Environment

Public Works and Government Services Canada

Construction Summary Report
CAM-D DEW Line Site
Simpson Lake, Nunavut - Final

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Project Number:

60149115 (403)

Date:

March 26, 2013

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March 26, 2013

Matthew McElwaine, P.Eng.
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Dear Mr. McElwaine:

Project No: **60149115 (403)**

Regarding: **Construction Summary Report**
CAM-D DEW Line Site
Simpson Lake, Nunavut - Final

We are pleased to submit to you a copy of the above referenced report. This report presents the results of the remediation program completed at the CAM-D DEW Line Site during the 2010 and 2011 construction seasons. We trust that the information presented herein is consistent with your expectations. Please contact me at (780) 486-5922 if you have any questions.

Sincerely,
AECOM Canada Ltd.



Greg Wright, M.Sc.
Project Manager
Greg.Wright@aecom.com

GTW
Encl.

Distribution List

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5	X	PWGSC (Matthew McElwaine)

Revision Log

Revision #	Revised By	Date	Issue / Revision Description
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Executive Summary

CAM-D is a former DEW Line site situated on the Boothia Peninsula between Shepherd Bay and Pelly Bay, Nunavut. The closest community is Kugaaruk, Nunavut, located approximately 90 kilometres (km) east of CAM-D. Taloyoak and Gjoa Haven are the next closest, located 125 km northwest and 160 km west, respectively. Locals regularly pass through this area, when travelling between communities, often taking time to fish and hunt the rich biodiversity this area provides.

The CAM-D DEW Line site was constructed in 1957 and operated until 1963 at which point it was abandoned. In 1965, responsibility for the Site was assumed by the Department of Indian Affairs and Northern Development (DIAND), now Aboriginal Affairs and Northern Development Canada (AANDC), and in 1994 a portion of the property was transferred to Department of National Defence (DND) to support construction of the Short Range Radar (SRR) station, which continues to be in operation. The Site consists of a Main Station Area, Airstrip Area, Freshwater Lake, Simpson Lake, and Borrow Source Area. The Main Station Area is where the majority of the infrastructure was located; however, when the site was abandoned, much of the infrastructure was haphazardly demolished and partially buried, resulting in numerous environmental and physical hazards including derelict buildings and several dumpsites, debris piles and barrel caches.

The Site has been the subject of various environmental site investigations (ESG 1994, Earth Tech 2006, UMA 2007, Golder 2007, Earth Tech 2007). Tender and construction designs and specifications were developed to meet remediation outcomes and recommendations outlined in the Remedial Action Plan (RAP) (Earth Tech, 2007) and accompanying Additional Assessment report (UMA-AECOM, 2007).

AECOM was retained by Public Works and Government Services Canada (PWGSC) on behalf of AANDC to provide site resident services, construction contract administration, and geotechnical and environmental inspection services for the remediation of the former CAM-D DEW Line Site at Simpson Lake, Nunavut. AECOM provided contract administration and monitoring of the remediation work completed by the Contractor, Kudlik Construction Ltd. AECOM provided technical and contract support to PWGSC both on and offsite. On-site activities included, but were not limited to, recording construction quantities and progress of contract items, and communicating this information to PWGSC, as well as design modifications where necessary. AECOM provided contract administration and monitoring of regulatory compliance on behalf of PWGSC and AANDC. AECOM also provided monitoring, tracking and reporting for Health and Safety and permitting requirements. For contract administration, unit rate items were recorded by the Contractor and site Departmental Representative (DR) as construction activity progressed. Lump Sum items were recorded by the Contractor and DR as percentage-complete based on the work required to complete the item.

The first contract amendment was issued for demolition of the SRR construction camp on the DND property. Demolition of the construction camp was not included in the original contract; however, the derelict camp presented physical and environmental issues, and was generally unaesthetic. Consequently, after consultation with DND, demolition and disposal of the camp was added to the CAM-D remediation contract, and the work was completed in 2011. A second contract amendment was issued, under the AANDC Training Fund, to provide food preparation training for participants in the communities of Kugaaruk, Taloyoak and Gjoa Haven. In addition, two design revisions were required during the project. These included regrades at the Main Dump and a change in the remedial approach for hydrocarbon impacted soils from the Petroleum, Oil and Lubricants (POL) and Garage areas. Regrades at the Main Dump were required to cap extensive buried debris that was discovered following surface debris collection in this area. The large volume of hydrocarbon impacted soil (elevated concentrations but below contaminated soil criteria) at the POL and Garage areas lead to design revision that allowed for the landfarm treatment of the impacted soils rather than strictly excavation and disposal in the non-hazardous waste landfill (NHWL). The landfarm treatment was required to divert the majority of the impacted soil, to ensure the NHWL

capacity would be retained for the non-hazardous debris and Tier I soils generated from other site remediation activities.

Kudlik Construction Ltd. initially mobilized to Shepherd Bay in August 2009, at which point all equipment and camp facilities were offloaded and stored at a temporary camp established along the shore of Shepherd Bay, approximately 7 km west of the CAM-3 DEW Line Site. Mobilization by CAT train to CAM-D occurred over an eight week timeframe in March and April 2010, during which time all equipment, camp facilities, fuel, etc. required for the remediation program was transported to the CAM-D camp area situated adjacent to Borrow Area No. 2, approximately 5 km southwest of the CAM-D DEW Line Site.

The 2010 construction season lasted 17.5 weeks (122 days), with the first Contractor personnel arriving on site on June 10, 2010 to open the camp and begin preliminary construction activities (i.e. road improvements, snow clearing, etc.) and the last personnel leaving on October 10, 2010. In 2010, DR's were on-site from July 5 to October 9. The 2011 construction season lasted eleven weeks (78 days), from on June 25, 2011 to September 23, 2011 including a two week break from July 31 to August 14, 2011. In 2011, DR's were onsite from July 5 to September 23.

The 2010 and 2011 construction seasons consisted of the following major activities:

- Mobilization and demobilization of all personnel, equipment, support facilities and other required materials
- Provision of site supports services (includes camp, vehicles, air transportation and communication)
- Upgrading of site roads and airstrips to facilitate construction activities
- Production of Type 2 and Type 3 granular material required for remediation activities
- Construction of an engineered landfill for disposal of non-hazardous waste, hydrocarbon impacted and Tier I contaminated soils
- Demolition, segregation and disposal of buildings and infrastructure
- Collection, cleaning and disposal of barrels and contents
- Collection, sorting, onsite transport and incineration of non-hazardous, unpainted, untreated combustible waste
- Excavation and disposal or treatment of contaminated soils, as required
- Soil treatment for petroleum hydrocarbon (PHC) impacted soils from the Garage and POL areas
- Excavation of buried debris, waste segregation, transport and disposal
- Regrading buried debris lobes at the Main Dump
- Offsite transport and disposal of designated contaminated soil to approved waste disposal facility
- Collection, excavation, sorting, containerization and offsite transport of hazardous debris, soils and/or liquids to approved hazardous waste disposal facility
- Backfilling and/or regrading of all excavations and site work areas

The table below summarizes the hazardous waste that was transported offsite from CAM-D and disposed of at approved waste disposal facilities.

Container Type	Number of Containers	Contents	Disposal Facility
Super Bags	446	Metals, PCBs and/or hydrocarbon contaminated soil, ash from incineration of domestic waste and unpainted wood, used absorbents, soil from spills, and tar from barrel processing	Stablex, Blainville, QC
Sea-cans	93	Metals, PCBs and/or hydrocarbon contaminated soil	Stablex, Blainville, QC
Marine Containers	7	PCB amended paint materials, PCB containing waste fluids from barrel processing (in overpack drums), PCB transformers and ballasts, lead paint materials	Aevitas, Cornwall, ON; Sena Waste Services, Swan Hills, AB
Drums	162	Waste fluids from barrel processing, including PCB containing waste fluids (in overpack drums)	Solva Rec, Richelieu, QC
Totes	3	Sludge from barrel processing	Solva Rec, Richelieu, QC
Other	4	Lined wooden boxes with sludge from wastewater (Bionest) treatment system, batteries, and containment cells from Barrel Processing	Solva Rec, Richelieu, QC; Stablex, Blainville, QC

With the completion of the remediation contract, all remediation components identified in the 2007 Remedial Plan have been effectively addressed.

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1. Introduction

AECOM was retained by Public Works and Government Services Canada (PWGSC) on behalf of Aboriginal Affairs and Northern Development Canada (AANDC) to provide site resident services, construction contract administration, and geotechnical and environmental inspection services for the remediation of the former CAM-D DEW Line Site at Simpson Lake, Nunavut. This report summarizes the remediation activities; Inuit Owned Land Licence, Water Licence, Quarry and Land Use Permit reporting requirements; and quality assurance work performed during the 2010 and 2011 construction seasons.

1.1 Background

CAM-D is a former DEW Line site (herein referred to as "Site") situated on the Boothia Peninsula between Shepherd Bay and Pelly Bay, Nunavut. The closest community is Kugaaruk, Nunavut, located approximately 90 kilometres (km) east of CAM-D. Taloyoak and Gjoa Haven are the next closest, located 125 km northwest and 160 km west, respectively. The DEW Line site was constructed in 1957 and operated until 1963 at which point it was abandoned. In 1965, responsibility for the Site was assumed by the Department of Indian Affairs and Northern Development (DIAND) and in 1994 a portion of the property was transferred to the Department of National Defence (DND) to support construction of the Short Range Radar (SRR) station, which continues to be in operation.

The Site consists of the Main Station Area, Airstrip Area, Freshwater Lake, Simpson Lake, and Borrow Source Area. Elevation at the Main Station Area is approximately 370 metres above sea level (mASL) and the shoreline of Simpson Lake is approximately 50 mASL. The Main Station Area is where the majority of the infrastructure is located, and prior to remediation included; a module train building (demolished and buried), warehouse (partially demolished and buried), garage, Inuit house (demolished and buried), Quonset huts (demolished and buried), Petroleum, Oil and Lubricants (POL) tank and pumphouse, sewage outfall, radar antenna tower (downed), as well as several dumpsites, debris piles and barrel caches. An overall site plan of CAM-D is provided in **Figure 1, Appendix A**.

The Site has been the subject of various environmental site investigations (ESG 1994, Earth Tech 2006, UMA 2007, Golder 2007, Earth Tech 2007); however, no previous remediation efforts were conducted at the Site.

1.2 Summary of Remediation Plan

Remediation activities at CAM-D were conducted to meet the requirements of the Tender and Construction Drawings and Specifications and as well as regulatory requirements. Tender and construction designs and specifications were developed to meet remediation outcomes and recommendations outlined in the Remedial Action Plan (RAP) (Earth Tech, 2007) and accompanying Additional Assessment report (UMA-AECOM, 2007). The contaminated/impacted soil areas and inventories of hazardous and non-hazardous waste were taken from the RAP and applied to the tender design and specifications. The contaminated soil classifications are described in further detail in **Section 2.7**.

The main remediation findings and recommendations provided in the RAP are summarized in **Table 1**.

Table 1. CAM-D Remedial Action Plan (RAP) Summary

Environmental Concern	Site Assessment Findings	Remedial Approach
Metals Contaminated Soils	45 m^3 of soils with concentrations of As, Cd and Zn, which exceed the DCC Tier II criteria were identified on-site (electrical cabinets, outfall, airstrip, plumbers dump and Simpson lake). This volume includes 3 m^3 of material that is co-contaminated with PCBs. In addition, 240 m^3 of Tier I soils and 319 m^3 of Tier II soils may be located in known buried waste sites.	Excavate, containerize and label soils that exceed DCC Tier II criteria and dispose off-site. Dispose of soils that exceed DCC Tier I criteria in an on-site landfill.
Petroleum Hydrocarbon Contaminated Soils	Approximately 350 m^3 of hydrocarbon contaminated soil in exceedance of the 2005 INAC AMSRP for PHC Soils were identified on-site (areas include pallet line, POL tanks and airstrip).	Excavate contaminated soils, place into containers, and ship off-site to a licensed disposal facility.
Petroleum Hydrocarbon Impacted Soils	Approximately 3,074 m^3 of impacted soils with elevated concentrations of F2, F3, BTEX and/or PAHs were identified on-site (areas include portable fuel tanks, pallet line, POL tanks, garage pad and burn pit).	Excavation of impacted soils and use as intermediate fill in on-site non-hazardous landfill.
Buried Debris	Buried debris on the site contains various amounts of hazardous and non-hazardous material as well as contaminated soils. There is potentially 428 m^3 of non-hazardous material and 56 m^3 of hazardous material (asbestos and painted materials) buried onsite (BD areas include east station, POL, warehouse, module train buried debris).	All buried and partially debris should be excavated, sorted and separated into different waste streams. All non-hazardous waste to be disposed in on-site non-hazardous landfill.
Surface Debris	Approximately 745 m^3 of non-hazardous debris (heavy equipment, barrels, scrap metal, scrap wood, concrete, electrical equipment and plumbing parts).	Consolidate and dispose in on-site non-hazardous landfill.
POL Fluids	There are approximately 16.4 m^3 (16,400 L) of POL fluids.	Incinerate POL fluids that meet the INAC AMSRP criteria, otherwise treat as hazardous waste.
Water in Barrels	Analysis of collected water in the abandoned barrels indicate that the dissolved metals meet DLCU barrel protocol.	Disposal on ground is permitted once water has been polished with absorbent material. Sampling of barrels during remediation program is required.
PCB/Lead Amended Paint Products	Approximately 40 m^3 of PCB/lead amended painted materials on-site, an additional 53 m^3 is estimated to be deposited in the buried debris areas.	Dismantle painted items and ship off-site to an appropriate disposal facility. Remove painted items from buried debris locations and dispose off-site.
Hazardous Materials	Approximately 18 m^3 of hazardous material consisting of lead acid batteries (1 m^3) and asbestos containing materials (17 m^3). There is also potentially 3 m^3 of additional asbestos materials deposited in the buried debris locations.	Asbestos waste to be collected, bagged and disposed of in onsite non-hazardous landfill. All hazardous materials (such as batteries) will be containerized and shipped to licensed disposal facility.
Structures	POL pumphouse, Garage and Warehouse concrete foundations	All buildings shall be demolished to their foundations and debris placed and compacted in an onsite landfill. Removal of the garage foundation is recommended in order to reduce safety concerns and access underlying PHC impacted soils.

1.3 Remediation Team

Key personnel involved in the remediation of the CAM-D site during construction were:

Owner	**Aboriginal Affairs and Northern Development Canada (AANDC)**
AANDC Project Manager	Dele Morakinyo
PWGSC Project Manager	Brad Thompson, Matthew McElwaine
On-site Departmental Representative (DR)	**AECOM**
Project Manager	Greg Wright
Site Resident Engineer	Greg Wright, Mike Zimmel, Mark Rea
Site Environmental Inspector	Priya Handa, Katie Scott
Site Geotechnical Inspector	Matt Lotecki, Bane Brotschi
Prime Contractor	**Kudlik Construction Ltd. (Kudlik)**
Contractor's Project Manager	François Bourassa
Contractor's Site Superintendent	John Fraser, Francois Bourassa
Contractor's Remediation Consultant	Daniel Fauteux
Contractor's Surveyor	Gaston Martin

2. Site Activities

The site activities involved with the remediation program at CAM-D included the mobilization of a construction camp, equipment and materials to site, provision of camp services and transportation of personnel to site, upgrading and maintenance of site roads and airstrip, demolition of remaining structures, processing of barrel contents and cleaning of barrels, excavation and sorting of buried debris areas, collection and containerization/packaging of hazardous and non-hazardous debris, excavation and disposal of contaminated soil, and demobilization of camp equipment and waste from site.

Mobilization of remediation equipment and camp facilities to the CAM-D site was conducted by means of sealift and CAT train. The mobilization sealift arrived in Shepherd Bay in August 2009, at which point all equipment and camp facilities were offloaded and stored at a temporary camp established along the shore of Shepherd Bay, approximately 7 km west of the CAM-3 DEW Line Site. Mobilization by CAT train to CAM-D occurred over an eight week timeframe in March and April 2010, during which time all equipment, camp facilities, fuel, etc. required for the remediation program was transported to the CAM-D camp area situated adjacent to Borrow Area No. 2, approximately 5 km southwest of the CAM-D DEW Line Site. Select photographs of the 2010 CAT train mobilization activities are shown in **Appendix C (Photos 1-4)**.

2.1 Camp, Contractor Equipment and Site Infrastructure

2.1.1 Camp Infrastructure

The CAM-D remediation construction camp consisted of 28 individually heated marine containers, which included dormitories, shower/washroom facilities, contractor offices, first aid, water storage tank and electrical room, all of which were connected by wooden ground-level walkways. A separate (foldable) building of wood and steel construction, joined together with a marine container, was used for the dining, common area and kitchen.

In addition to the main camp, two soft-sided tents were erected to provide office space for the DR's (i.e. Resident Engineer, Environmental Inspector and Geotechnical Inspector), as well as geotechnical and environmental laboratory facilities.

Power was supplied using a diesel generator; electric baseboard heaters were used to heat the camp buildings. All camp garbage was collected and incinerated daily in a dedicated fuel fired incinerator. All sewage and grey water effluent was collected via a network of aboveground piping, and treated using the Bionest treatment system described in **Section 2.1.3.2**.

A satellite camp was constructed at the temporary staging area near Shepherd Bay to accommodate the workers involved in the winter CAT train activities and sealift events. The Shepherd Bay camp consisted of five heated marine containers and a Quonset tent. A sixth separate marine container was used to house the diesel generator which receives diesel fuel from a double walled storage tank. All sewage waste was immediately incinerated by the use of electric incinerating toilets, greywater was collected in a small pit near the kitchen, and domestic waste generated as a result of camp operation is collected and transported to Kugaaruk for disposal.

Select photographs of the CAM-D construction camp and Shepherd Bay camp are shown in **Appendix C (Photos 5-30)**.

2.1.2 Contractor Equipment

All heavy construction equipment and supplies were brought to site during the sealift and CAT train mobilization. The following is a list of the Contractor's construction equipment brought to site:

- Three CAT Challenger 855D
- One Komatsu WA500 Loader
- One Komatsu PC300 Excavator
- One Ford F350 crew cab truck with canopy
- One Ford Excursion SUV
- Three Ford F350 crew cab trucks
- One Komatsu D41E Dozer
- One Champion 740 Grader
- One Komatsu WA420 Loader
- One Hitachi EX160LC Excavator
- One Komatsu PC400LC Excavator
- One Screener
- Two Komatsu HM300 Rock Trucks
- One Volvo A25 Rock Truck
- One Volvo 5350 Rock Truck
- One Compactor
- One Air Track Drill and Compressor
- Two John Deere Gators
- Three Honda ATVs
- Two Ski-Doo Skandic 550

2.1.3 Camp Activities

The construction contractor was responsible for the operation and maintenance of camp facilities for their own personnel, the DR's personnel and any visitors or inspectors. The 2010 construction season lasted 17.5 weeks (122 days), with the first contractor personnel arriving on site on June 10, 2010 to open the camp and begin preliminary construction activities (i.e. road improvements, snow clearing, etc.) and the last personnel leaving on October 10, 2010. In 2010, DR's were on-site from July 5 to October 9. The 2011 construction season lasted eleven weeks (78 days), from June 25, 2011 to September 23, 2011, including a two week break from July 31 to August 14, 2011. In 2011, DR's were onsite from July 5 to September 23. During both construction seasons, the regular workday consisted of a 12 hour shift from 7 am to 7 pm.

All environmental and regulatory testing requirements for the operation, maintenance and shutdown of camp were the responsibility of the contractor. All environmental testing results received by the Contractor were checked by the DR to confirm whether or not criteria had been met.

2.1.3.1 Water Usage

In 2010 and initially in 2011, drinking water was obtained from the unnamed tributary near the camp, and was treated with a UV lamp and filtration system prior to consumption. In 2011 the unnamed tributary ran dry; therefore, bottled water from Kugaaruk was used for drinking water and non-potable water was obtained from Freshwater Lake, using a dedicated pump and water tank and pre-treating the water with a small dose of bleach. Details regarding the water quality and water volumes used are provided in **Section 5.3.3.3**.

2.1.3.2 Sewage Handling

Sewage waste was collected via a network of piping, and passed through a "Bionest" treatment system. The "Bionest" system was comprised of a three step treatment process, which included a conventional septic tank equipped with an effluent filter, a bioreactor, and a UV lamp system. Additional information related to the treatment process, as well as details regarding the discharge quality and discharge volumes, is provided in **Section 5.3.3.3**.

2.1.3.3 Waste Disposal

All domestic waste which was generated as a result of camp operations was burned in a dedicated incinerator. The incinerator was routinely cleaned and the residual cinders were transferred into overpack drums which were sampled by the DR to determine the appropriate disposal method. Camp wastes generated during mobilization activities were backhauled to Kugaaruk for disposal.

In 2010, two and a half drums of ash were generated from domestic garbage burning. On September 9, 2010, two composite samples (i.e. one from each full barrel) were collected by the DR. The samples of ash were submitted to the laboratory for Toxic Characteristic Leaching Procedure (TCLP) metals and total metals analysis. A review of the analytical results revealed that both composite samples contained copper and zinc concentrations in excess of the DCC Tier II Contaminated Soil Criteria. All leachable metals parameters were below the regulatory guidelines.

A third sample of ash (composite of three full drums) was collected by the DR on July 18, 2011. The sample was submitted to the laboratory for total metals and leachable metals analysis. Analytical results showed concentrations of various heavy metals parameters including cadmium, copper and zinc exceeded the DCC Tier II Contaminated Soil Criteria; all leachable metals parameters were below laboratory detection limits. Consequently, all drums containing ash from the incineration of domestic waste required transportation off-site and disposal at a waste handling facility licensed to accept hazardous waste. A summary of the analytical results from the ash sampling program is presented in **Table B-1**, **Appendix B**.

2.1.3.4 Contractor's Barrel Washing Area

A barrel washing area (approximately 3 metres (m) by 3 m) was constructed north of the camp on July 13, 2011. The area was used to wash the contractor's empty fuel barrels prior to transport for crushing and disposal in the Non-Hazardous Waste Landfill (NHWL). The surrounding surface soils were bermed and a geotextile liner was placed along ground surface to prevent impact to the surface soils below (**Photo 21**). Prior to placement of the liner, a composite baseline soil sample was collected by the DR and submitted to the laboratory for BTEX, F1-F4 analysis. Analytical results showed all Petroleum Hydrocarbon (PHC) parameters were below criteria and/or laboratory detection limits.

Once empty, the barrels were rinsed by overfilling several times (using the filtered and separated water collected from the barrels) and were then punctured within the pan to drain the wash water. All washed, empty barrels were routinely transported to the NHWL where they were crushed to reduce their volume by a minimum of 75%.

On August 21, 2011, once barrel washing activities had been completed and use of the area was no longer required, the DR collected one composite confirmatory soil sample. The sample was submitted for BTEX, F1-F4 analysis. A review of the results showed that all parameters were below criteria and/or laboratory detection limits. Subsequently, the area was reshaped to match the surrounding terrain. A summary of the analytical results are presented in **Table B-2**, **Appendix B**.

2.1.4 Infrastructure Activities

2.1.4.1 Airstrip

The CAM-D site is accessed by a granular airstrip that runs northeast-southwest and is located approximately 1.1 km southeast of the Main Station area (**Photo 31**). The airstrip surface is composed of gravel and sand with minimal fines. The airstrip length, when constructed, was approximately 2,000 m (6,500 feet). Kudlik maintained and improved the airstrip using the Champion 740 grader, Komatsu D41E dozer and compactor. The airstrip remains in relatively good condition, with the exception of excessive erosion at the extreme northeast and southwest portions of the airstrip. This did not limit the use of the airstrip to support site remediation activities.

2.1.4.2 Access Roads

The site access roads at CAM-D total approximately 6 km in length and are constructed of native sand material. The main haul road begins at the apron area adjacent to the Airstrip and ends at the camp area, located within Borrow Area No. 2. The approximate length of the haul road is 4.5 km. The second section of road, approximately 1.5 km in length, extends from the apron area and provides access to the Main Station. In addition to these two main roads, improvements to an existing shortcut road were completed to facilitate the hauling of borrow material to the Main Station Area for landfill berm construction. The shortcut road extends from the main haul road northwest towards the Main Station Area at approximately the 3.6 km mark from the camp. Approximately 3,400 cubic metres (m^3) of Type 3 material, obtained from Borrow Area No. 2, was used for road construction and maintenance. Several culverts were also installed along the main haul road to promote drainage.

Receding permafrost in the area, coupled with high silt content in the soil that impeded quick drainage or percolation, resulted in extremely unfavourable road conditions. Some sections of the road became nearly impassable to passenger vehicles if there were more than three days between road maintenance and repairs. In 2010, once sufficient material was hauled (via rock truck) to the Main Station Area to complete landfill berm construction (end of July 2010), traffic on all site roads was restricted to pick-up trucks and small off-road vehicles to preserve the main road base. To repair rutting and surficial damage to the roadways from continued use by pick-up trucks, the site roads were maintained regularly using the Komatsu D41E dozer and compactor.

In July 2011, once the hauling of granular material from Borrow Area No. 2 to the Main Station was completed, restoration of the shortcut road was performed. This included removing much of the 3,400 m^3 of Type 3 material imported from Borrow Area No. 2, which was then used for regrading activities and backfilling of contaminated soil excavations. Restoration also included generally reshaping the road to match the surrounding terrain. At the completion of the 2011 construction season, drainage restoration was completed along the full length of the main haul road, including removing the culverts and ditches and re-establishing historical drainage channels. During the final camp area inspection, which took place on September 5, 2012, it was noted that drainage courses along the main haul road, between the camp area and the CAM-D site, were adequately restored and the road itself was not impeding drainage.

Select photographs of the construction, operation, maintenance and reclamation of the site access roads are provided in **Appendix C (Photos 32-42)**.

2.2 Non-Hazardous Waste Landfill (NHWL)

2.2.1 Design

The 2007 Remediation Plan had identified the need for development of an on-site non-hazardous waste disposal facility, and that the facility should be located at the Main Station Area between the POL Tanks and Pallet Line areas. The NHWL was designed to accept non-hazardous waste generated from the remedial work conducted at CAM-D, hydrocarbon impacted soils and Tier I metals and Polychlorinated Biphenyl (PCB) contaminated soils (defined in **Section 2.7**), asbestos containing materials (ACM), and to a lesser extent non-hazardous waste debris (empty fuel barrels) generated from camp operations. The perimeter berms and cap would be constructed from Type 2 material, placed in even lifts of 0.5 m (or less) and compacted between each lift. The base width of the berms would be approximately 12.5 m and taper to a width of 3.0 m at the final elevation, with an exterior slope configuration of 3H:1V and interior (against waste) configuration of 2H:1V. The final cover would include a minimum 1.0 m thick Type 2 material cap, placed over the final lift of intermediate fill, and have an overall grade of 3.0% sloping to the north. Debris would be placed in lifts not exceeding 0.5 m, with 0.15 m thick lifts of intermediate fill (including PHC impacted soil) between each layer of debris. The initial design allowed for the placement of four lifts

of waste in total. The design elevation of the final cap was 300.61 mASL at the south edge of the facility and sloping to 299.50 mASL at the north edge of the facility, based on the estimated volume of material requiring disposal.

Details of the NHWL are shown on **Figures 2** and **3** located in **Appendix A**. Select photographs during various stages of the NHWL construction, during placement of the waste and during final closure and capping of the facility are shown in **Appendix C (Photos 43 to 64)**.

2.2.2 Construction

Construction of the NHWL commenced on July 17, 2010, beginning with the construction of the perimeter berms. Consistent with the design, the berms were constructed using Type 2 material placed and track packed with a dozer in lifts not exceeding 0.5 m. Using a vibrating roller compactor, each lift was then compacted to a minimum of 95% of the proctor value for the material before subsequent lifts were placed on top. Additional information related to the geotechnical testing is provided in **Section 2.2.4**. Once the perimeter berms were established, waste was imported to the NHWL and placed in horizontal layers approximately 0.2 to 0.3 m thick, followed by 0.15 m lifts of intermediate fill (generally soil from PHC impacted excavations, as defined in **Section 2.7**) to fill in the voids. All debris was compacted within the NWHL using the Komatsu PC400LC Excavator, and barrels were crushed to less than 25% of their original size using the Komatsu PC400LC Excavator and a steel box. At the conclusion of the 2010 construction season, an approximately 0.5 m layer of intermediate fill was placed on top of the final layer of waste as a temporary cover between the 2010 and 2011 construction seasons.

Type 2 material required for the construction of the NHWL was quarried from Borrow Area No. 2, all of which was completed during the 2010 construction season. Type 2 material was quarried and transported to the NHWL until the berms were completed, after which point the Type 2 material required for the final cover was stockpiled at the Camp area (adjacent to Borrow Area No. 2), to be hauled at the conclusion of the 2010 construction season once the haul road had become sufficiently frozen to allow rock trucks to pass without becoming stuck or cause excessive rutting. The Type 2 material for the final cover was hauled in October 2010, and stockpiled adjacent to the NHWL.

In 2011, construction of the NHWL continued with consecutive layers of waste covered by layers of intermediate fill, with the exception of the southwest quadrant where an area was left open to allow for the placement of waste generated near the completion of the 2011 season. An area of approximately 10 m by 20 m was left open, approximately 5 m from the south and west perimeter berm walls, to allow disposal of all site debris generated at the conclusion of the 2011 season. As the last remaining barrels and other site debris were collected at the conclusion of the 2011 construction season and imported to the NHWL, lifts of debris and intermediate fill in the southwest quadrant were placed consistent with the construction of the balance of the NHWL.

All non-hazardous material consolidated from demolition, debris collection, buried debris excavation activities and the 8,800 barrels from barrel processing were placed in the NHWL. Non-hazardous material generated from demolition of the DND SRR construction camp was also placed in the NHWL for disposal. In addition, approximately 576 m^3 of treated soil, removed from the landfarm area, was also required in the southwest quadrant of the NHWL to fill the void left open for final debris.

Construction of the NHWL cap began on August 27, 2011. During installation of grade stakes to facilitate installation of the cap, it was discovered that the berms were not built to the correct design elevation or slope. The berms were 0.1 to 0.4 m too high, in order to achieve the final design elevation and slope at the same time as allowing for the required 1 m cap on top of the final lift of intermediate fill/waste debris. At the time, if constructed to the final design elevation the thickness of Type 2 material of the cap would have ranged from 0.6 m to 0.9 m. To solve the problem, excess intermediate fill was removed from the entire NHWL area (excluding the berms), and redistributed to the void space in the southwest quadrant of the NHWL. The depth of material removed and relocated within the NHWL ranged from 0 to 0.4 m. Following the redistribution of all excess intermediate fill, the NHWL was resurveyed to

confirm the top of the waste and intermediate fill. Grade stakes were installed to assist with placement of the first lift. In general, the first lift brought the inside cover elevations to match the existing berm elevations. The cover slope and elevation were field fit to meet the design intent.

The cap was constructed using lifts of Type 2 material stock piled near the NHWL from the borrow activities during the 2010 season. Additional Type 2 material was required to complete the NHWL to final grade so the "short cut" road leading up to the NHWL was used as a source. The material from the short cut road was used only after geotechnical testing was completed to confirm the material met the Type 2 specification. The NHWL was capped with 1 m of Type 2 material over the consolidated debris and intermediate fill, graded to specification, and compacted to a minimum of 95% of the proctor value for the Type 2 material. Construction of the NHWL was completed by September 14, 2011.

The quantities of granular fill used for the completion of the Non-Hazardous Waste Landfill are summarized in **Table 2** below.

Table 2. Estimated Granular Fill Quantities – Non-Hazardous Waste Landfill

Description	Material Type	Quantity (m^3)
Berms	Type 2	4,140
Intermediate Fill	PHC Impacted Soil	2,815
Final Cap	Type 2	3060

During the September 5, 2012 camp inspection site visit, visual observations were made in regard to the performance of constructed features at the CAM-D site itself, including the NHWL; however, time for visual inspection of the CAM-D site was limited. The NHWL was briefly inspected and found to be in very good condition, and performing as intended. Equipment cleat marks are still prominent on the NHWL and no erosion channels, depressions or slope instability features were observed. Photographs of the NHWL taken during the final inspection are located in **Appendix C (Photos 43 to 64)**.

2.2.3 Monitoring Well Installation

Installation of the four monitoring wells around the NHWL was completed on July 19, 2011, in accordance with the installation details provided in the Contract Documents; Section 02 51 00 – Instrumentation. The wells were installed to a completion depth of approximately 3.5 m below surface grade. Each well was equipped with 2 m of 38 millimetre (mm) diameter non-slotted stainless steel stand pipe and 2 m of 38 mm diameter slotted stainless steel stand pipe wrapped with filter sock. The annulus of each borehole was backfilled to surface using filter sand and bentonite. The well installation details are shown on **Figure 4** (**Appendix A**).

2.2.4 Geotechnical Testing

Quality control of the material placement at the NHWL was provided by the AECOM geotechnical inspector, and was carried out throughout the construction process of the NHWL. Once borrow sources were identified and borrow extraction begun, bulk samples were collected from each stockpile for a grain size distribution analysis. A total of 22 grain size distribution analyses were completed throughout the 2010 and 2011 season. The results of the analysis were compared to the specification for Type 2 granular fill material which was used for construction of the NHWL. Where material failed, and when possible, the material was mixed with another pile to achieve the desired grain sizes required to meet the Type 2 specifications. Results from the grain size distribution analysis can be found in **Appendix D**.

Standard Proctor testing was completed on three samples to obtain the material's optimum moisture content and dry density for compaction during the construction of the NHWL. Three proctor tests were completed to account for the

variance of grain sizes within the Type 2 specified ranges, as each stockpile had a different grain size distribution, and therefore required a different optimum moisture content to achieve the desired compaction when placed for construction. Results from the Proctor Compaction analysis can be found in **Appendix D**.

Density testing utilizing a Nuclear Densometer was completed throughout the NHWL construction process. Density testing was completed to confirm that the Type 2 material laid for the lifts of the NHWL reached a minimum value of 95% of the Standard Protor density of the same material. Where tests failed, re-compaction was ordered until the desired compaction was reached. Each test was recorded, including the moisture content and depth of the nuclear densometer's probe, which varied depending on the size of the compacted lift that was laid. The average density measured after compaction for the 2010 and 2011 construction of the NHWL was 99% of the standard Proctor Density for the Type 2 materials. Summaries of field density testing can be found in **Appendix D**.

2.3 Infrastructure Demolition

An inventory of the structures requiring demolition was provided in Appendix A of the Contract Documents and included the Warehouse Concrete Foundation, Garage Building, POL Tank No. 5, POL Pumphouse and Fallen Antenna. All those structures identified for destruction were demolished in 2010 with the exception of POL Tank No. 5 which was demolished in 2011. All building components deemed non-hazardous were disposed of in the NWHL. All components deemed hazardous were appropriately packaged for offsite disposal at an approved facility. Details regarding the classification of hazardous materials are provided in **Section 2.3.1**. Select photographs during demolition and disposal/containerization of the structures that remained at CAM-D are shown in **Appendix C (Photos 350 to 377)**.

2.3.1 Hazardous Material Classification

Debris, building components or soil with an overall concentration of PCBs greater than 50 parts per million (ppm) are classified as hazardous under legislation. At the time of project initiation and design, the concentration of 50 ppm applied to the piece of debris in its entirety and thus the PCB concentrations in the paint; the paint thickness, paint coverage and the substrate thickness are all taken into account when calculating total PCB concentration. PCBs were detected in concentrations up to 3,030 ppm in paint samples from various demolition and debris items at CAM-D. Painted items with concentrations of PCBs exceeding 50 ppm and consequently requiring containerization and disposal off-site included the interior metal cladding of the Garage (grey paint), the POL tank (silver paint), and all those pieces of the former module train painted pinkish-grey.

Painted materials that leach lead in a concentration equal to or greater than 5 milligrams per litre (mg/L) when subjected to the Toxic Characteristic Leaching Procedure (TCLP) test were deemed hazardous. The TCLP test for leachable lead seeks to reproduce the worst conditions that could be encountered in a landfill where the painted debris is subjected to full immersion in highly acidic conditions. Samples collected and subjected to the test include both paint and substrate. The only item found to be coated with leachable lead paint was the structural steel inside the Garage, which was painted with orange/grey paint that was found to have a TCLP concentration of 9.4 ppm.

With the exception of large vehicle parts and structural steel, which were sampled and assessed on a case by case basis, all painted surface debris was considered to be hazardous. All hazardous materials consolidated from demolition activities and surface debris collection at CAM-D were placed into prepared marine containers. The containers were prepared by lining the bottom and the sides (up to 1.2 m) with polyethylene sheeting followed by the placement of OSB plywood and 2 x 4's secured together (so as to not puncture the plastic).

2.3.2 Warehouse Concrete Foundation

Demolition of the Warehouse Foundation was completed in 2010. Concrete and structural metal from the Warehouse Foundation were placed directly in the NHWL, while the ACMs such as the transite board and pipe

insulation were wrapped and/or double bagged prior to disposal in the NHWL. Select photographs during hazardous materials segregation, as well as before and after photos of the Warehouse, are shown in **Appendix C (Photos 65 to 68)**.

2.3.3 Garage Building

Preparation for the structural demolition of the Garage commenced on July 7, 2010, and included stripping electrical, removing fiberglass insulation, and abating PCB amended paint (PAP) from the interior metal cladding. Exterior metal cladding was removed using a chain secured to a pick-up truck and was completed on July 17, 2010. All asbestos pipe/door insulation was removed, wrapped and/or double bagged before placement in the NHWL. Other inert debris from demolition activities, including the concrete foundation, exterior metal cladding, fiberglass insulation, electrical, heating tanks and furnace were also placed in the NHWL. The items from the demolition of the Garage Building which were considered hazardous and as a result required containerization for shipment and disposal off-site included interior metal cladding, structural steel, paint scrapings/floor sweepings, PCB oil-filled capacitors, batteries and door skins. Complete demolition of the Garage was finalized on July 24, 2010. Select photographs during hazardous materials abatement and containerization, as well as before and after photos of the Garage area, are shown in **Appendix C (Photos 69 to 82)**.

Some residual fuel was observed in one of the heating tanks in the former electrical room of the Garage. The fuel was removed from the tanks and temporarily stored in a Rubbermaid container which required sampling to determine the appropriate disposal requirements. AECOM was prepared to sample the fuel; however, upon arrival it was discovered that the container had been filled with used sorbents (from Garage demolition) and all of the fuel had been soaked up. Therefore, a sample was not collected. Consequently, the used sorbents were placed, with other used sorbents, in one of the marine containers scheduled to be shipped off-site.

