anthracene (mg/kg)	<0.010				
	Benzo(a)pyrene (mg/kg)	<0.010				
	Benzo(b)fluoranthene (mg/kg)	<0.010				
	Benzo(b+j+k)fluoranthene (mg/kg)	<0.015				
	Benzo(g,h,i)perylene (mg/kg)	<0.010				
	Benzo(k)fluoranthene (mg/kg)	<0.010				
	Chrysene (mg/kg)	<0.010				
	Dibenz(a,h)anthracene (mg/kg)	<0.0050				
	Fluoranthene (mg/kg)	<0.010				
	Fluorene (mg/kg)	<0.010				
	Indeno(1,2,3-c,d)pyrene (mg/kg)	<0.010				
	2-Methylnaphthalene (mg/kg)	<0.010				
	Naphthalene (mg/kg)	<0.010				
	Phenanthrene (mg/kg)	<0.010				
	Pyrene (mg/kg)	<0.010				
	Surrogate: Acenaphthene d10 (%)	94.4				
	Surrogate: Chrysene d12 (%)	100.4				
	Surrogate: Naphthalene d8 (%)	87.2				
	Surrogate: Phenanthrene d10 (%)	95.9				
	B(a)P Total Potency Equivalent (mg/kg)	<0.020				
	IACR (CCME) (mg/kg)	<0.15				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-71 SEDIMENT 27-AUG-12 TPS-5	L1206097-72 SEDIMENT 27-AUG-12 TPS-COMP	L1206097-73 SEDIMENT 27-AUG-12 TPN-1	L1206097-74 SEDIMENT 27-AUG-12 TPN-2	L1206097-75 SEDIMENT 27-AUG-12 TPN-3
Grouping	Analyte						
SOIL							
Metals	Vanadium (V) (mg/kg)		30.8		32.1	28.6	35.4
	Zinc (Zn) (mg/kg)		84.7		83.4	65.9	84.7
Aggregate Organics	Mineral Oil and Grease (mg/kg)			<500			
Hydrocarbons	EPH10-19 (mg/kg)			<610 ^{DLHM}			
	EPH19-32 (mg/kg)			<610 ^{DLHM}			
	LEPH (mg/kg)			<610			
	HEPH (mg/kg)			<610			
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)			<0.0050			
	Acenaphthylene (mg/kg)			<0.0050			
	Anthracene (mg/kg)			<0.0040			
	Benz(a)anthracene (mg/kg)			<0.010			
	Benzo(a)pyrene (mg/kg)			<0.010			
	Benzo(b)fluoranthene (mg/kg)			<0.010			
	Benzo(b+j+k)fluoranthene (mg/kg)			<0.015			
	Benzo(g,h,i)perylene (mg/kg)			<0.010			
	Benzo(k)fluoranthene (mg/kg)			<0.010			
	Chrysene (mg/kg)			<0.010			
	Dibenz(a,h)anthracene (mg/kg)			<0.0050			
	Fluoranthene (mg/kg)			<0.010			
	Fluorene (mg/kg)			<0.010			
	Indeno(1,2,3-c,d)pyrene (mg/kg)			<0.010			
	2-Methylnaphthalene (mg/kg)			<0.010			
	Naphthalene (mg/kg)			<0.010			
	Phenanthrene (mg/kg)			<0.010			
	Pyrene (mg/kg)			<0.010			
	Surrogate: Acenaphthene d10 (%)			104.6			
	Surrogate: Chrysene d12 (%)			120.5			
	Surrogate: Naphthalene d8 (%)			118.7			
	Surrogate: Phenanthrene d10 (%)			116.3			
	B(a)P Total Potency Equivalent (mg/kg)			<0.020			
	IACR (CCME) (mg/kg)			<0.15			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-76 SEDIMENT 27-AUG-12 TPN-4	L1206097-77 SEDIMENT 27-AUG-12 TPN-5	L1206097-78 SEDIMENT 27-AUG-12 TPN-COMP	L1206097-79 SEDIMENT 17-AUG-12 DUP-1	L1206097-81 SEDIMENT 19-AUG-12 DUP-2
Grouping	Analyte						
SOIL							
Metals	Vanadium (V) (mg/kg)		32.8	31.1		25.8	23.5
	Zinc (Zn) (mg/kg)		77.3	73.0		109	68.6
Aggregate Organics	Mineral Oil and Grease (mg/kg)				<800		
Hydrocarbons	EPH10-19 (mg/kg)				<310 ^{DLHM}		
	EPH19-32 (mg/kg)				<310 ^{DLHM}		
	LEPH (mg/kg)				<310		
	HEPH (mg/kg)				<310		
					<310		
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)				<0.0050		
	Acenaphthylene (mg/kg)				<0.0050		
	Anthracene (mg/kg)				<0.0040		
	Benz(a)anthracene (mg/kg)				<0.010		
	Benzo(a)pyrene (mg/kg)				<0.010		
	Benzo(b)fluoranthene (mg/kg)				<0.010		
	Benzo(b+j+k)fluoranthene (mg/kg)				<0.015		
	Benzo(g,h,i)perylene (mg/kg)				<0.010		
	Benzo(k)fluoranthene (mg/kg)				<0.010		
	Chrysene (mg/kg)				<0.010		
	Dibenz(a,h)anthracene (mg/kg)				<0.0050		
	Fluoranthene (mg/kg)				<0.010		
	Fluorene (mg/kg)				<0.010		
	Indeno(1,2,3-c,d)pyrene (mg/kg)				<0.010		
	2-Methylnaphthalene (mg/kg)				<0.010		
	Naphthalene (mg/kg)				<0.010		
	Phenanthrene (mg/kg)				<0.010		
	Pyrene (mg/kg)				<0.010		
	Surrogate: Acenaphthene d10 (%)				92.2		
	Surrogate: Chrysene d12 (%)				92.9		
	Surrogate: Naphthalene d8 (%)				105.1		
	Surrogate: Phenanthrene d10 (%)				100.6		
	B(a)P Total Potency Equivalent (mg/kg)				<0.020		
	IACR (CCME) (mg/kg)				<0.15		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-83 SEDIMENT 18-AUG-12 DUP-3	L1206097-85 SEDIMENT 21-AUG-12 DUP-4	L1206097-87 SEDIMENT 20-AUG-12 DUP-5	L1206097-89 SEDIMENT 22-AUG-12 DUP-6	L1206097-91 SEDIMENT 24-AUG-12 DUP-7
Grouping	Analyte						
SOIL							
Metals	Vanadium (V) (mg/kg)		31.4	34.0	38.5	37.9	15.7
	Zinc (Zn) (mg/kg)		107	77.6	116	84.5	18.8
Aggregate Organics	Mineral Oil and Grease (mg/kg)						
Hydrocarbons	EPH10-19 (mg/kg)						
	EPH19-32 (mg/kg)						
	LEPH (mg/kg)						
	HEPH (mg/kg)						
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)						
	Acenaphthylene (mg/kg)						
	Anthracene (mg/kg)						
	Benz(a)anthracene (mg/kg)						
	Benzo(a)pyrene (mg/kg)						
	Benzo(b)fluoranthene (mg/kg)						
	Benzo(b+j+k)fluoranthene (mg/kg)						
	Benzo(g,h,i)perylene (mg/kg)						
	Benzo(k)fluoranthene (mg/kg)						
	Chrysene (mg/kg)						
	Dibenz(a,h)anthracene (mg/kg)						
	Fluoranthene (mg/kg)						
	Fluorene (mg/kg)						
	Indeno(1,2,3-c,d)pyrene (mg/kg)						
	2-Methylnaphthalene (mg/kg)						
	Naphthalene (mg/kg)						
	Phenanthrene (mg/kg)						
	Pyrene (mg/kg)						
	Surrogate: Acenaphthene d10 (%)						
	Surrogate: Chrysene d12 (%)						
	Surrogate: Naphthalene d8 (%)						
	Surrogate: Phenanthrene d10 (%)						
	B(a)P Total Potency Equivalent (mg/kg)						
	IACR (CCME) (mg/kg)						

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-93 SEDIMENT 23-AUG-12 DUP-8				
Grouping	Analyte					
SOIL						
Metals	Vanadium (V) (mg/kg)	16.3				
	Zinc (Zn) (mg/kg)	26.7				
Aggregate Organics	Mineral Oil and Grease (mg/kg)					
Hydrocarbons	EPH10-19 (mg/kg)					
	EPH19-32 (mg/kg)					
	LEPH (mg/kg)					
	HEPH (mg/kg)					
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)					
	Acenaphthylene (mg/kg)					
	Anthracene (mg/kg)					
	Benz(a)anthracene (mg/kg)					
	Benzo(a)pyrene (mg/kg)					
	Benzo(b)fluoranthene (mg/kg)					
	Benzo(b+j+k)fluoranthene (mg/kg)					
	Benzo(g,h,i)perylene (mg/kg)					
	Benzo(k)fluoranthene (mg/kg)					
	Chrysene (mg/kg)					
	Dibenz(a,h)anthracene (mg/kg)					
	Fluoranthene (mg/kg)					
	Fluorene (mg/kg)					
	Indeno(1,2,3-c,d)pyrene (mg/kg)					
	2-Methylnaphthalene (mg/kg)					
	Naphthalene (mg/kg)					
	Phenanthrene (mg/kg)					
	Pyrene (mg/kg)					
	Surrogate: Acenaphthene d10 (%)					
	Surrogate: Chrysene d12 (%)					
	Surrogate: Naphthalene d8 (%)					
	Surrogate: Phenanthrene d10 (%)					
	B(a)P Total Potency Equivalent (mg/kg)					
	IACR (CCME) (mg/kg)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206097-80 OTHER 17-AUG-12 SWIPE-1	L1206097-82 OTHER 19-AUG-12 SWIPE-2	L1206097-84 OTHER 18-AUG-12 SWIPE-3	L1206097-86 OTHER 21-AUG-12 SWIPE-4	L1206097-88 OTHER 20-AUG-12 SWIPE-5
Grouping	Analyte					
SWAB						
Metals	Aluminum (Al)-Total (ug)	34	21	<20	<20	<20
	Antimony (Sb)-Total (ug)	<20	<20	<20	<20	<20
	Arsenic (As)-Total (ug)	<20	<20	<20	<20	<20
	Barium (Ba)-Total (ug)	<1.0	<1.0	<1.0	<1.0	<1.0
	Beryllium (Be)-Total (ug)	<0.50	<0.50	<0.50	<0.50	<0.50
	Bismuth (Bi)-Total (ug)	<20	<20	<20	<20	<20
	Cadmium (Cd)-Total (ug)	<1.0	<1.0	<1.0	<1.0	<1.0
	Calcium (Ca)-Total (ug)	<80 ^{DLB}	26.9	34.6	19.5	38.3
	Chromium (Cr)-Total (ug)	4.3	5.7	6.9	5.2	7.1
	Cobalt (Co)-Total (ug)	<1.0	<1.0	<1.0	<1.0	<1.0
	Copper (Cu)-Total (ug)	<1.0	<1.0	<1.0	<1.0	<1.0
	Iron (Fe)-Total (ug)	58.3	<35 ^{DLB}	<40 ^{DLB}	<30 ^{DLB}	<35 ^{DLB}
	Lead (Pb)-Total (ug)	<5.0	<5.0	<5.0	<5.0	<5.0
	Lithium (Li)-Total (ug)	<1.0	<1.0	<1.0	<1.0	<1.0
	Magnesium (Mg)-Total (ug)	<25 ^{DLB}	<10	<15 ^{DLB}	<10	<10
	Manganese (Mn)-Total (ug)	3.45	0.79	3.90	0.90	0.86
	Molybdenum (Mo)-Total (ug)	<3.0	<3.0	<3.0	<3.0	<3.0
	Nickel (Ni)-Total (ug)	<5.0	<5.0	<5.0	<5.0	<5.0
	Phosphorus (P)-Total (ug)	<30	<30	<30	<30	<30
	Potassium (K)-Total (ug)	<200	<200	<200	<200	<200
	Selenium (Se)-Total (ug)	<20	<20	<20	<20	<20
	Silver (Ag)-Total (ug)	<1.0	<1.0	<1.0	<1.0	<1.0
	Sodium (Na)-Total (ug)	<200	<200	<200	<200	<200
	Strontium (Sr)-Total (ug)	0.55	<0.50	<0.50	<0.50	<0.50
	Thallium (Tl)-Total (ug)	<20	<20	<20	<20	<20
	Tin (Sn)-Total (ug)	<3.0	<3.0	<3.0	<3.0	<3.0
	Titanium (Ti)-Total (ug)	1.2	<1.0	<1.0	<1.0	<1.0
	Vanadium (V)-Total (ug)	<3.0	<3.0	<3.0	<3.0	<3.0
	Zinc (Zn)-Total (ug)	<2.0 ^{DLB}	<1.0 ^{DLB}	<1.5 ^{DLB}	<0.50	<0.50

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206097-90 OTHER 22-AUG-12 SWIPE-6	L1206097-92 OTHER 24-AUG-12 SWIPE-7	L1206097-94 OTHER 23-AUG-12 SWIPE-8		
Grouping	Analyte						
SWAB							
Metals	Aluminum (Al)-Total (ug)	<20	<20	<20			
	Antimony (Sb)-Total (ug)	<20	<20	<20			
	Arsenic (As)-Total (ug)	<20	<20	<20			
	Barium (Ba)-Total (ug)	<1.0	<1.0	<1.0			
	Beryllium (Be)-Total (ug)	<0.50	<0.50	<0.50			
	Bismuth (Bi)-Total (ug)	<20	<20	<20			
	Cadmium (Cd)-Total (ug)	<1.0	<1.0	<1.0			
	Calcium (Ca)-Total (ug)	18.9	32.3	53.5			
	Chromium (Cr)-Total (ug)	7.7	2.3	3.7			
	Cobalt (Co)-Total (ug)	<1.0	<1.0	<1.0			
	Copper (Cu)-Total (ug)	<1.0	<1.0	<1.0			
	Iron (Fe)-Total (ug)	<40 ^{DLB}	<15 ^{DLB}	<20 ^{DLB}			
	Lead (Pb)-Total (ug)	<5.0	<5.0	<5.0			
	Lithium (Li)-Total (ug)	<1.0	<1.0	<1.0			
	Magnesium (Mg)-Total (ug)	<10	<15 ^{DLB}	14			
	Manganese (Mn)-Total (ug)	1.21	<0.50	<0.50			
	Molybdenum (Mo)-Total (ug)	<3.0	<3.0	<3.0			
	Nickel (Ni)-Total (ug)	<5.0	<5.0	<5.0			
	Phosphorus (P)-Total (ug)	<30	<30	<30			
	Potassium (K)-Total (ug)	<200	<200	<200			
	Selenium (Se)-Total (ug)	<20	<20	<20			
	Silver (Ag)-Total (ug)	<1.0	<1.0	<1.0			
	Sodium (Na)-Total (ug)	<200	<200	<200			
	Strontium (Sr)-Total (ug)	<0.50	<0.50	<0.50			
	Thallium (Tl)-Total (ug)	<20	<20	<20			
	Tin (Sn)-Total (ug)	<3.0	<3.0	<3.0			
	Titanium (Ti)-Total (ug)	<1.0	<1.0	<1.0			
	Vanadium (V)-Total (ug)	<3.0	<3.0	<3.0			
	Zinc (Zn)-Total (ug)	<1.0 ^{DLB}	<0.50	<0.50			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Mercury (Hg)	DUP-H	L1206097-61, -62, -63, -64, -65
Duplicate	Copper (Cu)	DUP-H	L1206097-61, -62, -63, -64, -65
Duplicate	Barium (Ba)	DUP-H	L1206097-67, -68, -69, -70, -71, -73, -74, -75, -76, -77
Method Blank	Titanium (Ti)	MB-LOR	L1206097-61, -62, -63, -64, -65
Method Blank	Calcium (Ca)-Total	MB-LOR	L1206097-80, -82, -84, -86, -88, -90, -92, -94
Method Blank	Iron (Fe)-Total	MB-LOR	L1206097-80, -82, -84, -86, -88, -90, -92, -94
Method Blank	Magnesium (Mg)-Total	MB-LOR	L1206097-80, -82, -84, -86, -88, -90, -92, -94
Method Blank	Zinc (Zn)-Total	MB-LOR	L1206097-80, -82, -84, -86, -88, -90, -92, -94

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLB	Detection limit was raised due to detection of analyte at comparable level in Method Blank.
DLHM	Detection Limit Adjusted: Sample has High Moisture Content
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
MB-LOR	Method Blank exceeds ALS DQO. LORs adjusted for samples with positive hits below 5 times blank level. Please contact ALS if re-analysis is required.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-TOT-ORG-LECO-SK	Soil	Organic Carbon by combustion method	SSSA (1996) p. 973
Total Organic Carbon (C-TOT-ORG-LECO-SK, C-TOT-ORG-SK)			

Total C and inorganic C are determined on separate samples. The total C is determined by combustion and thermal conductivity detection, while inorganic C is determined by weight loss after addition of hydrochloric acid. Organic C is calculated by the difference between these two determinations.

Reference for Total C:

Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 961-1010 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

Reference for Inorganic C:

Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

EPH-TUMB-FID-VA	Soil	EPH in Solids by Tumbler and GCFID	BCMELP CSR

Extractable Hydrocarbons in Sediment/Soil

This analysis is carried out in accordance with the British Columbia Ministry of Environment, Lands and Parks (BCMELP) Analytical Method for Contaminated Sites "Extractable Petroleum Hydrocarbons in Solids by GC/FID, Version 2.1 July 1999". The procedure, based on EPA 3570, uses a rotary extraction technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene or kept in hexane/acetone and analyzed by capillary column gas chromatography with flame ionization detection (GC/FID). EPH results include Polycyclic Aromatic Hydrocarbons (PAH) and are therefore not equivalent to Light and Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH).

Accuracy target values for Reference Materials used in this method are derived from averages of long-term method performance, as certified values do not exist for the reported parameters.

HG-200.2-CVAF-VA	Soil	Mercury in Soil by CVAFS	EPA 200.2/245.7

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve (this sieve step is omitted for international soil samples), and a representative subsample of the dry material is weighed. The sample is then digested at 95 degrees Celsius for 2 hours by block digester using concentrated nitric and hydrochloric acids. Instrumental analysis is by atomic fluorescence spectrophotometry (EPA Method 245.7).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

LEPH/HEPH-CALC-VA	Soil	LEPHs and HEPHs	BC MOE LABORATORY MANUAL (2005)

Light and Heavy Extractable Petroleum Hydrocarbons in Solids. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated

by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, and Pyrene

Reference Information

are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).

MET-200.2-CCMS-VA Soil Metals in Soil by CRC ICPMS EPA 200.2/6020A

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve (this sieve step is omitted for international soil samples), and a representative subsample of the dry material is weighed. The sample is then digested at 95 degrees Celsius for 2 hours by block digester using concentrated nitric and hydrochloric acids. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

MET-UG-ICP-VA Swab Metals in Swab by ICPOES NIOSH 7303/EPA 6010B

This analysis is carried out using procedures adapted from Method 7303 in the NIOSH Manual of Analytical Methods (NMAM). The procedure involves a hot block digestion of the swab material, using a combination of nitric acid and hydrochloric acid. Instrumental analysis of the swab extract is by inductively coupled plasma - optical emission spectrophotometry (EPA 6010B).

MOISTURE-VA Soil Moisture content ASTM D2974-00 Method A

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

OGG-TUMB-SG-VA Soil CWS MOG with Silica Gel CCME PETROLEUM HYDROCARBONS-
GRAVIMETRIC

This analysis is carried out in accordance with the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method, Canadian Council of Ministers of the Environment, December 2000." A subsample of the sediment/soil is extracted with 1:1 hexane:acetone using a rotary extraction apparatus. The extract undergoes a silica-gel clean-up to remove polar compounds, and is analyzed gravimetrically. Mineral Oil and Grease is equivalent to fraction F4G of the Canada-wide Standard for Petroleum Hydrocarbons.

Accuracy target values for Reference Materials used in this method are derived from averages of long-term method performance, as certified values do not exist for the reported parameters.

PAH-TMB-H/A-MS-VA Soil PAH - Rotary Extraction (Hexane/Acetone) EPA 3570/8270

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3545 & 8270, published by the United States Environmental Protection Agency (EPA). The procedure uses a mechanical shaking technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene. The final extract is analysed by capillary column gas chromatography with mass spectrometric detection (GC/MS). Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation. Because the two isomers cannot be readily chromatographically separated, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.

PH-1:2-VA Soil pH in Soil (1:2 Soil:Water Extraction) BC WLAP METHOD: PH, ELECTROMETRIC, SOIL

This analysis is carried out in accordance with procedures described in the pH, Electrometric in Soil and Sediment method - Section B Physical/Inorganic and Misc. Constituents, BC Environmental Laboratory Manual 2007. The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.

PSA-PIPET+GRAVEL-SK Soil Particle size - Sieve and Pipette SSIR-51 METHOD 3.2.1

Particle size distribution is determined by a combination of techniques. Dry sieving is performed for coarse particles, wet sieving for sand particles and the pipette sedimentation method for clay particles.

Reference:

Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1	2	3	4	5

Reference Information

6 7 8 9

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

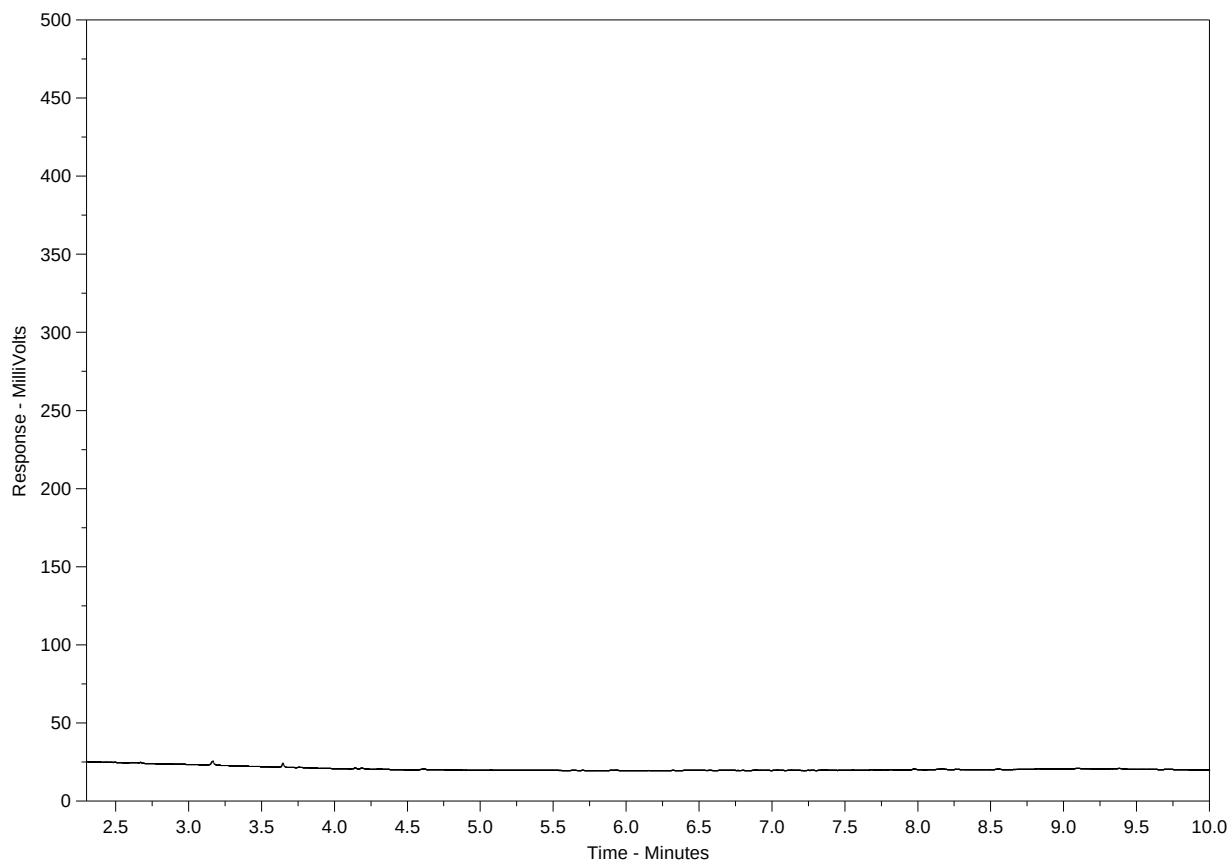
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-6
Client Sample ID: TPE-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

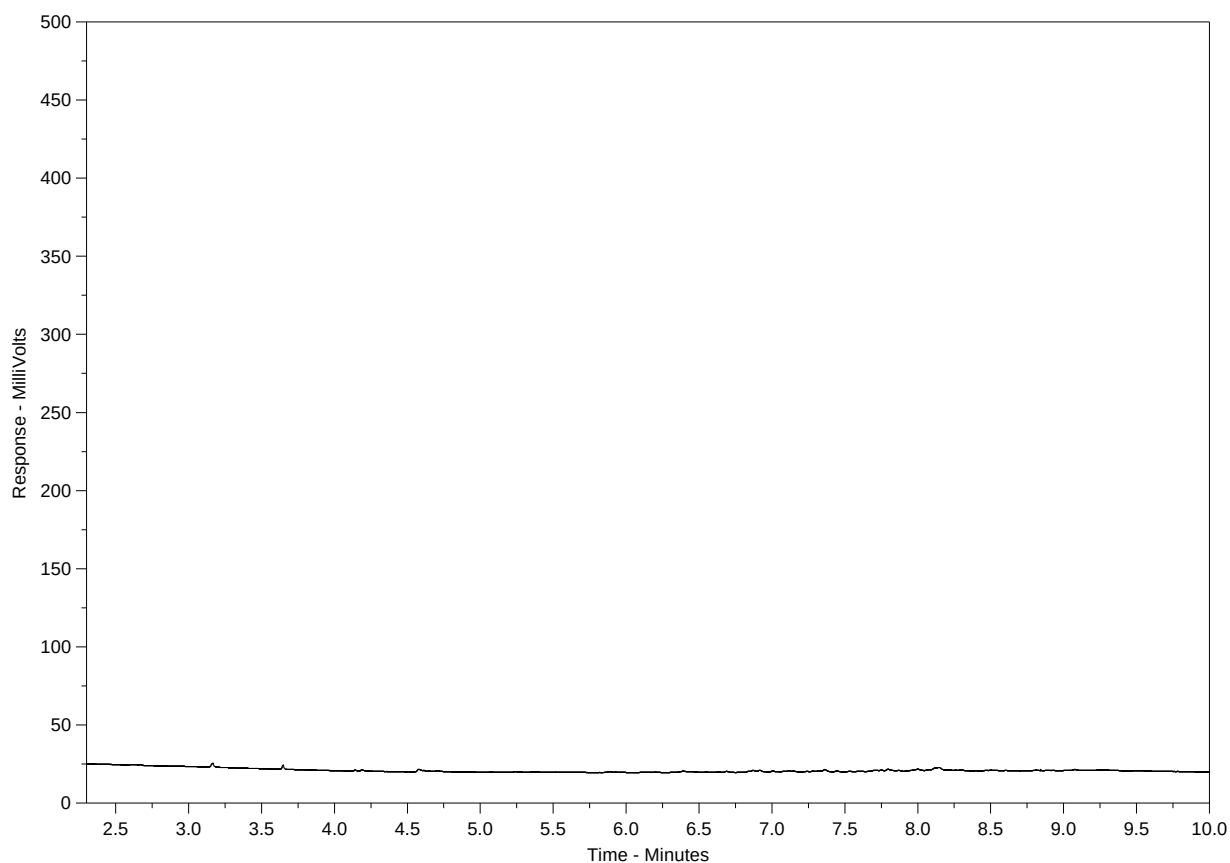
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-12
Client Sample ID: WAL-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

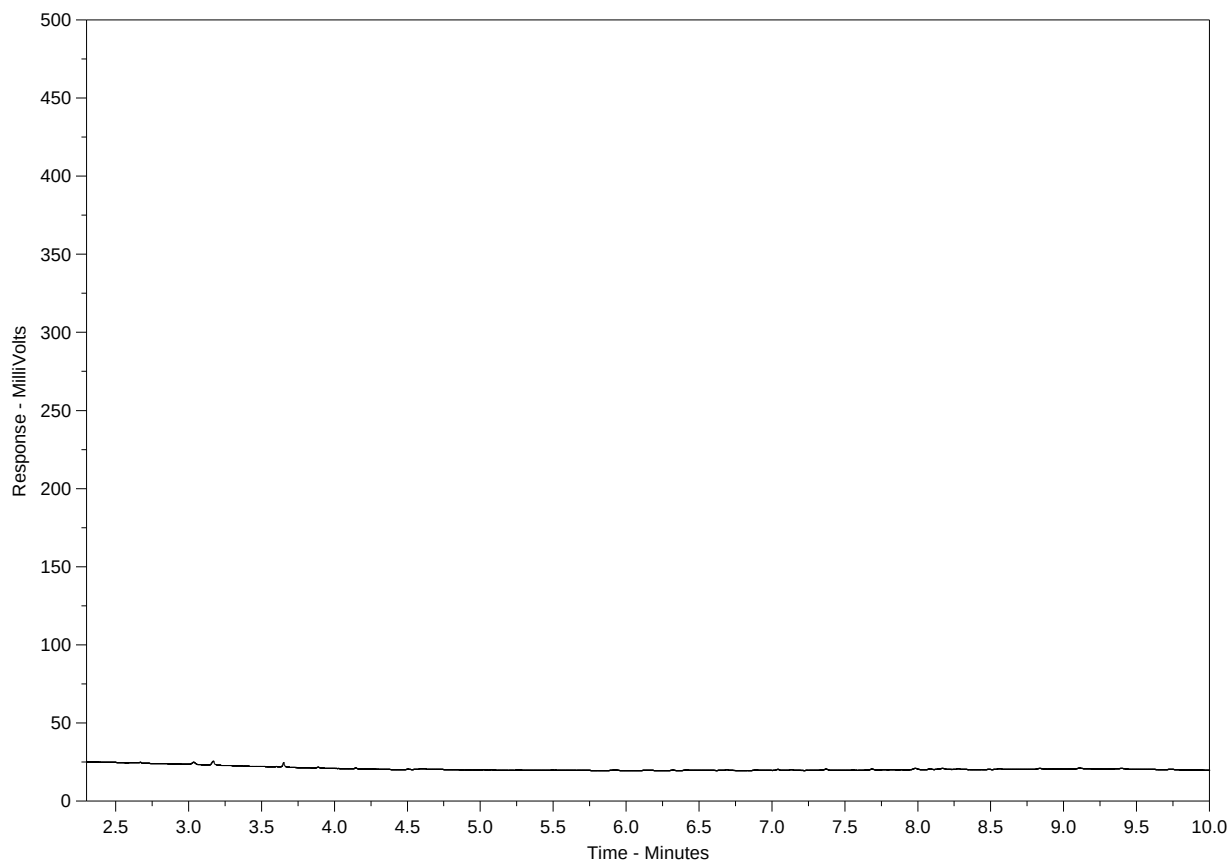
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-18
Client Sample ID: TE-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

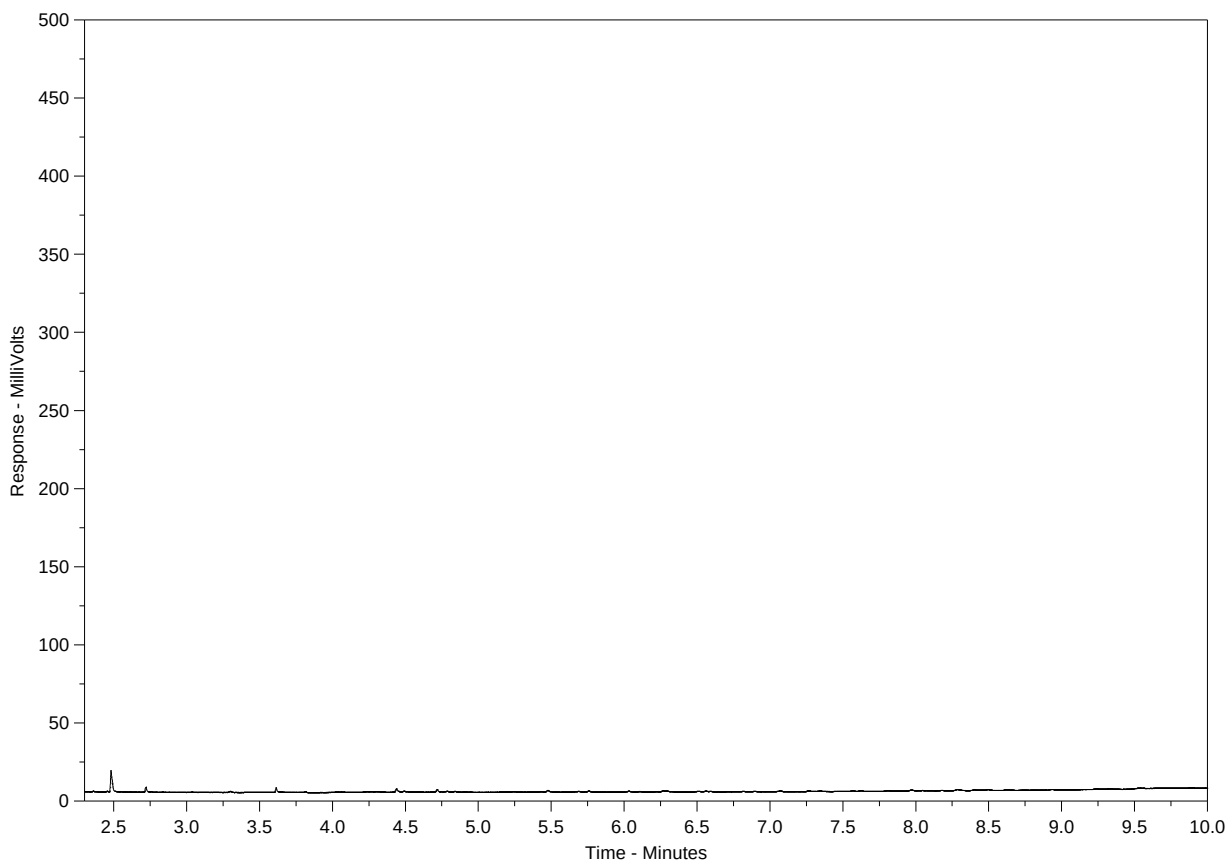
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-24
Client Sample ID: TEFF-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