2.3.4 POL Tank No. 5

One aboveground storage tank (AST), Tank No. 5, remained on site at the commencement of the remediation project. The tank was located at the main station area, approximately 50 m north of the former Warehouse Foundation, and had an approximate volume of 75,000 litres (L). All associated piping was removed prior to this remediation contract. Tank No.5 was classified as a painted item with concentrations of PCBs exceeding 50 ppm, thus requiring containerization and disposal off site.

During the winter CAT train (March 2010), Kudlik personnel emptied the POL tank contents into 13 drums. The contents were sampled by Kudlik on March 26, 2010 and analyzed in accordance with the 2009 INAC Abandoned Military Site Remediation Protocol (AMSRP) to determine disposal requirements. A review of the analytical data revealed that all parameters met the 2009 INAC AMSRP criteria for on-site incineration. For quality assurance and quality control (QA/QC) purposes a sample was collected by AECOM on August 15, 2010. Analytical results were received on September 7, 2010; all parameters met the criteria for on-site incineration confirming the results received by Kudlik.

The tank was decommissioned on August 19, 2010. The interior of the tank was cleaned and a quarter of a barrel of sludge was collected. The work was completed by the Kudlik hazardous materials specialist (Daniel Fauteux) and the Kudlik site superintendent (John Fraser), both of whom received confined space training prior to the remediation project. A hazard assessment was completed prior to entering the tank. Workers wore proper personal protective equipment (PPE) including full face respirators and used forced ventilation and air monitoring while completing the work. After the tank was decommissioned for fuel storage, it was used to store process water from remediation activities. The process water in the tank was treated, confirmed as meeting discharge criteria and discharged.

On August 29, 2011, the tank was split in half using ripper attachments on two excavators. The sides and top of the tank were folded and placed in a shipping container, which was lined with high-density polyethylene (HDPE) and metal strapping. The tank base was folded and disposed in the NHWL, as it was not painted.

Select photographs during product removal, tank cleaning, and demolition and containerization of POL Tank No. 5 are shown in **Appendix C (Photos 83 to 88)**.

2.3.5 POL Pumphouse

The POL Pumphouse was demolished and placed in the NHWL on July 23, 2010.

2.3.6 Fallen Antenna

Demolition of the fallen antenna was completed on August 3, 2010. The antenna was demolished and separated into eight sections, using an excavator. Samples of both the white and orange paint from the antenna were collected during a previously completed investigation and the results were below the leachable lead criteria. The sections were transported to the NHWL with the loader and later compacted in-situ with the excavator.

2.3.7 Short Range Radar (SRR) Camp

The provision for the demolition of the structures associated with the SRR camp located on DND property was introduced during the interseason. The demolition work fell under Contract Change Order (CCO) No. 2 and all activities related to hazardous materials were tracked under Task Authorization (TA) No. 10 as detailed in **Section 5.4.1**.

Demolition of the structures associated with the SRR camp (i.e. five modular trailers, four aboveground fuel storage tanks, a storage shed and an incinerator) commenced on July 7, 2011 and was finalized on July 10, 2011. Preliminary inspection of the structures was followed by hazardous materials identification and removal during which time six PCB oil-containing ballasts, a battery and approximately 24 linear fluorescent lamps (potentially containing mercury) were removed and packaged for off-site shipment. Four ASTs containing small amounts of residual diesel fuel were identified at the camp. The contents of the ASTs, which were used to service the camp, were removed and consolidated into one 1,000 L tote tank and sampled by the DR to determine the appropriate disposal requirements; additional details are provided in **Section 2.5**. All camp structures were then removed from DND property using a challenger and sled and transported to the NHWL for demolition and disposal.

An underground sewage vault was identified south of the modular trailers. The vault, which was rusted and void of effluent, consisted of a metal containment tray and plywood walls and cover. Rather than excavating the structure, lime was added to inhibit the growth of bacteria and the vault was collapsed in place and filled in with soils from within the immediate vicinity. Lathe was installed at each of the four corners of the tank location which was surveyed by the Contractor's Surveyor at the end of the 2011 construction season.

Debris encountered at the SRR camp consisted of scrap wood/metal, empty barrels, tin cans, glass and domestic waste. Scattered surface debris was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using a pickup truck. Activities at the SRR camp concluded with minor reshaping of the disturbed area to match the surrounding terrain.

Select photographs during demolition of the SRR camp and associated infrastructure, as well as before and after photos of the SRR area, are shown in **Appendix C (Photos 89 to 96)**.

2.4 Site Debris Areas

A total of 14 areas, shown on **Figure 1** (**Appendix A**), were identified as containing partially buried and/or scattered debris requiring removal, sorting, handling and appropriate disposal. Collection of surface debris from the Site Debris Areas was a work activity that extended throughout the 2010 and 2011 construction seasons. The majority of surface debris collection was completed by work crews using ATVs and trailers; however, in some areas larger equipment such as a CAT Challenger and sled, rock truck and/or the use of an excavator was required. Included in the debris collection were the approximately 8,792 barrels, which required collection, processing and disposal.

Known debris was defined as scattered visible debris on the existing ground surface or partially buried debris within 0.5 m of the existing ground surface. This debris consisted of hazardous and/or non-hazardous material. The approximate footprint and depth of waste of the debris areas were defined in the specification drawings. In addition to these debris areas, the Contractor was responsible for collecting debris that was located within 50 m of any access road or water course onsite or located within 10 m of a water body.

Select photographs of debris collection activities at CAM-D are shown in **Appendix C (Photos 97 to 167)**.

2.4.1 Site Debris Area 1 (Main Dump)

Surface debris collection at Site Debris Area 1 (Main Dump) commenced on August 25, 2010. Debris encountered at the Main Dump consisted of scrap wood/metal, barrels, waste concrete, a tracked bombardier, a wobbly tired grader box, a buggy earthmover frame, vehicles, tin cans, glass, and heavy equipment parts. Preliminary debris collection activities focused on separating the debris into waste streams, including segregating barrels containing fluid from empty barrels. Those containing fluid were accumulated awaiting processing and the empty barrels were transported to the NHWL for crushing and disposal. Details of the barrel processing program at the Main Dump are provided in **Section 2.5**. All asbestos transite panelling was immediately bagged and disposed of in the NHWL. Hazardous waste including capacitors and transformers containing or potentially containing PCB oil, as well as batteries, were collected when observed and packaged for off-site shipment. The locations of batteries or PCB oil-containing equipment were flagged with the intent of excavating and containerizing the underlying soil for off-site disposal. Details regarding the soil excavation and sampling program for battery and capacitor locations at the Main Dump are provided in **Section 2.7.13**.

It was found that once the top layer of debris was removed from the Main Dump there was extensive debris below surface and within several mounds inside the dump area. Included in the buried debris were batteries, asbestos containing materials (pipe insulation and transite panelling) and signs of potentially contaminated soil (stained soil). The Main Dump was identified in the Contract Documents as Site Debris Area 1 (which encompassed surface debris to a depth of 0.5 m); however, the amount of debris remaining in the soil after preliminary surface debris removal revealed that combing the area to remove visible debris at surface would not be sufficient to address the debris issue at the Main Dump.

A memorandum was issued by AECOM on September 20, 2010, entitled *CAM-D Main Dump and East Station Buried Debris Investigations,* which presented the results of a test pitting investigation completed by AECOM during the week of September 12, 2010. The study identified four lobes of previously unidentified buried debris (i.e. Lobes 1 through 4) within the limits of the Main Dump. Typical debris found within the lobes consisted of crushed and/or partially crushed barrels, scrap metal, wood, cables and machine parts mixed together with soil.

Results of the test pitting investigation coupled with supplementary information regarding soil quality, confirmed the need to re-evaluate the previously recommended remedial approach. Subsequently, a second memorandum was issued by AECOM during the interseason, on February 2, 2011, entitled *Redesign for Remediation of Unknown Buried Debris at Main Dump*, wherein recommendations were presented for each of the four lobes based on the

level of environmental risk associated with each lobe. It was recommended that Lobes 2, 3 and 4 be covered in place and Lobe 1 be excavated fully, the debris sorted and disposed of appropriately, and the residual soil stockpiled and sampled in accordance with the 2009 INAC AMSRP Ex-Situ Confirmatory Sampling Protocol. Details of the soil sampling program at Main Dump – Lobe 1 Buried Debris, as well as subsequent regrading of Lobe 1 area, are provided in **Section 2.6.5.1**. Details related to regrading activities at Main Dump – Lobes 2, 3 and 4 are provided in **Section 2.6.5.2**.

After thorough surface debris collection from the area between Lobes 1, 2, and 3 (and the collection, sorting and appropriate disposal of the debris and soil from Lobe 1) there remained pockets of partially exposed debris over much of the area. As a result, the area was re-evaluated using the *Dump site, landfill and debris area (waste disposal area – WDA) evaluation* (Annex A of the 2009 INAC AMSRP), the results and recommendations from the study were presented in AECOM memorandum *Design Revision for Lobe 1 at the Main Dump* dated July 29, 2011. Results of the evaluation classified the area as low environmental risk. In accordance with the 2009 INAC AMSRP, an engineered cover was placed over the area. Details specific to the regrading of this area are provided in **Section 2.6.5.2**.

Residual scattered surface debris at the Main Dump was addressed by a labour crew hand picking surface debris and taking loads of scrap metal, wire, glass, etc. to the NHWL using the John Deere gators. During the 2011 construction season, all untreated/unpainted wood was routinely incinerated in a dedicated burn bin. The DR collected samples of the residual ash to determine the appropriate disposal method. Additional details regarding the ash sampling program are presented in **Section 5.3.3.5**.

The DR completed an inspection of the Main Dump and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

Select photographs during debris collection, sorting and test pit investigations at the Main Dump, as well as before and after photos of the Main Dump area, are shown in **Appendix C (Photos 97 to 127)**.

2.4.2 Site Debris Area 2 (Pallet Line)

Debris encountered at Site Debris Area 2 (Pallet Line) predominantly consisted of barrels (both empty and those containing fluid); some scattered scrap wood/metal was also present. Preliminary debris collection activities focused on separating the debris into waste streams, including segregating barrels containing fluid from empty barrels. Those containing fluid were accumulated awaiting processing and the empty barrels were transported to the NHWL for crushing and disposal. Details of the barrel processing program at the Pallet Line are presented in **Section 2.5**. Scattered surface debris at the Pallet Line was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of the Pallet Line and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

2.4.3 Site Debris Area 3 (Inuit House/Portable Fuel Tanks)

Debris encountered at Site Debris Area 3 included scattered scrap wood/metal, heavy equipment parts, barrels and a two portable fuel tanks mounted on a skid. Smaller surface debris was addressed by labourers combing through the area and transporting the loads of scrap wood/metal, wire, etc. to the NHWL using the John Deer gators. The excavator was required near the area referred to as Inuit House Buried Debris to remove partially buried barrels and large equipment parts. The two portable fuel tanks were removed from their original location early in the 2010 construction season, cleaned and retrofitted by the Contractor for use as a mobile barrel processing unit. After barrel processing activities at CAM-D were finalized, and use of the mobile barrel processing unit was no longer required, the portable fuel tanks were disposed of in the NHWL. The DR completed an inspection of Site Debris

Area 3 and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

2.4.4 Site Debris Area 4 (Main Barrel Cache)

Debris encountered at Site Debris Area 4 (Main Barrel Cache) predominantly consisted of barrels (both empty and those containing fluid); some scattered scrap wood/metal was also present. Preliminary debris collection activities focused on separating the debris into waste streams, including segregating barrels containing fluid from empty barrels. Those containing fluid were accumulated awaiting processing and the empty barrels were transported to the NHWL for crushing and disposal. Details of the barrel processing program at the Main Barrel Cache are presented in **Section 2.5**. Scattered surface debris at the Main Barrel Cache was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of the Main Barrel Cache and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

2.4.5 Site Debris Area 5 (Main Station Area)

Site Debris Area 5 consisted of the majority of the main station area, including the Garage, Warehouse, POL, Burn Pit and Electrical Cabinets areas as well as the Vehicle Dump. Debris encountered at Site Debris Area 5 included barrels (both empty and those containing fluid), painted and unpainted scattered scrap wood/metal, electrical cabinets, waste concrete, trucks, and heavy equipment parts. Preliminary debris collection activities focused on separating the debris into waste streams, including segregating barrels containing fluid from empty barrels. Those containing fluid were accumulated awaiting processing and the empty barrels were transported to the NHWL for crushing and disposal. Details of the barrel processing program at the Site Debris Area 5, specifically the small cache of barrels at the POL area and fluids from the vehicles located at the vehicle dump, are presented in **Section 2.5**. All fluids remaining in any of the equipment were drained, transferred to new containers (consolidated with similar fluids where appropriate), and sampled in accordance with the 2009 INAC AMSRP Barrel Protocol Criteria as described in **Section 2.5**. Scattered surface debris at Site Debris Area 5 was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of Site Debris Area 5 and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

To determine the appropriate disposal requirements, confirmatory samples of substrates coated with potentially leachable lead paint were collected from the POL pumphouse, the Garage (interior structural steel) and the former module train (partially buried in the Warehouse Buried Debris and Module Train Buried Debris areas). Analytical results showed the concentration of leachable lead was below criteria for the sample of painted wood and metal from the former module train as well as the sample from the POL pumphouse; the concentration of leachable lead in the sample of structural steel from the Garage exceeded criteria. Further discussion regarding the classification of hazardous materials is provided in **Section 2.3.1**. A summary of the analytical results for the paint/substrate samples are presented in **Table B-3**, **Appendix B**.

2.4.6 Site Debris Area 6 (Airstrip)

Surface debris collection at Site Debris Area 6 (Airstrip) commenced on July 14, 2010. Debris encountered at the Airstrip included scrap wood/metal, barrels, a tracked bombardier, a grader, a truck, and a crane. To determine the appropriate disposal requirements, confirmatory samples of substrates coated with potentially leachable lead paint were collected from the grader and the crane. Analytical results showed the concentration of leachable lead in both samples was below criteria. Further discussion regarding the classification of hazardous materials is provided in **Section 2.3.1**. A summary of the analytical results for the paint/substrate samples are presented in **Table B-3**, **Appendix B**. On July 23, 2010, the grader and similar items were removed for the Airstrip and disposed of in the

NHWL. The crane was removed from the airstrip on August 10, 2010 and hauled to the Main Station where it was disposed of in the NHWL. All fluids remaining in any of the equipment were drained, transferred to new containers (consolidated with similar fluids where appropriate), and sampled in accordance with the 2009 INAC AMSRP Barrel Protocol Criteria as described in **Section 2.5**. The DR completed an inspection of the Airstrip Area and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

2.4.7 Site Debris Area 7 (Simpson Lake)

Surface debris at Site Debris Area 7 (Simpson Lake) included scrap wood/metal, barrels, a broken battery, a square tank and a bombardier. The square tank was removed from the frozen shore of Simpson Lake during the winter 2010 CAT train and transported to the camp area prior to the beginning of the 2010 construction season. To determine the appropriate disposal requirements, a confirmatory sample of the painted tank was collected for analytical determination of PCBs and leachable lead. Results showed that the concentration of total PCBs of the painted material was below criteria; and the concentration of leachable lead was below laboratory detection limits. Subsequently the tank was disposed of in the NHWL. Further discussion regarding the classification of hazardous materials is provided in **Section 2.3.1**. A summary of the analytical results for the paint/substrate samples are presented in **Table B-3**, **Appendix B**.

A small area of soil contaminated with heavy metals was identified at Simpson Lake during the Phase III ESA. On August 22, 2010, the contaminated soil and the broken battery was excavated and placed in a Rubbermaid container and left in the area with the intention of retrieving the material on a return trip to Simpson Lake using the ATVs. Additional details regarding the soil excavation and sampling program at Simpson Lake are provided in **Section 2.7.11**.

On October 1, 2010, a crew consisting of members of the Contractor's team and the DR travelled to Simpson Lake for surface debris reconnaissance. During this time 11 empty barrels, a small volume of scrap metal and the Rubbermaid container were retrieved and transported to the Main Station using a John Deere gator and two ATVs. The contaminated soil was packaged for off-site shipment and the empty barrels and scrap metal were disposed of in the NHWL. Approximately 35 additional empty barrels remained at Simpson Lake, which were later recovered during the winter 2011 CAT train when access and egress in the area was improved. At the request of the Community of Kugaaruk, the bombardier was also removed during the winter 2011 CAT train and taken to the community.

2.4.8 Site Debris Area 8 (Freshwater Lake)

Debris encountered at Site Debris Area 8 (Freshwater Lake) included scattered scrap wood/metal, empty barrels, a water tank, a large steel cabinet and heavy equipment parts. Smaller surface debris at Freshwater Lake was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. Removal of the larger items was completed using the 160 excavator and the tracked pick-up truck. Debris collection at Freshwater Lake was finalized on September 19, 2010. On September 21, 2010, the DR completed an inspection of Freshwater Lake and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

2.4.9 Site Debris Area 9 (Plumber's Dump)

Surface debris collection at Site Debris Area 9 (Plumber's Dump) commenced on August 28, 2010. Typical debris encountered at Plumber's Dump included scrap wood/metal, plumbing material and fittings and empty barrels. Debris collection at Plumber's Dump was finalized on September 20, 2010. On September 21, 2010, the DR

completed an inspection of Plumber's Dump and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of in the NHWL.

2.4.10 Site Debris Area 10

Surface debris in Site Debris Area 10 consisted of scrap wood/metal and scattered barrels. Dispersed barrels were inspected and empty ones were labelled with a 'C' (i.e. crush) and transported to the NHWL for crushing and disposal. Those containing fluid were accumulated and relocated to the Pallet Line for processing. Scattered debris was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of Site Debris Area 10 and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately.

2.4.11 Site Debris Area 11

Surface debris in Site Debris Area 11 consisted of scrap wood/metal and scattered barrels. Dispersed barrels were inspected and empty ones were labelled with a 'C' (i.e. crush) and transported to the NHWL for crushing and disposal. Those containing fluid were accumulated and relocated to the Pallet Line for processing. Scattered debris was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of Site Debris Area 11 and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately.

2.4.12 Site Debris Area 12

Surface debris in Site Debris Area 12 consisted of scrap wood/metal and scattered barrels. Dispersed barrels were inspected and empty ones were labelled with a 'C' (i.e. crush) and transported to the NHWL for crushing and disposal. Those containing fluid were accumulated and relocated to the Pallet Line for processing. Scattered debris was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of Site Debris Area 12 and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately.

2.4.13 Site Debris Area 13

Surface debris in Site Debris Area 13 consisted of scrap wood/metal and scattered barrels. Dispersed barrels were inspected and empty ones were labelled with a 'C' (i.e. crush) and transported to the NHWL for crushing and disposal. Those containing fluid were accumulated and relocated to the Pallet Line for processing. Scattered debris was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of Site Debris Area 13 and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately.

2.4.14 Site Debris Area 14 (Borrow Area No. 2)

Surface debris in Site Debris Area 14 consisted of scrap wood/metal and scattered barrels. Dispersed barrels were inspected and empty ones were labelled with a 'C' (i.e. crush) and transported to the NHWL for crushing and disposal. Those containing fluid were accumulated and relocated to the Pallet Line for processing (with the exception of those barrels collected at the beginning of the 2010 construction season which were processed at the Camp barrel processing area (BPA)). Scattered debris was addressed by a labour crew hand picking surface debris and taking loads of material to the NHWL using the John Deere gators. The DR completed an inspection of Borrow Area No. 2 and confirmed that debris removal activities were sufficient; surface debris had been removed and disposed of appropriately and the disturbed area was reshaped to match the surrounding terrain.

2.5 Barrel Processing

All barrels in the immediate vicinity of the POL Area, Site Debris Area 2 (Pallet Line), Site Debris Area 1 (Main Dump), Site Debris Area 4 (Main Barrel Cache) as well as barrels dispersed on the tundra in the numerous site debris areas, were collected, inspected, labelled, tested and processed in accordance with the 2009 INAC AMSRP Barrel Protocol. Hazardous, damaged, leaking and/or corroded barrels were transported and processed inside salvage overpack drums. Over the duration of the two construction seasons, of the approximately 8,792 barrels handled, 4,081 barrels (46%) contained residual fluids (water, fuel or otherwise) that were processed. The following paragraphs describe the barrel processing activities in detail. Select photographs of the Barrel Processing activities at CAM-D are shown in **Appendix C (Photos 168 to 187)**.

Since barrels on-site were found in dense concentrations at various areas at the Main Station, a mobile barrel processing unit proved to be the most suitable approach rather than transporting all of the barrels to a single stationary BPA. Consequently, Kudlik constructed a mobile barrel processing unit using equipment left on-site (i.e. two green portable fuel tanks) mounted on a skid. Barrels containing fluids were consolidated at one of the six barrel processing areas. In each area, barrels which were identified to contain water only were processed first. The contents of these barrels were emptied into a lined pan (approximately 2.0 m long x 1.0 m wide x 0.5 m deep) to allow any sediment in the water to settle and to remove residual hydrocarbons (if any) using absorbent socks prior to pumping the liquid into the oil/water separator. Once emptied, the barrels were rinsed by overfilling several times (using the filtered and separated water collected from the barrels) and were then punctured within the pan to drain the wash water. Using the same procedure, barrels containing a mixture of water and diesel were processed next. Barrels identified to contain diesel fuel only were left until the end and consolidated into the most suitable barrel(s) in preparation for sampling. All washed, empty barrels were routinely transported to the NHWL where they were crushed (so as to reduce their volume by a minimum of 75 %). The residual sediment/sludge from barrel processing activities was then consolidated into a barrel for sampling to determine disposal requirements.

After barrel consolidation, all barrel contents of suspect origin or composition were sampled and sent to Maxxam Analytics in Calgary for analysis. Laboratory results were assessed in accordance with the INAC AMSRP barrel protocol criteria presented in **Table 3**.

Table 3. Barrel Protocol Criteria and Disposal Summary

Phase	% Alcohols or Glycols	PCBs (ppm)	Total Chlorine (ppm)	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)	Disposal Method
Organic	-	<2	<1000	<2	<10	<100	On-Site Incineration
Organic	-	>2	>1000	>2	>10	>100	Ship South
Aqueous	>2	-	>1000	>2	>10	>100	Ship South
Aqueous	>2	-	<1000	<2	<10	<100	On-Site Incineration
Aqueous	<2	-	-	-	-	-	Discard in accordance with wastewater discharge criteria

On June 29, 2010, (prior to AECOM's arrival on-site), Kudlik collected 95 drums from around the camp area and near the Murchison Tributary (passed through Borrow Area No. 2, adjacent to the camp, and discharged in to the Murchison River approximate 1 km west of the camp) because they were either damaged, leaking or a hindrance during camp construction. The barrels were placed in a bermed and lined storage area adjacent the Garage at the camp site (herein referred to the Camp BPA). Of the 95 barrels, 38 were empty and 57 had residual fluids in them. On July 9, 2010, liquid barrel contents were consolidated into 11 barrels (five water, four diesel, one containing a mixture of used oil and water and one containing black oil). The DR collected six samples of organic fluid on

July 21, 2010 and submitted the samples to the laboratory to be analyzed in accordance with the 2009 INAC AMSRP Criteria for on-site incineration. With the exception of the sample of black oil, the five other samples met the criteria for on-site incineration. All of the barrels were then transported to the Main Station Area to be washed/crushed/disposed of during barrel processing activities later in the season. At the time of barrel collection around the camp area, stained soil from within the vicinity of the barrels was excavated and consolidated into one barrel. A composite sample (sample ID 10-20) of the soil was collected on July 15, 2010, and submitted to the laboratory for BTEX, F1-F4, PCBs and heavy metals analysis to determine the appropriate disposal method. A review of the analytical results, shown in **Table 4** below, revealed that the concentration of F2 and F3 fraction PHCs exceeded the PHC Impacted Soil Criteria; consequently the barrel containing soil was disposed of in the NHWL.

Table 4. Analytical Results for Sample 10-20

Parameter	Maximum Allowable Concentration (ppm)	Sample 10-20
Benzene	0.0068	<0.0050
Ethylbenzene	0.08	<0.020
Toluene	0.018	<0.010
Xylenes	2.4	<0.040
F1	260/15,000	<12
F2	900/8,000	**1,400**
F3	800/18,000	**8,300**
F4	5,600/25,000	3,700
Total PCBs	1/5	<0.50
Arsenic	30	<1
Cadmium	5	0.2
Chromium	250	8
Cobalt	50	2
Copper	100	5
Lead	200/500	34
Mercury	2	<0.05
Nickel	100	4
Zinc	500	28

On August 2, 2010, three samples of organic fluid (i.e. BR-114, BR-115 and BR-117) were collected from vehicles found at Site Debris Area 5 and Site Debris Area 6. All fluids were drained from the vehicles and consolidated into separate containers to facilitate sample collection. Samples were submitted in accordance with the 2009 INAC AMSRP Criteria for on-site incineration. BR-114 contained a mixture of used oil and water which was consolidated from the vehicles at the airstrip (i.e. grader/compressor and blue truck); analytical results showed all parameters met the criteria for on-site incineration. Approximately 100 L of black oil was drained from the blue truck located in Site Debris Area 5 (BR-115); analytical results showed that the concentration of cadmium, lead and total chlorine in the sample was in excess of the incineration criteria and therefore requires shipment and disposal off-site. A small volume of red diesel (~ 1L) was removed from the blue truck and sampled separately (BR-117); a review of the analytical results showed that the concentration of lead in the sample was in excess of the on-site incineration criteria and therefore requires shipment and disposal off-site.

Prior to transport to the Main Station Area for disposal in the NHWL, the green crane was drained of all of its fluids; fluids were drained from the gear box and the fuel tank and placed in separate containers for sampling. A sample of the used oil from the gear box was collected on August 10, 2010 (BR-125). A sample of the fuel (thought to be a mixture of gasoline and solvent) was collected on August 11, 2010 (BR-128). The fluids were sampled and analyzed

in accordance with the 2009 INAC AMSRP Criteria for on-site incineration. A review of the analytical results revealed that the used oil contained concentrations of total chlorine in excess of the incineration criteria and therefore requires shipment and disposal off-site. All parameters reported for the sample of fluid collected from the fuel tank were below criteria (i.e. suitable for on-site incineration).

Barrel processing activities commenced at the POL area on August 13, 2010. In total, 211 barrels containing fluids were identified, of which 128 contained diesel fuel, 68 barrels contained water and 14 contained a mixture of both. The diesel fuel from barrel processing activities at the POL area was consolidated into six drums (approximately 820 L), a sample of which was collected and submitted to the laboratory to be analyzed in accordance with the 2009 INAC AMSRP Criteria for on-site incineration. All parameters met the incineration criteria. The process water was consolidated into one of the green fuel tanks on the mobile barrel processing unit (approximately 2,500 L). One barrel was found to contain black oil (60 L) and was sampled separately (BR-124). A review of the analytical results revealed that the black oil contained concentrations of lead in excess of the incineration criteria and therefore requires shipment off-site. On August 20, 2010, once barrel processing activities at the POL area were finalized, the mobile barrel processing unit was relocated to the Pallet Line.

In March 2010, Kudlik personnel emptied out the partially full POL Tank located at the Main Station Area. The contents were removed from the tank and placed into 13 new barrels. The fuel was sampled by Kudlik on March 26, 2009 to determine suitability for incineration on-site. A review of the analytical data revealed that all parameters met the 2009 INAC AMSRP Criteria for on-site incineration. For QA/QC purposes a sample was collected by AECOM on August 15, 2010 which confirmed the results retrieved by Kudlik.

On August 21, 2010, barrel processing commenced at Site Debris Area 2 (Pallet Line). In total, 814 barrels containing fluids were identified, of which 453 contained diesel fuel, 192 barrels contained water, and 130 contained a mixture of both. The diesel fuel from barrel processing activities at the Pallet Line was consolidated into seven drums (approximately 1,080 L), a sample of which was collected and submitted to the laboratory to be analyzed in accordance with the 2009 INAC AMSRP Criteria for on-site incineration. All parameters met the incineration criteria. Approximately 6,500 L of water was generated from barrel processing at the Pallet Line. This water was consolidated with the water from the barrel processing activities at the POL area. Thirty-six barrels containing lubricating oil and three barrels containing black oil were identified at the Pallet Line. Barrel contents were consolidated (where practical) and then sampled to determine disposal requirements. In 2010, the DR collected 20 samples of oil from barrels at the Pallet Line, of which 11 met the on-site incineration criteria and nine did not (i.e. require off-site shipment). Barrel processing at the Pallet Line was finalized on September 3, 2010.

At the beginning of August, solidified grease was found spilled onto the ground near the pallet line excavations and immediately adjacent to 3-BD-3 (Module Train Buried Debris). The grease and surrounding soils were collected, consolidated into four 20 L pails and temporarily stored within the secondary containment at the Pallet Line. A sample of the grease sand mixture was collected on September 9, 2010 and was analyzed in accordance with the INAC AMSRP to determine the suitability for incineration. Analytical results showed all parameters met the criteria for on-site incineration.

On September 14, 2010, barrel processing commenced at Site Debris Area 1 (Main Dump). In total, 186 barrels containing fluids were identified, of which 10 contained diesel fuel, 133 barrels contained water, and two contained a mixture. The diesel fuel from barrel processing activities at the Main Dump was consolidated into four drums (approximately 740 L), a sample of which was collected and submitted to the laboratory to be analyzed in accordance with the 2009 INAC AMSRP Criteria for on-site incineration. All parameters met the incineration criteria. Water generated from barrel processing at the Main Dump was consolidated with the water from the barrel processing activities at the POL and Pallet Line areas. Thirty barrels containing lubricating oil and seven barrels containing black oil were identified at the Main Dump. Barrel contents were consolidated (where practical) and then

sampled to determine disposal requirements. In 2010, the DR collected 30 samples of oil from barrels at the Main Dump, of which 21 met the on-site incineration criteria and nine did not (i.e. require shipment off-site). Barrel processing at the Main Dump was finalized on September 16, 2010.

Three barrels marked NRCAN (containing Jet B fuel) were identified adjacent to the haul road. It was confirmed that the barrels were left in the area by the Geological Survey of Canada during the CNGO Boothia Mapping Project in 2005-2006. On September 18, 2010 the three NRCAN barrels were transported to a temporary shelter at the Main Station area, and used in the frost fighters during the 2011 CAT train.

All those barrels containing organic oil (which were either suitable for incineration or for which the disposal method had not yet been confirmed) were relocated to the Pallet Line for winter storage. The barrels were placed in one of two areas: the Pallet Line Temporary Storage Area (TSA) or within the adjacent secondary containment pan. Details regarding the construction of the Pallet Line TSA and the baseline/confirmatory sampling results are presented in **Section 2.5.1.2**.

The residual sludge from barrel processing activities at the POL area, Pallet Line and Main Dump was consolidated into four partially full barrels. A composite sample of the sludge (sample ID 10-537) was collected on September 22, 2010 and analyzed for BTEX, F1-F4, PCBs and heavy metals to determine the appropriate disposal method. Analytical results showed that concentrations of BTEX, F1 and F4 fraction PHCs exceeded the PHC impacted soil criteria, while F2 and F3 fraction PHCs exceeded the PHC Contaminated Soil Criteria (as shown in **Table 5**, below). In addition to the PHC exceedances, three heavy metals exceedances were noted; concentrations of copper, nickel and zinc were found to exceed the DCC Tier II Contaminated Soil Criteria. As a result, the sludge was not considered suitable for disposal in the NHWL and the barrels were containerized for off-site shipment.

Table 5. Analytical Results for Sample 10-537

Parameter	Maximum Allowable Concentration (ppm)	Sample 10-537
Benzene	0.0068	**1.9**
Ethylbenzene	0.08	**47**
Toluene	0.018	**29**
Xylenes	2.4	**280**
F1	260/15,000	**1,300**
F2	900/8,000	**74,000**
F3	800/18,000	**24,000**
F4	5,600/25,000	**8,200**
Total PCBs	1/5	<0.010
Arsenic	30	24
Cadmium	5	0.5
Chromium	250	75
Cobalt	50	25
Copper	100	**230**
Lead	200/500	95
Mercury	2	0.13
Nickel	100	**110**
Zinc	500	**720**

The remaining barrels to be processed after the close of the 2010 construction season were those located within Site Debris Area 4 (Main Barrel Cache) only. Preliminary barrel sorting commenced on July 9, 2011 and barrel

processing began on July 23, 2011. In total, 2,709 barrels containing fluids were identified, of which 585 contained diesel fuel, 2,056 barrels contained water, and 35 contained a mixture. The diesel fuel from barrel processing activities at the Main Barrel Cache was consolidated into 30 partially full barrels (combined volume of approximately 4,055 L). The fuel was routinely consolidated and sampled in stages throughout the 2011 construction season (i.e. once a sufficient volume of fuel had been consolidated, a sample was collected). Six samples of consolidated diesel fuel from the Main Barrel Cache were collected by the DR and submitted to the laboratory in accordance with the 2009 INAC AMSRP Criteria for on-site incineration; all parameters met the incineration criteria. Four barrels containing small volumes of red diesel were identified at the Main Barrel Cache, the contents of the barrels were consolidated prior to sample collection and submission for analysis. A review of the analytical results revealed that the concentration of lead in the sample (i.e. 510 ppm) exceeded the criteria and would require shipment off-site. Eighteen barrels containing lubricating oil and nine barrels containing black oil were identified at the Main Barrel Cache. Barrel contents were consolidated (where practical) and then sampled to determine disposal requirements. In 2011, the DR collected nine samples of oil (i.e. lubricating oil/black oil or otherwise) from barrels at the Main Barrel Cache, of which six met the on-site incineration criteria and three did not (i.e. require shipment off-site). Barrel processing at the Main Barrel Cache was finalized on September 4, 2011.

Four ASTs containing small amounts of residual diesel fuel were identified at the SRR camp. The ASTs were drained and the contents were consolidated into one 1,000 L tote tank (approximately 500 L), a sample of which was collected and submitted to the laboratory to be analyzed in accordance with the 2009 INAC AMSRP Criteria for on-site incineration. All parameters met the incineration criteria.

The Contractor chose not to destroy any of the fluids deemed suitable for on-site incineration (by way of sample collection and analysis) since an appropriate incinerator had not been brought to site. An attempt to construct a suitable incinerator using equipment and materials available on-site was unsuccessful. As a result, it was decided that it would be more cost effective to transport all POL fluids to a southern licensed disposal facility.

A summary of the analytical results from the CAM-D barrel sampling program are presented in **Table B-4**, **Appendix B**.

2.5.1.1 Process Water

Consistent with the requirements of the 2009 INAC AMSRP, all process water generated during barrel processing activities was first sampled and submitted to the laboratory for % glycols analysis only. Process water that met the 2009 INAC AMSRP Barrel Protocol Criteria for % Glycols (i.e. < 2%) was then analyzed in accordance with the discharge requirements of the Water Licence, additional details for which are provided in **Section 5.3.3.3**.

On September 6, 2010, aluminum sulphate (alum) was added to the water generated during barrel processing activities at the Pallet Line and POL area, to promote flocculation and settling of the suspended solids. The DR collected a sample of the water on September 12, 2010. Consistent with the requirements of the 2009 INAC AMSRP, the sample was submitted for % glycols analysis. A review of the analytical results revealed that the concentration of glycol was reported below the laboratory detection limits. Consequently, a request was made to the laboratory to analyze the water for all of the discharge parameters in the Water License. Results showed exceedances of the Maximum Allowable Concentration values for three of the discharge parameters; oil and grease, pH and phenols. Consequently, all water generated from barrel processing activities in 2010 was pumped from the two green portable fuel tanks and transferred to POL Tank No. 5 (combined volume of approximately 19,000 L) for storage over the winter with the intent to resample the fluid at the beginning of the 2011 construction season.

The water stored inside POL Tank No. 5 was re-sampled on July 12, 2011, and submitted to the laboratory for analysis of pH, oil and grease and phenols. Analytical results showed all parameters met the discharge requirements of the water license excepting pH. The Contractor added a small quantity of lime to the water to raise

the pH and the water was field-tested using a pH kit. On July 21, 2011, once acceptable PH levels were achieved, the water was discharged, approximately 100 m north of the tank location, using a splashboard to minimize erosion impact to the tundra. As described in **Section 2.3.4**, at the end of the 2011 construction season, the tank was cleaned of all residual sludge, prior to being demolished and containerized for off-site shipment.

Approximately 6,000 L of process water had been consolidated from barrel processing activities at the Main Barrel Cache by July 30, 2011, at which time the DR collected a sample. Consistent with the requirements of the 2009 INAC AMSRP, the sample was submitted for % glycols analysis. A review of the analytical results revealed that the concentration of glycol was reported below the laboratory detection limits. Consequently, a request was made to the laboratory to analyze the sample in accordance with the discharge parameters in the Water License. Results showed the concentration of phenols in the water sample exceeded the Maximum Allowable Concentration value listed in the Water License. On August 18, 2011, the water was transferred from the green portable fuel tank into an inflatable containment pool for treatment via activated carbon and alum to reduce phenols concentrations. Since initial sample collection, additional process water had been added to the pool; the intention was to re-sample for a full suite of parameters once barrel processing was complete.

On September 7, 2011 a composite sample of barrel process water was collected by the DR and submitted to the laboratory for % glycols analysis. All water generated during barrel processing activities at the Main Barrel Cache had been consolidated into four inflatable containment pools (combined volume of approximately 40,000 L). A review of the analytical results revealed that the concentration of glycol was reported below the laboratory detection limits. Consequently, a request was made to the laboratory to analyze the sample in accordance with the discharge parameters in the Water License. Results showed the concentration of phenols in the water sample (0.04 mg/L) exceeded the Maximum Allowable Concentration value (0.02 mg/L) listed in the Water License. Considering that the phenols concentration was reduced from 0.22 mg/L (time of initial sampling, July 30, 2011) to 0.04 mg/L since being treated (using activated carbon and alum), and due to the lateness in the season (analytical results for an additional sample would not have been available prior to camp shut down), it was recommended to pass the process water through the carbon filters and discharge the effluent to the tundra. The effluent was discharged to the tundra on September 19, 2011 (at a location approximately > 2 km away from the nearest surface water body), at which time the DR collected a sample of the effluent to evaluate the final concentrations of phenols in the process water. Analytical results showed that the concentration of phenols remained slightly elevated above the Maximum Allowable Concentration as stated in the Water Licence, but had been further reduced to 0.029 mg/L. The results of the analyses are presented in **Table 6**.

It should be noted that in 2007, DND and ESG submitted a position paper regarding phenols in wastewater. Based on the evidence presented in the paper, phenols were removed from the discharge parameters for the DND DEW Line Clean Up program. The DND paper indicated that there is a low environmental risk associated with the release of water with low levels of phenols, when discharged to the ground away from water bodies. It was concluded that phenols are naturally attenuated by sunlight under such circumstances.