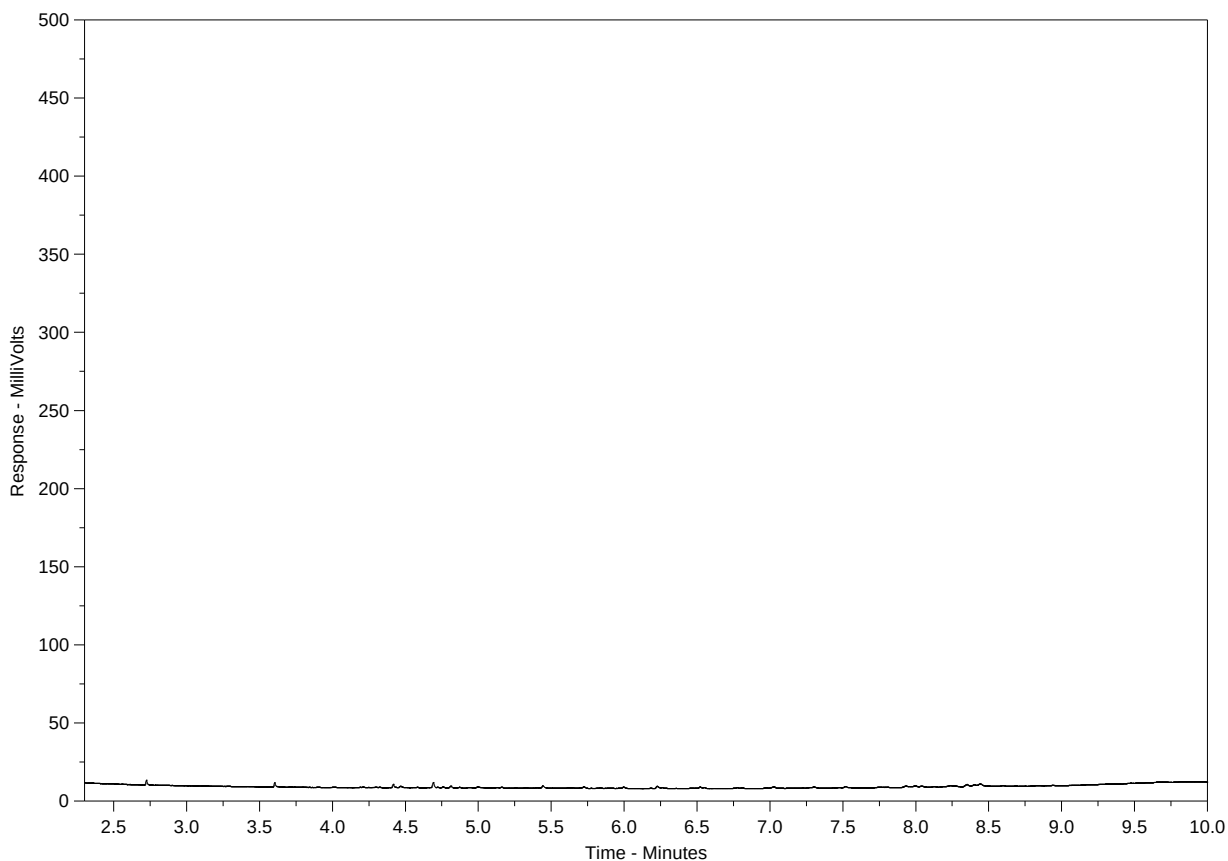
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-30
Client Sample ID: SP-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

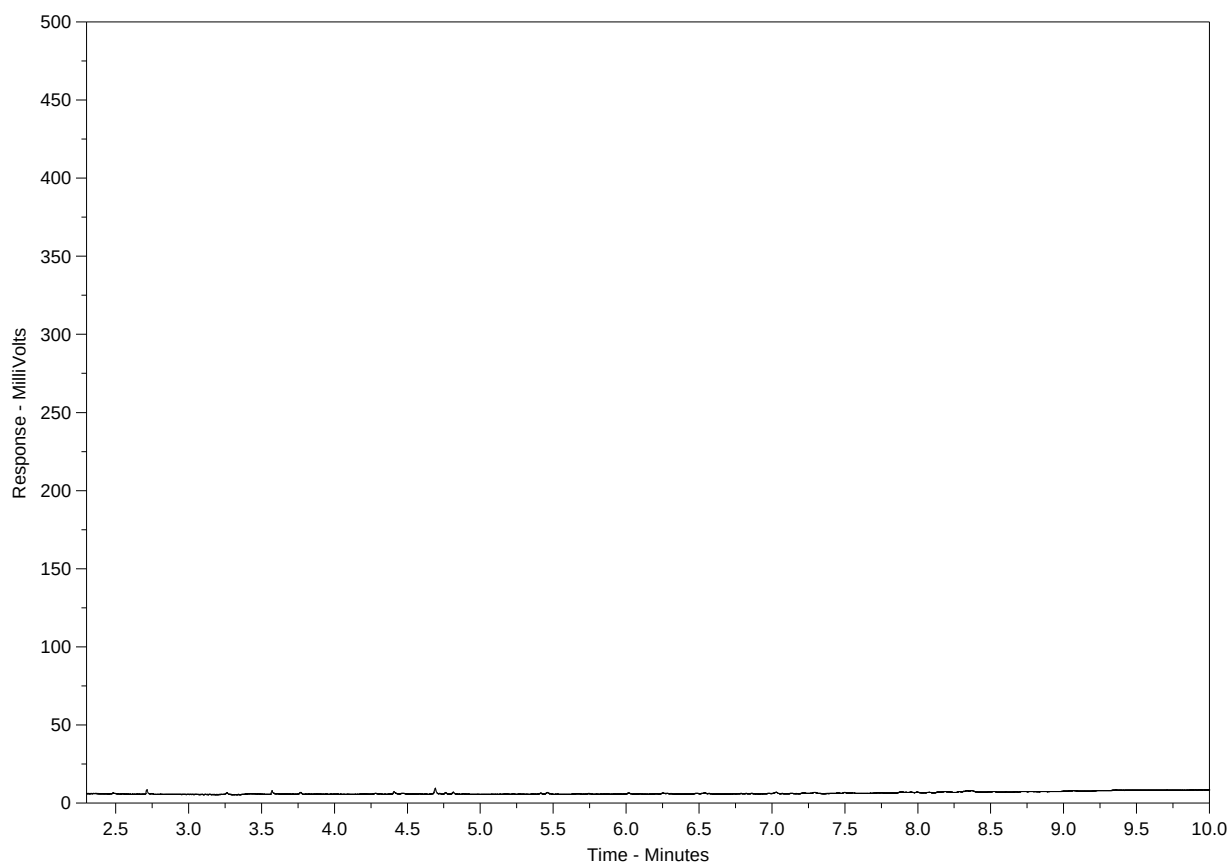
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-36
Client Sample ID: INUG-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

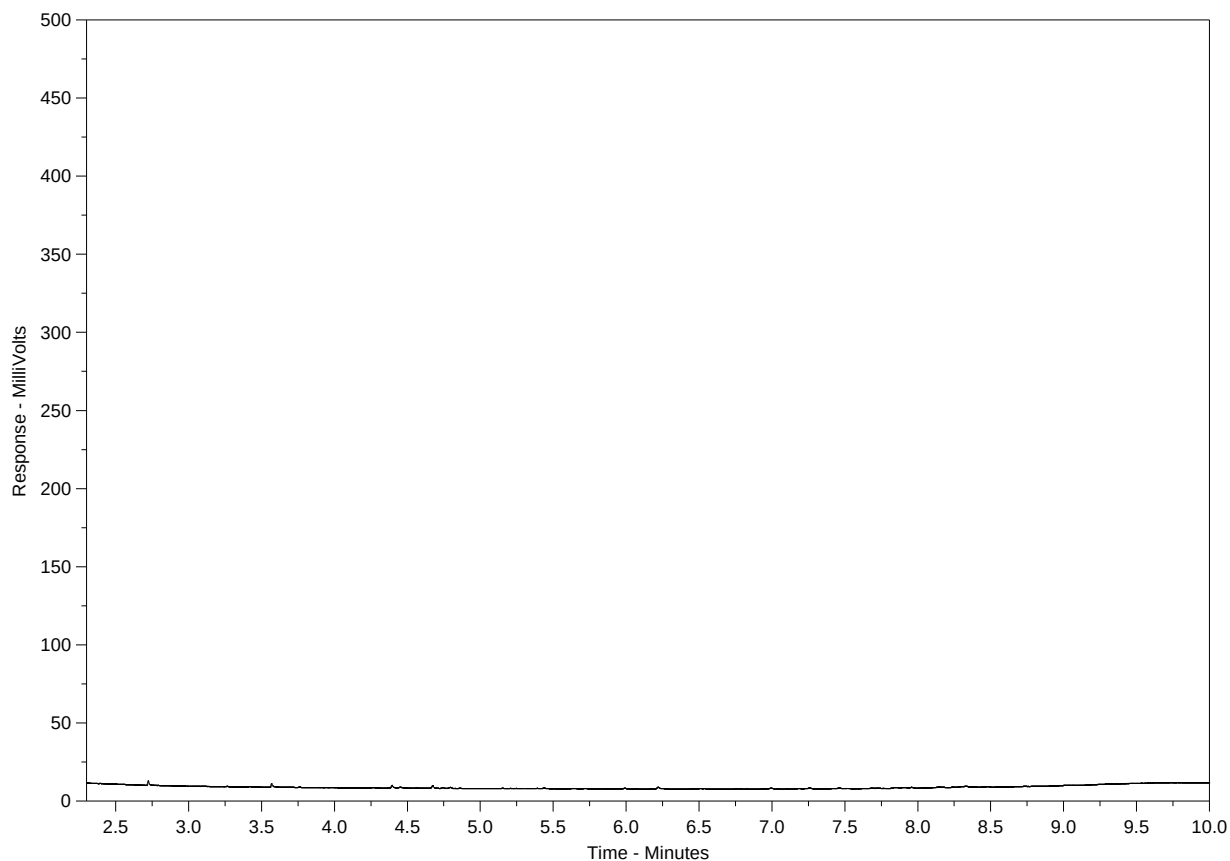
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-42
Client Sample ID: PDL-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

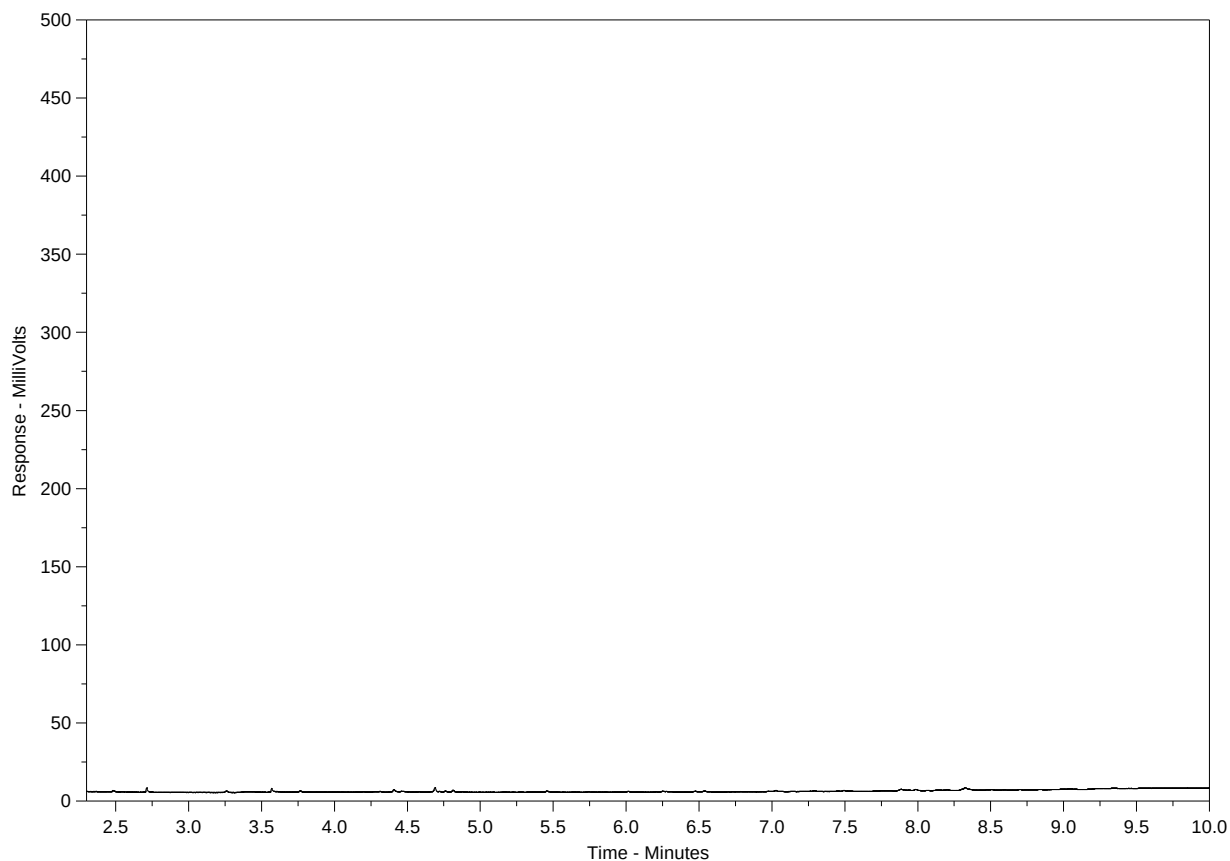
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-48
Client Sample ID: BBD-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

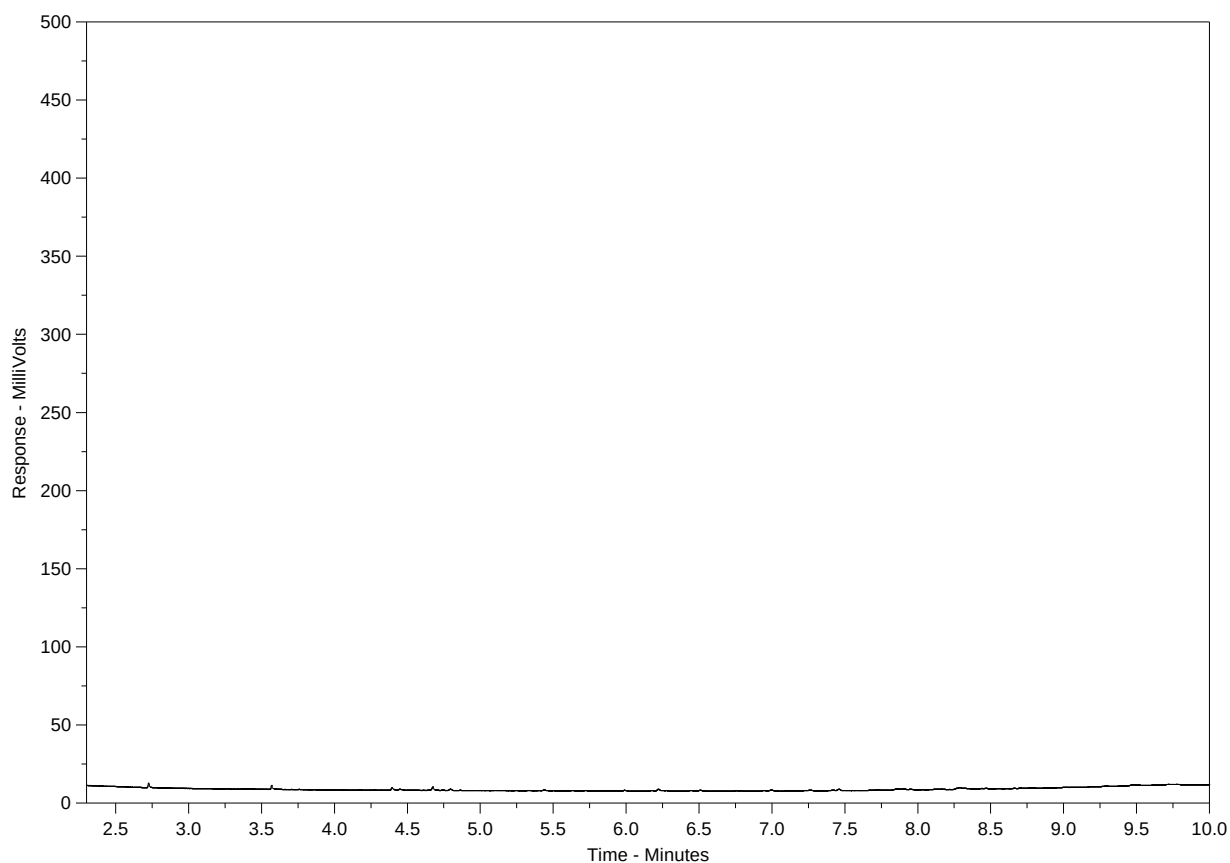
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-54
Client Sample ID: BPJ-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

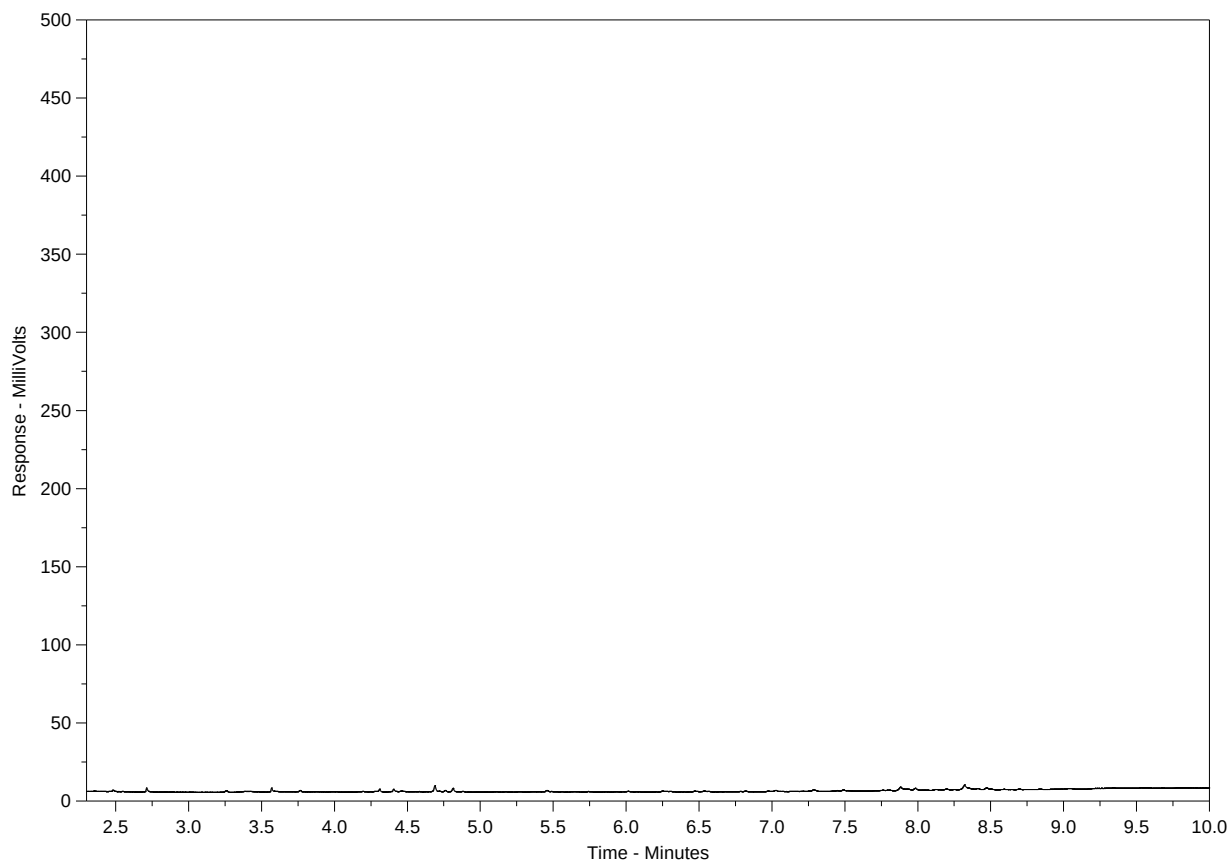
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-60
Client Sample ID: BAP-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

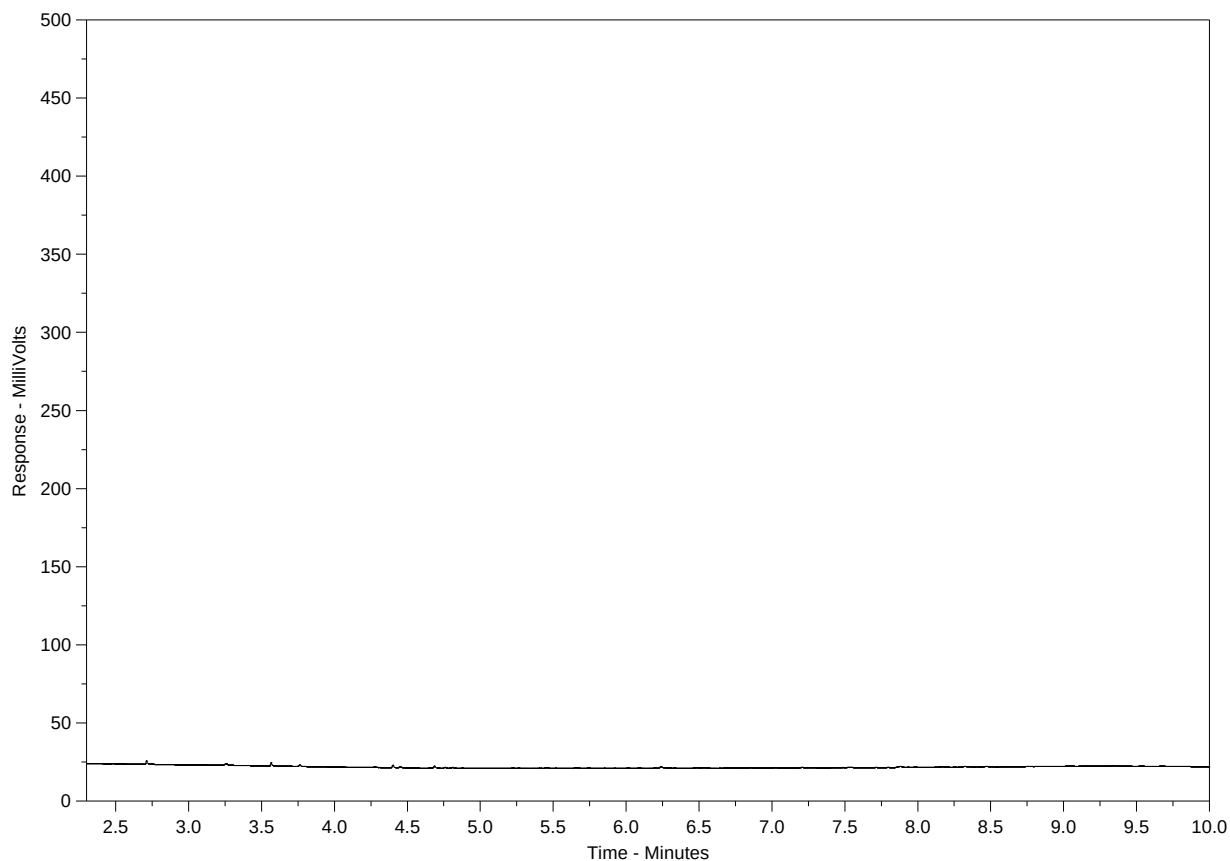
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-66
Client Sample ID: BES-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

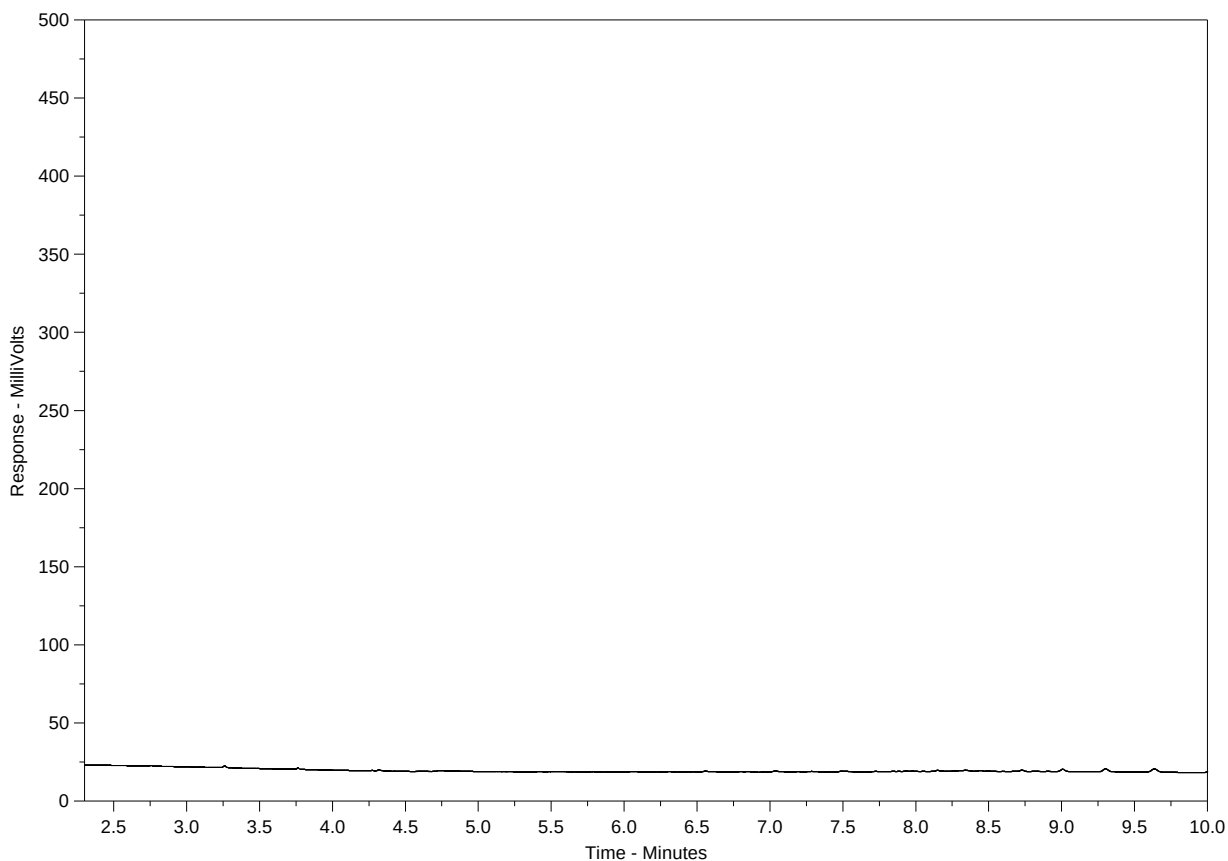
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-72
Client Sample ID: TPS-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

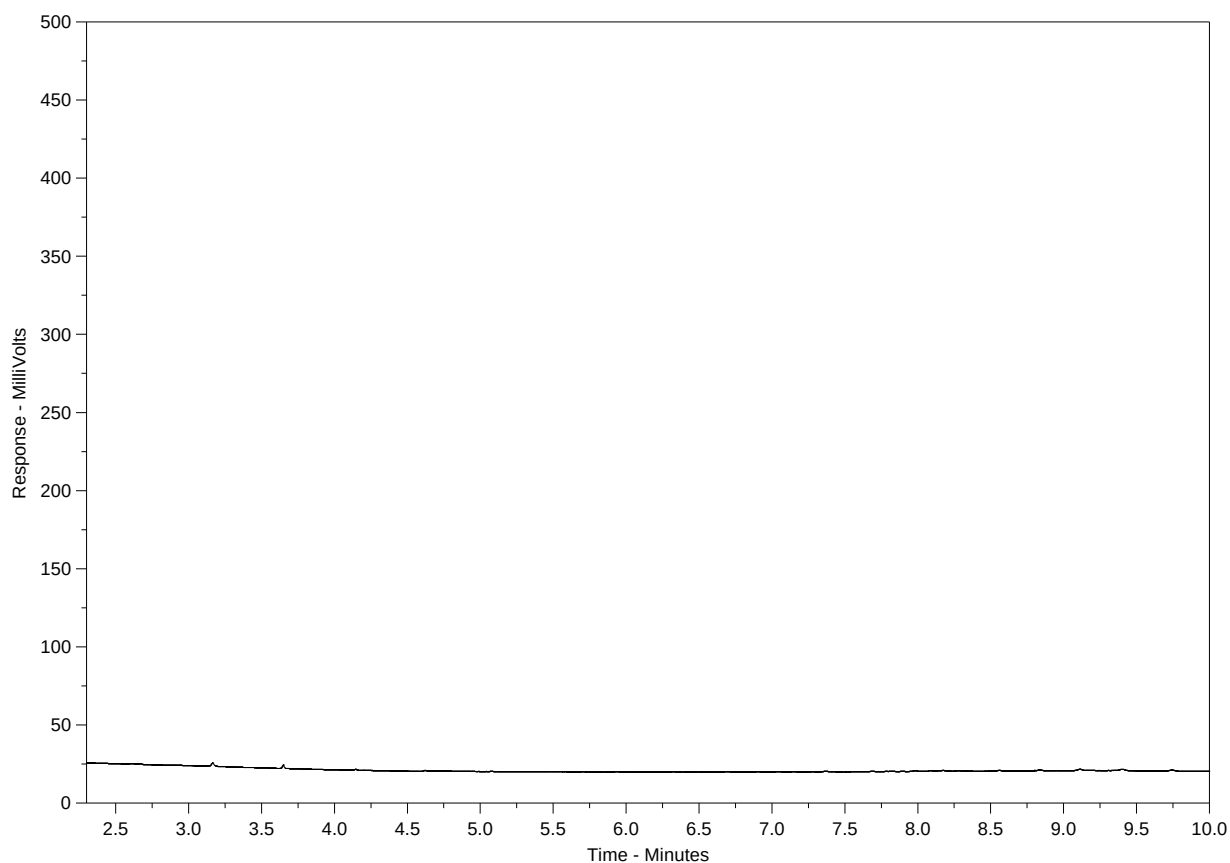
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report



ALS Sample ID: L1206097-78
Client Sample ID: TPN-COMP



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline → ← Diesel / Jet Fuels → ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.



Chain of Custody / Analytical Request Form
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Report To			Report Format / Distribution			Service Requested (Rush for routine analysis subject to availability)													
Company: Azimuth Consulting Group			☐ Standard ☐ Other			☒ Regular (Standard Turnaround Times - Business Days)													
Contact: Maggie McConnell / Gary Mann			☒ PDF ☒ Excel ☐ Digital ☐ Fax			☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT													
Address: #218 - 2902 West Broadway			Email 1: mmccconnell@azimuthgroup.ca			☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT													
Vancouver, BC			Email 2: gmann@azimuthgroup.ca			☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT													
Phone: 604-730-1220 Fax: 604-739-8511			Email 3:			Analysis Request:													
Invoice To Same as Report? ☒ Yes ☐ No			Client / Project Information			Please indicate below Filtered, Preserved or both (F, P, F/P)													
Hardcopy of Invoice with Report? ☐ Yes ☒ No			Job #: Meadowbank CREMP 2012																
Company:			PO / AFE:																
Contact:			LSD:																
Address:			Quote #: Q33276																
Phone:			Fax:																
Lab Work Order # (lab use only)			ALS Contact: Brent Mack			Sampler: MM, MF													
L1206097																			
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	MET-CCME-FULL - VA	MOISTURE & pH- VA	C-TOT-ORG-LECO - SK	PSA-PIPET+GRAVEL - SK	LEPH/HEPH/PAH-LOW - VA	OGG-TUMB-SG - VA									Number of Containers
	TPE-1	16-Aug-12		Sediment	X	X	X	X											2
	TPE-2	16-Aug-12		Sediment	X	X	X	X											2
	TPE-3	16-Aug-12		Sediment	X	X	X	X											2
	TPE-4	16-Aug-12		Sediment	X	X	X	X											2
	TPE-5	16-Aug-12		Sediment	X	X	X	X											2
	TPE-COMP	16-Aug-12		Sediment					X	X									1
	WAL-1	17-Aug-12		Sediment	X	X	X	X											2
	WAL-2	17-Aug-12		Sediment	X	X	X	X											2
	WAL-3	17-Aug-12		Sediment	X	X	X	X											2
	WAL-4	17-Aug-12		Sediment	X	X	X	X											2
	WAL-5	17-Aug-12		Sediment	X	X	X	X											2
	WAL-COMP	17-Aug-12		Sediment					X	X									1
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																			
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SHIPMENT RELEASE (client use)					SHIPMENT RECEPTION (lab use only)					SHIPMENT VERIFICATION (lab use only)									
Released by: Maggie McConnell	Date (dd-mm-yy) 30-Aug-12	Time (hh-mm)	Received by: BP	Date: Sept. 7	Time: 11:30	Temperature: 20.6 °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF									