Table 6. Process Water Analysis Results

Parameter	Maximum Allowable Concentration (µg/L)	10-448 (BR-146)	11-144 (BR-182)	11-420 (BR-190)	11-508 (BR-201)	11-510 (re-sample of BR-201)
	Date Sampled	12-Sep-10	12-Jul-11	30-Jul-11	7-Sep-11	19-Sep-11
pH	6 to 9 (pH units)	**4.53**	**5.72**	8.99	6.03	-
Oil and Grease	5000	**6000**	<2000	5000	<2000	-
Arsenic (Total)	100	<1	-	0.8	0.7	-
Cadmium (Dissolved)	10	8.9	-	0.017	0.049	-
Chromium (Dissolved)	100	<5	-	<1	<1	-
Cobalt (Dissolved)	50	3	-	<0.3	0.9	-
Copper (Dissolved)	200	7	-	3.1	1.2	-
Lead (Dissolved)	50	1	-	4.8	1.1	-
Mercury (Total)	0.6	<0.002	-	<0.002	<0.002	-
Nickel (Dissolved)	200	19	-	4.1	6.8	-
PCB (Total)	1000	<0.05	-	<0.5	<1.3	-
Phenols	20	**1100**	**420**	**220**	**40**	**29**
Zinc (Total)	500	410	-	27	32	-

2.5.1.2 Barrel Processing Areas (BPAs)

During the 2010 construction season, four BPAs were established (i.e. POL BPA, Pallet Line BPA-1, Pallet Line BPA-2 and Main Dump BPA). In 2011, two additional BPAs were created to address the barrels located within Site Debris Area 4 (Main Barrel Cache), namely Main Barrel Cache BPA-1 and Main Barrel Cache BPA-2. As the mobile barrel processing unit was moved from one area to another, the BPAs were baseline and confirmatory sampled by the DR, results for which are presented in **Table B-2, Appendix B**.

POL BPA

On August 12, 2010, three baseline soil samples were collected at the POL BPA; one next to the ramp where the barrels were brought into the processing workflow and two on the downgradient side of the system. The samples were submitted for BTEX, F1-F4, heavy metals and PCB analyses. Analytical results showed that concentrations of all parameters were below criteria and/or laboratory detection limits. After barrel processing activities were complete and the mobile barrel processing unit was moved to the Pallet Line BPA-1, twelve confirmatory soil samples (and one duplicate sample) were collected. Confirmatory samples were arranged in a 3 m x 3 m grid spacing over the area where the mobile equipment was situated during barrel processing. A review of analytical results for the confirmatory samples showed that concentrations of all parameters were below criteria and/or laboratory detection limits. The confirmatory sample points at the POL BPA are presented on **Figure 5**, located in **Appendix A.**

Pallet Line BPA-1

The mobile barrel processing unit was moved to the Pallet Line BPA-1 on August 21, 2010 at which time three baseline soil samples were collected. The samples were analyzed for BTEX, F1-F4, PCBs and heavy metals; all parameters were below criteria and/or laboratory detection limits. After barrel processing activities were complete and the mobile barrel processing unit was moved to the Pallet Line BPA-2, twelve confirmatory samples (and one duplicate sample) were collected. Confirmatory samples were arranged in a 6 m x 6 m grid spacing over the area where the mobile equipment was situated during barrel processing. Analytical results showed that concentrations of all parameters were below criteria and/or laboratory detection limits. The confirmatory sample points at the Pallet Line BPA-1 are presented on **Figure 6**, located in **Appendix A.**

Pallet Line BPA-2

On August 25, 2010 the mobile barrel processing equipment was moved to the Pallet Line BPA-2. Three baseline soil samples were collected prior to the commencement of barrel processing activities and submitted for analysis; results showed concentrations of all parameters (i.e. BTEX, F1-F4, heavy metals and PCBs) were below criteria and/or laboratory detection limits. After barrel processing activities were complete and the mobile barrel processing unit was moved to the Main Dump BPA (September 6, 2010), ten confirmatory soil samples (and one duplicate sample) were collected. Confirmatory samples were arranged in a 3 m x 3 m grid spacing over the area where the mobile equipment was situated during barrel processing. A review of the analytical results showed one exceedance of the DCC Tier I Contaminated Soil Criteria for PCBs. The concentration of PCBs in sample 10-433 was 2.99 ppm and was considered to be highly localized, since it was surrounded by clean samples. Consequently, on September 20, 2010 approximately 1 m^3 of impacted soil was excavated and disposed of in the NHWL. A second confirmatory sample was collected; results showed non-detectable concentrations of PCBs. The confirmatory sample points at the Pallet Line BPA-2 are presented on **Figure 6**, located in **Appendix A.**

Pallet Line TSA

The Contractor constructed a 5 m x 7 m TSA at the Pallet Line on September 20, 2010, to store barrels containing organic fluid (which were either identified as suitable for incineration of for which the disposal method had not yet been confirmed) over the duration of the winter. The surrounding surface soils were bermed and a Geotextile liner was placed on the ground surface to prevent impact to the soil beneath. Prior to placing the liner on the ground surface, three baseline soil samples were collected and submitted to the laboratory for BTEX, F1-F4, PCBs and heavy metals analysis. Analytical results showed concentrations of all parameters were below criteria and/or laboratory detection limits. Both the Pallet Line TSA, as well as the secondary containment pan, were covered with tarps which were anchored to the ground at the end of the 2010 construction season to prevent any potential damage from severe winter weather conditions. At the end of the 2011 construction season, once use of the Pallet Line TSA was no longer required, the DR collected one composite baseline soil sample from the area. A review of the analytical results, provided in **Table B-5** (**Appendix B**), revealed that all parameters were below criteria and/or laboratory detection limits, consequently the Pallet Line TSA was reshaped to match the surrounding terrain.

Main Dump BPA

Three baseline soil samples were collected at the Main Dump BPA on September 4, 2010. A review of analytical results showed that concentrations of all parameters (i.e. BTEX, F1-F4, heavy metals and PCBs) were below criteria and/or laboratory detection limits. After barrel processing activities were complete, eleven confirmatory soil samples (and one duplicate sample) were collected. Confirmatory samples were arranged in a 6 m x 6 m grid spacing over the area where barrel processing activities occurred. A review of the analytical results showed one exceedance of the DCC Tier I Contaminated Soil Criteria and one exceedance of the DCC Tier II Contaminated Soil Criteria for PCBs. The concentrations of PCBs in sample 10-530 and 10-531 (duplicate sample) were 1.49 ppm and 8.7 ppm respectively. Since both samples were collected from the same location and all surrounding samples showed concentrations below criteria, the exceedances were considered to be highly localized. Considering the exceedance was noted at the conclusion of the 2010 construction season, and the soil conditions at the Main Dump, the soil exceeding criteria was not excavated and would be addresses during the 2011 construction season. At the end of the 2010 construction season, the mobile barrel processing unit was winterized in place at the Main Dump BPA where it remained for the duration of the winter.

Excavation of the PCB exceedance at Main Dump BPA was completed on July 6, 2011. Approximately 2 m^3 of soil was removed and containerized (one seacan was filled) for off-site disposal. One confirmatory sample (and one duplicate sample) was collected from the base of the excavation on July 10, 2011 and submitted to the laboratory for PCB analysis. A review of the analytical results revealed that the concentration of total PCBs in both of the samples (i.e. the sample and it's duplicate) were below laboratory detection limits. Subsequently, the excavation was

reshaped to match the surrounding terrain. The confirmatory sample points at the Main Dump BPA are presented on **Figure 7**, located in **Appendix A.**

Main Barrel Cache BPA-1

Prior to the start of 2011 barrel processing activities at the Main Barrel Cache BPA-1, the DR collected three baseline soil samples. The samples were analyzed for BTEX, F1-F4, PCBs and heavy metals; all parameters were below criteria and/or laboratory detection limits. Once barrel processing activities at the Main Barrel Cache BPA-1 were finalized, and the mobile barrel processing unit was relocated to the Main Barrel Cache BPA-2, the DR collected ten confirmatory soil samples (and one duplicate sample). Confirmatory samples were arranged to ensure complete coverage over the area where the mobile equipment was situated during barrel processing. Analytical results showed that concentrations of all parameters were below criteria and/or laboratory detection limits. The confirmatory sample points at the Main Barrel Cache BPA-1 are presented on **Figure 8**, located in **Appendix A.**

Main Barrel Cache BPA-2

On July 26, 2011, the mobile barrel processing equipment was moved to the Main Barrel Cache BPA-2. Three baseline soil samples were collected by the DR prior to the commencement of barrel processing activities and submitted for analysis; results showed all parameters were below criteria and/or laboratory detection limits. Once barrel processing activities at the Main Barrel Cache BPA-2 were finalized, 19 confirmatory soil samples (and two duplicate samples) were collected by the DR. Confirmatory samples were arranged to ensure complete coverage over the area where barrel processing activities occurred. A review of the analytical results showed two exceedances of the 2009 INAC AMSRP for Type B Hydrocarbon Contamination. The concentration of Type B Hydrocarbon Contamination in sample 11-490 and 11-491 (duplicate sample) were 2,620 ppm and 2,640 ppm respectively. Since both samples were collected from the same location and all surrounding samples showed concentrations below criteria, the exceedances were considered to be highly localized. Excavation of the PHC exceedance was completed on September 14, 2011, during which time approximately 12.5 m^3 of soil was excavated and disposed of in the NHWL. A confirmatory sample was not collected from this area; instead the area of the exceedance was over excavated then reshaped to match the surrounding terrain. The confirmatory sample points at the Main Barrel Cache BPA-2 are presented on **Figure 8**, located in **Appendix A.**

2.5.2 Hazardous Waste

Hazardous waste encountered during remediation of the CAM-D DEW Line Site included:

- Asbestos
- PCB waste (ballasts, transformers, and painted debris)
- Batteries
- Barrels

ACMs such as the transite board and pipe insulation were wrapped and/or double bagged prior to disposal in the NHWL. PCB waste and scattered batteries were collected and consolidated into salvage overpack drums and seacans (separately; i.e. PCB waste was not mixed with batteries) and then secured inside prepared marine containers for off-site shipment. Additional details regarding PCB storage are provided in **Section 5.3.3.6**.

Eighty-six samples of organic fluid were collected over the two construction seasons at CAM-D, of which 27 were identified as hazardous (i.e. not suitable for on-site incineration) based on a comparison of the analytical results to the 2009 INAC AMSRP Barrel Protocol Criteria as discussed in **Section 2.5**.

Workers wore the appropriate PPE when handling hazardous waste, including but not limited to: full face respirators, tyvek coveralls, disposable nitrile gloves, and safety glasses. All hazardous materials consolidated from demolition and debris collection activities at CAM-D were placed into prepared marine containers, superbags or wooden seacans. Marine containers were prepared by lining the bottom and the sides (up to 1.2 m) with polyethylene

sheeting followed by the placement of OSB plywood and 2 by 4's secured together (so as to not puncture the plastic).

2.6 Buried Debris Areas

The remedial design that was applied in relation to buried debris excavations consisted of:

- Removal of surface debris
- Excavation of debris and soil until either the design depth was reached or until no further debris was observed
- Sorting and separation of debris into different waste streams
- Disposal of non-hazardous waste into the NHWL
- Preparation of hazardous waste for offsite shipment and disposal
- Stockpiling intermixed soil for sampling to determine disposal requirements

For all buried debris areas, a Material Processing Area (MPA) was set up within the excavation limits, to allow sorting of the excavated contents and stockpiling of intermixed soil. Excavated contents were sorted and segregated according to non-hazardous debris, hazardous debris, and soil. Hazardous debris was containerized upon removal, and placed at the TSA. Non-hazardous debris was disposed of in the NHWL. Soil was stockpiled in place, in stockpiles of approximately 20 m^3, and sampled according to the procedures of the AMSRP to assess contaminant levels. Contaminated soil requiring offsite disposal was containerized appropriately, whereas clean soil or soil containing low level contaminants was used for backfill as described in the following sections. Upon removal of the contaminated soil stockpiles, confirmatory samples were collected from the base of the buried debris excavation where contaminated soil had been identified to confirm that no residual contamination was present.

2.6.1 2-BD-1 (East Station Buried Debris)

A memorandum was issued by AECOM on September 20, 2010, entitled *CAM-D Main Dump and East Station Buried Debris Investigations,* which presented the results of a test pitting investigation completed by AECOM during the week of September 12, 2010. The study revealed that excavation of 2-BD-1 (East Station Buried Debris) based on the original design limits would not be sufficient to address the buried debris in this area. Consequently, the lateral limits of the excavation were extended by 20 m and the depth was vertically extended by 0.5 m for a combined total depth of 1.0 m.

Excavation of East Station Buried Debris to the revised design limits commenced on September 23, 2010 and was finalized on September 24, 2010. Debris found within the excavation included metal strapping, 4 inch steel casing, scrap wood, scrap metal, crushed and/or partially crushed empty barrels, and pieces of an antenna. The depth of debris ranged from 0.5 m to 1.0 m. The excavated material was sorted (i.e. debris was removed and separated into waste streams then disposed of in the NHWL or containerized) and the residual soil (now free from debris) was placed in stockpiles.

Twelve stockpiles of potentially contaminated soil were generated during the East Station Buried Debris excavation, all of which were stockpiled within the excavation limits, thus eliminating the need for a separate material processing area. The first ten stockpiles were approximately 20 m^3 in size; the next 2 stockpiles were approximately 10 m^3 in size. On September 25, 2010, 66 soil samples (plus 7 duplicate samples) were collected from the soil stockpiles in accordance with the 2009 INAC AMSRP Ex-Situ Confirmatory Sampling Protocol (i.e. 5 discrete samples and 1 composite sample from each 20 m^3 stockpile) and submitted to the laboratory for heavy metals and PCB analyses. Analytical results for the East Station Buried Debris stockpiles were received on October 13, 2010. A review of the results revealed one copper exceedance of the DCC Tier II Contaminated Soil Criteria (ES-BD-7); however no further activity was completed during the 2010 construction season. The stockpile requiring disposal was identified by AECOM and containerized on July 10, 2011, during which time ten seacans were filled (approximately 20 m^3).

Subsequent to the removal of the stockpiled soil, two confirmatory samples from the base of the excavation were collected and submitted to the laboratory for the analysis of copper. Analytical results for the two confirmatory samples collected from the base of the excavation were received on July 19, 2011; the concentration of copper was below criteria in both samples.

Using the 11 remaining stockpiles, the excavation was backfilled and reshaped to match the surrounding terrain on July 25, 2011.

A summary of the analytical results from the East Station Buried Debris stockpile sampling program and confirmatory testing are located in **Tables B-6** and **B-7**, **Appendix B**, respectively. Select photographs during excavation and debris sorting at the East Station Buried Debris area are shown in **Appendix C (Photos 188 to 191)**.

2.6.2 3-BD-1 (POL Buried Debris)

Excavation of 3-BD-1 (POL Buried Debris) commenced on September 20, 2010 and was finalized on September 23, 2010. Debris found within the excavation included scrap wood (both painted and unpainted as well as that treated with creosote), scrap metal, crushed and/or partially crushed empty barrels, aluminum caulking, capacitors, batteries, fibreglass insulation, rebar, cables and heavy equipment parts. The depth of excavation did not exceed 1.2 m (i.e. debris did not extend to estimated design limits of 2.0 m). The excavated material was sorted (i.e. debris was removed and separated into waste streams then disposed of in the NHWL or containerized) and the residual soil (now free from debris) was placed in stockpiles.

Thirteen stockpiles of potentially contaminated soil were generated during the POL Buried Debris excavation, all of which were stockpiled within the excavation limits, thus eliminating the need for a separate material processing area. The first 12 stockpiles were approximately 20 m^3 in size and the thirteenth stockpile was approximately 5 m^3 in size. On September 23, 2010, 76 soil samples (plus nine duplicate samples) were collected from the soil stockpiles in accordance with the 2009 INAC AMSRP Ex-Situ Confirmatory Sampling Protocol (i.e. 5 discrete samples and 1 composite sample from each 20 m^3 stockpile) and submitted to the laboratory for heavy metals and PCB analyses. Stockpiles POL-BD-11 through POL-BD-13 were generated from within the overlapping area of POL – Impacted and POL Buried Debris, consequently the soil from within these stockpiles was also analyzed for BTEX, F1-F4. Analytical results for the POL Buried Debris stockpiles were received between September 28 and October 1, 2010. A review of analytical results revealed one PCB exceedance of the DCC Tier I Contaminated Soil Criteria (POL-BD-9) and nine exceedances for various BTEX, F1-F4 parameters of the site specific PHC Impacted Soil Criteria (POL-BD-11, POL-BD-12 and POL-BD-13); however no further activity was completed during the 2010 construction season. The four stockpiles requiring disposal were identified by AECOM and disposed of in the NHWL on July 7, 2011. On July 17, 2011, subsequent to the removal of POL-BD-9, two confirmatory samples from the base of the excavation were collected and submitted to the laboratory for PCB analysis. The area beneath stockpiles POL-BD-11, POL-BD-12 and POL-BD-13 did not require confirmatory sampling as this material was intended to be removed during the excavation of POL – Impacted. Analytical results for the two confirmatory samples collected from the base of the excavation, below POL-BD-9, were received on July 22, 2011; concentrations of PCBs in both samples were below criteria. Consequently, the nine remaining stockpiles, were used to backfill a portion of 3-PHC-I-1 (POL – Impacted) and reshaped to match the surrounding terrain.

A summary of the analytical results from the POL Buried Debris stockpile sampling program and confirmatory testing are located in **Tables B-8** and **B-7**, **Appendix B**, respectively. Select photographs during excavation and debris sorting at the POL Buried Debris area are shown in **Appendix C (Photos 192 to 197)**.

During the excavation of POL Buried Debris, approximately ten cans of an unknown white powdery substance was discovered, a sample (sample ID 10-625) of which was collected and submitted for metals analysis. As shown in **Table 7** below, results for all parameters were low and/or below laboratory detection limits. Regardless, the small

containers with this powdery substance were consolidated in a plastic bag, placed in a marine container with other hazardous waste, and shipped south for disposal.

Table 7. Analytical Results for Sample 10-625

Parameter	Maximum Allowable Concentration (ppm)	Sample 10-625
Arsenic	30	<1
Cadmium	5	<0.1
Chromium	250	3
Cobalt	50	1
Copper	100	<5
Lead	200/500	3
Mercury	2	<0.05
Nickel	100	2
Zinc	500	39

2.6.3 3-BD-2 (Warehouse Buried Debris)

Excavation of 2-BD-2 (Warehouse Buried Debris) was completed on July 7, 2011. Debris found within the excavation included scrap wood (both painted and unpainted), scrap metal, crushed and/or partially crushed empty barrels, concrete, fibreglass insulation and electrical wiring. The depth of excavation did not exceed 0.4 m (i.e. debris did not extend to estimated design limits of 2.0 m). The excavated material was sorted (i.e. debris was removed and separated into waste streams then disposed of in the NHWL or containerized) and the residual soil (now free from debris) was placed in stockpiles approximately 20 m^3 in size.

Five stockpiles of potentially contaminated soil were generated during the Warehouse Buried Debris excavation, all of which were stockpiled within the excavation limits, thus eliminating the need for a separate material processing area. On July 10, 2011, 30 soil samples (plus three duplicate samples) were collected from the soil stockpiles in accordance with the 2009 INAC AMSRP Ex-Situ Confirmatory Sampling Protocol (i.e. 5 discrete samples and 1 composite sample from each 20 m^3 stockpile) and submitted to the laboratory for heavy metals and PCB analyses. Analytical results for the Warehouse Buried Debris stockpiles were received on July 19, 2011. A review of the results showed one PCB exceedance of the DCC Tier I Contaminated Soil Criteria for PCBs (WH-BD-4). On July 23, 2011, WH-BD-4 was disposed of in the NHWL. Subsequent to the removal of WH-BD-4, two confirmatory samples from the base of the excavation (immediately below the stockpile WH-BD-4) were collected and submitted to the laboratory for PCB analysis. Analytical results were received on July 27, 2011; all parameters were below criteria and/or laboratory detection limits. The remaining four stockpiles, were used to regrade the largest concrete antenna base (~80 m^3), where the material from the stockpiles was placed around the concrete base and covered with Type 3 Granular Fill sourced from the immediate vicinity. The Warehouse Buried Debris excavation was reshaped to match the surrounding terrain on July 28, 2011.

A summary of the analytical results from the Warehouse Buried Debris stockpile sampling program and confirmatory testing are located in **Tables B-9** and **B-7**, **Appendix B**, respectively. Select photographs during excavation and debris sorting at the Warehouse Buried Debris area are shown in **Appendix C (Photos 198 to 199)**.

2.6.4 3-BD-3 (Module Train Buried Debris)

Excavation of 3-BD-3 (Module Train Buried Debris) was completed on July 7, 2011. Debris found within the excavation included scrap metal, scrap wood (both painted and unpainted), pieces of the former module train, pipe, asbestos (five bags filled), and five empty CO_2 tanks. The depth of excavation did not exceed 0.5 m (i.e. debris did

not extend to estimated design limits of 1.9 m). The excavated material was sorted (i.e. debris was removed and separated into waste streams then disposed of in the NHWL or containerized) and the residual soil (now free from debris) was placed in stockpiles approximately 20 m^3 in size.

Five stockpiles of potentially contaminated soil were generated during the Module Train Buried Debris excavation, all of which were stockpiled within the excavation limits, thus eliminating the need for a separate material processing area. On July 10, 2011, 30 soil samples (plus three duplicate samples) were collected from the soil stockpiles in accordance with the 2009 INAC AMSRP Ex-Situ Confirmatory Sampling Protocol (i.e. 5 discrete samples and 1 composite sample from each 20 m^3 stockpile) and submitted to the laboratory for heavy metals and PCB analyses. Analytical results for the Module Train Buried Debris stockpiles were received on July 19, 2011. A review of the results showed exceedances of the DCC Tier I Contaminated Soil Criteria for PCBs in all five stockpiles. On July 23, 2011, all five stockpiles generated from the excavation of Module Train Buried were disposed of in the NHWL. As a precautionary measure, an additional 36 m^3 of soil was excavated from the base of Module Train Buried Debris to prevent the requirement for secondary excavation. On July 24, 2011, subsequent to the removal of the stockpiles, 16 confirmatory soil samples (plus one duplicate sample) were collected from the base of the excavation and submitted to the laboratory for PCB analysis. Analytical results were received on July 27, 2011; all parameters were below criteria and/or laboratory detection limits. The excavation was reshaped to match the surrounding terrain on July 28, 2011.

The confirmatory sample points at the Module Train Buried Debris excavation are presented on **Figure 9**, located in **Appendix A.** A summary of the analytical results from the Module Train Buried Debris stockpile sampling program and confirmatory testing are located in **Tables B-10** and **B-7**, **Appendix B**, respectively. Select photographs during excavation and debris sorting at the Module Train Buried Debris area are shown in **Appendix C (Photos 200 to 203)**.

2.6.5 Main Dump

2.6.5.1 Lobe 1

Excavation of Main Dump – Lobe 1 Buried Debris was completed on July 6, 2011, as per the recommendations provided in the redesign memorandum issued by AECOM on February 2, 2011. Debris found within the excavation included scrap metal and wood, cable, heavy equipment parts, crushed and/or partially crushed empty barrels, batteries and PCB oil-containing capacitors. The depth of excavation did not exceed the estimated design limits of 0.6 m. The excavated material was sorted (i.e. debris was removed and separated into waste streams then disposed of in the NHWL or containerized) and the residual soil (now free from debris) was placed in stockpiles approximately 20 m^3 in size.

Eleven stockpiles of potentially contaminated soil were generated during the Main Dump – Lobe 1 Buried Debris excavation, all of which were stockpiled within the excavation limits, thus eliminating the need for a separate material processing area. On July 10, 2011, 66 soil samples (plus seven duplicate samples) were collected from the soil stockpiles in accordance with the 2009 INAC AMSRP Ex-Situ Confirmatory Sampling Protocol (i.e. 5 discrete samples and 1 composite sample from each 20 m^3 stockpile) and submitted to the laboratory for heavy metals and PCB analyses. Analytical results for the Main Dump – Lobe 1 Buried Debris stockpiles were received on July 19, 2011. A review of the results showed exceedances of the DCC Tier II Contaminated Soil Criteria for copper, lead and/or PCBs in nine of the eleven stockpiles (i.e. MDL1-BD-1 through MDL1-BD-9). The remaining two stockpiles (MDL1-BD-10 and MDL1-BD-11) required disposal in the NHWL due to exceedances of the DCC Tier I Contaminated Soil Criteria for lead and/or PCBs. On July 21, 2011, the two stockpiles were disposed of in the NHWL. Soil from the remaining nine stockpiles was further sorted to minimize debris being containerized. The stockpiles were transported via rock truck to the Construction Camp MPA for containerization. Containerization of

contaminated soil was finalized on July 27, 2011; 33 seacans and 92 superbags were required for the contaminated soil from the Main Dump – Lobe 1 Buried Debris excavation.

On July 27, 2011, subsequent to the removal of the stockpiles, 21 confirmatory soil samples (plus two duplicate samples) were collected from the base of the excavation and submitted to the laboratory for heavy metals and PCB analyses. A review of the analytical results revealed three exceedances of the DCC Tier II Contaminated Soil Criteria for copper and/or zinc (PCB concentrations for all of the samples were below criteria and/or laboratory detection limits).

On August 16, 2011, three confirmatory samples (plus three additional delineation samples collected 20 centimetres (cm) deeper than the planned excavation) were collected by the DR. Secondary excavation to address residual contaminated soil at Main Dump – Lobe 1 Buried Debris had not yet been completed; however, in an effort to collect and submit the confirmatory samples as quickly as possible, three testpits in the area of the exceedances were advanced. The samples were submitted to the laboratory for heavy metals analysis.

Secondary excavation of Tier II contaminated soil at Main Dump – Lobe 1 Buried Debris was completed on August 18 to 19, 2011. The excavated soil was transported via rock truck to the Construction Camp MPA for containerization, during which time 24 superbags were required (i.e. approximately 24 m^3). Analytical results for the second round of confirmatory soil samples were received on August 23, 2011; one of the three samples showed exceedances of the DCC Tier II Contaminated Soil Criteria for chromium. Consequently, a request was made to the laboratory to analyze the delineation sample from that location (collected 20 cm deeper than the planned excavation). A review of the analytical results revealed that the concentration of chromium in the delineation sample was below criteria; consequently, the excavation was deepened by 20 cm (this delineation sample, showing acceptable results, was considered a substitute for a third confirmatory sample at this location). Tertiary excavation was completed on August 24, 2011, during which time approximately 4 m^3 of contaminated soil was excavated and transported to the Construction Camp MPA. On August 25, 2011, the contaminated soil was containerized; four superbags were required. A third confirmatory sample was not collected from this location; the delineation sample showing acceptable results

A summary of the analytical results from the Main Dump – Lobe 1 Buried Debris stockpile sampling program and confirmatory testing are located in **Tables B-11** and **B-7**, **Appendix B,** respectively.

Subsequent to receiving clean confirmatory samples for the east portion of Lobe 1, backfilling and regrading of this portion of Lobe 1 was completed between August 17 and 23, 2011. Backfilling and regrading of the remainder of Lobe 1 was completed on August 24 and 25, 2011. As per the redesign, the excavated area was backfilled and covered with approximately 0.7 m of Type 3 overlain by 0.3 m of Type 2 granular fill material. Between consecutive lifts, which were approximately 0.25 m in thickness, the area was compacted using the roller compacter until compaction requirements were met. Summaries of field density testing completed during regrading at the Main Dump can be found in **Appendix D**.

To avoid the occurrence of desiccation cracks, as was observed on the regrade of Lobe 2 as described in **Section 2.6.5.2**, organic rich soil sourced from reshaping activities immediately south of the Main Dump was used to cover the Lobe 1 regrade. The objective was to ensure short term and long term performance of the regrade, by preventing ingress of precipitation, limit preferential erosion, and promote vegetation regrowth. Additionally, subsequent to thorough surface debris collection at the Main Dump (and the collection, sorting and appropriate disposal of the debris and soil from Lobe 1), there remained pockets of partially exposed debris over much of the area between Lobes 1, 2, and 3. As a result, the area was re-evaluated and the recommended remedial approach was to cover the area between Lobes 1, 2 and 3 with an engineered cover. The lateral extents of the regrade were based on the visual extents of partially buried debris. Consistent with regrade design of the Lobes, the area was

covered with Type 3 overlain by Type 2 granular fill material. The quantities of granular fill used for the completion of the Lobe 1 regrade, including the capping of the area between Lobes 1, 2 and 3, was 280 m^3 of Type 2 and 1,940 m^3 of Type 3.

Details of the regrades at the Main Dump are shown on **Figures 10** and **11** located in **Appendix A**. Select photographs during excavation and sorting of the buried debris, during placement of the cover, as well as before and after photos of the Main Dump Lobe 1 are shown in **Appendix C (Photos 204 to 211)**.

Construction Camp Material Processing Area (MPA)

As a result of poor soil conditions at the Main Station Area and to facilitate demobilization during the winter 2012 CAT train, the Contractor chose to transport the contaminated soil from the Main Dump – Lobe 1 Buried Debris excavation stockpiles (i.e. MDL1-BD-1 through MDL1-BD-9) to the construction camp area for containerization.

Prior to the containerization of contaminated soil, four baseline soil samples were collected by the DR at the Construction Camp MPA on July 22, 2011. The samples were submitted to the laboratory for heavy metals and PCB analyses. A review of the analytical results showed all parameters were below criteria and/or laboratory detection limits. Subsequent to baseline soil sample collection a Geotextile liner was placed on the ground surface to prevent impact to the soil beneath.

On August 25, 2011, once all identified contaminated soil had been containerized and use of the Construction Camp MPA was no longer required, four confirmatory soil samples (plus one duplicate sample) were collected by the DR. Analytical results were received on September 1, 2011; a review of the results showed all PCBs and metals parameters were below criteria and/or laboratory detection limits. The area was reshaped to match the surrounding terrain.

A summary of the analytical results from the Construction Camp MPA baseline/confirmatory sampling program are presented in **Table B-5**, **Appendix B**. Select photographs from the Camp MPA are shown in **Appendix C (Photos 212 to 215)**.

2.6.5.2 Lobes 2, 3 and 4

As per the redesign memorandum issued by AECOM on February 2, 2011, it was recommended to regrade Lobes 2, 3 and 4 with approximately 0.7 m of Type 3 overlain by 0.3 m of Type 2 granular fill material. Consequently there was no excavation, soil stockpiling and/or debris sorting subsequent to the surface debris collection; however, prior to capping the Lobes, surface debris collection was completed using an excavator with rake bucket attachment and by hand. Capping of Lobes 2, 3 and 4 was completed between July 4 and 6, 2011. Construction of each of the Lobe regrades consisted of lifts of Type 3 material, sourced from the main station area which along with the Main Dump is located within Borrow Area No. 1, overlain by Type 2 material, which was stockpiled at the main station area. Between consecutive lifts, which were approximately 250 mm to 350 mm in thickness, the area was track packed using a dozer. On July 6, the completed regrades of Lobes 2, 3 and 4 were compacted using the roller compactor. It was anticipated to use the roller compactor between all lifts as well as on the final cap; however, ability to mobilize the compactor to the Main Station Area was restricted by the condition of the road at the beginning of the 2011 construction season.

On August 18, 2011, desiccation cracks were observed on regrades 2, 3 and 4. Based on discussions between the on-site DR and senior AECOM geotechnical personnel, it was recommended that the cracks be repaired to ensure short term and long term performance of the regrades. The recommended design was to cover, and track pack, the regrade with 100 to 200 mm of organic rich soil to promote vegetation regrowth, and limit further ingress of precipitation and to limit the potential for preferential erosion. Between August 20 and 22, 2011, Lobes 2 and 4 were covered with approximately 200 mm of organic rich soil. Placement of the organic rich cover on Lobe 3 was

conducted between August 22 and 25, 2011, in conjunction with placement of the engineered cover of the area between Lobes 1, 2 and 3 as described in **Section 2.6.5.1**. All regrading and debris collection activities were completed by August 25, 2011.

The quantities of granular fill used for the capping of Lobes 2, 3 and 4, not including the organic rich cover or the capped area between Lobes 1, 2 and 3 (which is provided in **Section 2.6.5.1**), are summarized in **Table 8** below.

Table 8. Estimated Granular Fill Quantities – Main Dump, Lobes 2, 3 and 4

Description	Quantity of Type 2 (m^3)	Quantity of Type 3 (m^3)
Lobe 2	50	100
Lobe 3	100	200
Lobe 4	50	100

Similar to the QA testing completed during construction of the NHWL, density testing utilizing a Nuclear Densometer was completed on the engineered regrades at the Main Dump. On July 7, 2011, geotechnical density testing was conducted on the completed regrades of Lobes 2, 3 and 4. Lobes 2 and 3 achieved over the specified 95% of the Standard Proctor density, with test results of 99% and 98%, respectively; however Lobe 4 required additional compaction and retesting. Following additional roller compaction completed, Lobe No. 4 passed with measured density of 96% of Standard Proctor density on July 8, 2011.

Details of the regrades at the Main Dump are shown on **Figures 10** and **11** located in **Appendix A**. Select photographs during placement of the engineered caps on Lobes 2, 3 and 4, as well as before and after photos of the Main Dump area are shown in **Appendix C (Photos 216 to 221)**.

2.7 Contaminated Soil

At the time of the assessment (2005), and during the design of the CAM-D Remediation Program, the INAC AMSRP was in draft format. As a result, the INAC remedial objectives that were current at that time were used in the design of the remediation of CAM-D. In the specifications, two types of soil were identified, PHC Contaminated soil and PHC Impacted soil. PHC Contaminated soil was defined as soil with PHC concentrations in excess of the 2005 INAC remedial objectives. PHC Impacted soil was defined as soil containing elevated concentrations of BTEX, F1-F4 or polycyclic aromatic hydrocarbons (PAHs) but below the 2005 INAC remedial objectives. Specifications for the site specific criteria, which are included in Section 02 55 13 – Contaminated Soil of the Contract Documents, are presented in the following table.

Table 9. Soil Criteria

Parameter	DCC Tier I Maximum Allowable Concentration ppm	DCC Tier II Maximum Allowable Concentration ppm	PHC Impacted Maximum Allowable Concentration ppm	PHC Contaminated Maximum Allowable Concentration ppm
Benzene			0.0068	
Ethylbenzene			0.08	
Toluene			0.018	
Xylenes			2.4	
F1			260	15,000
F2			900	8,000
F3			800	18,000
F4			5,600	25,000
Total PCBs	1	5		
Arsenic		30		
Cadmium		5		
Chromium		250		
Cobalt		50		
Copper		100		
Lead	200	500		
Mercury		2		
Nickel		100		
Zinc		500		

Since the specifications had been finalized and gone to tender prior to the finalization of the INAC AMSRP (2009), an agreement was made by all of the stakeholders involved in the CAM-D Remediation Program to retain the criteria that was used during the assessment and design stages of the project rather than adopt the current criteria. The following table outlines the criteria applied to the site, and the remedial approach for each contaminated soil class.

The 2009 INAC AMSRP identifies two classes of hydrocarbon contamination Type A (non-mobile) and Type B (mobile). Type B (approximately equal to the sum of PHC fractions F1 through F3) includes lighter end or more volatile hydrocarbon products such as diesel which is characteristic of the hydrocarbon contamination present at the CAM-D DEW Line Site. The remedial objectives for Type B hydrocarbon contamination are 2,500 ppm (surface soils to 0.5 m depth) and 5,000 ppm (soils below 0.5 m depth) for the protection of terrestrial wildlife, where the depth of contamination is relative to the final grade. It should be noted that the hydrocarbon contamination criteria in the 2009 INAC AMSRP was developed based on site specific information from several DEW Line sites, one of which included CAM-D.

A memorandum was issued by AECOM during the interseason, on November 19, 2010, entitled *Recommendations for PHC Impacted Soil and Buried Debris at CAM-D,* wherein it was recommended that the remaining impacted soil at CAM-D (i.e. PHC impacted soil from POL – Impacted and Garage - Impacted) be excavated based on the current 2009 INAC AMSRP remedial objectives, using the Type B hydrocarbon contamination criteria. Consequently, soil excavations completed during the 2010 construction season were evaluated using the site specific PHC Contaminated/Impacted soil guidelines and those which were completed in 2011 were evaluated using the 2009 INAC AMSRP Type B PHC remedial objectives.

2.7.1 2-PHC-1 (Pallet Line – Contaminated)

Excavation of PHC contaminated soils at 2-PHC-1 (Pallet Line – Contaminated) commenced on August 6, 2010 and was finalized on August 10, 2010. The area was excavated to the specification limits and design depth of 0.60 m. Soils removed from Pallet Line – Contaminated were excavated and containerized for shipment off-site. In total, 254 superbags were filled with contaminated soil. The DR conducted confirmatory sampling on August 10, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 6 m x 6 m grid spacing). During that time 25 confirmatory soil samples (and three duplicate soil samples) were collected and submitted to the laboratory. Upon receipt of analytical results, it was determined that two of the confirmatory samples exceeded the site specific PHC Impacted Soil Criteria and one of the samples exceeded the PHC Contaminated Soil Criteria.

On August 29, 2010, the excavation was extended vertically (to 1.0 m along the base of the existing excavation) and laterally (expanded along the A4, A5, and A6 design limit to the north to a depth of 0.60 m). Soil which was considered to be 'contaminated' was excavated and placed in seacans (seven; approximately 14 m^3) for shipment off-site; soil which was considered to be 'impacted' was excavated and placed in the NHWL. A second round of confirmatory sampling was carried out by the DR on September 2, 2010 at which time eight additional soil samples (and one duplicate soil sample) were collected and submitted to the laboratory for analysis. After a review of the analytical results it was determined that the concentration of PHC fraction F2 in one of the confirmatory samples (2,400 ppm) remained in exceedance of the site specific PHC Impacted Soil Criteria.

Consequently, a third round of excavation was completed on September 15, 2010. The excavation was extended vertically by 0.40 m (1.0 m total depth) in the area of the exceedance. During this time, an additional 4.5 m^3 of 'impacted' soil was excavated and disposed of in the NHWL. Confirmatory sampling was completed by the DR a third time; analytical results showed that all PHC parameters were below the site specific PHC Impacted Soil Criteria and/or laboratory detection limits. The area of Pallet Line – Contaminated was backfilled and reshaped on September 24, 2010.

The excavation perimeters and all related sample points are presented on **Figure 12**, located in **Appendix A**. A summary of the analytical results from Pallet Line – Contaminated are presented in **Table B-12**, **Appendix B**. Select photographs prior to, during, and subsequent to excavation of the Pallet Line – Contaminated area are shown in **Appendix C (Photos 222 to 229)**.