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Fax:																				
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Sample #	Sample Identification (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	MET-CCME-FULL - VA	MOISTURE & pH - VA	C-TOT-ORG-LECO - SK	PSA-PIPET+GRAVEL - SK	LEPH/HEPH/PAH-LOW - VA	OGG-TUMB-SG - VA										Number of Containers
	TE-1	19-Aug-12		Sediment	X	X	X	X												2
	TE-2	19-Aug-12		Sediment	X	X	X	X												2
	TE-3	19-Aug-12		Sediment	X	X	X	X												2
	TE-4	19-Aug-12		Sediment	X	X	X	X												2
	TE-5	19-Aug-12		Sediment	X	X	X	X												2
	TE-COMP	19-Aug-12		Sediment					X	X										1
	TEFF-1	18-Aug-12		Sediment	X	X	X	X												2
	TEFF-2	18-Aug-12		Sediment	X	X	X	X												2
	TEFF-3	18-Aug-12		Sediment	X	X	X	X												2
	TEFF-4	18-Aug-12		Sediment	X	X	X	X												2
	TEFF-5	18-Aug-12		Sediment	X	X	X	X												2
	TEFF-COMP	18-Aug-12		Sediment					X	X										1
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Lab Work Order # (lab use only)			ALS Contact: Brent Mack			Sampler: MM, MF													Number of Containers
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	MET-CCME+FULL - VA	MOISTURE & pH- VA	C-TOT-ORG-LECO - SK	PSA-PIPET+GRAVEL - SK	LEPH/HEPH/PAH-LOW - VA	OGG-TUMB-SG - VA									
	SP-1	20-Aug-12		Sediment	X	X	X	X										2	
	SP-2	20-Aug-12		Sediment	X	X	X	X										2	
	SP-3	20-Aug-12		Sediment	X	X	X	X										2	
	SP-4	20-Aug-12		Sediment	X	X	X	X										2	
	SP-5	20-Aug-12		Sediment	X	X	X	X										2	
	SP-COMP	20-Aug-12		Sediment					X	X								1	
	INUG-1	21-Aug-12		Sediment	X	X	X	X										2	
	INUG-2	21-Aug-12		Sediment	X	X	X	X										2	
	INUG-3	21-Aug-12		Sediment	X	X	X	X										2	
	INUG-4	21-Aug-12		Sediment	X	X	X	X										2	
	INUG-5	21-Aug-12		Sediment	X	X	X	X										2	
	INUG-COMP	21-Aug-12		Sediment					X	X								1	
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Lab Work Order # (lab use only)		ALS Contact: Brent Mack		Sampler: MM, MF																	
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	PDL-1	22-Aug-12		Sediment	X	X	X	X													2
	PDL-2	22-Aug-12		Sediment	X	X	X	X													2
	PDL-3	22-Aug-12		Sediment	X	X	X	X													2
	PDL-4	22-Aug-12		Sediment	X	X	X	X													2
	PDL-5	22-Aug-12		Sediment	X	X	X	X													2
	PDL-COMP	22-Aug-12		Sediment					X	X											1
	BBD-1	23-Aug-12		Sediment	X	X	X	X													2
	BBD-2	23-Aug-12		Sediment	X	X	X	X													2
	BBD-3	23-Aug-12		Sediment	X	X	X	X													2
	BBD-4	23-Aug-12		Sediment	X	X	X	X													2
	BBD-5	23-Aug-12		Sediment	X	X	X	X													2
	BBD-COMP	23-Aug-12		Sediment					X	X											1
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Phone:																	
Fax:																	
Lab Work Order # (lab use only)			ALS Contact: Brent Mack			Sampler: MM, MF									Number of Containers		
Sample #	Sample Identification (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	MET-CCME-FULL - VA	MOISTURE & pH - VA	C-TOT-ORG-LECO - SK	PSA-PIPET+GRAVEL - SK	LEPH/HEPH/PAH-LOW - VA	OGG-TUMB-SG - VA						
	BPJ-1		24-Aug-12		Sediment	X	X	X	X								2
	BPJ-2		24-Aug-12		Sediment	X	X	X	X								2
	BPJ-3		24-Aug-12		Sediment	X	X	X	X								2
	BPJ-4		24-Aug-12		Sediment	X	X	X	X								2
	BPJ-5		24-Aug-12		Sediment	X	X	X	X								2
	BPJ-COMP		24-Aug-12		Sediment					X	X						1
	BAP-1		24-Aug-12		Sediment	X	X	X	X								2
	BAP-2		24-Aug-12		Sediment	X	X	X	X								2
	BAP-3		24-Aug-12		Sediment	X	X	X	X								2
	BAP-4		24-Aug-12		Sediment	X	X	X	X								2
	BAP-5		24-Aug-12		Sediment	X	X	X	X								2
	BAP-COMP		24-Aug-12		Sediment					X	X						1
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																	
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Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	MET-CCME-FULL - VA	MOISTURE & pH - VA	C-TOT-ORG-LECO - SK	PSA-PIPET+GRAVEL - SK	LEPH/HEPH/PAH-LOW - VA	OGG-TUMB-SG - VA							
	BES-1	25-Aug-12		Sediment	X	X	X	X									2
	BES-2	25-Aug-12		Sediment	X	X	X	X									2
	BES-3	25-Aug-12		Sediment	X	X	X	X									2
	BES-4	25-Aug-12		Sediment	X	X	X	X									2
	BES-5	25-Aug-12		Sediment	X	X	X	X									2
	BES-COMP	25-Aug-12		Sediment					X	X							1
	TPS-1	27-Aug-12		Sediment	X	X	X	X									2
	TPS-2	27-Aug-12		Sediment	X	X	X	X									2
	TPS-3	27-Aug-12		Sediment	X	X	X	X									2
	TPS-4	27-Aug-12		Sediment	X	X	X	X									2
	TPS-5	27-Aug-12		Sediment	X	X	X	X									2
	TPS-COMP	27-Aug-12		Sediment					X	X							1
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[illegible]



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Address:		Quote #: Q33276																					
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Sample #	Sample Identification (This description will appear on the report)					Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	MET-COME+FULL - VA	MOISTURE & pH - VA	C-TOT-ORG-LECO - SK	PSA-PIPET+GRAVEL - SK	LEPH/HIPH/PAH-Low - VA	OGG-TUMB-SG - VA									Number of Containers
DUP-1						17-Aug-12		Sediment	X	X	X	X											2
SWIPE-1						17-Aug-12		Other	X														1
DUP-2						19-Aug-12		Sediment	X	X	X	X											2
SWIPE-2						19-Aug-12		Other	X														1
DUP-3						18-Aug-12		Sediment	X	X	X	X											2
SWIPE-3						18-Aug-12		Other	X														1
DUP-4						21-Aug-12		Sediment	X	X	X	X											2
SWIPE-4						21-Aug-12		Other	X														1
DUP-5						20-Aug-12		Sediment	X	X	X	X											2
SWIPE-5						20-Aug-12		Other	X														1
DUP-6						22-Aug-12		Sediment	X	X	X	X											2
SWIPE-6						22-Aug-12		Other	X														1
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																							
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																							
By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.																							
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																							
SHIPMENT RELEASE (client use)						SHIPMENT RECEPTION (lab use only)						SHIPMENT VERIFICATION (lab use only)											
Released by: Maggie McConnell	Date (dd-mmm-yy) 30-Aug-12	Time (hh-mm)	Received by: 	Date: Sept. 7	Time: 11:30	Temperature: 20.6 °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF													



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COC #

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[illegible]



AZIMUTH CONSULTING GROUP INC.
ATTN: Maggie McConnell
218 - 2902 West Broadway
Vancouver BC V6K 2G8

Date Received: 07-SEP-12
Report Date: 20-SEP-12 16:16 (MT)
Version: FINAL

Client Phone: 604-730-1220

Certificate of Analysis

Lab Work Order #: L1206118
Project P.O. #: NOT SUBMITTED
Job Reference: MEADOWBANK CREMP 2012
C of C Numbers: 1, 2, 3, 4, 5, 6, 7
Legal Site Desc:

Brent Mack
Account Manager

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ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

20-SEP-12 16:16 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID		L1206118-1 SEDIMENT 16-AUG-12 TPE-SC-1	L1206118-2 SEDIMENT 26-AUG-12 TPE-SC-3	L1206118-3 SEDIMENT 26-AUG-12 TPE-SC-5	L1206118-4 SEDIMENT 26-AUG-12 TPE-SC-7	L1206118-5 SEDIMENT 26-AUG-12 TPE-SC-9
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	5.90	5.76	5.66	5.90	5.85
Organic / Inorganic Carbon	Total Organic Carbon (%)	3.65	3.25	2.65	3.36	3.05
Metals	Aluminum (Al) (mg/kg)	23900	25600	29200	21400	22500
	Antimony (Sb) (mg/kg)	0.23	0.22	0.24	0.20	0.21
	Arsenic (As) (mg/kg)	17.4	21.6	25.5	16.4	18.0
	Barium (Ba) (mg/kg)	116	126	142	103	113
	Beryllium (Be) (mg/kg)	1.66	1.96	2.18	1.58	1.76
	Bismuth (Bi) (mg/kg)	2.33	2.72	3.09	2.28	2.43
	Cadmium (Cd) (mg/kg)	0.210	0.139	0.159	0.104	0.212
	Calcium (Ca) (mg/kg)	2240	1910	1880	1790	1780
	Chromium (Cr) (mg/kg)	116	115	111	95.9	86.1
	Cobalt (Co) (mg/kg)	15.5	18.2	20.7	13.4	19.0
	Copper (Cu) (mg/kg)	49.4	60.8	71.1	53.2	55.6
	Iron (Fe) (mg/kg)	41100	52100	65700	42800	52000
	Lead (Pb) (mg/kg)	20.1	22.1	24.1	18.8	19.2
	Lithium (Li) (mg/kg)	43.4	53.6	60.6	45.8	43.8
	Magnesium (Mg) (mg/kg)	9870	11200	11600	9410	8950
	Manganese (Mn) (mg/kg)	1830	2170	2700	892	3380
	Mercury (Hg) (mg/kg)	0.0219	0.0182	0.0169	0.0195	0.0199
	Molybdenum (Mo) (mg/kg)	3.70	4.49	5.73	3.81	4.90
	Nickel (Ni) (mg/kg)	70.5	68.4	72.3	56.3	69.1
	Phosphorus (P) (mg/kg)	424	420	422	428	350
	Potassium (K) (mg/kg)	4430	4870	5560	4300	4090
	Selenium (Se) (mg/kg)	0.89	0.44	0.38	0.80	0.74
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)	170	190	170	170	150
	Strontium (Sr) (mg/kg)	19.2	17.6	18.3	15.7	15.6
	Thallium (Tl) (mg/kg)	0.383	0.393	0.464	0.339	0.409
	Tin (Sn) (mg/kg)	3.8	3.0	3.1	4.3	3.9
	Titanium (Ti) (mg/kg)	910	991	1080	951	830
	Uranium (U) (mg/kg)	14.8	19.8	23.4	16.0	17.8
	Vanadium (V) (mg/kg)	40.2	47.2	51.1	40.0	38.9
	Zinc (Zn) (mg/kg)	102	124	130	102	107

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1206118-6	L1206118-7	L1206118-8	L1206118-9	L1206118-10
		Description	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
		Sampled Date	26-AUG-12	17-AUG-12	17-AUG-12	17-AUG-12	17-AUG-12
		Sampled Time					
		Client ID	TPE-SC-DUP	WAL-SC-1	WAL-SC-3	WAL-SC-5	WAL-SC-7
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		5.87	6.53	6.56	6.25	6.46
Organic / Inorganic Carbon	Total Organic Carbon (%)		3.18	12.3	10.1	9.47	9.21
Metals	Aluminum (Al) (mg/kg)		22900	16500	20000	17000	20100
	Antimony (Sb) (mg/kg)		0.21	0.47	0.53	0.37	0.44
	Arsenic (As) (mg/kg)		20.2	38.9	36.7	44.6	38.0
	Barium (Ba) (mg/kg)		113	96.3	119	96.8	117
	Beryllium (Be) (mg/kg)		1.73	1.35	1.52	1.28	1.53
	Bismuth (Bi) (mg/kg)		2.51	1.61	1.98	1.67	2.05
	Cadmium (Cd) (mg/kg)		0.126	0.455	0.532	0.386	0.479
	Calcium (Ca) (mg/kg)		1850	4880	4780	4090	4320
	Chromium (Cr) (mg/kg)		119	48.8	56.4	48.8	57.4
	Cobalt (Co) (mg/kg)		16.7	8.14	9.31	8.83	9.28
	Copper (Cu) (mg/kg)		59.0	243	258	201	257
	Iron (Fe) (mg/kg)		46500	32600	35500	39000	39400
	Lead (Pb) (mg/kg)		20.8	30.4	34.0	29.1	34.4
	Lithium (Li) (mg/kg)		48.4	28.9	31.6	28.8	33.2
	Magnesium (Mg) (mg/kg)		10900	6560	7360	6700	7580
	Manganese (Mn) (mg/kg)		1800	370	310	396	418
	Mercury (Hg) (mg/kg)		0.0178	0.0817	0.0794	0.0761	0.0817
	Molybdenum (Mo) (mg/kg)		3.72	7.51	9.88	8.35	9.29
	Nickel (Ni) (mg/kg)		68.3	49.0	52.6	48.3	53.7
	Phosphorus (P) (mg/kg)		398	908	741	850	729
	Potassium (K) (mg/kg)		4380	3040	3330	2890	3290
	Selenium (Se) (mg/kg)		0.50	0.92	1.03	0.81	0.92
	Silver (Ag) (mg/kg)		<0.10	0.58	0.70	0.42	0.59
	Sodium (Na) (mg/kg)		140	230	230	210	200
	Strontium (Sr) (mg/kg)		15.5	30.3	28.2	26.3	28.0
	Thallium (Tl) (mg/kg)		0.352	0.279	0.315	0.274	0.313
	Tin (Sn) (mg/kg)		3.6	7.8	7.5	4.5	11.0
	Titanium (Ti) (mg/kg)		843	519	611	531	525
	Uranium (U) (mg/kg)		18.0	13.2	16.5	13.2	15.6
	Vanadium (V) (mg/kg)		45.1	26.1	30.3	27.7	31.0
	Zinc (Zn) (mg/kg)		115	130	142	118	143

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206118-11 SEDIMENT 17-AUG-12 WAL-SC-9	L1206118-12 SEDIMENT 17-AUG-12 WAL-SC-DUP	L1206118-13 SEDIMENT 18-AUG-12 TE-SC-1	L1206118-14 SEDIMENT 19-AUG-12 TE-SC-3	L1206118-15 SEDIMENT 19-AUG-12 TE-SC-5
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		6.48	6.22	5.07	5.54	5.50
Organic / Inorganic Carbon	Total Organic Carbon (%)		9.05	9.91	1.53	1.00	2.23
Metals	Aluminum (Al) (mg/kg)		21500	20600	12300	16500	20200
	Antimony (Sb) (mg/kg)		0.43	0.45	0.11	0.13	0.14
	Arsenic (As) (mg/kg)		42.5	59.2	6.91	18.8	10.5
	Barium (Ba) (mg/kg)		125	116	56.1	80.7	108
	Beryllium (Be) (mg/kg)		1.67	1.66	1.10	1.74	1.64
	Bismuth (Bi) (mg/kg)		2.20	2.16	1.23	1.62	1.95
	Cadmium (Cd) (mg/kg)		0.518	0.449	0.053	0.060	0.148
	Calcium (Ca) (mg/kg)		4000	4120	1350	1540	1780
	Chromium (Cr) (mg/kg)		60.8	59.8	33.3	42.4	52.2
	Cobalt (Co) (mg/kg)		9.95	10.1	5.83	7.55	12.0
	Copper (Cu) (mg/kg)		247	267	34.4	46.2	52.0
	Iron (Fe) (mg/kg)		42900	50100	25000	49500	45000
	Lead (Pb) (mg/kg)		36.3	36.9	12.1	16.2	18.6
	Lithium (Li) (mg/kg)		34.2	30.9	26.9	33.5	42.3
	Magnesium (Mg) (mg/kg)		7740	7380	5350	6610	7810
	Manganese (Mn) (mg/kg)		416	476	269	510	1180
	Mercury (Hg) (mg/kg)		0.0764	0.100	0.0241	0.0199	0.0403
	Molybdenum (Mo) (mg/kg)		11.5	12.6	1.81	4.28	5.75
	Nickel (Ni) (mg/kg)		56.3	56.5	22.0	26.4	40.0
	Phosphorus (P) (mg/kg)		684	937	690	1240	494
	Potassium (K) (mg/kg)		3390	3340	2460	3210	4130
	Selenium (Se) (mg/kg)		1.01	1.02	0.36	0.24	0.52
	Silver (Ag) (mg/kg)		0.68	0.60	0.10	<0.10	0.12
	Sodium (Na) (mg/kg)		190	200	110	120	170
	Strontium (Sr) (mg/kg)		26.7	26.6	10.6	12.3	16.0
	Thallium (Tl) (mg/kg)		0.324	0.319	0.196	0.249	0.346
	Tin (Sn) (mg/kg)		6.8	6.7	<2.0	<2.0	2.1
	Titanium (Ti) (mg/kg)		498	503	609	786	913
	Uranium (U) (mg/kg)		17.1	17.0	11.4	19.1	18.5
	Vanadium (V) (mg/kg)		33.2	32.7	21.8	29.0	33.5
	Zinc (Zn) (mg/kg)		139	150	62.1	72.6	95.2

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

20-SEP-12 16:16 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID		L1206118-16 SEDIMENT 19-AUG-12 TE-SC-7	L1206118-17 SEDIMENT 19-AUG-12 TE-SC-9	L1206118-18 SEDIMENT 19-AUG-12 TE-SC-DUP	L1206118-19 SEDIMENT 18-AUG-12 TEFF-SC-1	L1206118-20 SEDIMENT 18-AUG-12 TEFF-SC-3
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	6.13	5.75	5.60	6.02	6.07
Organic / Inorganic Carbon	Total Organic Carbon (%)	2.70	3.29	2.93	4.31	3.76
Metals	Aluminum (Al) (mg/kg)	20400	18500	16400	19700	21300
	Antimony (Sb) (mg/kg)	0.18	0.17	0.18	0.20	0.18
	Arsenic (As) (mg/kg)	21.4	71.1	39.1	11.8	13.5
	Barium (Ba) (mg/kg)	104	114	90.6	115	119
	Beryllium (Be) (mg/kg)	1.78	1.65	1.48	1.67	1.80
	Bismuth (Bi) (mg/kg)	1.98	1.77	1.72	1.79	1.98
	Cadmium (Cd) (mg/kg)	0.146	0.240	0.130	0.216	0.164
	Calcium (Ca) (mg/kg)	1680	1880	1730	1970	1930
	Chromium (Cr) (mg/kg)	52.9	51.3	44.2	50.4	59.6
	Cobalt (Co) (mg/kg)	14.2	10.9	10.4	12.4	14.8
	Copper (Cu) (mg/kg)	54.6	54.5	48.1	53.5	61.7
	Iron (Fe) (mg/kg)	54900	96400	91300	39200	45100
	Lead (Pb) (mg/kg)	18.8	17.5	16.3	19.6	20.6
	Lithium (Li) (mg/kg)	41.3	36.9	32.0	42.6	45.8
	Magnesium (Mg) (mg/kg)	7690	7350	6610	7200	8710
	Manganese (Mn) (mg/kg)	2060	1980	1730	3430	2860
	Mercury (Hg) (mg/kg)	0.0508	0.0373	0.0387	0.0373	0.0225
	Molybdenum (Mo) (mg/kg)	6.28	11.7	10.9	4.47	4.75
	Nickel (Ni) (mg/kg)	40.9	47.6	33.1	44.8	42.6
	Phosphorus (P) (mg/kg)	527	1250	952	519	498
	Potassium (K) (mg/kg)	4120	3970	3430	4240	4580
	Selenium (Se) (mg/kg)	0.53	0.76	0.74	0.81	0.54
	Silver (Ag) (mg/kg)	<0.10	0.16	0.14	<0.10	<0.10
	Sodium (Na) (mg/kg)	180	180	160	180	190
	Strontium (Sr) (mg/kg)	15.4	16.5	14.7	17.3	16.7
	Thallium (Tl) (mg/kg)	0.337	0.319	0.284	0.393	0.391
	Tin (Sn) (mg/kg)	2.5	2.4	3.2	5.2	5.1
	Titanium (Ti) (mg/kg)	865	797	720	785	855
	Uranium (U) (mg/kg)	19.0	17.1	15.3	21.3	23.6
	Vanadium (V) (mg/kg)	34.2	32.9	28.8	33.9	39.3
	Zinc (Zn) (mg/kg)	102	101	81.1	101	114

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

20-SEP-12 16:16 (MT)

Version: FINAL

		Sample ID Description Sampled Date Sampled Time Client ID	L1206118-21 SEDIMENT 18-AUG-12 TEFF-SC-5	L1206118-22 SEDIMENT 18-AUG-12 TEFF-SC-7	L1206118-23 SEDIMENT 18-AUG-12 TEFF-SC-9	L1206118-24 SEDIMENT 18-AUG-12 TEFF-SC-DUP	L1206118-25 SEDIMENT 20-AUG-12 SP-SC-1
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		5.58	5.74	6.05	6.05	6.21
Organic / Inorganic Carbon	Total Organic Carbon (%)		3.47	3.08	3.43	3.10	3.70
Metals	Aluminum (Al) (mg/kg)		18800	15200	21600	15800	24200
	Antimony (Sb) (mg/kg)		0.15	0.16	0.15	0.12	0.26
	Arsenic (As) (mg/kg)		13.2	20.3	11.8	5.61	28.6
	Barium (Ba) (mg/kg)		116	81.6	108	98.8	125
	Beryllium (Be) (mg/kg)		1.53	1.26	1.87	1.39	1.96
	Bismuth (Bi) (mg/kg)		2.16	1.33	1.94	1.29	2.44
	Cadmium (Cd) (mg/kg)		0.277	0.152	0.118	0.190	0.265
	Calcium (Ca) (mg/kg)		1600	1570	1890	1810	2090
	Chromium (Cr) (mg/kg)		52.0	39.9	56.1	40.2	84.3
	Cobalt (Co) (mg/kg)		14.0	8.52	13.0	6.32	17.4
	Copper (Cu) (mg/kg)		56.8	40.9	55.1	40.9	79.5
	Iron (Fe) (mg/kg)		63300	67800	41400	22200	59600
	Lead (Pb) (mg/kg)		17.8	15.3	20.4	15.1	21.4
	Lithium (Li) (mg/kg)		40.2	32.1	51.5	36.1	44.0
	Magnesium (Mg) (mg/kg)		7680	5970	8130	6210	9730
	Manganese (Mn) (mg/kg)		2510	1030	1940	365	2390
	Mercury (Hg) (mg/kg)		0.0447	0.0337	0.0191	0.0412	0.136
	Molybdenum (Mo) (mg/kg)		5.70	7.14	4.38	3.18	5.89
	Nickel (Ni) (mg/kg)		50.1	26.4	37.2	32.5	72.7
	Phosphorus (P) (mg/kg)		607	891	411	446	637
	Potassium (K) (mg/kg)		4080	3170	4350	3300	4860
	Selenium (Se) (mg/kg)		0.69	0.78	0.47	0.58	0.64
	Silver (Ag) (mg/kg)		<0.10	<0.10	<0.10	0.12	<0.10
	Sodium (Na) (mg/kg)		170	140	160	150	190
	Strontium (Sr) (mg/kg)		15.0	13.6	17.0	14.4	19.2
	Thallium (Tl) (mg/kg)		0.374	0.263	0.381	0.287	0.378
	Tin (Sn) (mg/kg)		4.0	2.2	3.4	2.8	3.0
	Titanium (Ti) (mg/kg)		786	660	792	706	985
	Uranium (U) (mg/kg)		20.8	15.9	23.9	16.5	20.3
	Vanadium (V) (mg/kg)		35.1	28.0	37.5	29.0	42.5
	Zinc (Zn) (mg/kg)		106	79.3	106	83.7	121

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206118-26 SEDIMENT 20-AUG-12 SP-SC-3	L1206118-27 SEDIMENT 20-AUG-12 SP-SC-5	L1206118-28 SEDIMENT 20-AUG-12 SP-SC-7	L1206118-29 SEDIMENT 20-AUG-12 SP-SC-9	L1206118-30 SEDIMENT 20-AUG-12 SP-SC-DUP
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	6.22	6.14	6.30	7.00	6.06
Organic / Inorganic Carbon	Total Organic Carbon (%)	4.10	4.03	4.15	4.31	3.79
Metals	Aluminum (Al) (mg/kg)	22100	24400	23500	24900	25500
	Antimony (Sb) (mg/kg)	0.27	0.23	0.27	0.27	0.25
	Arsenic (As) (mg/kg)	28.0	32.6	32.2	35.2	26.3
	Barium (Ba) (mg/kg)	141	115	120	139	121
	Beryllium (Be) (mg/kg)	1.80	2.10	1.96	2.12	2.16
	Bismuth (Bi) (mg/kg)	2.19	2.42	2.35	2.44	2.40
	Cadmium (Cd) (mg/kg)	0.333	0.195	0.229	0.256	0.228
	Calcium (Ca) (mg/kg)	2150	2590	2430	2130	2330
	Chromium (Cr) (mg/kg)	84.5	82.7	88.8	86.7	78.8
	Cobalt (Co) (mg/kg)	17.1	17.4	17.1	19.3	12.9
	Copper (Cu) (mg/kg)	79.7	76.5	81.3	86.5	76.1
	Iron (Fe) (mg/kg)	68200	59600	57000	61900	50000
	Lead (Pb) (mg/kg)	20.8	21.6	21.2	21.9	21.9
	Lithium (Li) (mg/kg)	42.0	45.5	44.8	46.0	48.3
	Magnesium (Mg) (mg/kg)	9390	9570	9970	9940	9490
	Manganese (Mn) (mg/kg)	3640	2600	2660	3840	856
	Mercury (Hg) (mg/kg)	0.0588	0.0296	0.034	0.0478	0.0628
	Molybdenum (Mo) (mg/kg)	7.14	6.19	5.86	6.46	7.08
	Nickel (Ni) (mg/kg)	75.5	65.6	70.6	74.3	59.6
	Phosphorus (P) (mg/kg)	635	549	580	651	554
	Potassium (K) (mg/kg)	4480	4360	4490	4760	4820
	Selenium (Se) (mg/kg)	0.79	0.60	0.65	0.67	0.73
	Silver (Ag) (mg/kg)	0.21	<0.10	<0.10	<0.10	0.19
	Sodium (Na) (mg/kg)	190	160	180	180	200
	Strontium (Sr) (mg/kg)	18.9	19.7	19.6	19.2	20.1
	Thallium (Tl) (mg/kg)	0.371	0.350	0.348	0.370	0.378
	Tin (Sn) (mg/kg)	2.7	3.3	4.2	2.8	2.7
	Titanium (Ti) (mg/kg)	870	782	885	870	913
	Uranium (U) (mg/kg)	18.1	20.4	20.3	21.3	20.1
	Vanadium (V) (mg/kg)	41.0	40.8	42.9	44.3	41.5
	Zinc (Zn) (mg/kg)	119	121	122	128	121

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1206118-31	L1206118-32	L1206118-33	L1206118-34	L1206118-35
		Description	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
		Sampled Date	21-AUG-12	21-AUG-12	21-AUG-12	21-AUG-12	21-AUG-12
		Sampled Time					
		Client ID	INUG-SC-1	INUG-SC-3	INUG-SC-5	INUG-SC-7	INUG-SC-9
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		5.65	5.92	5.74	5.71	6.08
Organic / Inorganic Carbon	Total Organic Carbon (%)		3.64	4.58	4.14	3.17	2.68
Metals	Aluminum (Al) (mg/kg)		20700	21200	27400	18700	23600
	Antimony (Sb) (mg/kg)		0.14	0.19	0.30	0.14	0.16
	Arsenic (As) (mg/kg)		8.32	18.4	5.97	114	14.1
	Barium (Ba) (mg/kg)		117	137	31.9	88.3	101
	Beryllium (Be) (mg/kg)		1.36	1.47	0.58	1.11	1.44
	Bismuth (Bi) (mg/kg)		1.16	1.32	<0.20	1.05	1.38
	Cadmium (Cd) (mg/kg)		0.147	0.338	0.116	0.094	0.120
	Calcium (Ca) (mg/kg)		2040	2120	22200	1400	1570
	Chromium (Cr) (mg/kg)		113	120	50.8	87.1	117
	Cobalt (Co) (mg/kg)		10.7	12.7	17.5	21.6	14.6
	Copper (Cu) (mg/kg)		45.3	55.6	63.0	40.8	52.6
	Iron (Fe) (mg/kg)		29400	45800	44500	132000	40600
	Lead (Pb) (mg/kg)		12.6	14.7	6.63	10.3	14.9
	Lithium (Li) (mg/kg)		29.2	27.5	30.6	19.8	33.8
	Magnesium (Mg) (mg/kg)		10100	10300	18700	7470	10400
	Manganese (Mn) (mg/kg)		438	814	752	1270	871
	Mercury (Hg) (mg/kg)		0.0455	0.0611	0.0320	0.0192	0.0143
	Molybdenum (Mo) (mg/kg)		1.99	3.49	0.66	12.0	3.56
	Nickel (Ni) (mg/kg)		81.8	91.8	37.4	69.2	77.8
	Phosphorus (P) (mg/kg)		891	1210	865	1720	518
	Potassium (K) (mg/kg)		3560	3640	740	2800	3480
	Selenium (Se) (mg/kg)		0.48	0.70	<0.20	0.76	0.24
	Silver (Ag) (mg/kg)		0.13	0.20	0.11	0.13	<0.10
	Sodium (Na) (mg/kg)		160	190	100	130	130
	Strontium (Sr) (mg/kg)		23.6	24.6	75.6	18.6	22.8
	Thallium (Tl) (mg/kg)		0.184	0.213	<0.050	0.162	0.255
	Tin (Sn) (mg/kg)		2.1	2.6	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)		721	708	2610	542	729
	Uranium (U) (mg/kg)		15.2	17.0	0.689	13.5	22.3
	Vanadium (V) (mg/kg)		38.2	39.8	111	29.0	38.6
	Zinc (Zn) (mg/kg)		86.7	102	85.3	78.1	90.2

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

20-SEP-12 16:16 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID		L1206118-36 SEDIMENT 21-AUG-12 INUG-SC-DUP	L1206118-37 SEDIMENT 22-AUG-12 PDL-SC-1	L1206118-38 SEDIMENT 22-AUG-12 PDL-SC-3	L1206118-39 SEDIMENT 22-AUG-12 PDL-SC-5	L1206118-40 SEDIMENT 22-AUG-12 PDL-SC-7
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	5.83	6.20	6.32	5.83	6.37
Organic / Inorganic Carbon	Total Organic Carbon (%)	3.48	2.61	2.39	2.41	2.28
Metals	Aluminum (Al) (mg/kg)	20600	20200	21500	20200	22200
	Antimony (Sb) (mg/kg)	0.15	0.30	0.22	0.25	0.25
	Arsenic (As) (mg/kg)	5.86	30.0	36.5	138	40.9
	Barium (Ba) (mg/kg)	108	80.6	84.3	85.4	88.1
	Beryllium (Be) (mg/kg)	1.35	0.96	1.03	1.07	1.01
	Bismuth (Bi) (mg/kg)	1.12	0.93	1.01	0.99	1.01
	Cadmium (Cd) (mg/kg)	0.125	0.125	0.236	0.183	0.207
	Calcium (Ca) (mg/kg)	2030	1910	1770	1740	2040
	Chromium (Cr) (mg/kg)	101	129	137	132	146
	Cobalt (Co) (mg/kg)	9.02	17.0	19.9	16.7	20.3
	Copper (Cu) (mg/kg)	39.7	47.1	53.7	51.1	54.1
	Iron (Fe) (mg/kg)	25200	38300	40000	64500	44200
	Lead (Pb) (mg/kg)	12.7	14.4	15.2	14.7	15.1
	Lithium (Li) (mg/kg)	29.3	27.6	29.8	25.8	28.8
	Magnesium (Mg) (mg/kg)	9560	10500	10800	10300	11500
	Manganese (Mn) (mg/kg)	325	1160	1840	735	1950
	Mercury (Hg) (mg/kg)	0.0206	0.0104	0.0091	0.0123	0.0095
	Molybdenum (Mo) (mg/kg)	1.96	2.63	3.32	4.93	3.31
	Nickel (Ni) (mg/kg)	65.9	84.0	105	92.1	109
	Phosphorus (P) (mg/kg)	723	446	410	997	566
	Potassium (K) (mg/kg)	3100	2670	2850	2600	2850
	Selenium (Se) (mg/kg)	0.46	0.33	0.29	0.44	0.33
	Silver (Ag) (mg/kg)	0.15	<0.10	<0.10	0.11	<0.10
	Sodium (Na) (mg/kg)	160	150	110	110	120
	Strontium (Sr) (mg/kg)	26.0	20.3	20.0	19.0	24.3
	Thallium (Tl) (mg/kg)	0.194	0.190	0.201	0.175	0.194
	Tin (Sn) (mg/kg)	<2.0	2.7	<2.0	<2.0	2.2
	Titanium (Ti) (mg/kg)	596	513	563	468	552
	Uranium (U) (mg/kg)	14.9	8.51	10.0	9.86	9.79
	Vanadium (V) (mg/kg)	33.5	35.0	37.2	35.7	39.1
	Zinc (Zn) (mg/kg)	79.1	77.8	82.7	86.7	87.5