2.7.2 3-PHC-1 (POL – Contaminated)

On July 30, 2010, excavation of PHC contaminated soils at 3-PHC-1 (POL – Contaminated) commenced and was finalized the following day. The area was excavated to the specification limits and design depth of 0.40 m. Soils removed from POL – Contaminated were excavated and containerized for off-site shipment; 16 seacans and 32 superbags were filled with contaminated soil. The DR conducted confirmatory sampling on August 2, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 6 m x 6 m grid spacing). During that time, 19 confirmatory soil samples (and two duplicate samples) were collected. Analytical results showed that three of the samples exceeded the PHC Contaminated Soil criteria for PHC fraction F2.

Consequently, a second round of excavation to address residual hydrocarbon contamination was completed on August 28, 2010. The base of the excavation where exceedances were measured was extended vertically by 0.30 m (to a depth of 0.70 m below original grade) and the portion of the excavation outside of the original design limits was excavated to 0.40 m depth. Eight confirmatory soil samples (and one duplicate soil sample) were collected by the DR on August 28, 2010. During secondary excavation, approximately 29 m^3 of contaminated soil was placed in 13 superbags and three seacans. A review of analytical results revealed that concentrations of various PHC parameters in five of the samples exceeded the PHC Impacted Soil Criteria and two samples exceeded

the PHC Contaminated Soil Criteria for PHC fraction F2. As a result, a third round of excavation of contaminated soil was required.

Tertiary excavation at POL – Contaminated was conducted on September 10, 2010 at which time approximately 4 m^3 of contaminated soil was excavated and placed into two seacans for shipment off-site. Based on visible staining and olfactory evidence, it was apparent that some additional excavation would be required to remove residual hydrocarbon contamination; however, due to the poor soil conditions the excavation was halted. In addition, the five exceedances of the PHC Impacted Soil Criteria identified during the second round of confirmatory sampling were addressed during the 2011 construction season when 3-PHC-I-1 (POL – Impacted) was excavated.

After discussions held between Kudlik and based on the poor soil conditions at the Main Station Area, it was decided that rather than finishing the tertiary excavation of the remaining contaminated soil at POL – Contaminated before the end of the 2010 construction season it would be more practical to continue excavating at the beginning of the 2011 construction season when the material is still slightly frozen.

On July 10, 2011, excavation to address the residual hydrocarbon contaminated soils was completed, during which time approximately 2 m^3 of contaminated soil was excavated and placed in a seacan for shipment off-site. Confirmatory sampling was not conducted as the soil from beneath the area was intended to be removed during the excavation of POL – Impacted. A summary of the analytical results from POL – Contaminated are presented in **Table B-13**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 13**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the POL – Contaminated area are shown in **Appendix C (Photos 230 to 237)**.

2.7.3 4-METPHC-1 (Airstrip – Contaminated)

Excavation of PHC and metals contaminated soil at 4-METPHC-1 (Airstrip – Contaminated) was completed on July 27, 2010. The area was excavated to the specification limits and design depth of 0.20 m. Soil removed from Airstrip – Contaminated was excavated and containerized for shipment off-site; five seacans were filled with contaminated soil. The DR conducted confirmatory sampling on July 28, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 3 m x 3 m grid spacing). During that time 18 confirmatory soil samples (and two duplicate soil samples) were collected and submitted to the laboratory for BTEX, F1-F4 and heavy metals analyses. Upon receipt of analytical results, it was determined that two of the confirmatory samples exceeded the DCC Tier II Contaminated Soil Criteria for zinc. All other metals concentrations were low and no exceedances were measured for any of the PHC parameters.

On August 10, 2010, the base of the existing excavation was extended vertically by 0.20 m (to a total depth of 0.40 m relative to the original grade) and expanded along the A6 and A7 design limit to the southeast to a depth of 0.40 m depth. Five superbags were filled with contaminated soil excavated during the secondary excavation. A second round of confirmatory sampling was carried out by the DR on August 10, 2010 at which time four additional soil samples were collected and submitted to the laboratory for analysis. A review of the analytical results showed that concentrations of all heavy metals parameters were below criteria and/or laboratory detection limits. Subsequently the excavation was backfilled and reshaped. A summary of the analytical results from Airstrip - Contaminated are presented in **Table B-14**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 14**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the Airstrip – Contaminated area are shown in **Appendix C (Photos 238 to 241)**.

Stained Area near 4-METPHC-1 (Airstrip – Contaminated)

Subsequent to debris removal and during excavation of Airstrip – Contaminated, an area of surficial staining was observed adjacent to Airstrip - Contaminated. To determine soil quality, one surface sample was collected from the stained area on August 14, 2010 and submitted to the laboratory for analysis of BTEX, F1-F4, PCBs and heavy metals. A review of analytical results showed that the concentration of PHC fraction F3 in the surficial soil exceeded the PHC Impacted Soil Criteria and as a result would require excavation and disposal in the NHWL. All other parameters were below criteria and/or laboratory detection limits. The DR collected five delineation samples on August 25, 2010, to determine the limits of the area requiring excavation. Analytical results showed concentrations of all BTEX, F1-F4 parameters were below criteria and/or laboratory detection limits. Consequently, based on the original PHC fraction F3 exceedance, on September 7, 2010, 2 m^3 of soil was excavated and placed in the NHWL. At this time, two confirmatory soil samples were collected and submitted for analysis. Analytical results showed all parameters were below criteria and/or laboratory detection limits; the excavation was backfilled and reshaped. A summary of the analytical results are presented in **Table B-15**, **Appendix B**. Select photographs of the Stained Area excavation at the Airstrip are shown in **Appendix C (Photos 242 to 243)**.

Broken Batteries near 4-METPHC-1 (Airstrip – Contaminated)

In addition to the area of staining observed near Airstrip – Contaminated, two broken batteries were observed adjacent the Airstrip. Excavation and containerization of soil from within the vicinity of the broken batteries was completed on September 6, 2010. During this time approximately 1 m^3 of contaminated soil was excavated (by hand) and placed into two superbags for shipment off-site. The DR collected two confirmatory soil samples (and one duplicate sample) on September 7, 2010 for heavy metals analysis. Analytical results showed the concentration of lead in one of the soil samples exceeded the DCC Tier 2 Contaminated Soil Criteria. Consequently, secondary excavation to address residual metals contamination was completed on September 23, 2010. Approximately 0.5 m^3 of soil was excavated (by hand) and placed into a super bag for shipment off-site and one additional confirmatory soil sample was collected on September 24, 2010. A review of analytical results revealed that the concentration for lead was below criteria therefore the area was backfilled and reshaped. A summary of the analytical results are presented in **Table B-15**, **Appendix B**. Select photographs of the Broken Batteries excavations at the Airstrip are shown in **Appendix C (Photos 244 to 245)**.

2.7.4 2-PHC-I-1 (Pallet Line – Impacted)

Excavation of PHC impacted soils at 2-PHC-I-1 (Pallet Line – Impacted) commenced on August 10, 2010 and was finalized on August 11, 2010. The area was excavated to the specification limits and design depth of 0.60 m. Soils removed from Pallet Line – Impacted were excavated and placed in the NHWL as intermediate fill. The DR conducted confirmatory sampling on August 12, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 6 m x 6 m grid spacing). During that time 17 confirmatory soil samples (and two duplicate soil samples) were collected and submitted to the laboratory for BTEX, F1-F4 analysis. Concentrations of all PHC parameters were below criteria and/or laboratory detection limits. Subsequently, the excavation was backfilled and reshaped. A summary of the analytical results from Pallet Line – Impacted are presented in **Table B-16**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 12**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the Pallet Line - Impacted area are shown in **Appendix C (Photos 246 to 249)**.

2.7.5 2-PHC-I-2 (Portable Fuel Tanks – Impacted)

On August 17, 2010, excavation of PHC impacted soils at 2-PHC-I-2 (Portable Fuel Tanks – Impacted) commenced and was finalized the following day. The area was excavated to the specification limits and design depth of 1.0 m.

Soil removed from Portable Fuel Tanks - Impacted was excavated and placed in the NHWL as intermediate fill. The DR conducted confirmatory sampling on August 18, 2010 at which time 50 confirmatory soil samples (and five duplicate soil samples) were collected. Samples collected from Portable Fuel Tanks – Impacted were submitted to the laboratory for BTEX, F1 – F4 and polycyclic aromatic hydrocarbons (PAHs). This was one of two excavations where PAH impact was identified during the Phase III ESA. Analytical results showed ten samples exceeded the PHC Impacted Soil Criteria for various PHC parameters; all PAH parameters were below criteria and/or laboratory detection limits.

Consequently, a second round of excavation to address residual hydrocarbon impact was completed. Secondary excavation commenced on September 1, 2010 and was finalized on September 3, 2010. The base of the excavation where exceedances were measured was extended by 0.30 m (to a depth of 1.30 m below original grade), the portion of the excavation outside of the original design limits on the north side was excavated to 0.80 m depth and that portion along the southwest limits of the excavation was excavated to depths ranging between 0.80 m and 1.30 m. Eight confirmatory samples were collected by the DR on September 3, 2010. The volume of hydrocarbon impacted soil excavated during secondary excavation was approximately 128 m^3.

Analytical results for the confirmatory samples collected subsequent to the secondary excavation at Portable Fuel Tanks - Impacted were reviewed; exceedances of various PHC parameters were reported for two of the soil samples. The soil that required tertiary excavation was in two locations; one in the base and one along the south wall.

Tertiary excavation was completed on September 15, 2010. This excavation was limited to removing the impacted soil exceedances identified along the south wall of the plume. The issue with completing additional excavation in the area of the base exceedance was that nearly the entire excavation had been filled in by loose saturated soil. The walls of the excavation migrated to the point where the toe of the flow, which was the former perimeter wall of the excavation, was over 5 m from the original location. Consequently, confirmatory samples previously collected had either been covered or had migrated due to the flow of the soil in this area. The concentrations remaining in the base were below laboratory detection limits for F1-F4 fraction PHCs and slightly above the impacted criteria for BTEX parameters. The area left in place is approximately 18 square metres (m^2) and extends from 1.3 m below original grade to an estimated depth of 1.5 m.

Along the south wall, the excavation was extended vertically by 40 cm, to a total depth of 120 cm. Approximately 7.5 m^3 of impacted soil was excavated and disposed of in the NHWL. One confirmatory sample (and one duplicate sample) was collected by the DR on September 15, 2010. Analytical results showed concentrations of all parameters were below criteria and/or laboratory detection limits.

The excavation was backfilled and reshaped on September 22, 2010. A summary of the analytical results from Portable Fuel Tanks – Impacted are presented in **Table B-17**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 15**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the Portable Fuel Tanks – Impacted area are shown in **Appendix C (Photos 250 to 257)**.

2.7.6 3-PHC-I-1 (POL – Impacted)

A memorandum was issued by AECOM on September 12, 2010, entitled *Impacted Soil Excavation Status vs. Landfill Capacity – September 12, 2010,* which identified the potential lack of available airspace remaining in the on-site NHWL. It was determined that the volume of non-hazardous debris left to be transported and disposed of in the NHWL, and the remaining impacted soil was greater than the available airspace. Consequently an investigative test

pitting program was implemented at 3-PHC-I-1 (POL – Impacted) to determine whether the limits of the excavation could potentially be reduced.

A second memorandum was issued by AECOM during the interseason, on November 19, 2010, entitled Recommendations for PHC Impacted Soil and Buried Debris at CAM-D*,* which presented the results of the test pitting investigation completed by AECOM on September 17, 2010. The study confirmed that the limits of the plume could be redefined with further accuracy (i.e. the size of the area requiring excavation could be reduced). In addition, it was recommended that the impacted soil from POL – Impacted be excavated based on the current 2009 INAC AMSRP remedial objectives, using the Type B hydrocarbon contamination criteria.

Excavation of PHC impacted soils at 3-PHC-I-1 (POL – Impacted) to the revised design limits commenced on July 16, 2011 and was finalized on July 20, 2011. Soils excavated from POL – Impacted were placed in the NHWL to be used as intermediate fill material. The DR conducted confirmatory sampling on July 20 to 21, 2011 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 6 m x 6 m grid spacing). During that time 47 confirmatory soil samples (and six duplicate samples) were collected and submitted to the laboratory for BTEX, F1 –F4 analysis. POL – Impacted was one of two excavations where PAH impact was identified during the Phase III ESA completed by Earth Tech in 2005 (Portable Fuel Tanks – Impacted was the second location), as a result five of the samples were also submitted for PAH analysis. A review of the analytical results showed six exceedances of the 2009 INAC AMSRP for Type B Hydrocarbon Contamination (all PAH parameters were below criteria and/or laboratory detection limits). Based on the concentrations of Type B Hydrocarbon Contamination reported for these samples (i.e. 3,271 ppm to 29,390 ppm), treatment by aeration to reduce Type B Hydrocarbon Contamination concentrations was recommended for the more heavily contaminated soil.

On July 27 to 28, 2011, the portion of POL – Impacted where acceptable results were received was backfilled and reshaped using the clean stockpiled soil from POL Buried Debris as well as other suitable material sourced from the immediate vicinity of the excavation.

Secondary excavation of POL – Impacted was completed on July 27, 2011, during which time a total of approximately 324 m^3 of additional soil was excavated from three localized exceedances. Approximately 144 m^3 of impacted soil was disposed of in the NHWL and 180 m^3 of more heavily impacted soil was transported to the landfarm for treatment. A second round of confirmatory sampling was carried out by the DR on July 27 to 28, 2011 at which time 28 confirmatory soil samples (and three duplicate samples) were collected and submitted to the laboratory for BTEX, F1-F4 analysis. A review of the analytical results showed four exceedances of the 2009 INAC AMSRP for Type B Hydrocarbon Contamination.

On August 16, 2011, the portion of POL – Impacted where acceptable results were received was backfilled and reshaped using suitable material sourced from the immediate vicinity of the excavation.

A third round of excavation to address residual PHC impacted soil at POL – Impacted was completed on August 16, 2011, during which time approximately 110 m^3 of soil was excavated and placed in the landfarm for treatment. Subsequent to the completion of tertiary excavation, the DR collected ten confirmatory soil samples for submission to the laboratory for BTEX, F1-F4 analysis. Analytical results were received on August 22, 2011; all parameters were below criteria and/or laboratory detection limits. The remaining open portion of the excavation was backfilled and reshaped on August 23, 2011. A summary of the analytical results from POL - Impacted are presented in **Table B-18**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 16**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the POL – Impacted area are shown in **Appendix C (Photos 258 to 267)**.

2.7.7 3-PHC-I-2 (Burn Pit – Impacted)

Excavation of 3-PHC-I-2 was completed on July 28, 2010. The area was excavated to the specification limits and design depth of 0.70 m. Soils removed from Burn Pit – Impacted were excavated and placed in the NHWL as intermediate fill. The DR conducted confirmatory sampling on July 29, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 3 m x 3 m grid spacing). During that time 16 confirmatory samples (and two duplicate soil samples) were collected and submitted to the laboratory.

A review of the analytical results revealed exceedances of the PHC Impacted Soil Criteria for various BTEX and/or F1-F3 fraction PHC parameters in three soil samples. Also, one exceedance of the PHC Contaminated Soil Criteria for F2 fraction PHC (8,000 ppm) was measured; the F2 concentration for Sample 10-106 (wall) was 8,700 ppm. Since the soil from this excavation was considered to be impacted (and below the contaminated soil criteria), it was placed as intermediated fill in the NHWL; however, the area immediately surrounding the contaminated soil exceedance required excavation and containerization for shipment off-site.

The second round of excavation to address residual hydrocarbon impact/contamination was completed on August 12, 2010. The base of the excavation where exceedances were measured was extended vertically by 0.30 m and the portion of the excavation outside of the original design limits (i.e. north along the D2-D3 limit and west of D1) was excavated to a depth of 1.0 m. The saturated soil conditions prevented entry into the excavation; therefore confirmatory samples were collected using an excavator bucket. Six confirmatory samples (and one duplicate sample) were collected by the DR on August 12, 2010. At this time additional delineation samples were collected approximately three metres from the new limits of the excavation and placed on hold at the laboratory pending the results of the second round of confirmatory sampling. During secondary excavation, approximately 1.5 m^3 of contaminated soil was excavated from the area found to exceed the contaminated criteria; however, three superbags were required because the soil at the base was extremely saturated.

Analytical results showed one exceedance of the PHC Impacted Soil Criteria for ethylbenzene in a confirmatory sample collected from the west wall of the excavation. Consequently a request was made to the lab to analyze two of the delineation samples (collected at the time of confirmatory sampling). Analytical results showed exceedances of F2 fraction PHC in both delineation samples.

Consequently, tertiary excavation was completed on August 28, 2010, during which time approximately 20 m^3 of PHC impacted soil was excavated and placed in the NHWL. A third round of confirmatory sampling was conducted by the DR on the same date, at which time five additional soil samples (and one duplicate sample) were collected. A review of the analytical results revealed that all PHC parameters were below criteria and/or laboratory detection limits. Subsequently, the excavation was backfilled and reshaped. A summary of the analytical results from Burn Pit – Impacted are presented in **Table B-19**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 17**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the Burn Pit – Impacted area are shown in **Appendix C (Photos 268 to 273)**.

2.7.8 3-PHC-I-3 (Garage – Impacted)

On August 25, 2010, partial excavation of PHC impacted soils at 3-PHC-I-3 (Garage – Impacted) commenced. The intent of partial excavation at Garage – Impacted in 2010 was to remove 1.0 m (design depth) of impacted soil from the top of the gravel pad and following the receipt of acceptable confirmatory sample results the balance of the gravel pad could potentially be used as general fill for site improvements at the Main Station.

Soil removed from Garage - Impacted was excavated and stockpiled within the limits of the excavation prior to placement in the NHWL as intermediate fill (when site conditions permitted). The DR conducted confirmatory sampling on August 26, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 6 m x 6 m grid spacing). During that time 15 confirmatory soil samples (and two duplicate soil samples) were collected and submitted to the laboratory for BTEX, F1 – F4 analysis. Analytical results showed three samples exceeded the PHC Impacted Soil Criteria for various PHC parameters.

Consequently, a second round of excavation to address residual hydrocarbon impact was completed. Secondary excavation commenced on September 6, 2010. The estimated 0.30 m required to remove residual hydrocarbon contamination was excavated; however, based on olfactory evidence additional excavation was required prior to the collection of confirmatory samples. The secondary excavation at Garage - Impacted was extended vertically by an additional 0.70 m (down to permafrost) in the area of the exceedances (to a total depth of 2.10 m below original grade) on September 7, 2010 at which time three confirmatory samples were collected (from the base of the excavation). During secondary excavation, approximately 60 m^3 of PHC impacted soil was excavated and stockpiled adjacent the gravel mound (together with the soils from the first round of excavation).

Analytical results for the second round of confirmatory samples collected at Garage - Impacted showed concentrations of Toluene, Ethylbenzene, Xylenes and PHC fraction F2 in excess of the PHC Impacted Soil Criteria.

On September 16, 2010, three additional confirmatory soil samples were collected from the northeast wall of the secondary excavation to confirm that clean excavation limits had been reached. Concentrations of various BTEX, F1-F4 parameters in two of the three samples showed exceedances of the PHC Impacted Soil Criteria. Although tertiary excavation was required, due to the lateness in the season and poor soil conditions at the Main Station Area, further excavation was halted and scheduled to resume during the 2011 construction season.

Before the close of the 2010 construction season, an investigative test pitting program was implemented at Garage - Impacted to determine whether the limits of the excavation could potentially be reduced. A memorandum was issued by AECOM during the interseason, on November 19, 2010, entitled Recommendations for PHC Impacted Soil and Buried Debris at CAM-D, which presented the results of the test pitting investigation completed by AECOM on September 17, 2010. The study confirmed that the lateral limits of the plume could be redefined with further accuracy; however, the depth to which the PHC impact extended was still somewhat uncertain. As a result, it was recommended that the remaining soil within the limits of Garage – Impacted be excavated based on the current 2009 INAC AMSRP remedial objectives, using the Type B hydrocarbon contamination criteria and ex-situ treatment of the soil by aeration to reduce PHC concentrations to meet guidelines.

Excavation of Garage – Impacted to the revised design limits commenced on July 3, 2011 and was finalized on July 11, 2011. Consistent with the redesign, impacted soil removed from this excavation was relocated to the on-site landfarm for ex-situ treatment by aeration to reduce PHC concentrations to meet the 2009 INAC AMSRP Type B Hydrocarbon Contamination guidelines. On July 16, 2011, the DR conducted confirmatory sampling at which time 48 confirmatory soil samples (and six duplicate samples) were collected and submitted to the laboratory for BTEX, F1-F4 analysis. A review of the results revealed that six of the samples submitted for analysis exceeded the 2009 INAC AMSRP guideline for Type B Hydrocarbon Contamination.

Secondary excavation (in three localized areas) to address residual impacted soil at Garage – Impacted was completed on July 25 - 26, 2011, during which time approximately 156 m^3 of impacted soil was excavated and placed in the landfarm for treatment by aeration. Subsequent to secondary excavation, the DR collected 14 confirmatory soil samples (plus one duplicate sample) for submission to the laboratory for BTEX, F1-F4 analysis. Analytical results for the confirmatory samples were received on August 3, 2011. A review of the results revealed

that one of the samples submitted for analysis exceeded 2009 INAC AMSRP guideline for Type B Hydrocarbon Contamination.

On August 16, 2011, those areas of Garage – Impacted for which acceptable results were received were backfilled and reshaped using material sourced from within the immediate vicinity of the excavation.

The third round of excavation to address residual PHC impact was completed on August 16, 2011, during which time approximately 10 m^3 of impacted soil was excavated and placed in the landfarm for treatment by aeration. The DR collected one confirmatory soil sample from the base of the excavation for submission to the laboratory for BTEX, F1-F4 analysis. Analytical results were received on August 22, 2011; all parameters were below criteria and/or laboratory detection limits. The remaining open portion of the excavation was backfilled and reshaped on August 23, 2011. A summary of the analytical results from Garage - Impacted are presented in **Table B-20**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 18**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the Garage – Impacted area are shown in **Appendix C (Photos 274 to 285)**.

2.7.9 3-MET-1 (Electrical Cabinets – Contaminated)

Excavation of metals contaminated soils at 3-MET-1 (Electrical Cabinets – Contaminated) was completed on July 28, 2010. The area was excavated to the specification limits and design depth of 0.30 m. Soils removed from Electrical Cabinets – Contaminated were excavated and containerized for shipment off-site; eight seacans were filled with contaminated soil. The DR conducted confirmatory sampling on July 28, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 3 m x 3 m grid spacing). During that time 16 confirmatory soil samples (and two duplicate soil samples) were collected and submitted to the laboratory for heavy metals analysis. A review of analytical results revealed that concentrations of all metals parameters were below criteria and/or laboratory detection limits. Subsequently, the excavation was backfilled and reshaped. A summary of the analytical results from Electrical Cabinets - Contaminated are presented in **Table B-21**, **Appendix B**.

The excavation perimeters and all related sample points are presented on **Figure 19**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the Electrical Cabinets – Contaminated area are shown in **Appendix C (Photos 286 to 287)**.

2.7.10 6-MET-1 (Plumber's Dump – Contaminated)

A review of photographs taken of 6-MET-1 (Plumber's Dump – Contaminated) from the Phase III ESA (completed by Earth Tech in 2005) revealed some discrepancy between the surveyed design limits of the excavation and the general location of the surface debris in the area. Since there was only one sample collected from Plumber's Dump - Contaminated in 2005 which determined the design limits of the excavation, five delineation samples (10-1 to 10-5) were collected by the DR on July 13, 2010. Results showed all heavy metals parameters were below criteria and/or laboratory detection limits.

An additional sample was collected on August 7, 2010 to confirm metals contamination (10-163). The sample was collected at the exact sample location/depth as was sample ET-162 (which was collected by Earth Tech in 2005). The original sample location was determined by the location of tag ET-162 and cross-referenced with photos taken of the sampling location in 2005. The only heavy metals parameter for ET-162 that exceeded the applicable criteria was cadmium; the criteria for cadmium is 5 ppm and the analytical result obtained for cadmium in the 2005 sample was 5.13 ppm. A review of analytical results for sample 10-163 revealed the concentration of cadmium (1.1 ppm) was below criteria. All other heavy metals parameters were below criteria and/or laboratory detection limits.

For precautionary measures, four additional soil samples (10-289 to 10-292) including one duplicate soil sample, were collected by the DR on August 20, 2010 to verify the absence of heavy metals contamination. All four samples were collected from within 0.30 m of sample ET-162. Analytical results proved concentrations of all heavy metals parameters to be below criteria and/or laboratory detection limits. Consequently, no soil excavation was required at Plumber's Dump – Contaminated; work activities in the area were limited to surface debris collection only.

A summary of the analytical results from Plumber's Dump - Contaminated are presented in **Table B-22**, **Appendix B**. The confirmatory sample points are presented on **Figure 20**, located in **Appendix A**. Select photographs of the Plumbers Dump area are shown in **Appendix C (Photos 288 to 289)**.

2.7.11 7-MET-1 (Simpson Lake – Contaminated)

An inspection of 7-MET-1 (Simpson Lake – Contaminated) was completed on August 22, 2010 which revealed the presence of a single battery within the design limits of the excavation. Consequently, the area immediately surrounding the battery was excavated (i.e. Simpson Lake - Contaminated was not excavated to the specification limits and design depth) by hand (approximately 20 cm x 20 cm x 20 cm). The battery together with the excavated soil was placed in a Rubbermaid container for shipment off-site. One confirmatory sample (composite) was collected by the DR from the small excavation on August 22, 2010 and submitted for metals analysis. A review of analytical results revealed concentrations of all metals parameters were below criteria and/or laboratory detection limits. A summary of the analytical results from Simpson Lake – Contaminated is presented in **Table B-23**, **Appendix B**.

2.7.12 3-METPCB-1 (Outfall – Contaminated)

Excavation of metals and PCB contaminated soils at 3-METPCB-1 (Outfall – Contaminated) was completed on July 28, 2010. The area was excavated to the specification limits and design depth of 0.20 m. Soils removed from Outfall – Contaminated were excavated and containerized for shipment off-site; two seacans were filled with contaminated soil. The DR conducted confirmatory sampling on July 28, 2010 in accordance with the 2009 INAC AMSRP (i.e. samples were collected based on 3 m x 3 m grid spacing). During that time eight confirmatory soil samples (and one duplicate soil sample) were collected and submitted to the laboratory for heavy metals and PCB analyses. A review of analytical results revealed that concentrations of PCBs and metals parameters were below criteria and/or laboratory detection limits. Subsequently, the excavation was backfilled and reshaped. A summary of the analytical results from Outfall - Contaminated are presented in **Table B-24**, **Appendix B**.

The confirmatory sample points are presented on **Figure 21**, located in **Appendix A**. Select photographs prior to, during, and subsequent to excavation of the Outfall – Contaminated area are shown in **Appendix C (Photos 290 to 293)**.

2.7.13 Main Dump Battery/Capacitor Locations

Three PCB oil-containing capacitor locations and 19 battery locations were identified during surface debris collection at the Main Dump. Preliminary excavation (by hand) of all known battery and PCB oil-containing capacitor locations was completed on July 14, 2011. A confirmatory sample from each location was collected and submitted to the laboratory for analysis of heavy metals and/or PCBs. A review of analytical results revealed 12 exceedances of the DCC Tier II Contaminated Soil criteria for copper, cadmium, lead and/or PCBs. Secondary excavation was completed on July 28, 2011. Confirmatory soil samples at each location were collected by the DR on July 29, 2011. Analytical results showed concentrations of heavy metals or PCBs in five of the 12 areas remained in exceedance of the either the DCC Tier I or Tier II criteria and required further excavation. On August 17, 2011, tertiary excavation at the final five battery/capacitor locations, still showing exceedances of the applicable criteria, was completed. A confirmatory sample was collected from each location with one exception. At battery location 11-167/11-414, a

confirmatory sample could not be collected as all of the soil had been removed (i.e. the base of the excavation was all rock). Analytical results showed exceedances of cadmium and/or lead at two of the five locations. One of the samples exceeded the DCC Tier II criteria for cadmium and lead and therefore required excavation and containerization; the other sample exceeded the DCC Tier I criteria for lead and therefore the soil excavated from this location was suitable for disposal of in the NHWL. On August 24, 2011, a fourth round of excavation was completed at the remaining two battery locations at the Main Dump; each location was confirmatory sampled by the DR. A review of the analytical results showed that all metals parameters were below criteria and/or laboratory detection limits for both samples. In total, approximately 2.2 m^3 of DCC Tier II contaminated soil was excavated from the battery and capacitor excavations and placed in three partially full superbags for shipment off-site. A summary of the analytical results from battery and capacitor locations at the Main Dump are presented in **Table B-25**, **Appendix B**, and the confirmatory sample points are presented on **Figure 10**, located in **Appendix A**.

Photo 294 (Appendix C) shows a typical battery/capacitor excavation completed at the Main Dump.

2.8 Type B PHC Soil Treatment

As previously mentioned in **Sections 2.7.6** and **2.7.8**, the provision for the treatment/aeration of PHC impacted soils was introduced in the interseason to minimize the requirement for disposal of all of the remaining impacted soil in the NHWL.

The location sited for the treatment of PHC impacted soils was a portion of the Main Station TSA which was used during the 2010 construction season to store hazardous material containers. In 2010, five marine containers were filled with hazardous material (i.e. lead/PCB painted steel/wood, PCB oil-filled capacitors and transformers etc.). During the winter CAT Train (March 2011) the containers were relocated to the Shepherd Bay TSA, consequently, use of the Main Station TSA (approximately 100 m x 50 m) in 2011 would be minimal. Since the hazardous materials storage containers had been removed, knowing that use of the area in 2011 would be limited and given its location in relation to the remaining PHC impacted soil excavations and the NHWL, a portion of the Main Station TSA was deemed a suitable choice for Type B PHC soil treatment.

The construction of the perimeter berms around the landfarm treatment cell (approximately 50 m x 60 m) was completed on July 2, 2011, using soils from within the immediate vicinity of the treatment area. Placement of PHC impacted soil commenced on July 3, 2011. In total, approximately 960 m^3 of PHC impacted soil from Garage – Impacted were excavated and placed in the cell for ex-situ treatment by aeration.

Consistent with the redesign, the soil was placed and spread within the treatment area to a maximum loose thickness of 400 mm (being careful to keep ‘hot spots’ separate from the remaining soils), followed by nutrient application (i.e. 46% granular nitrogen distribution and then moisture conditioning using a mixture of phosphoric acid and water) over the surface.

Beginning July 5, 2011 and each day thereafter, the full thickness of the impacted soil was treated by aeration (twice per day; once in the morning and once in the evening), alternating the direction of tilling between lengthwise, cross-wise and diagonal. During treatment, all rocks greater than 100 mm in size were removed from treatment soils and placed in the void space between the treatment soils and the perimeter berms.

To gauge the effectiveness of treatment by aeration of soils within the landfarm, nine composite soil samples (and one duplicate sample), each representing approximately 100 m^3 of impacted soil, were collected by the DR on July 13, 2011 and submitted to the laboratory for BTEX, F1-F4 analysis. Analytical results for the soil within the landfarm treatment cell were received on July 19, 2011. A review of the results showed that the concentration of Type B hydrocarbons in all samples was below the 2,500 ppm guideline; results ranged from 572 ppm to 1,672 ppm. Consequently, no additional treatment of these soils was required.

On July 25, 2011, during secondary excavation of Garage – Impacted, an additional 156 m^3 of impacted soil was excavated and placed in the landfarm area for treatment (an area within the treatment cell was cleared to allow for the placement of this new material). Another 180 m^3 of impacted soil was added to the treatment area, two days later on July 27, 2011, during secondary excavation of POL – Impacted. The additional soil requiring treatment was mixed with a small volume of soil that remained in the landfarm, and still contained available nutrients, to promote effective treatment.

The same treatment method was applied to this soil (i.e. the full thickness of the impacted soil was treated by aeration, twice daily) until temporary camp-shut down (July 30 to August 15, 2011), treatment resumed thereafter. On August 16, 2011 an additional 10 m^3 from the tertiary excavation of Garage – Impacted and 110 m^3 from the tertiary excavation of POL - Impacted was added to the soil in the treatment area.

On August 24, 2011, five composite soil samples, each representing approximately 100 m^3 of impacted soil, were collected from within the landfarm treatment cell, and submitted to the laboratory for BTEX, F1-F4 analysis. Analytical results for the soil within the landfarm treatment cell were received on August 29, 2011. A review of the results showed that the concentration of Type B hydrocarbons in all samples was below the 2,500 ppm guideline; results ranged from 664 ppm to 1,025 ppm. Consequently, no additional treatment of these soils was required. Following the treatment of impacted soil within the landfarm treatment cell, approximately 576 m^3 of treated soil was removed from the landfarm area and used as the final lifts of intermediate fill in the NHWL (i.e. not the landfill cover). The remaining treated soils were left in place and the area was reshaped to provide positive drainage.

A summary of the analytical results for treatment soils are presented in **Table B-26**, **Appendix B**. The confirmatory sample points are presented on **Figure 22**, located in **Appendix A**. Select photographs of the Soil Treatment area are shown in **Appendix C (Photos 295 to 297)**.

3. Environmental Data QA/QC

3.1 QA/QC Procedures and Evaluation

In order to confirm that the sampling and analytical data collected were interpretable, defensible, and comparable, a Quality Assurance and Quality Control (QA/QC) program was implemented for the project. QA/QC measures were taken in both the collection and analysis of the environmental sampling program. The following sections outlines the QA/QC program completed during the remediation program.

3.1.1 AECOM QA/QC Program

Quality Control (QC) measures used in the collection, preservation, shipment, and analysis of samples included the following:

- Sampling techniques were performed in accordance with standard written AECOM protocols
- Field notes were recorded during the investigation
- All samples were kept cool prior to shipment to the laboratory
- Samples were assigned unique sample control numbers and transported under chain of custody procedures
- The analytical laboratory has proficiency certification issued by the Canadian Association for Laboratory Accreditation Inc. (CALA) for the specific analyses conducted

Quality Assurance (QA) measures established for the investigation included collection of duplicate field samples at a rate of approximately 10%. A blind duplicate sample consists of a second aliquot of an individual sample that is submitted to the analytical laboratory under a separate label such that the analytical laboratory has no prior knowledge that it is a duplicate. Duplicate samples from numerous locations were submitted to the laboratory for analysis.

The relative percent difference (RPD) between duplicate results was used to assess overall sampling precision. The RPD is a measure of the variability between two duplicate analyses and is calculated by the following equation:

$RPD = 100 \times \mathbf{(}(2 \times (x_1 - x_2))/(x_1 + x_2)\mathbf{)}$

Where x_1 is the primary result and x_2 is the blind duplicate result.

Tables B-27 and **B-28** in **Appendix B** compare sample analysis between the original samples and their duplicates. Acceptable RPD values vary based on analytical parameters, the sample matrix and the concentrations of analytes in the sample. For metals in soils acceptable RPD values are 35% or less and for organics in soils (PHCs and PCBs), the acceptable RPD values are 50% or less. Only when concentrations are at least ten times the method detection limit are RPD calculations considered valid.

3.2 Summary of QA/QC Results

3.2.1 Field Duplicate Samples

In 2010, 56 field duplicates for soil and four field duplicates for barrel samples were analyzed to provide an indication of the overall sampling and analytical precision; during the 2011 construction season, 38 field duplicates for soil and one field duplicate for barrel samples were analyzed. The blind field duplicates were analyzed for various parameters based on their location and expected contaminant(s) present. RPDs were calculated for all parameters analyzed in each sample. For the majority of the parameter results the RPD values were below 50% for PHCs, 35% for metals in soil and 40% for PHCs, 25% for metals/general chemistry in water. The results of these calculations are summarized in **Tables B-27** and **B-28** in **Appendix B**.

Thirty-nine of the 56 soil duplicates were found to have exceedances relative to the Recommended Alert Criteria, which is defined as the RPD level at which the QA/QC results should be further reviewed. Based on the field notes the material type at the Site was typically clay, gravels and sands/silts. The variations in the nature of this material with the mixture of course gravels with sands and silts may provide an explanation as to why it may have been difficult at times to obtain a homogeneous sample. Also, it should be noted that blind field duplicates are useful for most samples however samples that cannot be homogenized have limited uses (i.e. PHCs in soil).

Sixteen other duplicate sets did have calculated RPDs that were above the Recommended Alert Criteria, however, the concentrations of one or both samples in the duplicate set were less than five times the reported detection limit. The RPD is therefore not considered to be strictly valid. All other parameters within the duplicated sets had acceptable values for RPDs.

Two of the five duplicate barrel samples collected at the site had a calculated RPD for pH that was above the Recommended Alert Criteria (sample set 10-420 and 10-421 and sample set 11-450 and 11-451). All of the other parameters within the barrel sample duplicate sets had acceptable values for RPDs.

3.2.2 Laboratory QA/QC

Maxxam Analytics (Maxxam) was the analytical laboratory used to analyse samples collected by AECOM for the duration of construction. Maxxam ran calibration check samples, matrix spike samples, surrogate spike analysis, and standard reference material analysis to determine analytical accuracy. All results were within acceptable limits or were acceptably qualified. The laboratory also ran laboratory duplicate samples to ascertain analytical precision. All results obtained were within acceptable limits or were qualified. Method blank samples were run to confirm that there was no carry-over from analysis to analysis, and that analytes were not introduced due to the reagents or methods used. Most blank analyses were observed to be less than the Method Detection Limits (MDL). For the samples with associated blanks that were greater than the MDL, the blank concentration was subtracted from the sample concentration. The results of laboratory analyses completed in 2010 and 2011 have been included in **Appendix G**.

4. Borrow Materials

The following types of granular fill types were specified for the clean-up of the CAM-D DEW Line Site:

- Type 2 Granular Fill – pit-run screened stone, gravel or sand with a trace of fines used for landfill berm construction, landfill cover and regrading requirements
- Type 3 Granular Fill – granular pit-run material for regrading low areas, backfill for contaminated soil and landfill excavations and general site grading requirements
- Type 6 Granular Fill – screened stone, gravel or sand used for intermediate landfill debris cover

Density and gradation specifications for these materials are presented in the Contract Documents; Sections 31 05 17 - Aggregate Materials and 31 22 15 – Grading.

4.1 Borrow Area Development and Closure

4.1.1 Borrow Area No. 1

Quarrying was completed within Borrow Area No.1; however, none of the material quarried was borrowed (i.e. the material was not removed and outside of Borrow Area No. 1). Suitable material quarried from Borrow Area No. 1 was used for backfilling excavations, regrading around antenna bases, general regrades and organic covers at the Main Dump, and general site maintenance.

4.1.2 Borrow Area No. 2

As expected from visual observation, grain size analysis showed that material available from the existing sand and gravel stockpile area within Borrow Area No. 2 consisted mainly of sand and was unsuitable as Type 2 Granular Fill.

An area was identified within Borrow Area No. 2 (northwest of the moraine deposit) as containing material with a gradation approximating that specified for Type 2. Material from this area was relatively well graded and when blended with sand from the sand deposit to the east could meet the design intent. The material in this area (including the overburden) was frozen but when extracted in thin lifts (~30 cm) it was possible to remove while manually removing oversized material. Copies of the geotechnical test results are included in **Appendix D**.

Development of Type 2 material in Borrow Area No. 2 commenced at the beginning of the 2010 construction season. Using the Komatsu excavator, all suitable material was consolidated into a stockpile and then loaded into the rock trucks to be transported to the Main Station for landfill berm construction. Once the scheduled construction of the landfill berms was complete for 2010, additional Type 2 material (~4,000 m^3) was excavated and stockpiled on the north side of the creek for future use as landfill cover. The material was hauled to the Main Station area and stockpiled at the completion of the 2010 construction season.

Type 3 Granular Fill (~2,000 m^3), required for general excavation backfill and road improvements, was also obtained from Borrow Area No. 2 at the same location as the Type 2 material.

Due to the poor conditions of the road, hauling to the Main Station Area ceased in early August and resumed on September 28, 2010 when the stockpiled 4,000 m^3 Type 2 and 2,000 m^3 of Type 3 material was relocated to the Main Station in preparation for 2011 construction activities.

No quarry development activities were performed at Borrow Area No. 2 in 2011.

The total volume of granular fill produced during the CAM-D remediation is summarized in **Table 10**, below.

Table 10. Summary of Granular Resources

Borrow Area ID	Type of Material Borrowed or Remaining in Borrow Area	Estimated Quantity Available (m^3) *	Estimated Quantity Borrowed for Use During Construction (m^3)	Comments
1	Type 2, Type 3, Type 4, Type 5	1,508,000 to 1,509,000	-	Type 5 material is saturated and would require drying and/or blending for structural construction use.
2	Type 1, Type 2, Type 3, Type 4	55,000	14,400	A minimal volume of Type 2 Granular Fill remains in Borrow Area No. 2. To access the available material, progressive thaw strip would be required below active layer; material will be very wet.

*Notes: * The total estimated quantity available was derived from Earth Tech 2006.*

4.1.2.1 Restoration of Borrow Area No. 2

Following extraction of Type 2 and 3 materials, restoration activities at Borrow Area No. 2 were completed to reduce the potential for stream migration, to promote natural drainage and to reshape the area to match the surrounding terrain. Processing riprap for the restoration of Borrow Area No.2 began on September 4, 2010 and full restoration was completed on September 12 (when the tributary crossing was removed and flow was low). The following paragraphs provide detail regarding the restoration process.

Firstly, the original stream bank was reinforced by backfilling immediately behind the stream bank with sand that was stockpiled in the borrow area. The material was then track packed to establish a firm foundation. Next, the sand layer was covered with the original overburden (that was stripped from the borrow area during quarrying) and graded such that the backside of the bank sloped gently away from the stream. The intention was that installing the material with a gentle grade away from the stream will limit overland drainage discharging directly into the creek and also direct drainage out of the borrow area and prevent ponding.

Next, the top of the bank was armoured with riprap (i.e. 150 mm or greater), to deflect flow away from the borrow area. Boulders used for armouring were collected from various stockpiles along the haul road to the main site.

In addition to reinforcing and armouring the bank, large boulders were placed upgradient of the borrow area, in a guide bank arrangement. The boulders were not placed immediately within the active channel, but along the south side of it, with the intent to maintain the current flow direction (past the borrow area rather than through it).

Lastly, drainage from precipitation and melting directly within the borrow area, and from overland flow originating south and east of the borrow area, was directed to the west down the middle of the borrow area and eventually to the stream at the north-western boundary of the borrow area. By directing drainage parallel to the stream, the overland drainage distance was maximized, therefore maximizing the amount of time for sediment to settle prior to actually reaching the stream. Also, directing drainage overland promotes infiltration and porous media flow, both of which will reduce the sediment load flowing downgradient of the borrow area. Drainage parallel to the stream was achieved by sloping the backside of the stream bank toward the south (as described above) and sloping the southern half of the borrow area gently toward the north. The overall area was sloped gently toward the west.

In addition to maximizing the distance prior to discharge, a series of check-dams was installed at the western boundary of the borrow area to reduce the overland flow rate and to promote settling of suspended sediment prior to discharge in the stream.

5. Construction Contract Administration

5.1 General

PWGSC retained AECOM to provide contract administration and monitoring of the remediation work completed by the Contractor. AECOM provided technical and contract support to PWGSC both on and offsite. On-site activities included, but was not limited to, recording construction quantities and progress of contract items, and communicating this information to PWGSC, as well as design modifications where necessary.

Significant changes to the contract defined scope of work required issuance of a Contract Amendment (Change Order). The redesign and price was then passed on to PWGSC/AANDC for review and approval prior to work commencing.

Additional works not defined in the original scope of work were considered Potential Additional Work (PAW) and required approval from PWGSC prior to PAW being performed. Approval of PAW was granted to the Contractor through *Task Authorizations* where the Contractor provided an estimate of the work required, using hourly labour and equipment rates, to generate a cost estimate and proposed work methodology, or Request for Task Authorization (RTA). These rates were submitted with the original proposal and formed part of the contract. The cost estimate was submitted to the PWGSC Project Manager for review and approval, who then prepared and signed the Task Authorization. Once a Task Authorization was received for a PAW item, the labour and equipment hours used were documented by the Contractor and AECOM. Daily records of PAW items were submitted to AECOM for approval and these amounts were documented to verify the sum of daily records did not exceed the value of the Task Authorization.

5.2 Pre-mobilization Activities

Pre-mobilization activities included community meetings, submittal review, and project kick-off meeting. AECOM provided contract support to PWGSC for the submittal review and during the project kick-off meeting.

5.2.1 Meetings

A project kick-off meeting, to review work activities, roles and responsibilities, and various other project specifics, was held in Quebec City in February 2010. Representatives from AECOM, PWGSC, AANDC and the Contractor were in attendance.

Community meetings were held in Kugaaruk, Taloyoak and Gjoa Haven prior to the start of remediation. The Contractor arranged the pre-construction community meetings and presented their work activities and recruitment information to attendees. PWGSC and AANDC attended the meetings, to answer questions and provide additional technical information regarding scope of work, as required. Additional community meetings, which AECOM attended, were held between construction seasons, as well as upon completion of remediation activities. Details regarding attendees and points of discussion during the meetings are provided in **Appendix G**.

5.2.2 Contractor Submittal Review

The specifications provide a list of information that the contractor is required to submit and many of those submittals are due prior to mobilization. AECOM reviewed submittals and maintained a document to track submittal status. This activity continued, as required, through to project completion.

5.3 Regulatory Compliance

One of the roles that AECOM fulfilled on-site, on behalf of the client and owner, was monitoring the Contractor's activities for compliance of regulatory issues, as identified in the contract documents, and the site permits. Discussions regarding specific compliance monitoring are provided below.

5.3.1 Health and Safety

Health and safety was a key consideration by all project team members and taken seriously by all staff and visitors to the Site.

Prior to construction, the Contractor submitted a detailed, site-specific health and safety plan (SSHASP) to AANDC and PWGSC. The plan outlined the policies and safe working practices that all personnel working on the site were to follow as well as the personal protective equipment to be used by workers. A medic was on-site at all times during the field season. The medic, supervisor, and foreman closely monitored worker safety and all workers were strongly encouraged to report any situations they believed could be unsafe. Each day on-site began with a job briefing which included a review of potential safety issues associated with current work activities.

AECOM monitored the Contractor's compliance with their SSHASP, and that the proper documentation and reporting was completed for any incidents on site.

The following table summarizes the incidents that occurred during the remediation contract. Additional details are included with the health and safety documentation included in **Appendix G**.

Table 11. Health, Safety and Environment Incident Summary

Incident	Date	Description	Contractor	Preventative Actions Taken
IR-01	July 9, 2010	A wolf, that was seen approaching one of the operators, was killed	Kudlik	Wildlife monitors to take extra care for returning wolves
IR-02	July 12, 2010	Excavator hit the main electrical line while placing gravel around the camp garage	Kudlik	Future work in this area to be completed using hand tools
IR-03	August 3, 2010	Employee tripped in carpenter container, and fell on the nailer he was carrying at the time; resulted in broken tooth and cut lip; required first aid was limited to cleaning the cut	Kudlik	Container was cleaned to remove hazards, and housekeeping procedures were discussed
IR-04	July 7, 2011	Employee temporarily lost consciousness and fell to the ground; employee was checked by the medic, and the incident required emergency evacuation to Kugaaruk health centre	Kudlik	N/A
IR-05	July 24, 2011	Employee accidentally sprayed Ether in own eye; eye was flushed with eye wash solution and examined by medic, additional first aid treatment included polysporin eye drops	Kudlik	Reiterated the need to use eye protection
IR-06	July 26, 2011	Pinched finger while unloading barrels of fuel; small cut was inspected by the medic, but treatment was limited to a bandage	Kudlik	Use a barrel lift, or get assistance
IR-07	August 30, 2011	Employee injured back when lifting a barrel	Kudlik	Use a barrel lift, or get assistance
IR-08	April 9, 2012	Employee injured shoulder when shoveling hard packed snow	Kudlik	N/A

Safety inspections were completed during remedial work on behalf of the Crown, and, in addition to completing the inspection itself, included submitting Site Safety Survey forms and updating the safety infraction log. Additionally,

Stratos Inc. completed a Combined EHS Compliance Management System and Due Diligence Audit in September 2010. In all cases, any noted non-conformance or deficiency items were documented and identified to the Contractor for correction, which AECOM monitored. A copy of the Corrective and Preventative Action Plan is provided with the health and safety documentation included in **Appendix G**.

Copies of the Health and Safety related documents are included in **Appendix G**.

5.3.1.1 Health and Safety Training

Worker Orientation was given by the site medic to all site personnel as they arrived on-site. This orientation familiarized the workers with the history of the site, objectives of the project, relevant AANDC, Nunavut, and Contractor health and safety policies as well as camp operation and evacuation information.

Courses for the operation and maintenance of the Challenger CATs and winter wilderness survival were held in Quebec City on February 22 to 25, 2010 prior to commencement of CAT train activities. A total of 10 people including two Inuit workers from Kugaaruk were in attendance.

Asbestos and PAP abatement work conducted on-site involved removal and bagging of material from the Garage and Warehouse. Prior to the commencement of the abatement work, full and half-mask respirator fit testing was performed for abatement crew members and work was completed by or under the direction/supervision of personnel trained in hazardous materials abatement.

Confined space training was provided to three Kudlik employees including the remediation consultant and site superintendent prior to the commencement of POL tank cleaning and a hazard assessment was completed prior to entering the tank. Workers wore proper PPE including full face respirators and used forced ventilation and air monitoring while completing the work.

5.3.2 Environmental Protection

Work and camp activities on-site were governed by environmental protection protocols outlined in the design specifications; INAC protocols; Contractor work practices; and the conditions of the Land Use Permit, Inuit Owned Land Licence, Quarrying Permit, and Water Licence.

Environmental protection supplies, such as oil absorbent booms and pads, were on-site and readily accessible throughout remediation activities. Oil drip trays were placed beneath parked equipment overnight and during breaks. Small spills were cleaned up with absorbent and small stains were excavated and stored in a 205 L barrel located in the garage.

Silt fencing was erected when work activities or climatic conditions had the potential to introduce silt to the adjacent water bodies. Specific locations when silt fencing was deployed include:

- In the drainage trench on the north side of camp
- Downstream of the culverts through the haul road
- At the toe of 3-PHC-1 (POL – Contaminated) excavation
- Along the overland drainage channel parallel to the stream in Borrow Area No. 2

5.3.3 Permits

DIAND was granted an Inuit Owned Land License Certificate of Exemption, Land Use Permit, Water Licence, Quarry Permit and a Burn Permit to authorize remediation work and camp operations at CAM-D. Conditions outlined in these permits governed the method of operation for several key remediation and camp processes. The details of the permits and the efforts undertaken to comply with them are described in the following sections.

Reports were completed by the DR and provided to AANDC, for submission to the water and land use inspectors. An environmental site inspection was conducted by AANDC Resource Management Officer (RMO) on August 5, 2010. A copy of the inspection report is provided in **Appendix E**.

5.3.3.1 Inuit Owned Land License Certificate of Exemption

Inuit Owned Land License Certificate of Exemption (#KTX09F001) was issued to DIAND by the Kitikmeot Inuit Association (KIA) on March 11, 2009 with an extension issued on April 12, 2010. Copies of the licence and extension are included in **Appendix E**.

The terms and conditions of the licence are in addition to and not a substitution for any applicable laws or regulation in force in the Nunavut Territory. The license outlines specific conditions related to fuel and chemical storage, ground disturbance, wildlife and annual reporting. In general, the intent of the licence is to minimize disturbance to environmentally sensitive areas and prevent any significant damage to Inuit Owned Lands.

5.3.3.2 Land Use Permit

Land Use Permit #N2008X0004 was issued to AANDC by the INAC Kitikmeot District on April 14, 2008. An amendment was issued to AANDC on February 1, 2010 extending the permit to April 13, 2011. Copies of the permit and amendment are included in **Appendix E**.

The general intent of the permit is to minimize disturbance to the sensitive arctic tundra and prevent any significant damage. To this end, heavy equipment was operated only on established site access roads as much as possible. ATVs and trailers were used to gather scattered debris from soft tundra areas.

All bulk petroleum products brought to site for use in the remediation activities, including diesel, gasoline and lubricating/hydrolytic oils, were stored in steel containers. All containers with a volume greater than 205 L consisted of a primary containment vessel within a secondary steel tub that has a volume of at least 110% of the stored volume. All vessels were marked with the Contractor's name and labelled with appropriate identifier placards.

Small volumes of chemicals are required on-site, generally as camp cleaning products and maintenance shop supplies. A list of these products was generated by Kudlik and posted on-site.

Wildlife

Adequate numbers of wildlife monitors were on duty during site remediation activities. Each wildlife monitor used an ATV to patrol areas where workers were active and made regular patrols of the general area. Each wildlife monitor carried a firearm and bear deterrents (bangers and screamers).

Caribou were often observed in and around the site area until early September in 2010 and 2011. Arctic wolves were also seen near and on-site, observed both alone and in small groups of four on several occasions. Arctic ground squirrels and various migratory birds including Canada geese, snow geese, sandhill cranes and roughed-legged hawks were also observed. Select photographs of wildlife in the CAM-D area are shown in **Appendix C (Photos 324 to 337)**.

A wolverine was observed within the camp area during the initial camp installation and was subsequently shot and killed by the wildlife monitor as a safety measure. In 2010, two wolves, which were coming within 20 m of the camp kitchen, were also killed in separate incidents by two different wildlife monitors as a safety precaution. Bear bangers and other methods of deterring the animals were made; however, it was determined by the wildlife monitors that the safety of workers was at risk. Consequently, the animals were killed as precautionary measures.

In the evening of September 18, 2011 a grizzly bear was spotted north of the camp, travelling in a general direction from the Main Station Area towards the camp area. The bear was next spotted approximately 150 m north of camp, where it observed the camp for a minute or two before backing away in to a gulley. A few minutes later the bear was spotted northeast of camp heading toward the south. To deter the bear, two wildlife monitors fired several shots in the bear's direction; however the bear did not run away immediately. The bear slowly retreated southeast from camp up the dry creek bed adjacent to the haul road. By this time it was getting dark so the DR, site superintendent and a wildlife monitor took a short drive up the main road to confirm the bear was out of sight. Afterwards, a meeting was held in the dining room to review the emergency response plan and set rules for night-time activity. With the exception of three people who were to rotate on night shift, everyone was to retreat to their rooms by 10 pm and remain in their room until 6:30 am. No additional bear sightings occurred.

Archaeological Sites

One archaeological site was identified in the Archaeological Impact Assessment Report completed by Golder Associates in 2007. The archaeological site is located near Freshwater Lake, and consists of a tent ring, cooking pot, fuel can and scattered wood. At the beginning of the remediation project the archaeological site was flagged and workers were instructed to stay away from the area.

A desktop archaeological assessment was completed by Golder Associates in 2010 on the CAT train routes from Shepherd Bay to CAM-D and Kugaaruk to CAM-D. The assessment concluded that 16 previously recorded sites are in the immediate vicinity of the CAT train route; however, the potential impacts to archaeological sites are considered low for mid-winter CAT train use given the snow covered and frozen ground conditions. In addition, being that the CAT train routes travel directly on frozen ice (where possible), archaeological sites situated along shorelines, or landforms overlooking lakes or streams, will be avoided.

5.3.3.3 Water License

Water Licence #1BR-SIM0813 was granted to DIAND by the Nunavut Water Board on December 2, 2010 with an amendment issued on June 17, 2010. A copy of the licence and amendment is included in **Appendix E**.

The Water License governs the rate and manner which water could be extracted from natural water bodies and provides discharge criteria for wastewater resulting from camp operations and site remediation activities. An appropriate site for the discharge of treated camp wastewater was chosen in consultation with the Nunavut Water Board.

The Water Licence permitted up to 20 m^3 of fresh water to be taken daily from the unnamed tributary near camp or Freshwater Lake. The average daily water usage during both construction seasons was 2 m^3 per day, for a total of approximately 426 m^3 over the course of the two construction seasons.

Authorized dewatering of excavations was completed using a pump with a 25 mm or 50 mm hose, and the water was discharged on top of a plywood sheet to reduce erosion at an authorized discharge location. An oil absorbent boom was deployed around the pump intake when pumping from hydrocarbon excavations. All excavations that required dewatering were sampled to confirm that the water quality meets the discharge criteria prior to dewatering. Details regarding analytical results for contact water are provided in the *Excavation Discharge* section below.

Drinking Water

Drinking water was obtained from the unnamed tributary near the camp, and was treated with a UV lamp and filtration system prior to consumption. Monthly water samples were collected (from the cold water faucet in the kitchen) by Kudlik and compared to the Health Canada Guidelines for Canadian Drinking Water Quality. For QA/QC purposes, a sample was collected by AECOM on October 4, 2010. All samples collected met the applicable guidelines.

Two water samples were collected from Freshwater Lake; one sample in 2010 and one in 2011. The intent of collecting these water samples for analysis was to identify a suitable alternative drinking water source should the unnamed tributary run dry, which was the case during the second half of the 2011 construction season. As shown in **Table 12**, all parameters met the applicable guidelines in the sample collected on July 27, 2010; however, a review of the analytical results for the sample collected on July 29, 2011 showed that the concentration of total coliforms exceeded the guidelines and was therefore not considered suitable for consumption. Therefore, in August and September 2011, when the unnamed tributary was essentially dry, drinking water was supplied using bottled water from Kugaaruk. Non-potable water was supplied to the camp from the Freshwater Lake using a dedicated water tank and pre-treating the water with a small dose of bleach.

Table 12. Drinking Water Analysis Results

Parameter	Guideline [1]	Units	Sampling Location						
			Kitchen	Kitchen	Freshwater Lake	Kitchen	Kitchen	Kitchen	Freshwater Lake
		Date Sampled	27-Jun-10	27-Jul-10	27-Jul-10	12-Sep-10	4-Oct-10	5-Jul-11	29-Jul-11
Routine Water Chemistry									
pH	6.5 to 8.5 [AO]	-	6.8	7.6	7.4	7.6	7.63	7.4	6.63
Electrical Conductivity	-	µs/cm	21	-	-	-	330	48	26
Calcium	-	mg/L	1.1	-	1.6	-	17	4.1	1.8
Magnesium	-	mg/L	0.82	-	1.1	-	10	1.4	1.0
Sodium	200	mg/L	1.1	3.4	1.3	10	29	2.2	1.6
Potassium	-	mg/L	1.5	-	0.7	-	3.0	0.9	0.7
Iron	0.3 [AO]	mg/L	0.23	-	0.06	-	0.21	0.11	<0.06
Manganese	0.05 [AO]	mg/L	0.015	-	0.003	-	0.009	0.0002	<0.004
Chloride	250 [AO]	mg/L	1.4	-	2.1	-	58	2.8	1
Nitrate-N	10	mg/L	<0.02	0.19	0.03	<0.02	0.11	<0.02	0.005
Nitrite-N	3.2	mg/L	<0.01	<0.01	<0.01	<0.01	<0.003	<0.02	<0.003
Sulphate (SO4)	500	mg/L	0.6	-	1.7	-	32	4.3	3
Hardness (as CaCO3)	-	mg/L	6	-	9	-	82.8	16	8.8
Metals									
Arsenic	0.01	mg/L	<0.001	<0.001	<0.001	<0.001	0.0003	<0.001	<0.0002
Cadmium	0.005	mg/L	<0.0005	-	<0.0005	-	<0.000005	<0.0005	<0.005
Chromium	0.05	mg/L	0.001	0.002	<0.001	0.001	<0.001	0.002	<0.001
Cobalt	-	mg/L	<0.001	-	<0.001	-	<0.0003	<0.001	<0.0003
Copper	1.0 [AO]	mg/L	0.005	-	<0.001	-	0.0090	<0.001	0.0004
Lead	0.01	mg/L	0.001	<0.001	<0.001	<0.001	0.0006	<0.001	<0.0002
Mercury	0.001	mg/L	<0.0001	-	<0.0001	-	-	<0.0001	<0.000005
Nickel	-	mg/L	0.002	-	<0.001	-	0.0015	<0.001	<0.0005
Zinc	5.0 [AO]	mg/L	0.026	-	<0.004	-	0.044	0.006	0.004
Microbiology									
Escherichia Coli	0/100 mL	UFC/100 mL	0	0	0	0	<1	0	<1
Fecal Coliforms	-	UFC/100 mL	0	0	0	0	<1	0	<1
Total Coliforms	0/100 mL	UFC/100 mL	0	-	-	0	<1	0	**86**
Total Plate Count	-	UFC/mL	5	-	-	-	-	-	-
Other									
PCBs	-	ug/L	<0.01	-	-	-	-	<0.01	<0.05
PHCs (C10-C50)	-	ug/L	<100	-	100	-	-	<100	<50

Notes: 1 Guidelines for Canadian Drinking Water Quality, Health Canada, December 2010
[AO] denotes Aesthetic Objective

Sewage System

As per the conditions of the Water Licence, all wastewater effluent generated as a result of camp operations could only be discharged to land at the approved location if it met the effluent quality limits shown in **Table 13**.

Table 13. CAM-D Effluent Quality Limits

Parameter	Maximum Average Concentration
BOD	120 mg/L
Total Suspended Solids	180 mg/L
Fecal Coliforms	100,000 CFU/100 mL
pH	6.0 to 9.0
Oil and Grease	No visible sheen

Sewage waste at CAM-D was pumped through a water treatment "Bionest" system installed outside the north boundary of camp. The "Bionest" system made by Kodiak uses a three step treatment system and was developed specifically for northern applications. All components of the "Bionest" were installed within a marine container to allow for ease of transport. The primary treatment is a conventional septic tank equipped with an effluent filter. The second treatment is made in the bioreactor where wastewater is put in contact with microbiological cultures naturally fixed on a synthetic material. Continuous aeration of the first compartment of the bioreactor is provided with a linear air pump and fine bubble air diffusers. The third and final treatment is made by ultraviolet rays prior to discharge. Details of the "Bionest" treatment system are provided in **Appendix G**.

Prior to complete installation of the treatment system, wastewater was directed to the two lined lagoons which were constructed adjacent to the "Bionest". Once installation was complete, the wastewater collected in the lagoons was introduced into the "Bionest" for treatment. During camp winterization, at the end of the 2010 construction season, the remaining untreated wastewater was transferred to the lagoons for winter storage and reintroduced into the "Bionest" at the start of the 2011 construction season.

Monthly samples of the treated water were collected by Kudlik, and submitted to Exova in Quebec City for analysis. Exova is a member of CALA and is accredited by the Standards Council of Canada (SCC). The effluent was then released at the approved discharge location north of camp once acceptable results were received. For QA/QC purposes, a sample was collected by AECOM on October 4, 2010. The results of the analyses are presented in **Table 14**.

Table 14. Treated Water Analysis Results

Parameter	Maximum Average Concentration	Units	Sampled By					
			Kudlik	Kudlik	Kudlik	AECOM	Kudlik	Kudlik
		Date Sampled	7-Jul-10	1-Sep-10	4-Oct-10	4-Oct-10	5-Jul-11	29-Jul-11
BOD	120	mg/L	40	24	9	14	70	67
Total Suspended Solids	180	mg/L	19	13	9	19	57	36
Fecal Coliforms	100,000	CFU/100 mL	66	210	1,900	1,700	**18,000,000**	2,000
pH	6.0 to 9.0	pH units	7.7	7.9	7.5	7.67	7.2	7.72
Oil and Grease	No visible sheen	mg/L	<1	<1	<1	<2	<2	<2

Analytical results for the "Bionest" effluent sample collected by Kudlik on July 5, 2011 were received on

July 18, 2011. All parameters except fecal coli forms met the effluent quality limits specified in the terms and conditions of the Water License. At that point, Kudlik had been continuously discharging since the beginning of the 2011 construction season. The Contractor was immediately instructed by AECOM to stop continuous discharge and redirect the effluent to the lagoons until acceptable results had been received. It is understood that the UV bulb had been compromised. As a result, the bulb was replaced, and the water within the "Bionest" was allowed the opportunity to circulate through the treatment system; the effluent was re-sampled by Kudlik on July 29, 2011. A review of the analytical results revealed all parameters met the effluent quality limits. Kudlik resumed continuous discharge of the waste effluent to the pre-approved discharge location on August 15, 2011, and continued with continuous discharge until the conclusion of the 2011 construction season.

As part of the Bionest closure procedures, a composite sample of the residual sludge from within the storage lagoons was sampled by the DR on September 5, 2011, and submitted to the laboratory for analysis to determine the appropriate disposal method. The samples were analyzed for BTEX, F1-F4, PCBs and heavy metals. A review of the analytical results showed that the concentration of Type B Hydrocarbons (65,400 ppm) in the sludge exceeded the 2009 INAC AMSRP for Type B Hydrocarbon Contamination; concentrations of PCBs and heavy metals were below criteria and/or laboratory detection limits. The sludge was consolidated and placed in a tote container and shipped south for disposal with other hazardous materials.

Excavation Discharge

Precipitation and groundwater that accumulated in excavations during remediation activities was sampled and analyzed against the criteria outlined in the Water Licence (**Table 15**):

Table 15. CAM-D Wastewater Discharge Limits

Parameter	Maximum Allowable Concentration (µg/L)
pH	6 to 9 (pH units)
Oil and Grease	5000
Arsenic (Total)	100
Cadmium (Dissolved)	10
Chromium (Dissolved)	100
Cobalt (Dissolved)	50
Copper (Dissolved)	200
Lead (Dissolved)	50
Mercury (Total)	0.6
Nickel (Dissolved)	200
PCB (Total)	1000
Phenols	20
Zinc (Total)	500

All contact water that met the discharge requirements of the Water Licence was pumped from the excavation and discharged at an approved location, on a splash board so as to minimize erosion. Results from contact water samples taken during the 2010 and 2011 construction seasons are summarized in **Table 16.**

The DR collected a sample of the surface water located in between the two Pallet Line excavations on August2, 2010. A review of analytical results revealed all parameters met the discharge requirements of the Water License. A notice of discharge was issued to the Water Inspector, after which time the water was discharged to the tundra.

A sample of the contact water within 3-PHC-1 (POL – Contaminated) was collected by Kudlik on August 19, 2010. Prior to receiving the results, the water was pumped into the existing POL Tank and mixed with contact water pumped from 3-PHC-I-2 (Burn Pit – Impacted) and 2-PHC-1 (Pallet Line – Contaminated). Consequently, on September 6, 2010, aluminum sulphate (alum) was added to the water in the POL tank (mixture of contact water from POL – Contaminated, Burn Pit – Impacted and Pallet Line – Contaminated) and was subsequently sampled by Kudlik on September 10, 2010 to determine disposal requirements. All parameters met the requirements of the Water Licence. A notice of discharge was issued to the Water Inspector on September 23, 2010, after which the water was discharged to the tundra.

On July 25, 2011, contact water from within 3-PHC-I-3 (Garage – Impacted) was pumped into a containment pool for temporary storage to allow for secondary excavation of impacted soil. In order to determine the appropriate disposal method, a sample of the water was collected by Kudlik on July 30, 2011. Once received, the analytical results were forwarded to AECOM for review; all parameters met the discharge requirements of the Water License. The contact water stored within the containment pool was then discharged to the tundra.

A sample of the water which had accumulated within the Camp BPA (located adjacent the garage on the east side) was collected by Kudlik on July 30, 2011. A review of the analytical results revealed all parameters met the discharge requirements of the Water License. Subsequently, the water was discharged to the tundra.

Ponded water which had accumulated within excavations where acceptable confirmatory soil sample results from the base of the excavation were received after the first round of excavation (i.e. Pallet Line – Impacted, Electrical Cabinets – Contaminated and POL - Impacted) was directly discharged to the tundra since there was no requirement to sample the water prior to discharge.

Table 16. Contact Water Analysis Results

Parameter	Maximum Allowable Concentration (µg/L)	AECOM/ 2-Aug-10	Kudlik/ 19-Aug-10	Kudlik/ 10-Sep-10	Kudlik/ 11-Jul-30 (Garage)	Kudlik/ 11-July-30 (Camp BPA)
pH	6 to 9 (pH units)	8.29	7.8	7.7	8.1	7.4
Oil and Grease	5000	<200	<1000	<1000	<1000	<1000
Arsenic (Total)	100	0.6	2	1	2	<10
Cadmium (Dissolved)	10	<0.005	<0.5	<0.5	<0.5	<0.5
Chromium (Dissolved)	100	<1	4	8	6	<1
Cobalt (Dissolved)	50	<0.3	3	6	1	<1
Copper (Dissolved)	200	1.3	13	11	3	2
Lead (Dissolved)	50	0.5	4	<1	<1	1
Mercury (Total)	0.6	0.008	<0.1	<0.1	<0.1	<0.1
Nickel (Dissolved)	200	0.6	5	10	2	1
PCB (Total)	1000	<0.05	<0.01	<0.01	<0.01	<0.01
Phenols	20	5	12	2	<2	2
Zinc (Total)	500	11	28	17	<2	2

Spills and Non-Compliances

Spills and unauthorized discharges that occurred during remediation operations are summarized in **Table 17**.

Table 17. Spill and Unauthorized Discharge Summary

Date of Occurrence	Description of Spill/Unauthorized Discharge	Related Equipment	Product Spilt	Quantity (L)	Corrective Action Taken
July 26, 2010	Stained soil observed near CAT Challenger 855D in Main Station Temporary Storage Area.	Unknown	Hydraulic Fluid	<1 L	The affected soil was excavated and placed into a barrel which was disposed of in the NHWL.
July 29, 2010	Hydraulic hose disconnected and sprayed the ground surface in the heavy equipment parking adjacent the garage.	Komatsu WA500 Loader	Hydraulic Fluid	1-2 L	Repaired the hose and cleaned the surface of the machine. The affected soil was excavated into a pail and placed in the NHWL.
August 2, 2010	Broke radiator half-way on haul road; leaked slowly along road to the garage.	Contractor's Ford F350 Crew Cab Truck	Anti-Freeze (ethylene glycol)	3 L	The remaining fluids in the radiator were drained (~3 L) into a spill pan and the radiator was replaced. The affected soil was excavated into a pail and disposed of in the NHWL.
August 24, 2010	Lubricant dripped from hinge and emulsified with ponded water at the Airstrip.	Compactor	Lubricant	<1 L	Cleaned the ground surface using absorbent pads and installed a drip collection pan underneath the parked compactor.
September 6, 2010	Stained soil observed adjacent garage at Camp Site.	Unknown	Diesel Fuel	<1 L	Affected soil was excavated onto a polyethylene membrane. The stockpile was sampled by AECOM and then placed in the NHWL when acceptable results were received.
September 6, 2010	Stained soil observed in Borrow Area No. 2.	Unknown	Hydraulic Fluid	< 1L	Affected soil was excavated onto a polyethylene membrane. The stockpile was sampled by AECOM and then placed in the NHWL when acceptable results were received.
September 7, 2010	Hydraulic hose was damaged and fluid sprayed on the equipment and the ground surface in Borrow Area No. 2.	Komatsu PC300 Excavator	Hydraulic Fluid	1-2 L	Repaired the hose and cleaned the surface of the machine (and the ground surface) using absorbent pads. No soil excavation was required. The used absorbents were incinerated on-site.
October 1, 2010	New diesel fuel barrel was damaged during transport from barrel cache to the main storage tank at the Camp Site. Barrel fell from the sleigh used for transport and was partially crushed. The partially crushed barrel leaked on the frozen ground. Two other barrels also fell to the ground and were damaged; however, they were not punctured and did not leak.	CAT Challenger 855D and Sleigh	Diesel Fuel	20-30 L	Contents of the damaged barrel were pumped into an empty fuel barrel. The fuel on the frozen ground was completely absorbed with bulk absorbent. The fuel soaked absorbent was placed into an open-top barrel and incinerated on-site. The contents of the other two barrels were pumped into the main storage tank.

June 25, 2011	Hydraulic oil leaked from compactor during the winter season. The compactor was parked along the east side of the air strip. The leak was observed once the snow has melted on June 25, 2011.	Compactor	Hydraulic Fluid	+/- 15 L	The spill was cleaned in 2 phases on June 25 and 27 2011 because snow and ice were still present and made it difficult to access the ground. All the fluid was recovered using granular and sheet absorbents. The absorbents were burnt in the incinerator.
June 27, 2011	While manoeuvring a marine container with a loader, the container wall and a barrel stored inside that container, were punctured with the forks of the loader. The barrel contained new lubricating high viscosity oil. The barrel lost part of is content.	Drum	Oil	< 25 L	Most of oil was contained inside the container. A smaller amount estimated to less than 25 litres escape from the container and was spilled on the soil surface. A dyke was constructed around the container with sand to contain the spill. All the lubricating oil was recovered using granular and sheet absorbents. The absorbents were burnt in the incinerator.
July 7, 2011	During the excavation of Lobe 1 in the Main Dump area, a buried canister (presence unknown until the incident) of grease similar to BR-145 was busted by the rock truck circulating in the area.	Grease container	Grease	< 10 L	The grease and soil were shovelled into plastic bags and consolidated in a 205 litres open top barrel with BR-145. Absorbent material were consolidated with absorbent material from barrel processing and packaged for off site shipping.
September 19, 2011	During the barrel consolidation activities in the north-east end of the camp, a portion of the south wall of the containment cell erected on the work platform fell while installing the duct work to warm up the barrels to be drained. The wall of the containment cell was rapidly put back in place. Approximately 20 litres were spilled on the ground surface.	Containment cell	Oil and fuel	20 L	Granular and sheet absorbent were used to clean the area. The absorbents were disposed of with the other absorbent material used in the barrel processing and consolidation activities. These absorbent materials will be sent off site (south) for final disposal and or treatment. The ground surface was brushed and all stained soil was shovel into a lined super bag also for disposal off site (south).

5.3.3.4 Quarry Permit

Quarrying Permit No. 2010QP0053 was issued to DIAND by the INAC Kitikmeot District on March 3, 2010. Monthly quarry permit returns were filed with AAND Kitikmeot District for the months of July, August, September and October, 2010. Volumes of material quarried and borrowed are outlined in **Table 18**.

Table 18. CAM-D Borrow Material Extraction Summary

Month	Quantity Quarried (m^3)	Quantity Borrowed (m^3)
July 1 to August 10	11,100	8,400
August 11 to September 10	5,650	0
September 11 to October 10	900	6,000
Total	**17,650**	**14,400**

The quantity of material borrowed refers to the volume of material removed from the quarry and used for road and landfill construction. The difference between the quantity quarried and quantity borrowed totals 3,250 m^3 which was used for borrow area improvements and was not removed from the borrow area.

Given the lack of Type 2 material located in Borrow Area 2 and the construction requirements associated with the remediation of CAM-D, quarrying activities progressed into low lying areas adjacent to the stream. An undisturbed natural buffer zone between the quarry area and the high water mark (HWM) of the stream was maintained to assist in sediment and erosion control and retention of riparian vegetation following the Department of Fisheries and Oceans Nunavut Operational Statements. Although a natural buffer zone between the quarry excavation and the stream bank was maintained, restoration activities were required in Borrow Area 2 to reduce the potential for a future silt release from occurring (by potential stream migration through the borrow area or overland drainage discharge directly into the stream). Restoration of the borrow area was completed in the fall during low flow to reinforce the stream bank, to deflect potential seasonal stream flow away from the borrow area and to promote overland drainage through the borrow area rather than across the borrow area. Details regarding restoration activities are provided in **Section 4.1.2.1**.

5.3.3.5 Burn Permit

An amendment to Water Licence #1BR-SIM0813, to allow controlled burning of un-treated and un-painted wood waste was granted to DIAND by the Nunavut Water Board on October 12, 2010. The Burn Permit outlines the waste materials suitable for incineration, as well as the requirements for an ash collection system to ensure all ash is contained, sampled and disposed of accordingly. A copy of the licence and amendment is included in **Appendix E**.

On July 17, 2011, a sample of ash was collected from each of the two halves of the former module train sewage tank which had been modified to burn unpainted/untreated wood on-site. One half of the incineration bin was located at the Main Dump, the other half was used to burn unpainted/untreated wood near Module Train Buried Debris. The samples (i.e. BR-183 and BR-184) were submitted for total metals and leachable metals analysis to determine disposal requirements. A review of the analytical results showed that concentrations of total metals and leachable metals from the ash sample collected from the incineration bin at the Main Dump (BR-183) were below criteria and could therefore be disposed of in the NHWL. Subsequent to sample collection, additional incineration had taken place in the bin; consequently the ashes were re-sampled on July 30, 2011. Analytical results were received on August 3, 2011; all heavy metals and leachable metals parameters were below criteria and/or laboratory detection limits and therefore suitable for disposal in the NHWL (completed on August 16, 2011).

The concentration of zinc (770 ppm) in the ash sample collected from the incineration bin located next to Module Train Buried Debris (BR-184) exceeded the DCC Tier II Criteria; all leachable metals parameters were below laboratory detection limits. Consequently, on August 24, 2011, the ash was containerized for off-site shipment during which time one superbag was filled.