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206118-41 SEDIMENT 22-AUG-12 PDL-SC-9	L1206118-42 SEDIMENT 22-AUG-12 PDL-SC-DUP	L1206118-43 SEDIMENT 23-AUG-12 BBD-SC-1	L1206118-44 SEDIMENT 23-AUG-12 BBD-SC-3	L1206118-45 SEDIMENT 23-AUG-12 BBD-SC-5
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		6.33	6.30	6.07	6.45	6.26
Organic / Inorganic Carbon	Total Organic Carbon (%)		2.00	2.02	0.51	0.35	0.24
Metals	Aluminum (Al) (mg/kg)		20200	22300	6810	5080	5580
	Antimony (Sb) (mg/kg)		0.25	0.26	<0.10	<0.10	<0.10
	Arsenic (As) (mg/kg)		36.9	63.0	11.1	12.5	4.42
	Barium (Ba) (mg/kg)		78.6	106	93.3	76.0	58.7
	Beryllium (Be) (mg/kg)		1.00	1.18	0.31	0.26	0.26
	Bismuth (Bi) (mg/kg)		0.94	1.07	<0.20	<0.20	<0.20
	Cadmium (Cd) (mg/kg)		0.238	0.577	0.053	<0.050	<0.050
	Calcium (Ca) (mg/kg)		1900	1650	2160	1700	1770
	Chromium (Cr) (mg/kg)		136	141	15.6	11.0	11.6
	Cobalt (Co) (mg/kg)		19.0	23.9	5.63	4.51	3.91
	Copper (Cu) (mg/kg)		48.9	67.6	7.80	5.58	5.06
	Iron (Fe) (mg/kg)		40700	49900	15300	13400	11300
	Lead (Pb) (mg/kg)		14.1	16.4	7.39	4.97	5.11
	Lithium (Li) (mg/kg)		27.9	31.4	9.4	8.1	9.1
	Magnesium (Mg) (mg/kg)		10400	10600	3910	3090	3260
	Manganese (Mn) (mg/kg)		1710	3180	437	454	217
	Mercury (Hg) (mg/kg)		0.0091	0.0097	0.0071	0.0073	<0.0050
	Molybdenum (Mo) (mg/kg)		3.04	5.29	0.69	0.63	0.51
	Nickel (Ni) (mg/kg)		99.2	153	10.2	7.45	7.80
	Phosphorus (P) (mg/kg)		426	434	699	703	609
	Potassium (K) (mg/kg)		2570	2790	1120	800	970
	Selenium (Se) (mg/kg)		0.31	0.25	<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)		<0.10	<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)		<100	<100	130	<100	<100
	Strontium (Sr) (mg/kg)		20.3	18.9	35.4	28.3	32.8
	Thallium (Tl) (mg/kg)		0.200	0.278	0.054	<0.050	<0.050
	Tin (Sn) (mg/kg)		2.5	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)		530	557	316	216	251
	Uranium (U) (mg/kg)		9.21	11.3	1.44	1.00	1.22
	Vanadium (V) (mg/kg)		36.2	39.2	17.5	14.5	15.4
	Zinc (Zn) (mg/kg)		79.6	98.1	30.5	23.0	23.6

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206118-46 SEDIMENT 23-AUG-12 BBD-SC-7	L1206118-47 SEDIMENT 23-AUG-12 BBD-SC-9	L1206118-48 SEDIMENT 23-AUG-12 BBD-SC-DUP	L1206118-49 SEDIMENT 24-AUG-12 BPJ-SC-1	L1206118-50 SEDIMENT 24-AUG-12 BPJ-SC-3
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	6.43	5.89	5.80	6.11	6.32
Organic / Inorganic Carbon	Total Organic Carbon (%)	<0.10	0.21	0.49	0.47	0.54
Metals	Aluminum (Al) (mg/kg)	3660	5030	7680	7600	9750
	Antimony (Sb) (mg/kg)	<0.10	<0.10	0.11	0.11	0.14
	Arsenic (As) (mg/kg)	3.86	6.58	19.2	20.0	44.4
	Barium (Ba) (mg/kg)	39.4	64.9	98.1	124	131
	Beryllium (Be) (mg/kg)	<0.20	0.24	0.33	0.35	0.47
	Bismuth (Bi) (mg/kg)	<0.20	<0.20	<0.20	<0.20	0.24
	Cadmium (Cd) (mg/kg)	<0.050	<0.050	0.058	0.062	0.079
	Calcium (Ca) (mg/kg)	1000	1520	2510	2220	2590
	Chromium (Cr) (mg/kg)	8.17	10.7	17.8	17.5	21.9
	Cobalt (Co) (mg/kg)	2.88	3.63	5.44	6.47	7.69
	Copper (Cu) (mg/kg)	2.77	4.32	9.20	7.25	9.23
	Iron (Fe) (mg/kg)	8530	11800	18100	18600	24100
	Lead (Pb) (mg/kg)	2.56	3.97	8.43	8.28	10.6
	Lithium (Li) (mg/kg)	6.5	8.6	10.8	10.1	12.5
	Magnesium (Mg) (mg/kg)	2420	3100	4250	4200	5200
	Manganese (Mn) (mg/kg)	207	195	358	4010	942
	Mercury (Hg) (mg/kg)	<0.0050	<0.0050	0.0094	0.0110	0.0144
	Molybdenum (Mo) (mg/kg)	<0.50	<0.50	0.79	1.94	1.28
	Nickel (Ni) (mg/kg)	5.23	7.23	11.3	11.3	14.3
	Phosphorus (P) (mg/kg)	296	581	941	813	1260
	Potassium (K) (mg/kg)	530	800	1280	1310	1640
	Selenium (Se) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)	<100	<100	130	140	160
	Strontium (Sr) (mg/kg)	22.8	29.5	39.0	43.0	49.0
	Thallium (Tl) (mg/kg)	<0.050	<0.050	0.060	0.059	0.069
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	177	228	350	340	369
	Uranium (U) (mg/kg)	0.502	0.783	1.60	1.53	1.96
	Vanadium (V) (mg/kg)	10.2	13.6	19.6	21.2	24.7
	Zinc (Zn) (mg/kg)	15.0	21.4	33.5	34.2	42.0

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206118-51 SEDIMENT 24-AUG-12 BPJ-SC-5	L1206118-52 SEDIMENT 24-AUG-12 BPJ-SC-7	L1206118-53 SEDIMENT 24-AUG-12 BPJ-SC-9	L1206118-54 SEDIMENT 24-AUG-12 BPJ-SC-DUP	L1206118-55 SEDIMENT 24-AUG-12 BAP-SC-1
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		6.21	6.07	5.94	6.27	5.85
Organic / Inorganic Carbon	Total Organic Carbon (%)		0.45	0.34	0.32	0.50	0.38
Metals	Aluminum (Al) (mg/kg)		8430	10100	10500	7990	4850
	Antimony (Sb) (mg/kg)		0.12	0.13	0.12	0.13	0.12
	Arsenic (As) (mg/kg)		48.7	7.56	6.42	61.0	4.41
	Barium (Ba) (mg/kg)		137	84.1	85.7	176	270
	Beryllium (Be) (mg/kg)		0.41	0.45	0.49	0.37	0.31
	Bismuth (Bi) (mg/kg)		0.20	0.23	0.24	<0.20	<0.20
	Cadmium (Cd) (mg/kg)		0.054	0.056	0.068	<0.050	<0.050
	Calcium (Ca) (mg/kg)		2460	2890	2850	2620	1770
	Chromium (Cr) (mg/kg)		19.2	21.6	22.7	17.6	14.8
	Cobalt (Co) (mg/kg)		7.01	7.19	8.51	8.30	3.74
	Copper (Cu) (mg/kg)		8.64	9.99	10.4	7.88	4.06
	Iron (Fe) (mg/kg)		26600	17700	18700	31700	11600
	Lead (Pb) (mg/kg)		8.32	9.88	10.2	8.14	4.40
	Lithium (Li) (mg/kg)		11.3	13.2	12.9	10.2	7.0
	Magnesium (Mg) (mg/kg)		4550	5150	5360	4150	2880
	Manganese (Mn) (mg/kg)		1260	639	635	3440	107
	Mercury (Hg) (mg/kg)		0.0081	0.0080	0.0089	0.0090	<0.0050
	Molybdenum (Mo) (mg/kg)		1.25	0.85	0.92	2.94	<0.50
	Nickel (Ni) (mg/kg)		12.4	13.5	14.5	11.2	9.20
	Phosphorus (P) (mg/kg)		1670	779	983	1740	708
	Potassium (K) (mg/kg)		1430	1790	1870	1430	1070
	Selenium (Se) (mg/kg)		<0.20	<0.20	<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)		<0.10	<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)		150	190	190	140	<100
	Strontium (Sr) (mg/kg)		45.0	54.8	52.2	51.4	38.8
	Thallium (Tl) (mg/kg)		0.058	0.077	0.082	0.055	0.050
	Tin (Sn) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)		343	490	496	323	270
	Uranium (U) (mg/kg)		1.71	1.99	2.09	1.65	1.15
	Vanadium (V) (mg/kg)		22.8	24.8	25.9	21.9	18.6
	Zinc (Zn) (mg/kg)		35.9	40.1	42.0	33.2	20.1

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206118-56 SEDIMENT 24-AUG-12 BAP-SC-3	L1206118-57 SEDIMENT 24-AUG-12 BAP-SC-5	L1206118-58 SEDIMENT 24-AUG-12 BAP-SC-7	L1206118-59 SEDIMENT 24-AUG-12 BAP-SC-9	L1206118-60 SEDIMENT 24-AUG-12 BAP-SC-DUP
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		6.78	5.80	6.11	6.36	5.56
Organic / Inorganic Carbon	Total Organic Carbon (%)		0.32	0.90	0.77	0.55	0.85
Metals	Aluminum (Al) (mg/kg)		5500	6860	6880	3910	7610
	Antimony (Sb) (mg/kg)		0.12	0.13	0.15	0.11	0.14
	Arsenic (As) (mg/kg)		4.94	8.81	4.01	2.51	11.2
	Barium (Ba) (mg/kg)		337	283	331	257	337
	Beryllium (Be) (mg/kg)		0.33	0.38	0.39	0.25	0.40
	Bismuth (Bi) (mg/kg)		<0.20	<0.20	<0.20	0.21	0.21
	Cadmium (Cd) (mg/kg)		<0.050	0.059	0.051	0.051	0.054
	Calcium (Ca) (mg/kg)		2170	2270	2300	1640	2420
	Chromium (Cr) (mg/kg)		15.2	18.4	17.9	13.8	19.3
	Cobalt (Co) (mg/kg)		4.79	5.47	4.92	2.96	5.74
	Copper (Cu) (mg/kg)		5.30	8.32	8.79	3.53	8.48
	Iron (Fe) (mg/kg)		13300	16100	15300	11000	18200
	Lead (Pb) (mg/kg)		4.75	6.11	6.11	3.74	6.71
	Lithium (Li) (mg/kg)		8.2	10.5	10.5	6.2	10.6
	Magnesium (Mg) (mg/kg)		3120	3890	3930	2480	4150
	Manganese (Mn) (mg/kg)		838	289	200	129	381
	Mercury (Hg) (mg/kg)		0.0060	0.0090	0.0080	<0.0050	0.0109
	Molybdenum (Mo) (mg/kg)		2.00	0.63	0.71	<0.50	0.70
	Nickel (Ni) (mg/kg)		9.56	11.5	11.3	8.26	12.4
	Phosphorus (P) (mg/kg)		700	797	796	548	826
	Potassium (K) (mg/kg)		1200	1580	1620	830	1770
	Selenium (Se) (mg/kg)		<0.20	<0.20	<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)		<0.10	<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)		<100	130	140	<100	150
	Strontium (Sr) (mg/kg)		41.9	43.1	43.1	34.0	47.1
	Thallium (Tl) (mg/kg)		0.061	0.077	0.073	<0.050	0.085
	Tin (Sn) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)		311	382	377	224	434
	Uranium (U) (mg/kg)		1.32	1.83	1.81	1.44	2.00
	Vanadium (V) (mg/kg)		19.0	22.8	23.7	16.6	24.6
	Zinc (Zn) (mg/kg)		23.4	30.9	30.9	17.6	33.0

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206118-61 SEDIMENT 25-AUG-12 BES-SC-1	L1206118-62 SEDIMENT 25-AUG-12 BES-SC-3	L1206118-63 SEDIMENT 25-AUG-12 BES-SC-5	L1206118-64 SEDIMENT 25-AUG-12 BES-SC-7	L1206118-65 SEDIMENT 25-AUG-12 BES-SC-9
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		6.96	7.06	6.60	7.03	6.60
Organic / Inorganic Carbon	Total Organic Carbon (%)		0.21	0.35	0.36	0.30	0.15
Metals	Aluminum (Al) (mg/kg)		4770	5010	5970	5280	5530
	Antimony (Sb) (mg/kg)		0.10	<0.10	0.11	0.12	0.12
	Arsenic (As) (mg/kg)		2.33	3.22	3.71	3.15	3.54
	Barium (Ba) (mg/kg)		104	132	88.3	121	83.2
	Beryllium (Be) (mg/kg)		0.28	0.28	0.33	0.29	0.29
	Bismuth (Bi) (mg/kg)		<0.20	<0.20	<0.20	<0.20	<0.20
	Cadmium (Cd) (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Calcium (Ca) (mg/kg)		1570	1680	1970	1890	2100
	Chromium (Cr) (mg/kg)		16.3	16.6	17.4	16.3	15.7
	Cobalt (Co) (mg/kg)		4.06	4.42	4.71	4.45	4.34
	Copper (Cu) (mg/kg)		3.58	4.32	5.14	4.55	4.78
	Iron (Fe) (mg/kg)		10400	11100	12600	11700	12100
	Lead (Pb) (mg/kg)		3.54	4.19	5.37	4.39	5.01
	Lithium (Li) (mg/kg)		7.7	7.8	8.4	7.8	7.8
	Magnesium (Mg) (mg/kg)		3440	3370	3580	3400	3270
	Manganese (Mn) (mg/kg)		672	327	444	360	354
	Mercury (Hg) (mg/kg)		<0.0050	0.0058	0.0083	0.0059	0.0077
	Molybdenum (Mo) (mg/kg)		0.56	<0.50	0.51	<0.50	<0.50
	Nickel (Ni) (mg/kg)		19.4	10.6	10.6	9.95	9.65
	Phosphorus (P) (mg/kg)		475	560	629	614	655
	Potassium (K) (mg/kg)		940	1040	1240	1150	1180
	Selenium (Se) (mg/kg)		<0.20	<0.20	<0.20	<0.20	<0.20
	Silver (Ag) (mg/kg)		<0.10	<0.10	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)		<100	<100	<100	<100	<100
	Strontium (Sr) (mg/kg)		27.1	28.1	35.9	32.9	35.7
	Thallium (Tl) (mg/kg)		<0.050	<0.050	0.052	<0.050	<0.050
	Tin (Sn) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)		265	245	301	281	299
	Uranium (U) (mg/kg)		0.882	1.05	1.27	1.16	1.37
	Vanadium (V) (mg/kg)		15.4	15.8	18.3	16.9	18.1
	Zinc (Zn) (mg/kg)		21.5	23.2	25.4	23.8	23.2

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206118-66 SEDIMENT 25-AUG-12 BES-SC-DUP	L1206118-67 SEDIMENT 27-AUG-12 TPS-SC-1	L1206118-68 SEDIMENT 27-AUG-12 TPS-SC-3	L1206118-69 SEDIMENT 27-AUG-12 TPS-SC-5	L1206118-70 SEDIMENT 27-AUG-12 TPS-SC-7
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	6.56	5.85	5.92	6.02	6.02
Organic / Inorganic Carbon	Total Organic Carbon (%)	0.33	3.79	3.56	3.87	3.67
Metals	Aluminum (Al) (mg/kg)	6310	20500	20100	22000	21700
	Antimony (Sb) (mg/kg)	0.14	0.20	0.21	0.22	0.20
	Arsenic (As) (mg/kg)	3.72	24.8	13.1	14.5	12.0
	Barium (Ba) (mg/kg)	80.2	94.0	89.7	101	89.1
	Beryllium (Be) (mg/kg)	0.34	1.23	1.21	1.50	1.31
	Bismuth (Bi) (mg/kg)	<0.20	1.52	1.51	1.64	1.62
	Cadmium (Cd) (mg/kg)	<0.050	0.153	0.123	0.154	0.111
	Calcium (Ca) (mg/kg)	2180	1750	1400	1500	1550
	Chromium (Cr) (mg/kg)	18.3	105	103	122	109
	Cobalt (Co) (mg/kg)	4.83	13.3	12.6	18.5	13.3
	Copper (Cu) (mg/kg)	5.29	58.7	60.1	71.0	60.6
	Iron (Fe) (mg/kg)	13300	35300	25900	31200	27500
	Lead (Pb) (mg/kg)	5.59	19.0	17.4	18.5	18.1
	Lithium (Li) (mg/kg)	8.8	32.6	31.3	33.2	34.4
	Magnesium (Mg) (mg/kg)	3670	8630	8410	9870	9090
	Manganese (Mn) (mg/kg)	473	629	475	740	408
	Mercury (Hg) (mg/kg)	0.0087	0.0210	0.0141	0.0195	0.0179
	Molybdenum (Mo) (mg/kg)	0.53	3.43	2.87	3.69	2.84
	Nickel (Ni) (mg/kg)	10.8	65.2	64.2	80.2	62.7
	Phosphorus (P) (mg/kg)	678	521	392	470	375
	Potassium (K) (mg/kg)	1310	3350	3220	3560	3420
	Selenium (Se) (mg/kg)	<0.20	0.70	0.60	0.79	0.59
	Silver (Ag) (mg/kg)	<0.10	0.15	0.12	0.14	0.13
	Sodium (Na) (mg/kg)	100	150	140	170	130
	Strontium (Sr) (mg/kg)	38.2	15.8	13.3	14.2	14.5
	Thallium (Tl) (mg/kg)	0.053	0.250	0.238	0.298	0.273
	Tin (Sn) (mg/kg)	<2.0	2.0	<2.0	2.6	2.6
	Titanium (Ti) (mg/kg)	318	624	617	642	659
	Uranium (U) (mg/kg)	1.33	16.1	16.5	18.8	17.1
	Vanadium (V) (mg/kg)	19.6	36.5	36.1	41.1	36.8
	Zinc (Zn) (mg/kg)	26.7	92.8	90.6	110	92.8