A sample of the ash generated from the incineration of the remaining unpainted/untreated wood on-site was collected on August 22, 2011. A review of the analytical results showed that all total metals and leachable metals parameters were below criteria and/or laboratory detection limits. As a result the ash was disposed of in the NHWL.

5.3.3.6 PCB Storage

As previously described in **Section 2.3.1**, materials that contain PCBs in excess of 50 mg/kg are regulated under the Canadian Environmental Protection Act (CEPA) and must be treated as hazardous waste and stored in a designated area. As a result, the Main Station TSA was established at CAM-D and access to the area was limited to authorized personnel only. Cautionary signage was erected at all access points to the Main Station TSA to ensure they were visible from all approaches. The signs were lettered in accordance with the details provided in Section 02 41 16 Structure Demolition of the Contract Documents.

PCB materials were stored in marine containers which were prepared by lining the bottom and the sides (up to 1.2 m) with polyethylene sheeting followed by the placement of OSB plywood and 2 x 4's secured together (so as to not puncture the plastic). A unique numbered identification sticker was placed on outer side of each container. Industrial grade spray adhesive was used to ensure labels would stay attached during periods of inclement weather. Each container was equipped with a lock and containers were positioned with doors butted up against one another to prevent unauthorized access to stored materials.

The DR conducted weekly inspections of the area during the 2010 and 2011 construction seasons to determine if any damage had been done to containers and to ensure that the appropriate signage and labels were present. To ensure compliance with the regulations, a PCB Storage Area Binder was developed which served as a management tool for the Departmental Representative. Copies of the binders were kept on site and circulated to PWGSC and AANDC. Binders were maintained with an entry/exit log, the number of containers in storage, an inventory of PCB materials stored at the Main Station TSA, a record of incoming material for each container placed in storage (when applicable), container numbers (i.e. actual container number and unique identification number found on affixed label), and a schematic of the area (revised weekly if applicable). Updates were provided to AANDC for dissemination.

Five marine containers were filled in 2010 with items such as structural steel, painted metal cladding, painted wood, and PCB oil-filled capacitors and transformers. The containers were relocated to the Shepherd Bay TSA during the winter 2011 CAT train. During the 2011 construction season, two marine containers were filled items painted with PCB amended paint (PAP). The marine containers were relocated to the temporary storage area at Shepherd Bay during the winter 2012 CAT train in preparation for final demobilization. Select photographs of the PCB storage areas are shown in **Appendix C (Photos 338 to 343)**.

A discussion of the baseline sampling program at the TSAs is provided in the following paragraphs. Select photographs of the TSAs are shown in **Appendix C (Photos 344 to 349)**.

Main Station Temporary Storage Area

A TSA was established at the Main Station for the purpose of storing hazardous material containers for the length of the remediation program. The Main Station TSA (approximately 100 m x 50 m) was baseline sampled prior to the placement of the containers; the DR collected ten baseline soil samples (and one duplicate sample) on July 19, 2010. The analyses requested for these samples included heavy metals and PCBs. Analytical results showed that all parameters were below criteria and/or laboratory detection limits. A summary of the baseline sample results is presented in **Table B-10, Appendix B**.

Since the majority of the Main Station TSA had been converted into a landfarm treatment area at the beginning of the 2011 construction season, confirmatory samples were not collected. Once acceptable results for the treated soil were received, the material was left in place and reshaped to match the surrounding terrain.

Shepherd Bay Temporary Storage Area

A TSA was established at Shepherd Bay for the purposes of storing hazardous material containers once removed from CAM-D in preparation for final demobilization (scheduled to occur in 2012). The Shepherd Bay TSA (approximately 17 m x 22 m) was baseline sampled on August 27, 2010; twelve baseline soil samples (and one duplicate sample) were collected. The analyses requested for these samples to include heavy metals and PCBs. Analytical results showed that all parameters were below criteria and/or laboratory detection limits. A summary of the baseline sample results is presented in **Table B-10, Appendix B**.

5.4 Contract Items

Forty-five items were initially identified within the construction contract for the remediation of CAM-D Simpson Lake. Of those, 15 were unit based items, 16 were lump sum items, and 11 were measured quantity amount items (Kg, m, m^2, and m^3), and 3 provisional cost items. One contract amendment was issued during the course the project, for demolition of the SRR construction camp on the DND property. Two design revisions were required during the project; however, because of capacity in the original agreement change orders were not required. The redesign work was completed using existing contract items. The design revisions included regrades at the Main Dump and a change in approach for the remediation of impacted soils from the POL and Garage (landfarm treatment rather than strictly excavation and disposal in the NHWL).

Unit based items and measured quantity items were recorded by the Contractor, surveyor and AECOM as construction activity progressed. Measurement for payment was detailed in the specifications.

Lump Sum items were recorded by the Contractor, AECOM, and PWGSC Project Manager as percentage-complete based on the work required to complete the item or detailed in the specifications. This included items such as Balance of Project Cost, Pre-Project Meetings, Mobilization, Demobilization, Survey, and Demolition.

Table 19 below is a summary of the contract items completed at CAM-D during the Final Remediation Contract based on the most recent contract amendment.

Table 19. CAM-D Contract Items

Item #	Description	Unit	Quantity
01 11 00-1	Worker Orientation Seminar	Each	1
01 29 83-1	Packaging, Handling and Transport of DR's Samples to Accredited Lab in Edmonton	Kg	800
01 29 83-2	Contractor's Testing Requirements including Sampling, Transportation and Analysis at an Accredited Laboratory	Lump sum	1
01 31 19-1	Pre-Construction Meeting at location of Contractor's choice	Lump sum	1
01 31 19-2	Inter-Season Meeting at location of Contractor's choice	Each	2
01 31 19-3	Return Transportation for Meetings- Contractor' Charter Base to CAM-D, NU	Person - trips	16
01 31 19-4	Community Meetings – Gjoa Haven, Taloyoak, Kugaaruk	Each	3
01 35 32-1	Site-Specific Health and Safety Plan	Lump sum	1
01 35 32-2	Wildlife Monitors including ATV	Days	220
01 35 43-1	Environmental Protection Supplies	Lump sum	1
01 53 00-1	Mobilization	Lump sum	1
01 53 00-2	Demobilization	Lump sum	1
01 54 00-1	Camp Start up	Each	2
01 54 00-2	Camp Winterization	Each	2
01 54 00-3	Operation and Maintenance of Camp Services	Week	30
01 54 00-4	DR and Authorized Personnel Room and Board	Person- day	470
01 54 00-5	Casual Meals – DR's Authorized Personnel	Each	40
01 54 00-6	Return Transportation - Contractor's Charter Base to Simpson Lake	Person - return trip	30
01 54 00-7	DR's Communication Links	Lump sum	1
01 54 00-8	Consumable Office Supplies (+ Fixed % Fee for O/H and profit).	Provisional cost sum	1
01 71 01-1	Survey	Lump sum	1
02 41 16-1	Demolition: POL Tank including Foundation and Piping	Lump sum	1
02 41 16-2	Demolition: POL Pumphouse including Foundation and Piping	Lump sum	1
02 41 16-3	Demolition: Warehouse Concrete Foundation	Lump sum	1
02 41 16-4	Demolition: Garage including Foundation	Lump sum	1
02 41 16-5	Demolition: Fallen Antenna	Lump sum	1
02 41 23-1	Known Debris Removal-Site Areas	Lump sum	1
02 51 00-1	Drilling	Metre	20
02 51 00-2	Monitoring Wells - Supply and Installation	Each	4
02 55 13-1	Contaminated Soil Excavation – All Site Areas	Cubic metre	442
02 55 13-2	Hydrocarbon Impacted Soil Excavation - All Site Areas	Cubic metre	3,234
02 55 13-3	Off-Site Transportation of Contaminated Soils	Cubic metre	800
02 55 13-4	Off-Site Disposal of Contaminated Soils (+ Fixed % Fee for O/H and profit).	Provisional cost sum	1
02 61 33-1	Supply of Barge Containers - Hazardous Waste Materials	Each	12
02 61 33-2	Supply of Intermediate Containers - Hazardous Materials and Contaminated Soils	Each	450
02 61 33-3	Containerization of Known Hazardous Materials	Lump sum	1

02 61 33-4	Off-site Transport of Containerized Hazardous Waste to Contractor's Designated Hazardous Waste Facility	cubic metre	140
02 61 33-5	Off-site Disposal of Containerized Hazardous Waste at Contractor's Designated Hazardous Waste Facility (+ Fixed % Fee for overhead and profit).	Provisional cost sum	1
31 22 15-1	Reshaping	Square metre	50,000
31 22 15-2	Type 2 Granular Fill	Cubic metre	8,500
31 22 15-3	Type 3 Granular Fill	Cubic metre	1,700
31 22 15-4	Unclassified Excavation	Cubic metre	100
31 22 15-5	Test Pit Excavation - Equipment Usage	Operating hours	40
31 22 15-6	Road, Access Construction and Tributary Crossing	Lump sum	1
31 23 11-1	Buried Debris Excavation	Cubic metre	2,265

5.4.1 PAW Task Authorizations

There were seventeen Task Authorizations during the CAM-D remediation contract. **Table 20** below is a summary of the approved Task Authorization items completed at CAM-D during the 2010 and 2011 construction seasons.

Table 20. CAM-D Borrow Material Extraction Summary

Item #	Description
TA-1	Barge Access – access to the CAM-3 barge landing area was not granted by DND; consequently a temporary barge landing area was constructed
TA-2	Collection and Disposal of 3 Tanks – 3 tanks were found along the shore of Simpson Lake, which were cut from the ice and disposed in the NHWL
TA-3	Nassituq Fuel Inspection – DND requirement for other parties accessing the CAM-3 airstrip for Spring 2010 CAT train operations
TA-4	Challenger & Wilderness Training – safety training seminar held in Quebec for those involved with the CAT train operations
TA-5	Vehicle Fluid Removal – draining of residual fluids from vehicles at the Vehicle Dump and Main Dump
TA-6	Barrel Processing – collection, sorting, draining, cleaning and crushing of the 8,792 barrels located at CAM-D
TA-7	Borrow Area #2 Restoration – required to restore Borrow Area No. 2 following aggressive quarrying to produce granular material required for the NHWL construction, as well as for other regrades completed on-site
TA-8	Nassituq Fuel Inspection 2011 - DND requirement for other parties accessing the CAM-3 airstrip for the Spring 2011 CAT train operations
TA-9	Landfarming – to support the design revision regarding treatment of hydrocarbon impacted soils
TA-10	DND Camp Hazmat – abatement and containerization of hazardous materials from the DND camp demolition
TA-11	soil sample shipment – required to cover additional confirmatory sample shipment costs
TA-12	emergency flight – associated with Incident Report 04; medical evacuation from CAM-D to Kugaaruk
TA-13	Nassituk escort - DND requirement for other parties accessing the CAM-3 airstrip for the Spring 2012 CAT train operations
TA-14	Emergency flights for water
TA-15	Nasittuk Escort Fuel Inspection 2012 - DND requirement for other parties accessing the CAM-3 airstrip for the Fall 2012 Sealift operations
TA-16	Flight for client (Cambridge Bay to Kugaaruk) – required to attend community meetings; mechanical issues with scheduled aircraft
TA-17	CAM-D Site Inspection – provision of aircraft and ATV for Fall 2012 final camp inspection

5.4.2 Scope Variance

As noted above, there were some design revisions implemented resulting in scope change. In particular, the scope of work for the following items was altered:

- Remedial design for buried debris at the Main Dump, as described in **Section 2.6.5**
- Treatment of PHC impacted soils from the POL and Garage, as described in **Section 2.8**
- SRR construction camp demolition, as described in Section 2.3.7

In addition to the items listed above, a contract amendment was also issued to the contractor, to provide food preparation training for participants in the communities of Kugaaruk, Taloyoak and Gjoa Haven. The training opportunity was part of an AANDC training fund program, which is outside the scope of work for the remediation project.

5.4.3 Schedule Variance

Overall, the remediation contract was completed following a schedule similar to that initially proposed by the Contractor. Some contract items took longer than originally scheduled, and there were several contract items that took less time than originally planned. Below are the more significant schedule variances, and causes of the variance.

- Granular material production from Borrow Area No. 2 – It was originally estimated that all Type 2 required for remediation activities would be produced over a 21 day period; however, quarrying and stockpiling of Type 2 (and 3) material started at the on-site of the 2010 construction season (July 5) and lasted approximately 40 days (until August 13, 2010). Borrow Area No. 2 is located along the sides of the unnamed tributary, within an outwash colluvial fan; consequently, it was discovered that suitable Type 2 material was located below a layer of silty sand. Extensive stripping was required to access the suitable Type 2 material. Furthermore, reclamation of Borrow Area No. 2 was more extensive than a typical quarry pit, due to the extensive stripping technique required to access and produce suitable granular material. Additional details are provided in Section 2.10.1.2.
- Challenges transporting granular material to the NHWL – Due to extensive thawing of the road base, the haul road from Borrow Area No. 2 to the Main Station Area (NHWL) became unsuitable for travel by rock truck by late July 2010. Consequently, once the required volume of Type 2 material for the NHWL berm construction was transported to the main site area, use of the haul road was restricted to passenger trucks and offroad vehicles. Hauling of the granular material resumed in October 2010, once the road base was frozen. This meant the 2010 construction season terminated on October 10, 2010 rather than September 17, 2010 as originally planned.
- Challenges with buried debris lobes at the Main Dump – It was originally estimated that debris collection at the Main Dump would be completed in 10 days; however, as described in Sections 2.4.1 and 2.6.5 extensive debris was found buried below the surface at the Main Dump. Remediation activities at the Main Dump started on August 25, 2010, following surface debris collection, and continued to September 16, 2010. Remediation at the Main Dump resumed at the onset of the 2011 construction season (July 6) and was completed by August 25, 2011. In total, approximately 77 days were required to complete the remediation activities at the Main Dump.
- Number of barrels requiring processing – It was originally estimated that barrel processing would be completed in 26 days; however the Contractor required 18 days in 2010 and 49 days in 2011 to complete these activities. As described in Section 2.5, there were nearly 8,800 barrels located at CAM-D, 46% of which were found to contain fluid and required processing.

Despite the challenges listed above, the Contractor generally made good progress and the project overall was completed within the originally planned timeframe.

5.4.4 Demobilization

Demobilization was largely completed during the March/April 2012 CAT train and September 2012 Sealift; however, some equipment and supplies were demobilized during the March 2011 CAT train. Also, Hydrocarbon

Contaminated soils, Tier II metals contaminated soils and/or PCB contaminated soils excavated and containerized during the 2010 construction season were demobilized from site during the March 2011 CAT train and September 2011 sealift.

In September 2011, at the completion of the on-site activities, the majority of the camp infrastructure was disconnected and prepared for demobilization. A small network of dorms and a temporary kitchen were constructed to facilitate the March/April 2012 CAT train. With the exception of two sleighs loaded with shipping containers located within and adjacent to the CAM-D PCB storage area, all of the equipment, camp materials, containerized debris and soil, etc. were stored in the camp area in preparation for demobilization. Prior to arranging the camp infrastructure, equipment, barrels, hazardous materials, contaminated soil, etc. in preparation for the final CAT train, the CAM-D camp area was cleaned of debris, and reshaped to eliminate ruts, to remove pads constructed for the camp and to promote drainage. Also, prior to placing anything in the staging areas, the areas were compacted in an effort to reduce the potential for any of the staged equipment and infrastructure on blocks, and the materials on pallets, to sink in to the surface soil.

The vast majority of the camp facilities and equipment were demobilized from CAM-D during the March/April 2012 CAT train and September 2012 sealift. A portion of the camp facilities and some equipment was transported to Kugaaruk to be used by Kudlik for ongoing projects in that community. Along with the camp infrastructure and equipment, and all remaining fuel drums, barrels with waste oil/fuel, soil bags and boxes with contaminated soil, marine containers and seacans with hazardous demolition waste, were transported to the Shepherd Bay camp, where they were stored until shipped south during the September 2012 Sealift from Shepherd Bay. As the infrastructure, equipment, soil bags and boxes, barrels, etc. were loaded on to sleighs for transport during the March/April 2012 CAT train, miscellaneous debris or wood was collected and disposed of accordingly. Being that final demobilization from the CAM-D site occurred when the area was snow covered, the camp area itself required a final inspection once the area was free and clear. An inspection of the former construction camp area was completed on September 5, 2012, and a small amount of wood, remaining from pallets, chocks and other miscellaneous wood waste, was found scattered around the camp area. There was also a minor amount of metal and plastic debris in the former camp area. All wood debris was collected, stockpiled and incinerated. The waste unsuitable for incineration (i.e. anything other than unpainted, untreated wood) was collected and removed from the site, and disposed of at the dump in Kugaaruk. In addition, a small privy used for grey water disposal for the temporary camp in place during the March/April 2012 CAT train required backfilling. Large boulders were used to fill the bulk of the hole, which were then covered using surrounding soil. Aside from the minor amount of debris and the pit that required backfilling, the CAM-D camp area was found to be in very good condition, with no erosion channels, slope instabilities, spills, or other significant issues observed.

The final sealift arrived in Shepherd Bay on September 11, 2012, and demobilization of camp facilities, equipment and remediation wastes occurred between September 14 and 16, 2012. Prior to the sealift arriving, Kudlik was on-site to prepare equipment and materials for transport south. This included the contaminated soil, barrels containing various waste oil products, as well as other hazardous materials generated during remediation of the CAM-D site. At the completion of the demobilization activities, no camp infrastructure, equipment, supplies, contaminated soils and hazardous materials, etc. remained at Shepherd Bay, and there was no debris observed at the temporary Shepherd Bay camp area or at the beach staging area. In addition, the temporary camp area was reshaped to remove pads constructed for the camp and to backfill the grey water privy used when the camp was in operation.

Visual observations of the performance of constructed features at the CAM-D site itself, including the non-hazardous waste landfill (NHWL), reshaping of the haul road, regrades, and backfilled excavations were conducted on September 5, 2012, during the Final Camp Inspection; however, time for visual inspection of the CAM-D site was limited. The following observations are generalized and not intended to be a complete record of conditions on site, as it was understood that the long term monitoring and inspection was completed separately, by another consultant.

Backfilled excavations, regraded dump areas and the NHWL were inspected and found to be in very good condition and performing as intended. Equipment cleat marks are still prominent on constructed surfaces and no erosion channels or slope instability features were observed. Drainage courses along the haul road, between the camp area and the CAM-D site, have been adequately restored and the road itself is not impeding drainage in any way.

DR's were on-site during the 2011 and 2012 CAT train events, as well as the final demobilization sealift that occurred in September 2012. Select photographs from the demobilization preparation, 2011 CAT Train, 2012 CAT and 2012 Sealift, as well as aerial photos taken during the final camp inspection, are shown in **Appendix C (Photos 350 to 377)**.

5.4.5 Off-site Disposal of Hazardous and Non-Hazardous Waste and Soil

As described in **Section 2.5.2**, all hazardous materials consolidated from demolition and debris collection activities at CAM-D were placed into prepared marine containers, superbags or wooden seacans.

Five marine containers were filled with hazardous materials generated during remediation activities in 2010. In addition to the marine containers, 308 superbags (approximately 1 m^3 capacity) and 48 wooden seacans (approximately 2.4 m^3 capacity) were filled with contaminated soil which required shipment off-site. The marine containers, superbags and seacans were relocated to the temporary storage area at Shepherd Bay during the winter 2011 CAT train, and finally demobilized during the September 2011 Sealift.

During the 2011 construction season, two marine containers were filled with hazardous materials. In addition to the marine containers, 123 superbags and 45 wooden seacans were filled with contaminated soil which required shipment off-site. In addition to the 123 superbags containing contaminated soil, three superbags were required for ashes from domestic garbage burning and/or the incineration of unpainted/untreated wood at the Main Station Area; the inflatable pools were deflated and packaged in four superbags; six superbags contain used absorbents, two superbags were required for soil excavated from spills around the construction camp (uncharacterized); and one contains tar from barrel processing activities at the Main Dump. The marine containers, superbags and seacans were relocated to the temporary storage area at Shepherd Bay during the winter 2012 CAT train in preparation for final demobilization.

Table 21 below summarizes the hazardous waste that was transported offsite from CAM-D for disposal at approved waste disposal facilities. Select photographs of the contents of the marine containers, taken prior to being transported offsite, are shown in **Appendix C (Photos 378 to 391)**.

Table 21. Hazardous Waste Summary

Container Type	Number of Containers	Contents	Disposal Facility
Super Bags	446	Metals, PCBs and/or hydrocarbon contaminated soil, ash from incineration of domestic waste and unpainted wood, used absorbents, soil from spills, and tar from barrel processing	Stablex, Blainville, QC
Sea-cans	93	Metals, PCBs and/or hydrocarbon contaminated soil	Stablex, Blainville, QC
Marine Containers	7	PCB amended paint materials, PCB containing waste fluids from barrel processing (in overpack drums), PCB transformers and ballasts, lead paint materials	Aevitas, Cornwall, ON; Sena Waste Services, Swan Hills, AB
Drums	162	Waste fluids from barrel processing, including PCB containing waste fluids (in overpack drums)	Solva Rec, Richelieu, QC
Totes	3	Sludge from barrel processing	Solva Rec, Richelieu, QC
Other	4	Lined wooden boxes with sludge from wastewater (Bionest) treatment system, batteries, and containment cells from Barrel Processing	Solva Rec, Richelieu, QC; Stablex, Blainville, QC

Offsite disposal documentation is provided in **Appendix F**.

6. References

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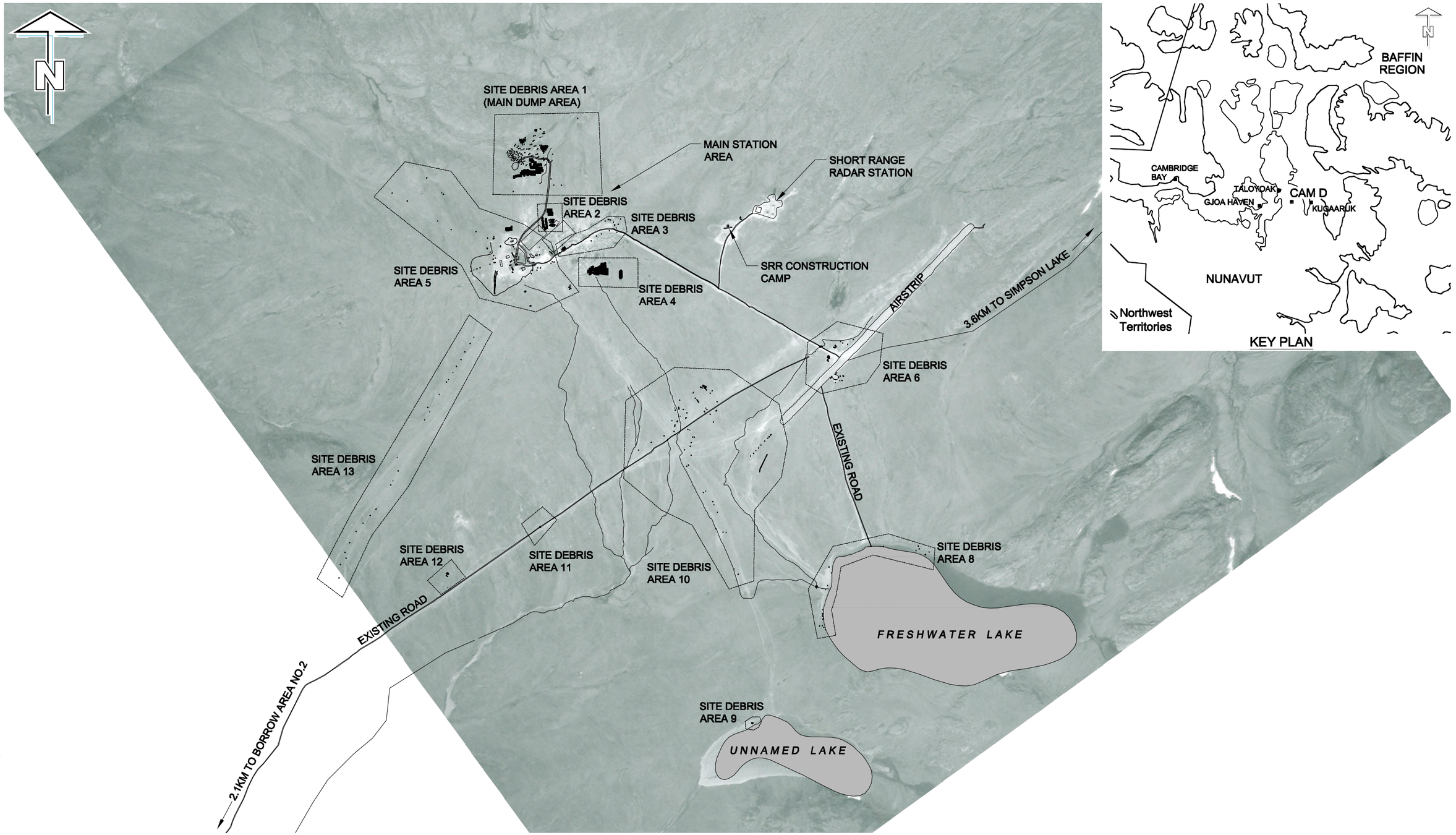
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Appendix A

Figures

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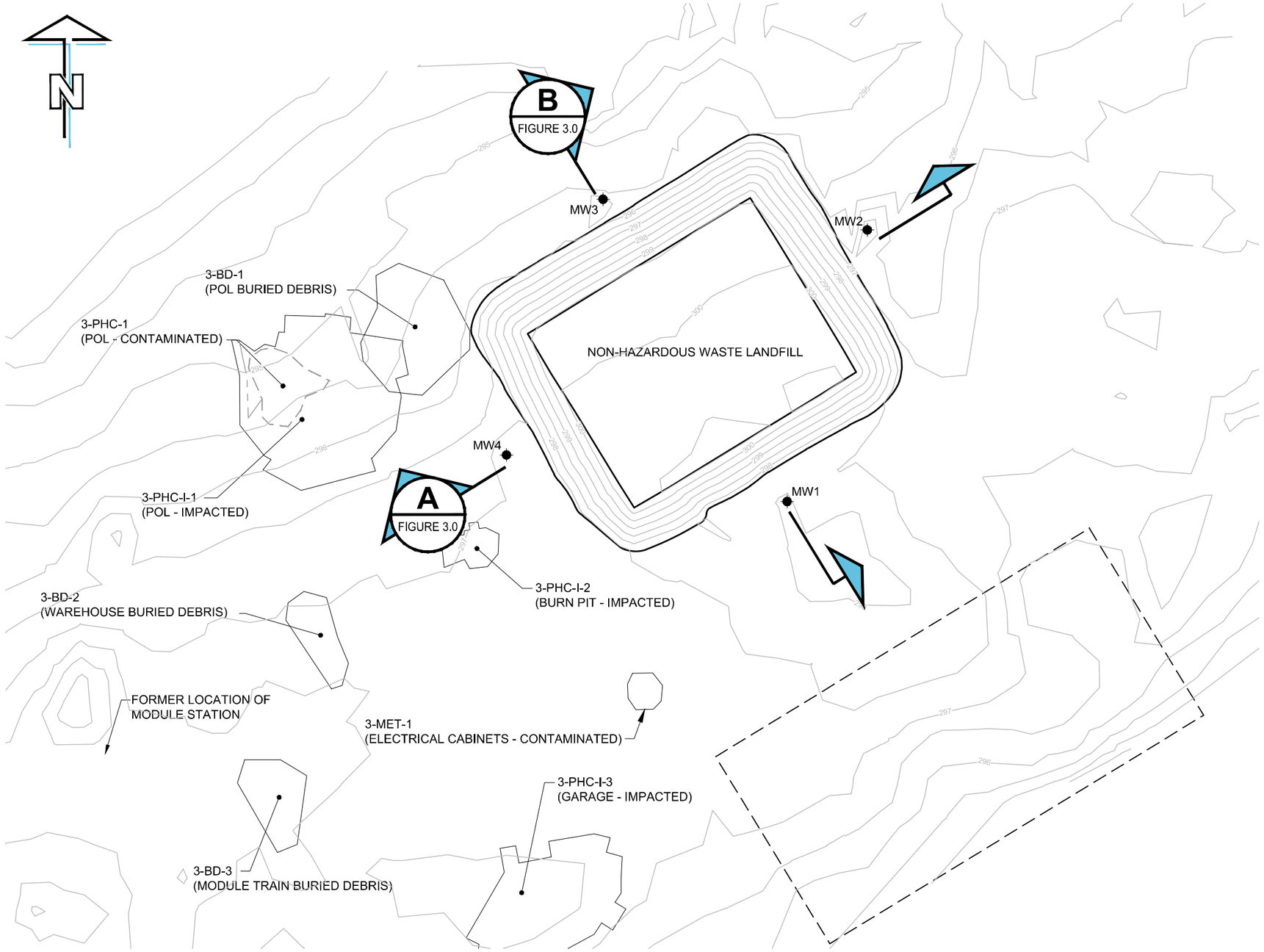
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CAM-D DEW Line Site
Construction Summary Report

Site Plan

AECOM

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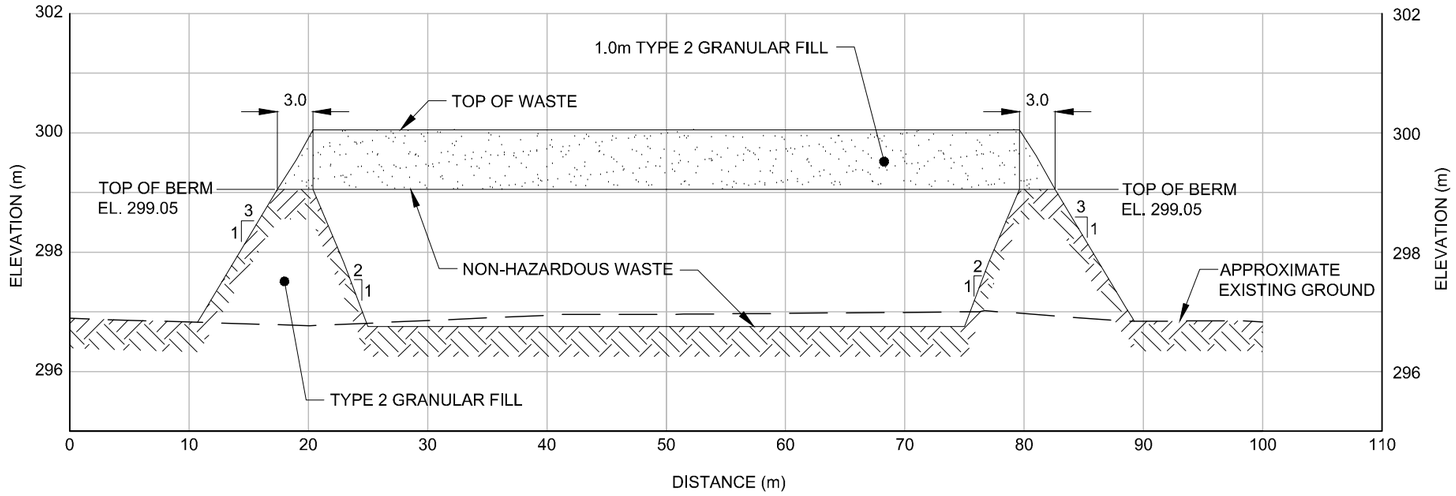
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Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

Non-Hazardous Waste Landfill
As-Built
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SECTION A

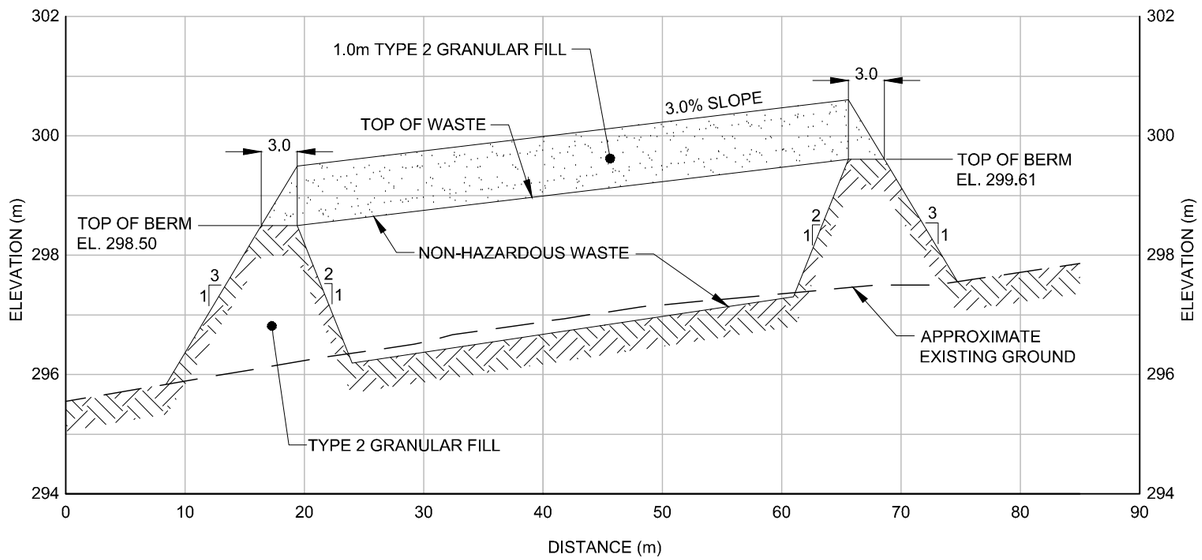
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FIGURE 2.0



SECTION B

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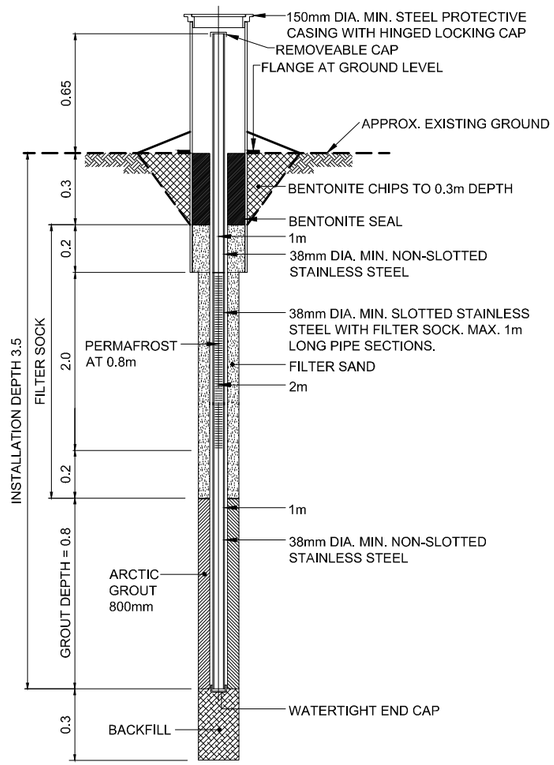
AECOM

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

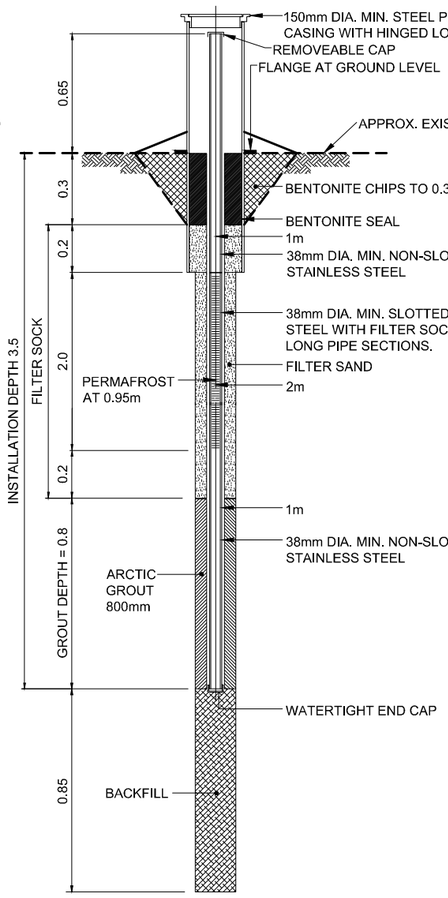
Non-Hazardous Waste Landfill As-Built - Typical Cross-Section

Figure 3.0

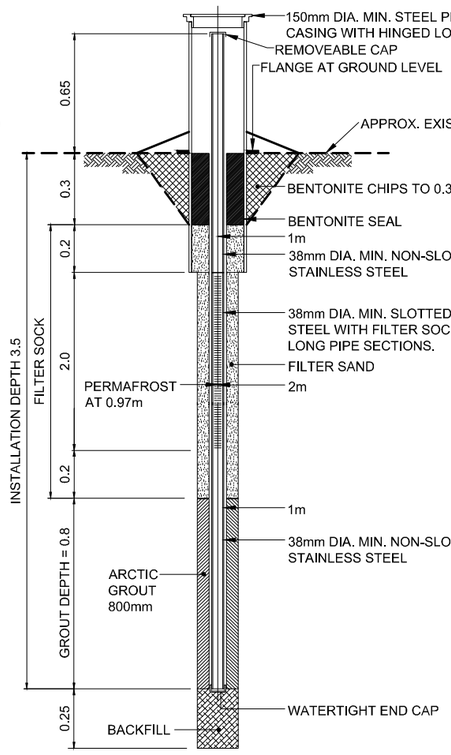
B SIZE 11" x 17" (279.4mm x 431.8mm)
PLOT: 1/23/2013 1:46:05 PM
Saved By: de leona
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ISS/REV: 0A
AECOM FILE NAME: 60149115-02-B-F04-R0A



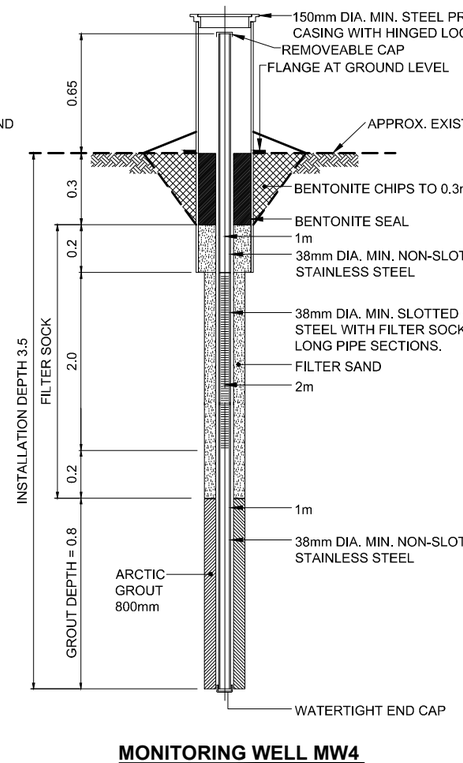
MONITORING WELL MW1
SCALE: N.T.S.



MONITORING WELL MW2
SCALE: N.T.S.



MONITORING WELL MW3
SCALE: N.T.S.



MONITORING WELL MW4
SCALE: N.T.S.

AECOM

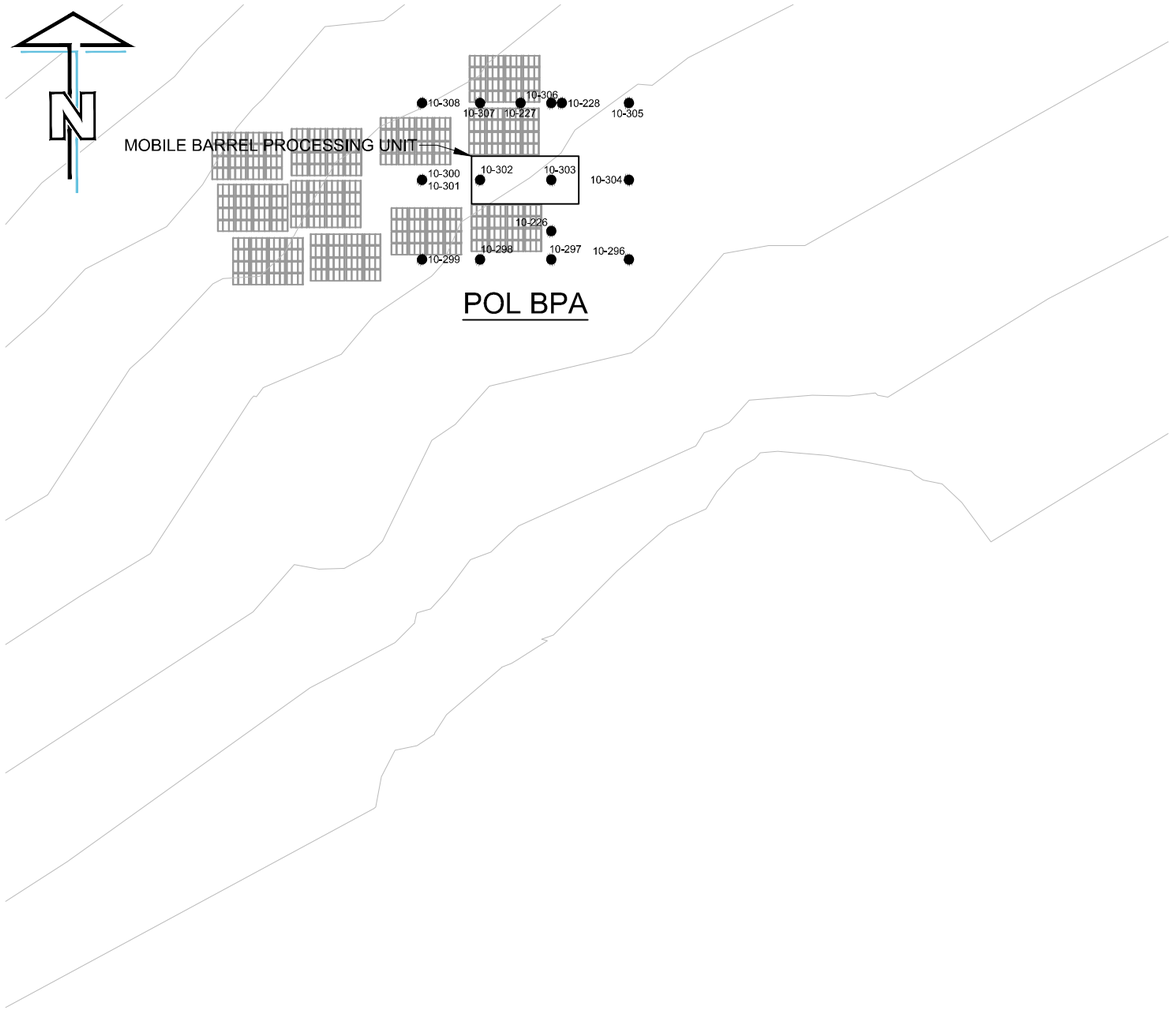
Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

Non-Hazardous Waste Landfill
As-Built - Monitoring Well Details
Figure 4.0

Saved by: De Leon, Adrian
PLOT: 1/23/2013 1:46:10 PM
B SIZE 11" x 17" (279.4mm x 431.8mm)
ISS/REV:
AECOM FILE NAME: 60149115-02-B-F05-R0A.DWG
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LEGEND:

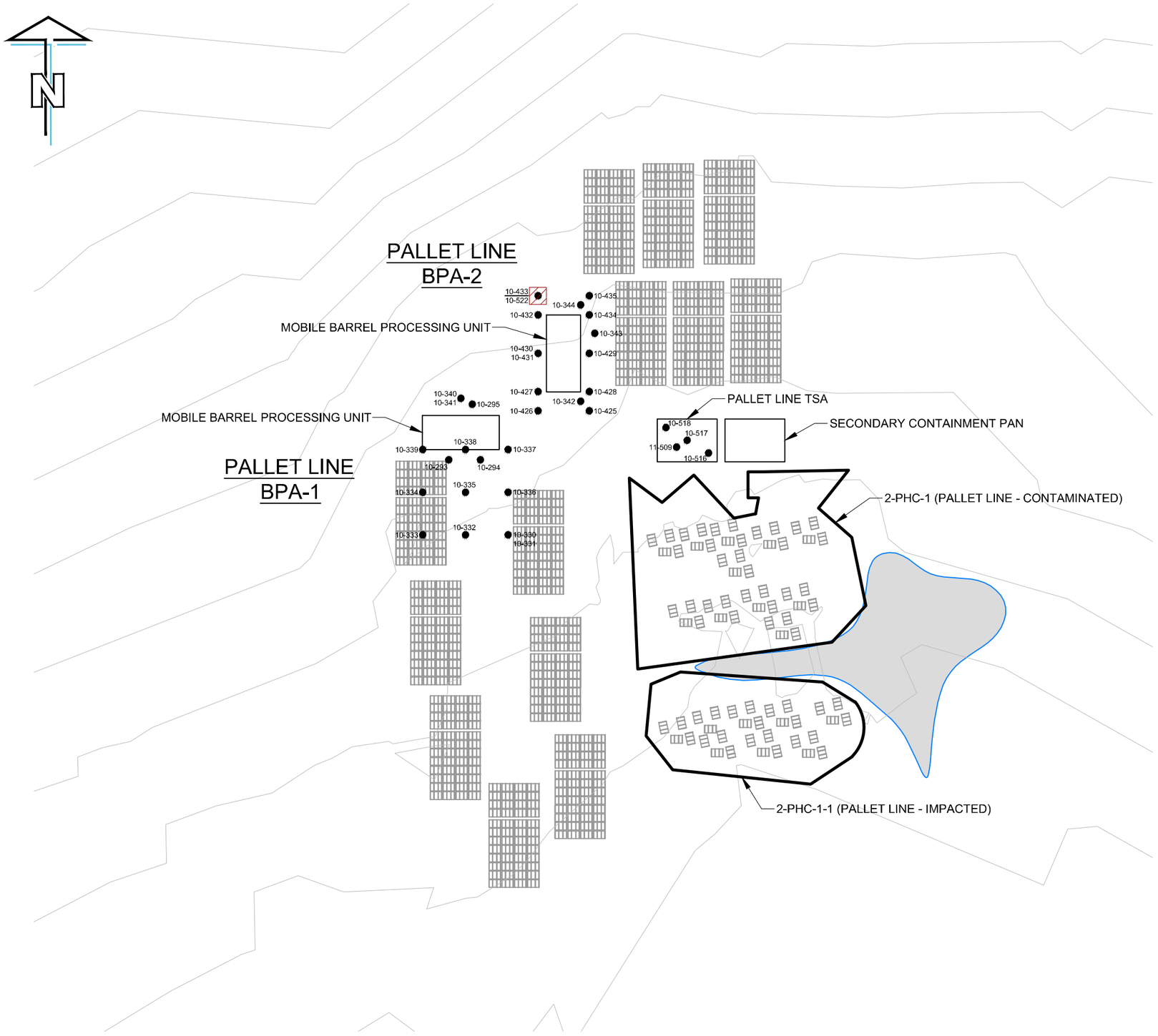
- 10-135 — SAMPLE LOCATIONS
- BARRELS



0 5 10 15 m SCALE 1:500

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

POL Area
Sample Locations
Figure 5.0



LEGEND:

- 10-135 — SAMPLE LOCATIONS
- 10-135 — EXCEEDANCE EXCAVATED
- EXCAVATION DEPTH = 0.2m
- BARRELS

0 5 10 15 m

SCALE 1:500

B SIZE 11" x 17" (279.4mm x 431.8mm)

Saved by: De Leon, Adrian
PLOT: 1/23/2013 1:46:16 PM

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CAM-D DEW Line Site
Construction Summary Report

Site Debris Area 2 (Pallet Line) Sample Locations

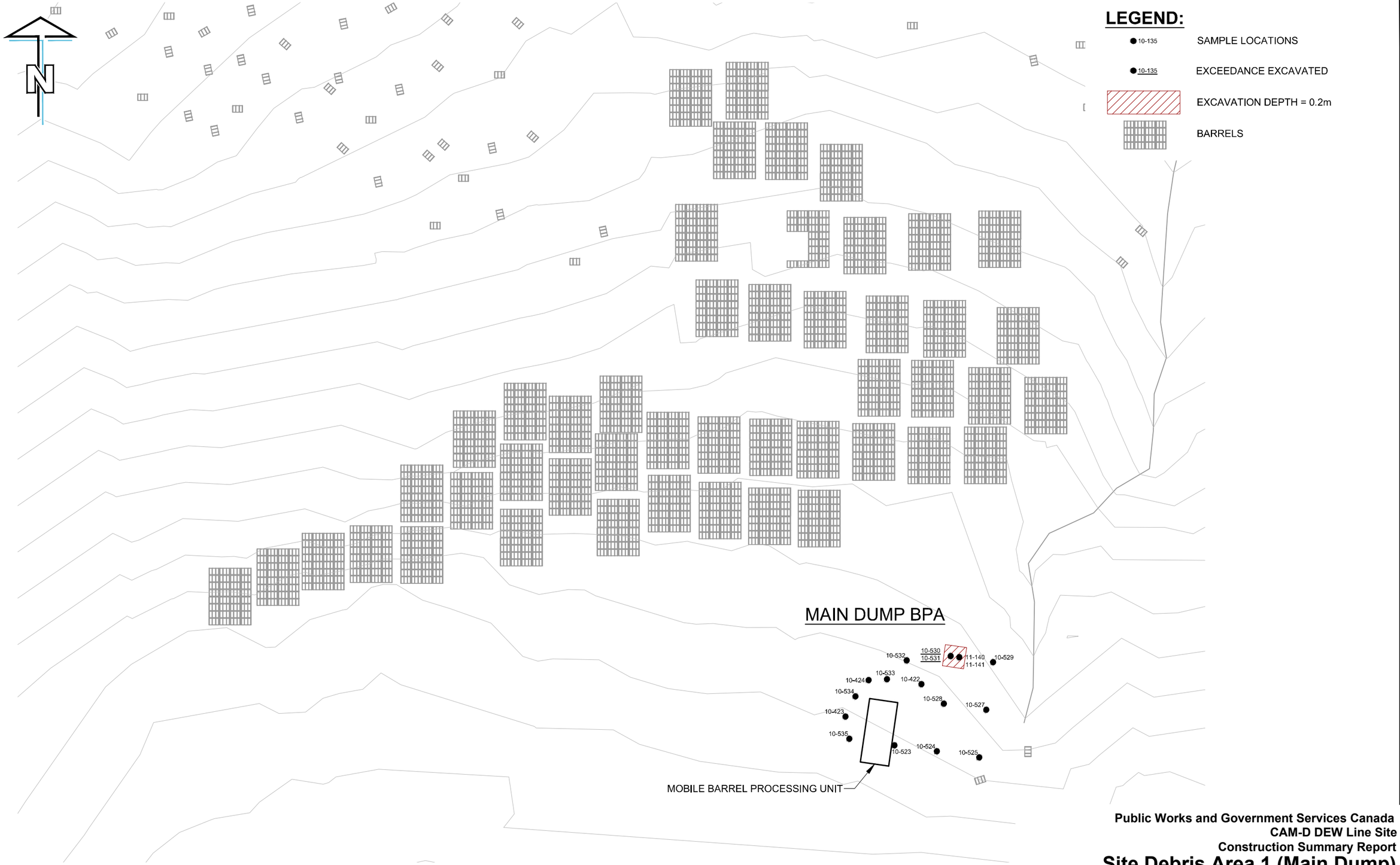
Figure 6.0

B SIZE 11" x 17" (279.4mm x 431.8mm)

Saved by: De Leon, Adrian
PLOT: 1/23/2013 1:46:28 PM

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Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

Site Debris Area 1 (Main Dump) Sample Locations

Figure 7.0

B SIZE 11" x 17" (279.4mm x 431.8mm)

Saved by: De Leon, Adrian
PLOT: 1/23/2013 1:46:38 PM

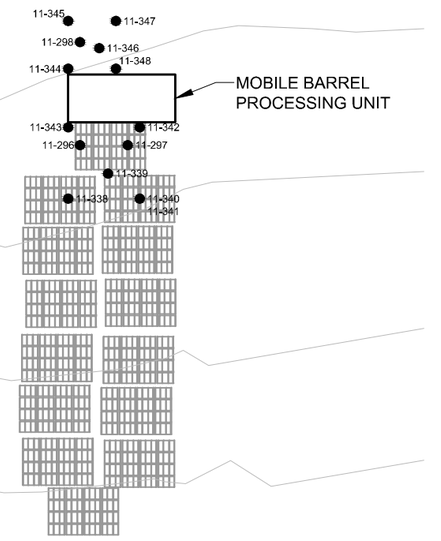
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AECOM FILE NAME: 60149115-02-B-F08-R0A.DWG

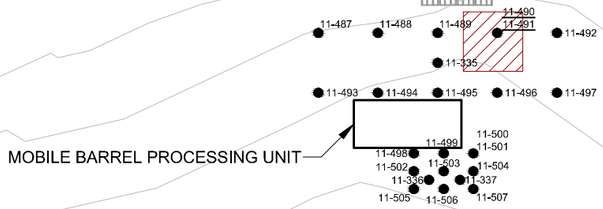
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LEGEND:

- 10-135 — SAMPLE LOCATIONS
- 10-135 — EXCEEDANCE EXCAVATED
- EXCAVATION DEPTH = 0.5m
- BARRELS

MAIN BARREL
CACHE BPA-1





MAIN BARREL
CACHE BPA-2

AECOM

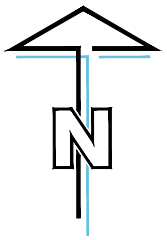
0 5 10 15 m SCALE 1:500

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

Site Debris Area 4 (Main Barrel Cache) Sample Locations

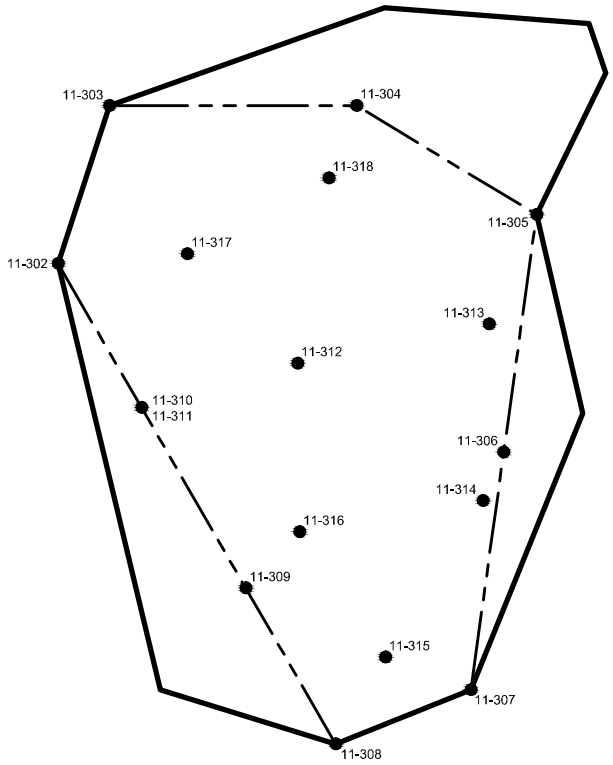
Figure 8.0

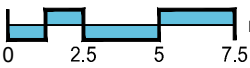
A SIZE 8.5" x 11" (215.9mm x 279.4mm)
PLOT: 1/23/2013 1:46:44 PM
Saved By: de leona
AECOM FILE NAME: 60149115-02-B-F02-R0X.dwg
ISS/REV: 0B
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LEGEND:

- 10-135 — CONFIRMATORY SAMPLE LOCATIONS
- ORIGINAL DESIGN LIMITS
- ACTUAL EXCAVATION LIMITS





SCALE 1:250

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

3-BD-3 (Module Train Buried Debris) Confirmatory Sample Locations

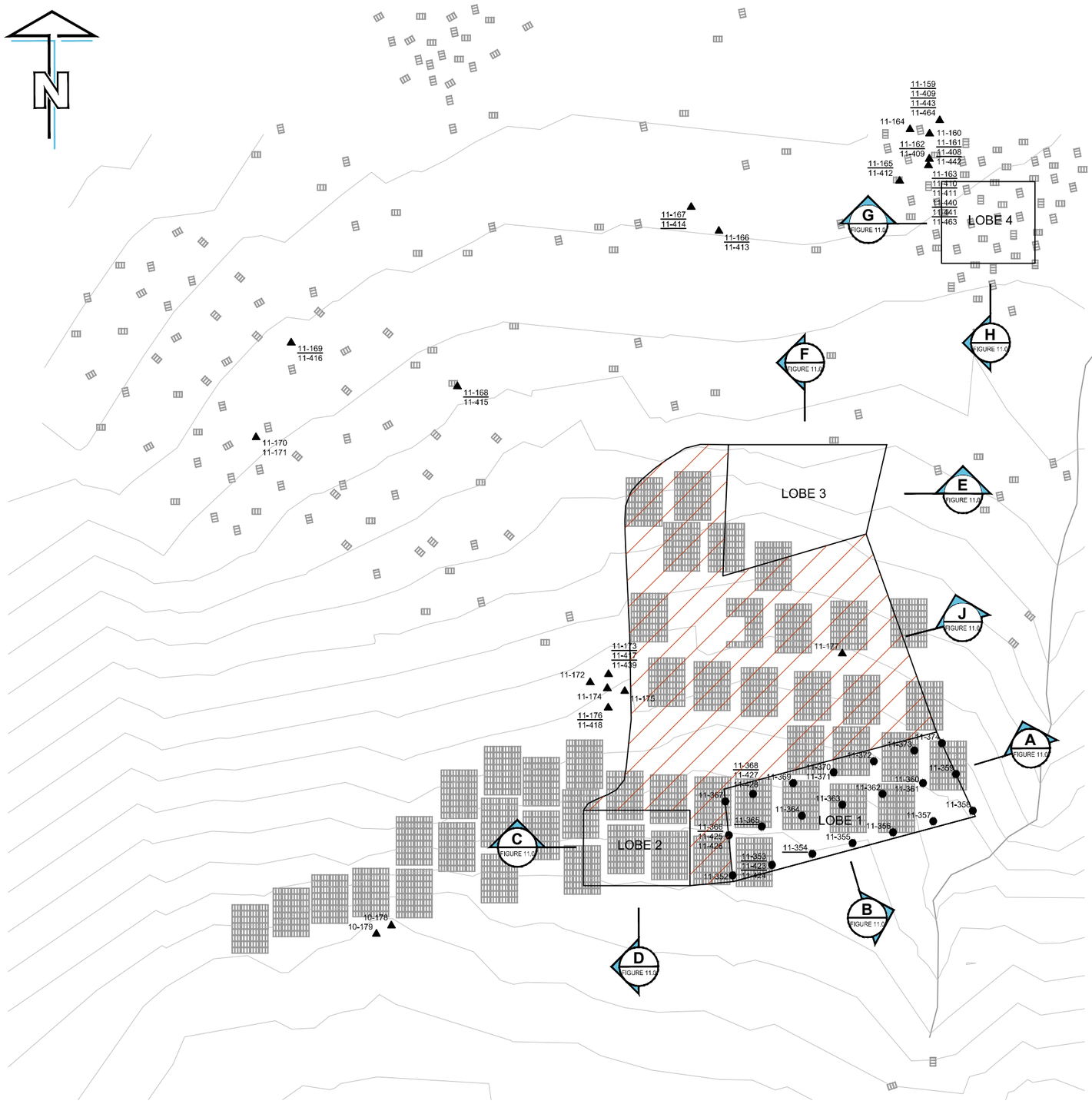
Figure 9.0

B SIZE 11" x 17" (279.4mm x 431.8mm)

Saved by: De Leon, Adrian
PLOT: 1/23/2013 1:46:54 PM

ISS/REV:
AECOM FILE NAME: 60149115-02-B-F10-R0A.DWG

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LEGEND:

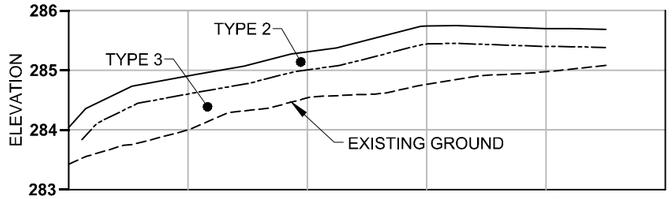
- 10-135 — SAMPLE LOCATIONS
- 11-156 — BATTERY/CAPACITOR SAMPLE LOCATIONS
- 11-168 — EXCEEDANCE EXCAVATED
- GENERAL REGRADE AREA
- BARRELS

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Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

Site Debris Area 1 (Main Dump)
Buried Debris Lobes and Battery/Capacitor Locations

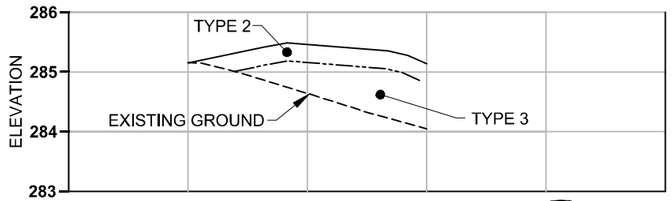
Figure 10.0



SECTION A

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

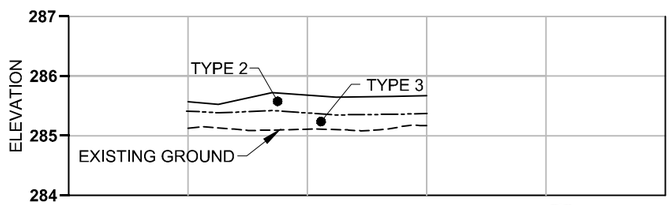
FIGURE 10.0



SECTION B

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

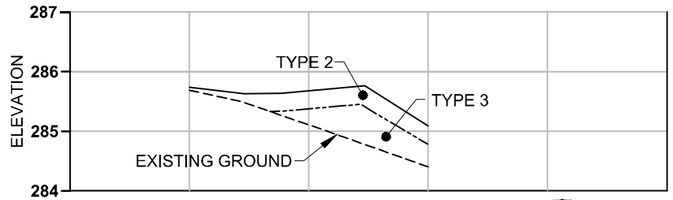
FIGURE 10.0



SECTION C

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

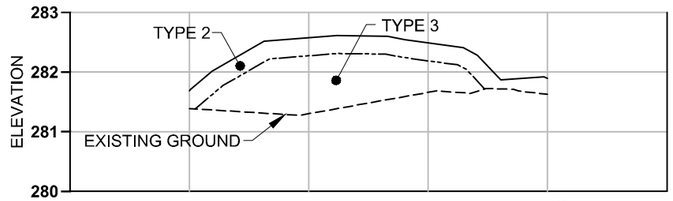
FIGURE 10.0



SECTION D

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

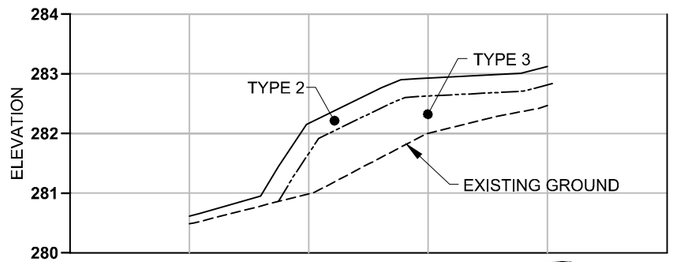
FIGURE 10.0



SECTION E

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

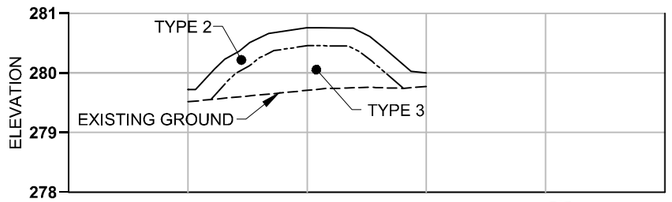
FIGURE 10.0



SECTION F

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

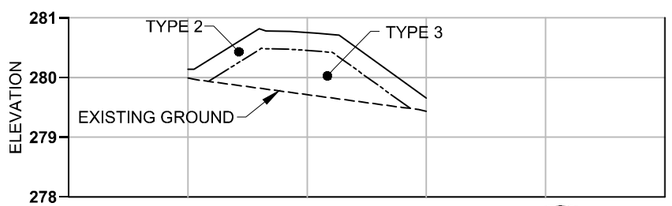
FIGURE 10.0



SECTION G

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

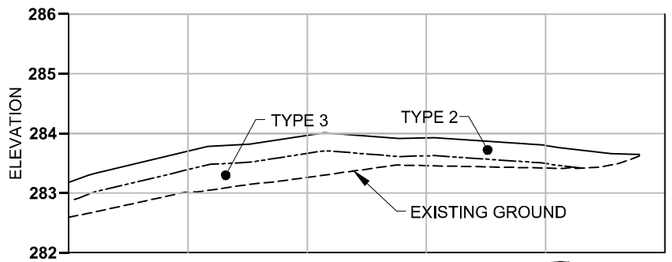
FIGURE 10.0



SECTION H

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

FIGURE 10.0



SECTION J

0 5 10 15 m H=1:500
0 1 2 3 V=1:100

FIGURE 10.0

B SIZE 11" x 17" (279.4mm x 431.8mm)

Saved by: De Leon, Adrian
PLOT: 1/23/2013 1:47:00 PM

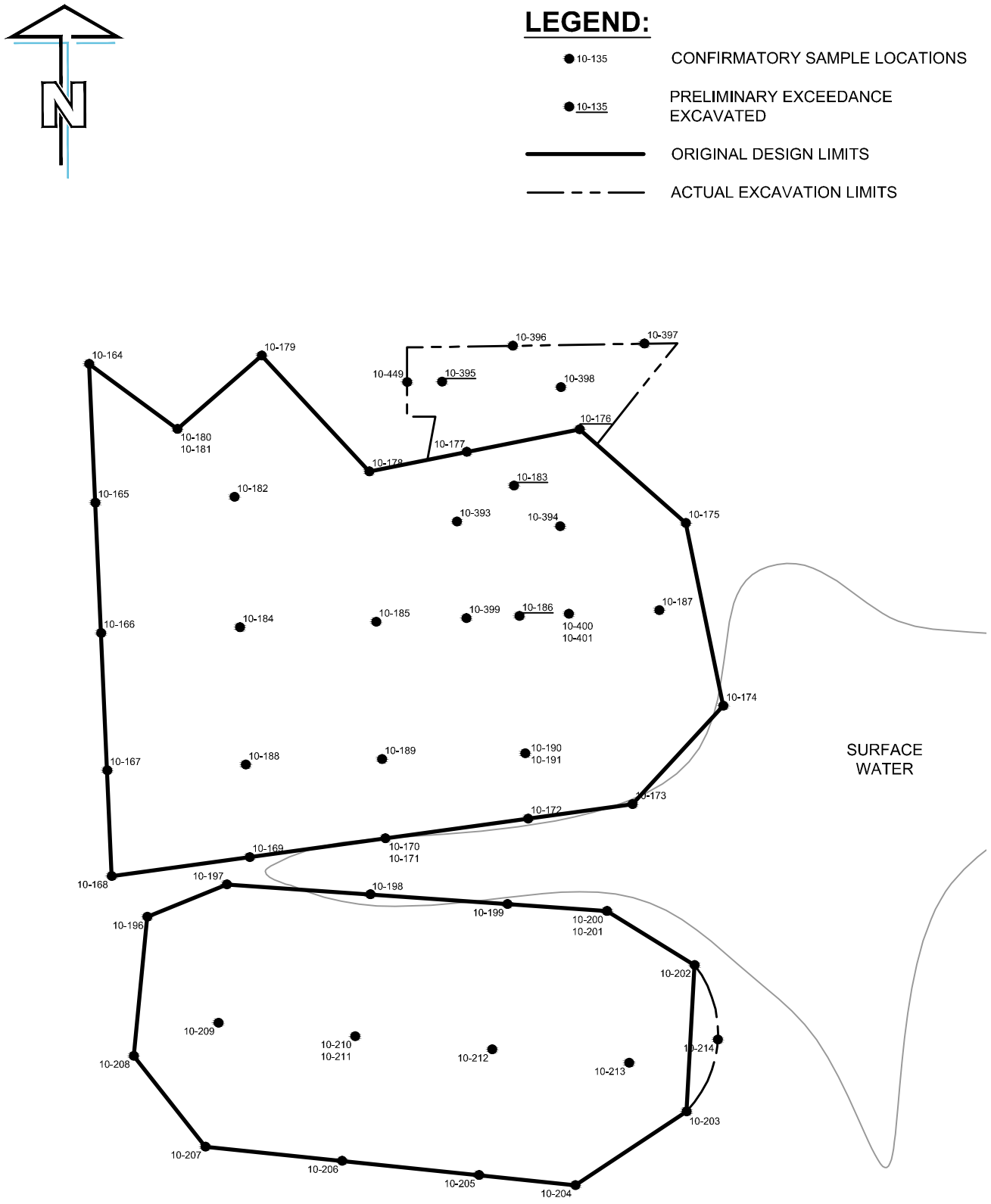
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CAM-D DEW Line Site
Construction Summary Report

Site Debris Area 1 (Main Dump)
Buried Debris Lobes - Sections
Figure 11.0



Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

2-PHC-1 (Pallet Line - Contaminated)
2-PHC-I-1 (Pallet Line - Impacted)
Confirmatory Sample Locations

Figure 12.0

AECOM

ISS/REV: 0B
AECOM FILE NAME: 60149115-02-B-F02-R0X.dwg Saved By: de leona PLOT: 1/23/2013 1:47:04 PM A SIZE 8.5" x 11" (215.9mm x 279.4mm)

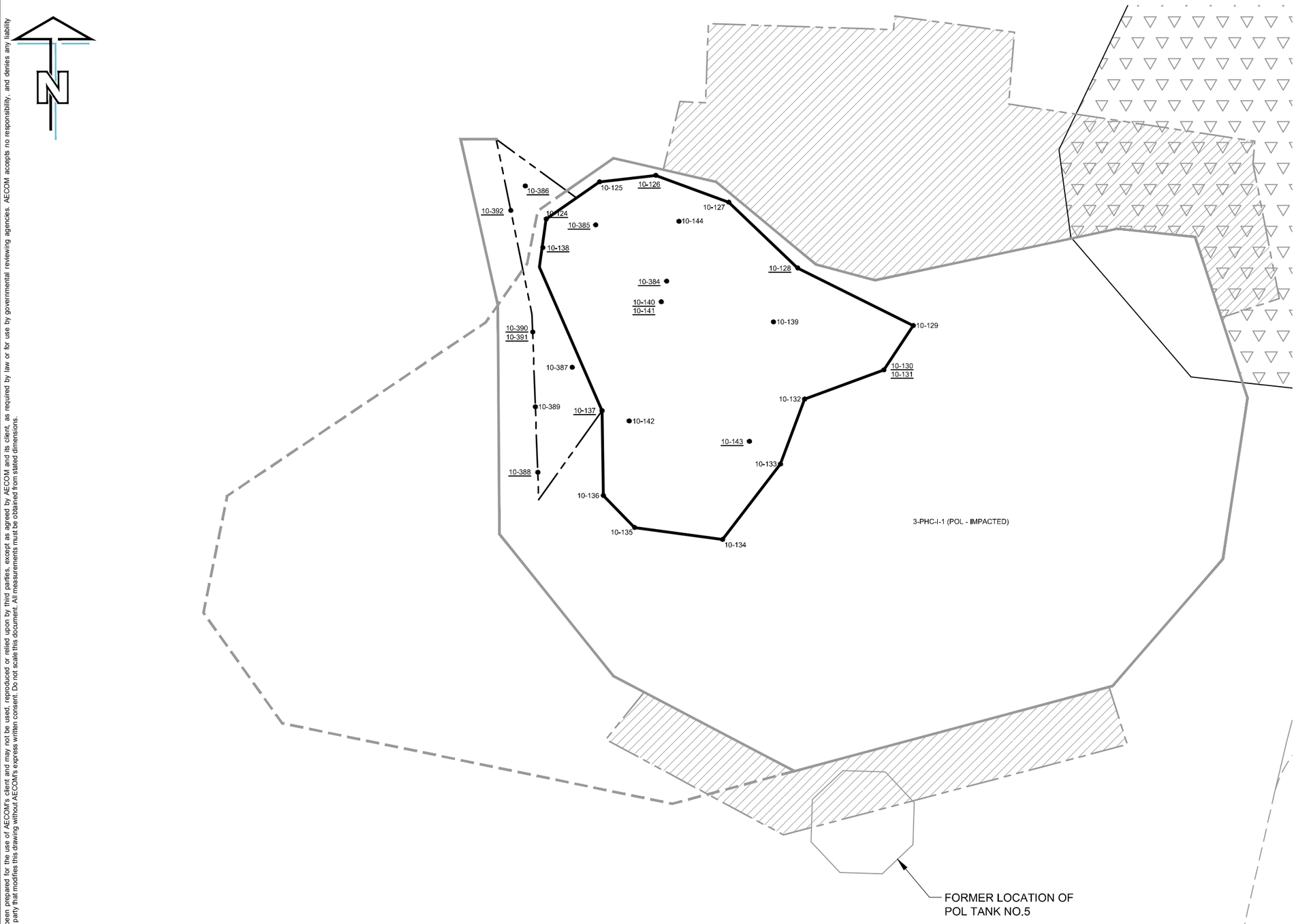
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B SIZE 11" x 17" (279.4mm x 431.8mm)

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PLOT: 1/23/2013 1:47:12 PM

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LEGEND:

- 10-135 — CONFIRMATORY SAMPLE LOCATIONS
- 10-135 — PRELIMINARY EXCEEDANCE EXCAVATED
- ORIGINAL DESIGN LIMITS
- ACTUAL EXCAVATION LIMITS

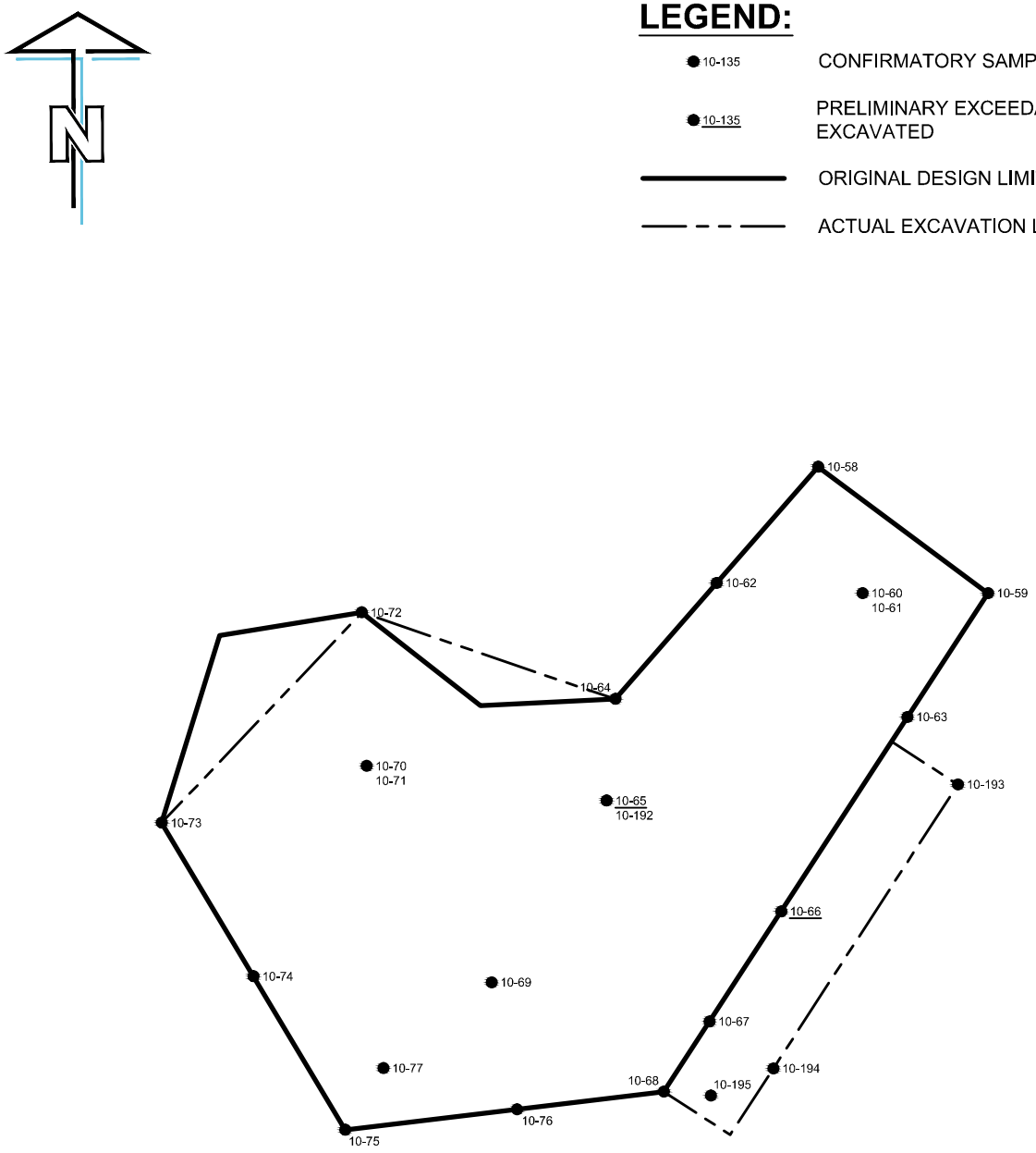
NOTE: SEE FIGURE 16.0 FOR POL-IMPACTED EXCAVATION LIMITS AND CONFIRMATORY SAMPLING