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1206118-71 SEDIMENT 27-AUG-12 TPS-SC-9	L1206118-72 SEDIMENT 27-AUG-12 TPS-SC-DUP	L1206118-73 SEDIMENT 27-AUG-12 TPN-SC-1	L1206118-74 SEDIMENT 27-AUG-12 TPN-SC-3	L1206118-75 SEDIMENT 27-AUG-12 TPN-SC-5
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	5.82	5.89	6.13	6.35	6.12
Organic / Inorganic Carbon	Total Organic Carbon (%)	2.56	4.22	0.33	0.25	3.72
Metals	Aluminum (Al) (mg/kg)	19000	20400	14500	9660	18100
	Antimony (Sb) (mg/kg)	0.16	0.20	0.11	<0.10	0.17
	Arsenic (As) (mg/kg)	9.94	30.6	15.6	4.99	14.2
	Barium (Ba) (mg/kg)	90.8	94.3	58.9	37.5	73.6
	Beryllium (Be) (mg/kg)	1.17	1.24	0.67	0.40	1.02
	Bismuth (Bi) (mg/kg)	1.29	1.57	0.78	0.59	1.24
	Cadmium (Cd) (mg/kg)	0.131	0.221	0.062	0.065	0.095
	Calcium (Ca) (mg/kg)	1420	2050	967	998	1570
	Chromium (Cr) (mg/kg)	93.1	104	80.6	44.6	111
	Cobalt (Co) (mg/kg)	10.5	14.1	10.3	7.71	10.5
	Copper (Cu) (mg/kg)	46.9	59.5	26.9	10.2	46.2
	Iron (Fe) (mg/kg)	24900	37600	28400	17000	26600
	Lead (Pb) (mg/kg)	16.2	19.8	10.0	6.60	15.8
	Lithium (Li) (mg/kg)	33.0	31.9	30.2	20.4	30.1
	Magnesium (Mg) (mg/kg)	8220	8490	7070	5310	8180
	Manganese (Mn) (mg/kg)	347	779	599	441	409
	Mercury (Hg) (mg/kg)	0.0102	0.0215	<0.0050	<0.0050	0.0213
	Molybdenum (Mo) (mg/kg)	1.67	3.93	4.12	0.96	2.51
	Nickel (Ni) (mg/kg)	60.7	67.7	48.8	32.8	55.8
	Phosphorus (P) (mg/kg)	566	547	191	143	412
	Potassium (K) (mg/kg)	3070	3300	2320	1560	2780
	Selenium (Se) (mg/kg)	0.40	0.77	<0.20	<0.20	0.44
	Silver (Ag) (mg/kg)	0.11	0.18	<0.10	<0.10	<0.10
	Sodium (Na) (mg/kg)	150	130	<100	100	120
	Strontium (Sr) (mg/kg)	13.3	16.3	11.7	9.35	14.5
	Thallium (Tl) (mg/kg)	0.222	0.259	0.170	0.124	0.212
	Tin (Sn) (mg/kg)	<2.0	2.2	<2.0	<2.0	2.2
	Titanium (Ti) (mg/kg)	647	619	665	470	521
	Uranium (U) (mg/kg)	14.2	16.4	10.8	4.44	15.3
	Vanadium (V) (mg/kg)	33.1	36.1	27.9	17.3	31.9
	Zinc (Zn) (mg/kg)	82.9	95.2	64.4	42.8	79.0

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1206118-76 SEDIMENT 27-AUG-12 TPN-SC-7	L1206118-77 SEDIMENT 27-AUG-12 TPN-SC-9	L1206118-78 SEDIMENT 27-AUG-12 TPN-SC-DUP		
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)		6.05	6.26	6.11		
Organic / Inorganic Carbon	Total Organic Carbon (%)		4.27	2.57	0.58		
Metals	Aluminum (Al) (mg/kg)		12400	12900	13600		
	Antimony (Sb) (mg/kg)		0.18	0.14	0.12		
	Arsenic (As) (mg/kg)		19.3	8.99	14.5		
	Barium (Ba) (mg/kg)		48.1	52.4	56.8		
	Beryllium (Be) (mg/kg)		0.79	0.70	0.67		
	Bismuth (Bi) (mg/kg)		0.89	0.86	0.73		
	Cadmium (Cd) (mg/kg)		0.104	0.070	0.084		
	Calcium (Ca) (mg/kg)		1380	1140	833		
	Chromium (Cr) (mg/kg)		87.7	79.7	75.3		
	Cobalt (Co) (mg/kg)		9.68	8.32	11.7		
	Copper (Cu) (mg/kg)		38.0	29.9	28.1		
	Iron (Fe) (mg/kg)		33100	20300	27200		
	Lead (Pb) (mg/kg)		13.1	11.0	9.29		
	Lithium (Li) (mg/kg)		19.0	23.0	28.3		
	Magnesium (Mg) (mg/kg)		6160	6240	6720		
	Manganese (Mn) (mg/kg)		558	354	835		
	Mercury (Hg) (mg/kg)		0.0188	0.0101	<0.0050		
	Molybdenum (Mo) (mg/kg)		3.20	1.81	4.27		
	Nickel (Ni) (mg/kg)		45.3	43.6	47.3		
	Phosphorus (P) (mg/kg)		596	273	162		
	Potassium (K) (mg/kg)		1760	1980	2380		
	Selenium (Se) (mg/kg)		0.55	0.29	<0.20		
	Silver (Ag) (mg/kg)		0.13	<0.10	<0.10		
	Sodium (Na) (mg/kg)		<100	100	<100		
	Strontium (Sr) (mg/kg)		11.7	10.9	10.3		
	Thallium (Tl) (mg/kg)		0.138	0.147	0.184		
	Tin (Sn) (mg/kg)		<2.0	<2.0	<2.0		
	Titanium (Ti) (mg/kg)		344	449	593		
	Uranium (U) (mg/kg)		9.98	9.94	10.6		
	Vanadium (V) (mg/kg)		23.2	23.7	26.3		
	Zinc (Zn) (mg/kg)		57.1	59.0	63.5		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Uranium (U)	DUP-H	L1206118-35, -36, -37, -38, -39, -40, -41, -42, -43, -44, -45, -46, -47, -48, -49, -50, -51, -52, -53, -54, -55, -56, -57, -58, -59, -60

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

C-TOT-ORG-LECO-SK Soil Organic Carbon by combustion method SSSA (1996) p. 973
Total Organic Carbon (C-TOT-ORG-LECO-SK, C-TOT-ORG-SK)

Total C and inorganic C are determined on separate samples. The total C is determined by combustion and thermal conductivity detection, while inorganic C is determined by weight loss after addition of hydrochloric acid. Organic C is calculated by the difference between these two determinations.

Reference for Total C:

Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 961-1010 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

Reference for Inorganic C:

Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-VA Soil Mercury in Soil by CVAFS EPA 200.2/245.7

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve (this sieve step is omitted for international soil samples), and a representative subsample of the dry material is weighed. The sample is then digested at 95 degrees Celsius for 2 hours by block digester using concentrated nitric and hydrochloric acids. Instrumental analysis is by atomic fluorescence spectrophotometry (EPA Method 245.7).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

MET-200.2-CCMS-VA Soil Metals in Soil by CRC ICPMS EPA 200.2/6020A

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve (this sieve step is omitted for international soil samples), and a representative subsample of the dry material is weighed. The sample is then digested at 95 degrees Celsius for 2 hours by block digester using concentrated nitric and hydrochloric acids. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

PH-1:2-VA Soil pH in Soil (1:2 Soil:Water Extraction) BC WLAP METHOD: PH, ELECTROMETRIC, SOIL

This analysis is carried out in accordance with procedures described in the pH, Electrometric in Soil and Sediment method - Section B Physical/Inorganic and Misc. Constituents, BC Environmental Laboratory Manual 2007. The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1	2	3	4	5

Reference Information

6

7

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



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Report To			Report Format / Distribution			Service Requested (Rush for routine analysis subject to availability)																				
Company: Azimuth Consulting Group			☐ Standard ☐ Other ☒ PDF ☒ Excel ☐ Digital ☐ Fax			☒ Regular (Standard Turnaround Times - Business Days) ☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT ☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT ☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT																				
Contact: Maggie McConnell / Gary Mann			Email 1: mmccconnell@azimuthgroup.ca																							
Address: #218 - 2902 West Broadway			Email 2: gmann@azimuthgroup.ca																							
Vancouver, BC			Email 3:																							
Phone: 604-730-1220 Fax: 604-739-8511						Analysis Request																				
Invoice To Same as Report? ☒ Yes ☐ No			Client / Project Information			Please indicate below Filtered, Preserved or both (F, P, F/P)																				
Hardcopy of Invoice with Report? ☐ Yes ☒ No			Job #: Meadowbank CREMP 2012																							
Company:			PO / AFE:																							
Contact:			LSD:																							
Address:																										
Phone:			Quote #: Q33276																							
Fax:																										
Lab Work Order # (lab use only)			ALS Contact: Brent Mack			Sampler: MM, MF																				
Sample #			Sample Identification (This description will appear on the report)			Date (dd-mm-yy)			Time (hh:mm)			Sample Type			MET-COME+FULL - VA			pH			C-TOT-ORG-LECO - SK			Number of Containers		
TPE-SC-1			16-Aug-12			Sediment			X X X												1					
TPE-SC-3			26-Aug-12			Sediment			X X X												1					
TPE-SC-5			26-Aug-12			Sediment			X X X												1					
TPE-SC-7			26-Aug-12			Sediment			X X X												1					
TPE-SC-9			26-Aug-12			Sediment			X X X												1					
TPE-SC-DUP			26-Aug-12			Sediment			X X X												1					
WAL-SC-1			17-Aug-12			Sediment			X X X												1					
WAL-SC-3			17-Aug-12			Sediment			X X X												1					
WAL-SC-5			17-Aug-12			Sediment			X X X												1					
WAL-SC-7			17-Aug-12			Sediment			X X X												1					
WAL-SC-9			17-Aug-12			Sediment			X X X												1					
WAL-SC-DUP			17-Aug-12			Sediment			X X X												1					
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																										
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																										
By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.																										
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																										
SHIPMENT RELEASE (client use)						SHIPMENT RECEPTION (lab use only)						SHIPMENT VERIFICATION (lab use only)														
Released by: Maggie McConnell		Date (dd-mm-yy) 30-Aug-12		Time (hh-mm)		Received by: <i>B. ...</i>		Date: Sept 7		Time: 11:30		Temperature: 19.7 °C		Verified by:		Date:		Time:		Observations: Yes / No ? If Yes add S/N						



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COC #

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Report To	Report Format / Distribution							Service Requested (Rush for routine analysis subject to availability)																																																																																																																																																																																																																																																																																																																											
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Released by: Maggie McConnell	Date (dd-mm-yy) 30-Aug-12	Time (hh-mm)	Received by: <i>R.H.</i>	Date: <i>Sept. 7</i>	Time: <i>11:30</i>	Temperature: <i>19.7 °C</i>	Verified by:	Date:	Time:	Observations Yes / No ? If Yes add S/L																																																																																																																																																																																																																																																																																																																									



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Report To			Report Format / Distribution			Service Requested (Rush for routine analysis subject to availability)												
Company: Azimuth Consulting Group			☐ Standard ☐ Other			☒ Regular (Standard Turnaround Times - Business Days)												
Contact: Maggie McConnell / Gary Mann			☒ PDF ☒ Excel ☐ Digital ☐ Fax			☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT												
Address: #218 - 2902 West Broadway			Email 1: mmccconnell@azimuthgroup.ca			☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT												
Vancouver, BC			Email 2: gmann@azimuthgroup.ca			☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT												
Phone: - 604-730-1220 Fax: 604-739-8511			Email 3:			Analysis Request												
Invoice To Same as Report? ☒ Yes ☐ No			Client / Project Information			Please indicate below Filtered, Preserved or both (F, P, F/P)												
Hardcopy of Invoice with Report? ☐ Yes ☒ No			Job #: Meadowbank CREMP 2012															
Company:			PO / AFE:			MET-CCME+FULL - VA pH C-TOT-ORG-LECO - SK Number of Containers												
Contact:			LSD:															
Address:																		
Phone: Fax:			Quote #: Q33276															
Lab Work Order # (lab use only)			ALS Contact: Brent Mack		Sampler: MM, MF													
Sample #	Sample Identification (This description will appear on the report)		Date (dd-mm-yy)	Time (hh:mm)	Sample Type													
	SP-SC-1		20-Aug-12		Sediment													
	SP-SC-3		20-Aug-12		Sediment													
	SP-SC-5		20-Aug-12		Sediment													
	SP-SC-7		20-Aug-12		Sediment													
	SP-SC-9		20-Aug-12		Sediment													
	SP-SC-DUP		20-Aug-12		Sediment													
	INUG-SC-1		21-Aug-12		Sediment													
	INUG-SC-3		21-Aug-12		Sediment													
	INUG-SC-5		21-Aug-12		Sediment													
	INUG-SC-7		21-Aug-12		Sediment													
	INUG-SC-9		21-Aug-12		Sediment													
	INUG-SC-DUP		21-Aug-12		Sediment													
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																		
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SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)											
Released by: Maggie McConnell	Date (dd-mm-yy) 30-Aug-12	Time (hh-mm)	Received by: Britt	Date: Sept 7	Time: 11:30	Temperature: 19.2 °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF								



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Report To						Report Format / Distribution								Service Requested (Rush for routine analysis subject to availability)								
Company: Azimuth Consulting Group						Standard ☐ Other ☐								Regular (Standard Turnaround Times - Business Days) ☒								
Contact: Maggie McConnell / Gary Mann						PDF ☒ Excel ☒ Digital ☐ Fax ☐								Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT ☐								
Address: #218 - 2902 West Broadway Vancouver, BC						Email 1: mmcconnell@azimuthgroup.ca Email 2: gmann@azimuthgroup.ca								Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT ☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT ☐								
Phone: 604-730-1220 Fax: 604-739-8511						Email 3:																
Invoice To Same as Report? Yes ☒ No ☐						Client / Project Information								Please indicate below Filtered, Preserved or both (F, P, F/P)								
Hardcopy of Invoice with Report? Yes ☐ No ☒						Job #: Meadowbank CREMP 2012																
Company:						PO / AFE:								MET-COME+FULL - VA C-TOT-ORG-LECO - SK 								
Contact:						LSD:																
Address:																						
Phone: Fax:						Quote #: Q33276																
Lab Work Order # (lab use only)						ALS Contact: Brent Mack		Sampler: MM, MF														
Sample #		Sample Identification (This description will appear on the report)				Date (dd-mm-yy)	Time (hh:mm)	Sample Type														
		BPJ-SC-1				24-Aug-12		Sediment	X X X													
		BPJ-SC-3				24-Aug-12		Sediment	X X X													
		BPJ-SC-5				24-Aug-12		Sediment	X X X													
		BPJ-SC-7				24-Aug-12		Sediment	X X X													
		BPJ-SC-9				24-Aug-12		Sediment	X X X													
		BPJ-SC-DUP				24-Aug-12		Sediment	X X X													
		BAP-SC-1				24-Aug-12		Sediment	X X X													
		BAP-SC-3				24-Aug-12		Sediment	X X X													
		BAP-SC-5				24-Aug-12		Sediment	X X X													
		BAP-SC-7				24-Aug-12		Sediment	X X X													
		BAP-SC-9				24-Aug-12		Sediment	X X X													
		BAP-SC-DUP				24-Aug-12		Sediment	X X X													
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Released by: Maggie McConnell		Date (dd-mm-yy) 30-Aug-12		Time (hh-mm)	Received by: B.HH		Date: Sept. 7	Time: 11:30	Temperature: 19.2 °C	Verified by:		Date:	Time:	Observations: Yes / No ? If Yes add SIF								



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Report To			Report Format / Distribution			Service Requested (Rush for routine analysis subject to availability)																			
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Phone: 604-730-4220 Fax: 604-739-8511			Email 3:			Analysis Request																			
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Lab Work Order # (lab use only)			ALS Contact: Brent Mack		Sampler: MM, MF		Number of Containers																		
Sample #			Sample Identification (This description will appear on the report)		Date (dd-mmm-yy)																	Time (hh:mm)		Sample Type	
			BES-SC-1		25-Aug-12				Sediment		1														
			BES-SC-3		25-Aug-12				Sediment		1														
			BES-SC-5		25-Aug-12				Sediment		1														
			BES-SC-7		25-Aug-12				Sediment		1														
			BES-SC-9		25-Aug-12				Sediment		1														
			BES-SC-DUP		25-Aug-12				Sediment		1														
			TPS-SC-1		27-Aug-12				Sediment		1														
			TPS-SC-3		27-Aug-12				Sediment		1														
			TPS-SC-5		27-Aug-12				Sediment		1														
			TPS-SC-7		27-Aug-12				Sediment		1														
			TPS-SC-9		27-Aug-12				Sediment		1														
			TPS-SC-DUP		27-Aug-12				Sediment		1														
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