0 2 4 6 m SCALE 1:200

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

3-PHC-1 (POL - Contaminated) Confirmatory Sample Locations

Figure 13.0



0 1 2 3 m SCALE 1:100

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

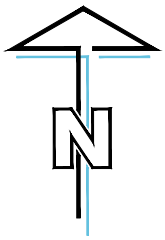
4-METPHC-1 (Airstrip - Contaminated) Confirmatory Sample Locations

Figure 14.0

ISS/REV: 0B
AECOM FILE NAME: 60149115-02-B-F02-R0X.dwg Saved By: de leona PLOT: 1/23/2013 1:47:19 PM A SIZE 8.5" x 11" (215.9mm x 279.4mm)

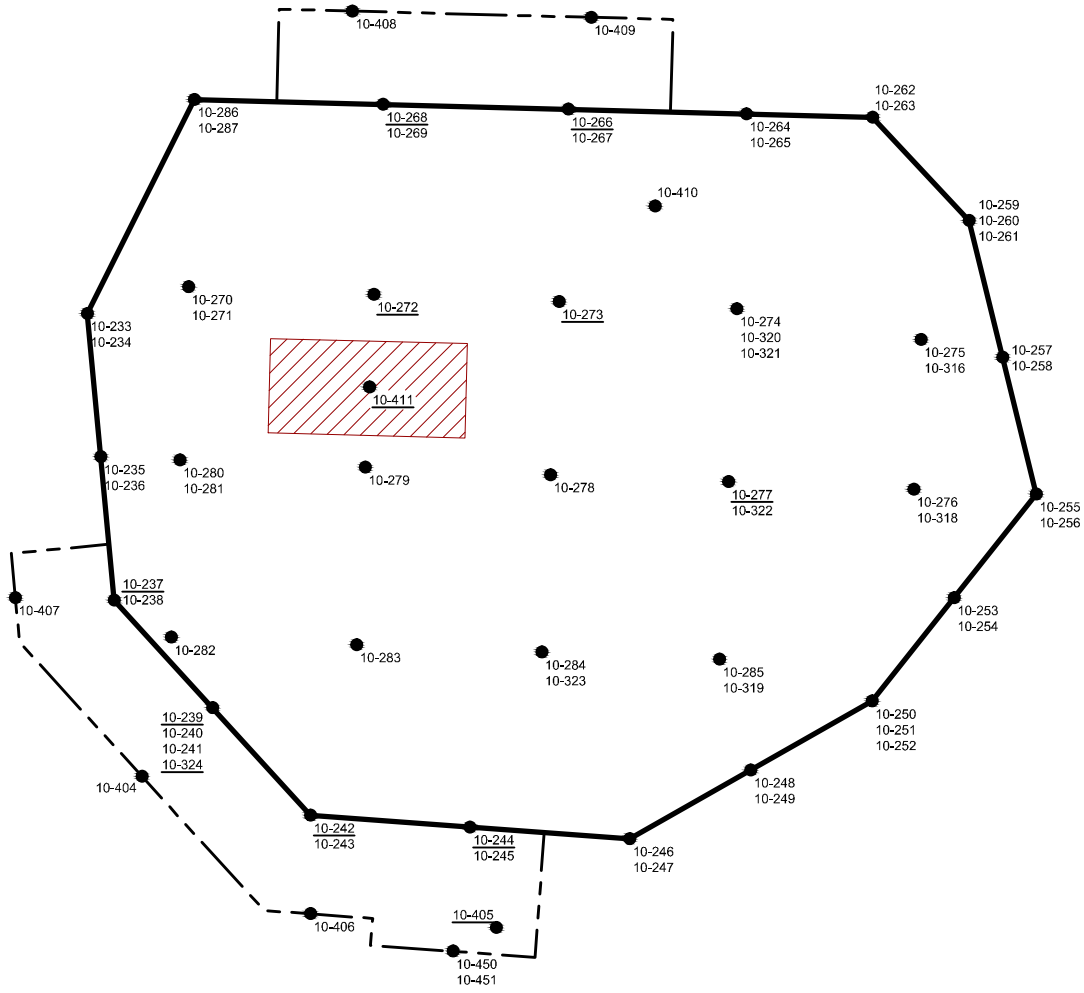
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A SIZE 8.5" x 11" (215.9mm x 279.4mm)
PLOT: 1/23/2013 1:47:24 PM
Saved By: de leona
AECOM FILE NAME: 60149115-02-B-F02-R0X.dwg
ISS/REV: 0B
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LEGEND:

- 10-135 — CONFIRMATORY SAMPLE LOCATIONS
- 10-135 — PRELIMINARY EXCEEDANCE EXCAVATED
- ORIGINAL DESIGN LIMITS
- ACTUAL EXCAVATION LIMITS
- PHC IMPACTED SOIL LEFT IN PLACE



0 2.5 5 7.5 m

SCALE 1:250

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

2-PHC-I-2 (Portable Fuel Tanks - Impacted) Confirmatory Sample Locations

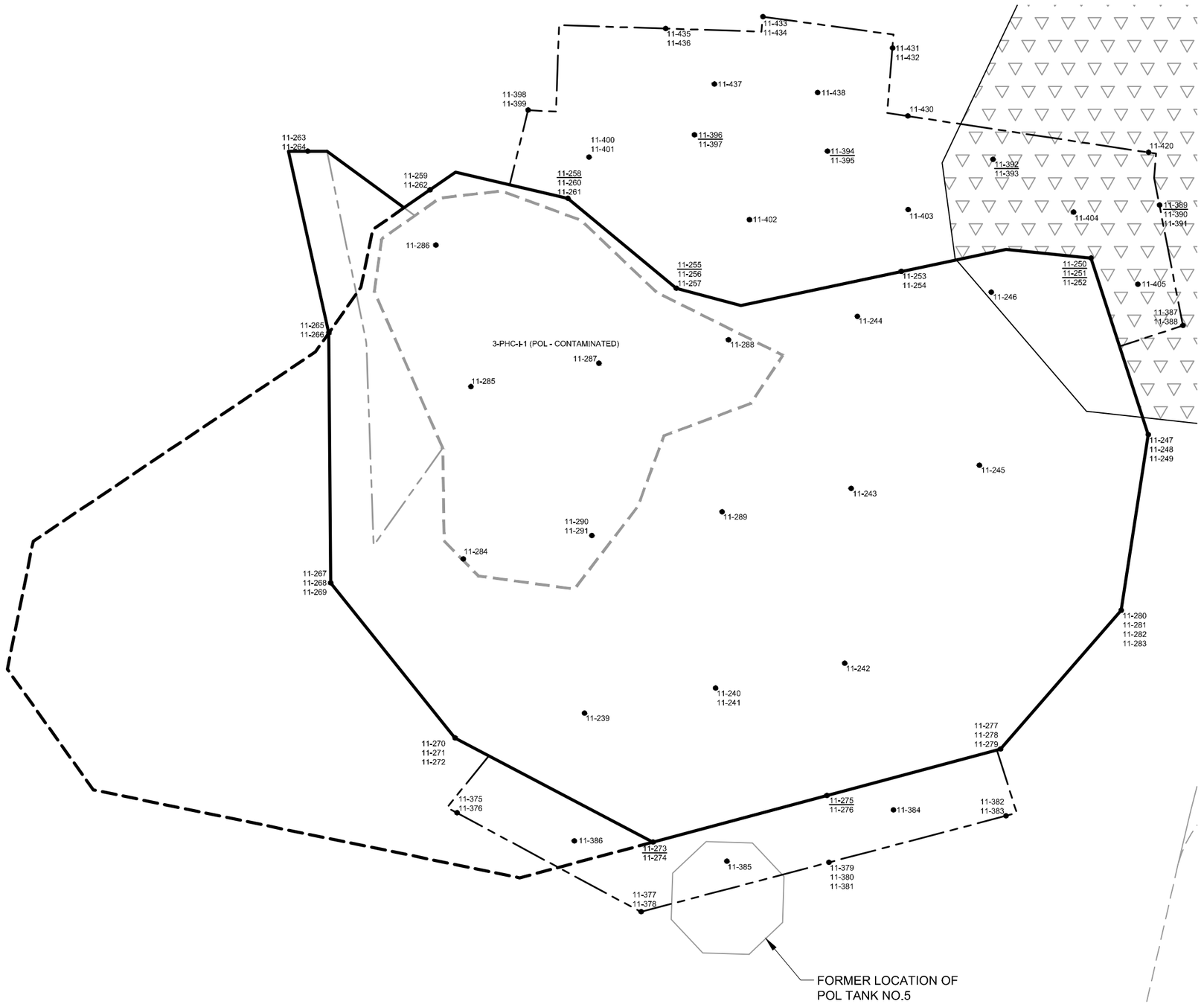
Figure 15.0

B SIZE 11" x 17" (279.4mm x 431.8mm)

Saved by: De Leon, Adrian
PLOT: 1/23/2013 1:47:32 PM

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ISS/REV:
AECOM FILE NAME: 60149115-02-B-F16-R0A.DWG



LEGEND:

- 10-135 — CONFIRMATORY SAMPLE LOCATIONS
- 10-135 — PRELIMINARY EXCEEDANCE EXCAVATED
- ORIGINAL DESIGN LIMITS
- REDESIGN EXCAVATION LIMITS
- ACTUAL EXCAVATION LIMITS

NOTE: SEE FIGURE 13.0 FOR POL-CONTAMINATED EXCAVATION LIMITS AND CONFIRMATORY SAMPLING

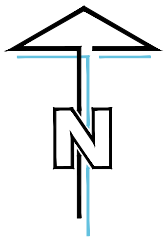
0 2 4 6 m SCALE 1:200

AECOM

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

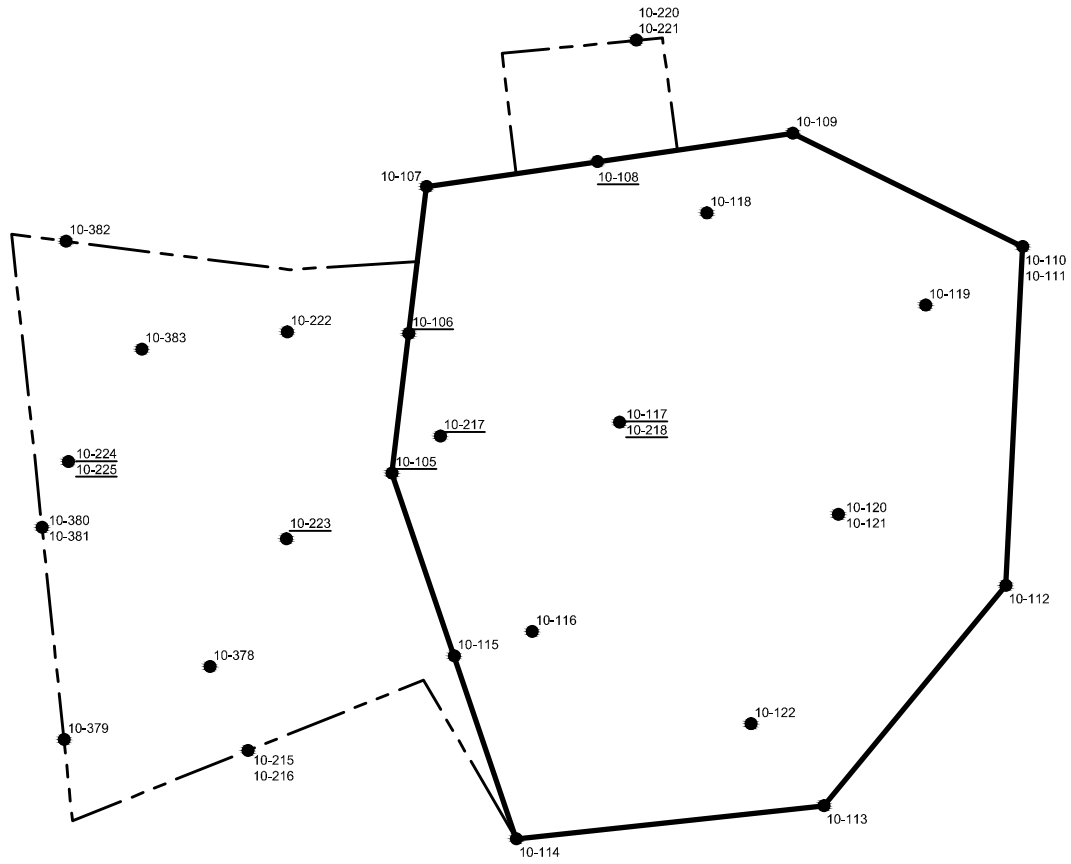
3-PHC-I-1 (POL - Impacted) Confirmatory Sample Locations

Figure 16.0



LEGEND:

- 10-135 — CONFIRMATORY SAMPLE LOCATIONS
- 10-135 — PRELIMINARY EXCEEDANCE EXCAVATED
- ORIGINAL DESIGN LIMITS
- ACTUAL EXCAVATION LIMITS



0 1 2 3 m SCALE 1:100

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

3-PHC-I-2 (Burn Pit - Impacted) Confirmatory Sample Locations

Figure 17.0

ISS/REV: 0B
AECOM FILE NAME: 60149115-02-B-F02-R0X.dwg Saved By: de leona PLOT: 1/23/2013 1:47:39 PM A SIZE 8.5" x 11" (215.9mm x 279.4mm)

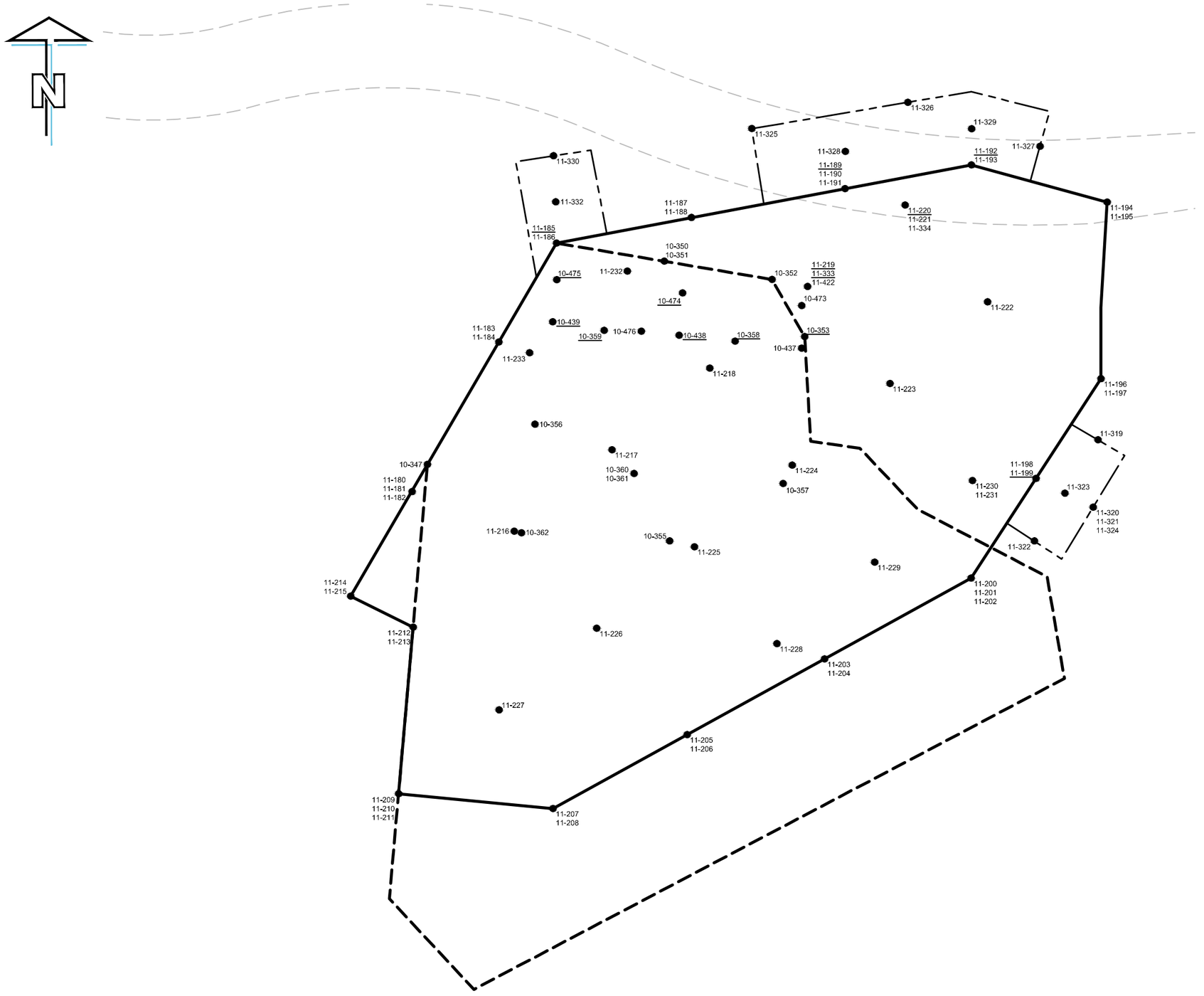
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B SIZE 11" x 17" (279.4mm x 431.8mm)

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LEGEND:

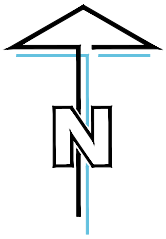
- 10-135 — CONFIRMATORY SAMPLE LOCATIONS
- 10-135 — PRELIMINARY EXCEEDANCE EXCAVATED
- ORIGINAL DESIGN LIMITS
- REDESIGN EXCAVATION LIMITS
- ACTUAL EXCAVATION LIMITS

0 2 4 6 m SCALE 1:200

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

3-PHC-I-3 (Garage - Impacted) Confirmatory Sample Locations

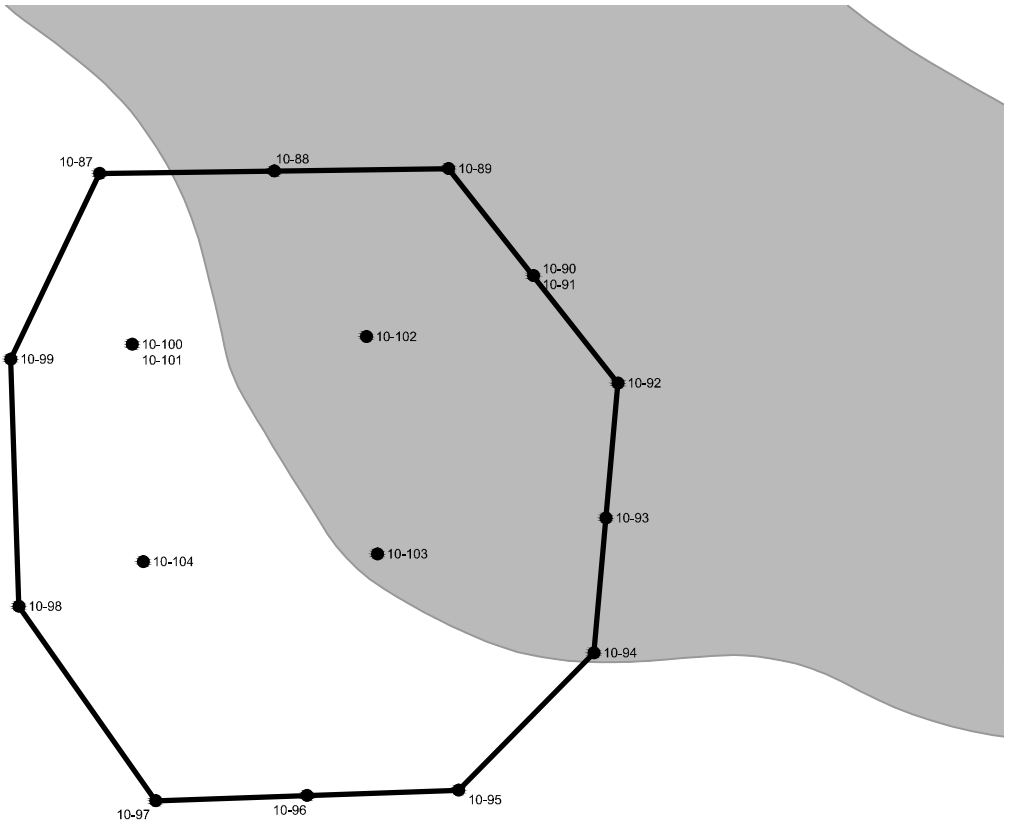
Figure 18.0



LEGEND:

10-135 CONFIRMATORY SAMPLE LOCATIONS

ORIGINAL DESIGN LIMITS



0 1 2 3 m

SCALE 1:100

Public Works and Government Services Canada
CAM-D DEW Line Site
Construction Summary Report

3-MET-1 (Electrical Cabinets - Contaminated) Confirmatory Sample Locations

Figure 19.0

AECOM

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AECOM FILE NAME: 60149115-02-B-F02-R0X.dwg Saved By: de leona PLOT: 1/23/2013 1:47:54 PM A SIZE 8.5" x 11" (215.9mm x 279.4mm)

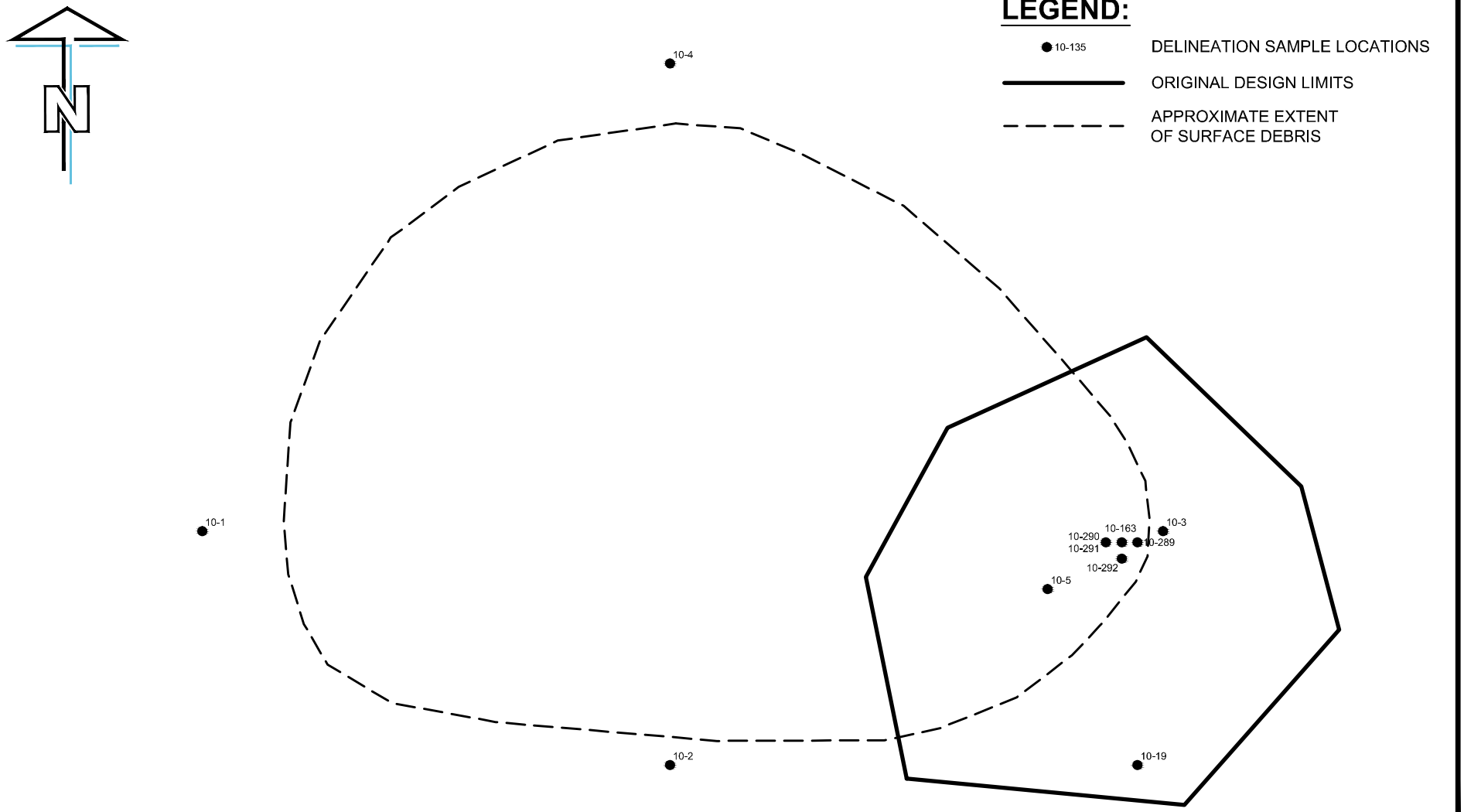
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A SIZE 8.5" x 11" (215.9mm x 279.4mm)

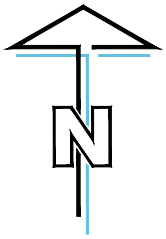
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6-MET-1 (Plumber's Dump - Contaminated) Delineation Samples

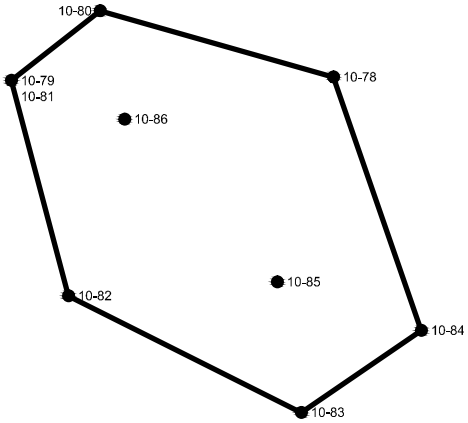
Figure 20.0



LEGEND:

10-135 CONFIRMATORY SAMPLE LOCATIONS

ORIGINAL DESIGN LIMITS



0 1 2 3 m SCALE 1:100

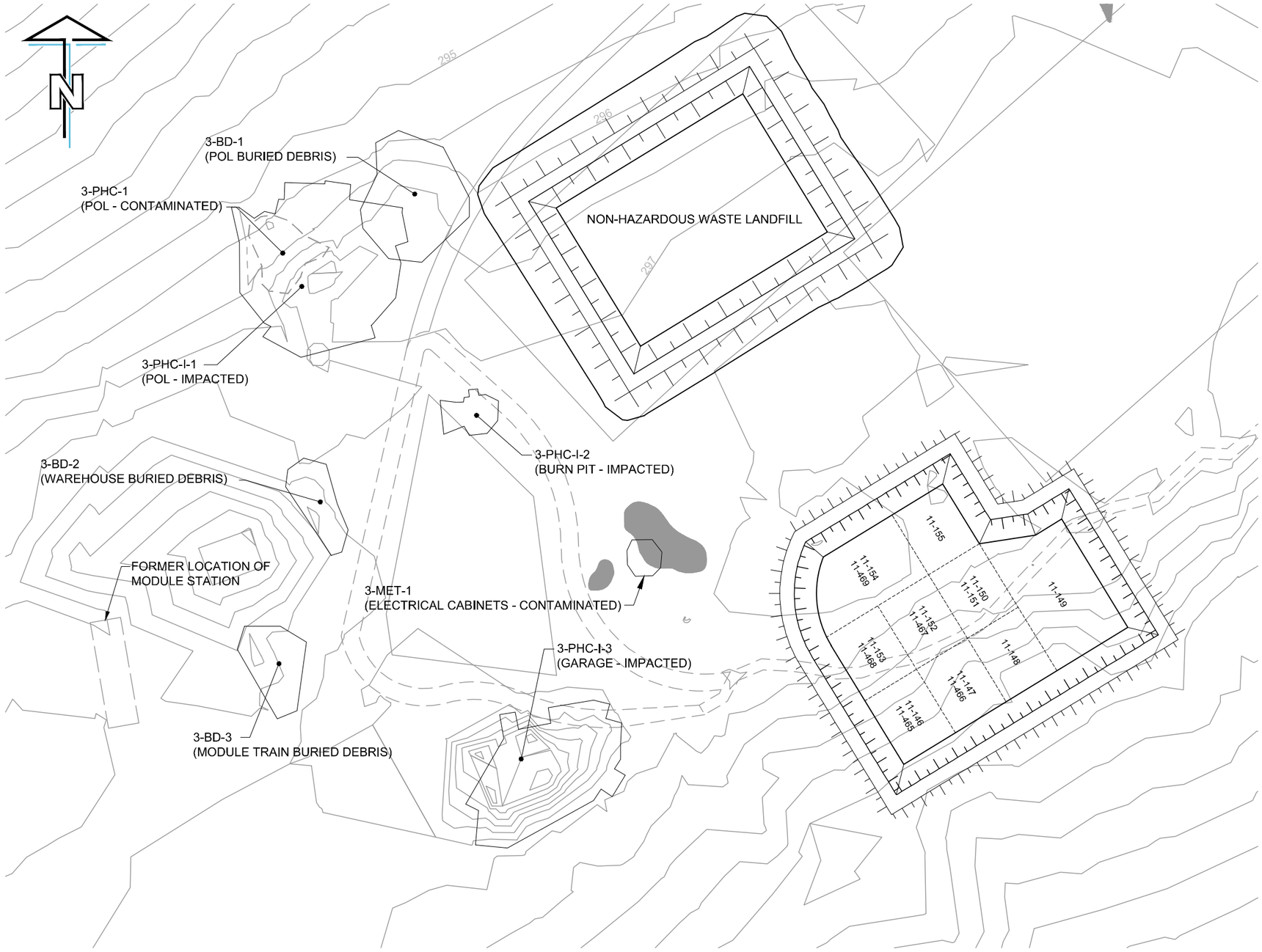
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Construction Summary Report

3-METPCB-1 (Outfall - Contaminated)
Confirmatory Sample Locations
Figure 21.0

ISS/REV: 0B
AECOM FILE NAME: 60149115-02-B-F02-R0X.dwg Saved By: de leona PLOT: 1/23/2013 1:48:04 PM A SIZE 8.5" x 11" (215.9mm x 279.4mm)

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B SIZE 11" x 17" (279.4mm x 431.8mm)
PLOT: 1/23/2013 1:48:12 PM
Saved By: de leona
ISS/REV: 0B
AECOM FILE NAME: 60149115-02-B-F03-R0X.dwg
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0 10 20 30 m SCALE 1:1000

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AECOM

Landfarm Treatment Area
Figure 22.0

Appendix B

Environmental Data Summary Tables

Table B-1. Waste Classification - Ashes

Year	Sample No.	Barrel ID	Description of Contents	Date Collected	Maxxam Job No.	Maxxam Sample ID	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)	Leachable Arsenic (mg/L)	Leachable Cadmium (mg/L)	Leachable Chromium (mg/L)	Leachable Lead (mg/L)	Leachable Mercury (mg/L)
Tier I Contaminated Soil							-	-	-	-	-	>200; <500	-	-	-	-	-	-	-	-
Tier II Contaminated Soil							30	5	250	50	100	500	2	100	500	-	-	-	-	-
Hazardous Materials							-	-	-	-	-	-	-	-	-	2.5	0.5	5	5	0.1
10 -	445	BR-097	ashes from domestic waste incineration	9-Sep-10	B084768	W92528	2	4.5	46	7	1000	32	0.09	21	1200	<0.5	<0.1	<0.5	<0.5	<0.02
10 -	446	BR-098	ashes from domestic waste incineration	9-Sep-10	B084768	W92558	8	2.9	91	7	3700	83	0.18	57	1200	<0.5	<0.1	<0.5	<0.5	<0.02
11 -	234	BR-183	ashes from incineration of unpainted/untreated wood	17-Jul-11	B164800	BA7431	2	0.7	20	6	41	77	<0.05	15	340	<0.5	<0.1	<0.5	<0.5	<0.02
11 -	235	BR-184	ashes from incineration of unpainted/untreated wood	17-Jul-11	B164800	BA7434	2	0.8	26	7	98	190	<0.05	12	770	<0.5	<0.1	<0.5	<0.5	<0.02
11 -	236	BR-185	ashes from domestic waste incineration	18-Jul-11	B164800	BA7435	9	6.6	58	5	1200	80	<0.05	22	870	<0.5	<0.1	<0.5	<0.5	<0.02
11 -	421	BR-191	ashes from incineration of unpainted/untreated wood	30-Jul-11	B169443	BD3845	3	0.9	30	8	83	84	<0.05	17	470	<0.5	<0.1	<0.5	<0.5	<0.02
11 -	445	BR-210	ashes from incineration of unpainted/untreated wood	22-Aug-11	B180111	BJ4865	<1	0.3	10	3	36	14	<0.05	<1	340	<0.5	<0.1	<0.5	<0.5	<0.02

Table B-2. Analytical Summary of Baseline and Confirmatory Sampling at Barrel Processing Areas

Sample ID		Sampling Program	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons									PCBs	Heavy Metals								
							Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil							-	-	-	-	-	-	-	-	-	>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil							-	-	-	-	-	-	-	-	-	>5; <50	30	5	250	50	100	500	2	100	500
INAC AMSRP PHC Contaminated Soil							-	-	-	-	15,000	8,000	18,000	25,000	-	5	-	-	-	-	-	-	-	-	-
PHC Impacted Soil							0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-	-	-	-	-	-	-	-	-	-	-
INAC AMSRP Type B PHC Contaminated Soil							-	-	-	-	-	-	-	-	2,500	-	-	-	-	-	-	-	-	-	-
Kudlik's Barrel Washing Area																									
11 -	145	Baseline	0-10	13-Jul-11	B163938	BA2346	<0.0050	<0.020	<0.010	<0.040	<12	<10	100	15	100	-	-	-	-	-	-	-	-	-	-
11 -	444	Confirmatory	0-10	21-Aug-11	B180111	BJ4864	<0.0050	<0.020	<0.010	<0.040	<12	<10	19	<10	19	-	-	-	-	-	-	-	-	-	-
POL BPA																									
10 -	226		0-10	12-Aug-10	B071890	W25188	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	13	4	11	6	<0.05	7	32
10 -	227	Baseline	0-10	12-Aug-10	B071890	W25220	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	12	4	7	5	<0.05	6	26
10 -	228		0-10	12-Aug-10	B071890	W25224	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	17	5	15	6	<0.05	9	35
10 -	296		0-10	21-Aug-10	B077228	W53246	<0.0050	<0.020	<0.010	<0.040	<12	<10	11	<10	-	<0.010	2	<0.1	44	6	9	6	<0.05	21	29
10 -	297		0-10	21-Aug-10	B077228	W53247	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	18	5	7	6	<0.05	9	23
10 -	298		0-10	21-Aug-10	B077228	W53248	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	43	6	8	8	<0.05	21	27
10 -	299		0-10	21-Aug-10	B077228	W53249	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	15	5	11	6	<0.05	8	27
10 -	300		0-10	21-Aug-10	B077228	W53251	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	28	7	13	11	<0.05	15	43
10 -	301 (d)		0-10	21-Aug-10	B077228	W53252	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	39	8	13	11	<0.05	20	44
10 -	302	Confirmatory	0-10	21-Aug-10	B077228	W53253	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	10	4	6	5	<0.05	5	15
10 -	303		0-10	21-Aug-10	B077228	W53254	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	16	5	11	6	<0.05	8	33
10 -	304		0-10	21-Aug-10	B077228	W53255	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	9	3	6	4	<0.05	5	18
10 -	305		0-10	21-Aug-10	B077228	W53256	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	14	5	12	5	<0.05	7	30
10 -	306		0-10	21-Aug-10	B077228	W53257	<0.0050	<0.020	<0.010	<0.040	<12	42	<10	<10	-	<0.010	1	<0.1	57	6	9	6	<0.05	27	38
10 -	307		0-10	21-Aug-10	B077228	W53258	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	26	8	26	15	<0.05	14	52
10 -	308		0-10	21-Aug-10	B077228	W53259	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	21	7	14	10	<0.05	11	40
Pallet Line BPA-1																									
10 -	293		0-10	21-Aug-10	B077228	W53243	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	0.1	21	5	8	6	<0.05	11	27
10 -	294	Baseline	0-10	21-Aug-10	B077228	W53244	<0.0050	<0.020	<0.010	<0.040	<12	<10	98	26	-	<0.010	1	<0.1	48	5	8	6	<0.05	23	29
10 -	295		0-10	21-Aug-10	B077228	W53245	<0.0050	<0.020	<0.010	<0.040	<12	<10	73	<10	-	<0.010	2	<0.1	18	6	18	8	0.11	9	34
10 -	330		0-10	25-Aug-10	B078347	W59813	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	20	4	6	6	0.05	11	29
10 -	331 (d)		0-10	25-Aug-10	B078347	W59814	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	0.2	34	5	8	24	<0.05	17	45
10 -	332		0-10	25-Aug-10	B078347	W59815	<0.0050	<0.020	<0.010	<0.040	<12	<10	130	44	-	<0.010	1	<0.1	43	5	6	7	<0.05	21	32
10 -	333		0-10	25-Aug-10	B078347	W59816	<0.0050	<0.020	<0.010	<0.040	<12	<10	370	60	-	<0.010	1	<0.1	44	5	9	7	<0.05	21	37
10 -	334		0-10	25-Aug-10	B078347	W59817	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	28	5	9	8	<0.05	14	41
10 -	335	Confirmatory	0-10	25-Aug-10	B078347	W59818	<0.0050	<0.020	<0.010	<0.040	<12	<10	11	<10	-	<0.010	1	<0.1	79	6	8	6	<0.05	38	34
10 -	336		0-10	25-Aug-10	B078347	W59819	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	24	4	<5	7	<0.05	11	20
10 -	337		0-10	25-Aug-10	B078347	W59839	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	<1	<0.1	54	4	<5	3	<0.05	26	17
10 -	338		0-10	25-Aug-10	B078347	W59840	<0.0050	<0.020	<0.010	<0.040	<12	<10	100	<10	-	<0.010	2	<0.1	20	6	11	7	<0.05	11	41
10 -	339		0-10	25-Aug-10	B078347	W59841	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	13	4	9	6	<0.05	7	29
10 -	340		0-10	25-Aug-10	B078347	W59842	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	14	5	12	6	<0.05	8	31
10 -	341 (d)		0-10	25-Aug-10	B078347	W59843	<0.0050	<0.020	<0.010	<0.040	<12	<10	15	<10	-	<0.010	1	<0.1	14	5	17	6	<0.05	8	35
Pallet Line BPA-2																									
10 -	342		0-10	25-Aug-10	B078347	W59844	<0.0050	<0.020	<0.010	<0.040	<12	<10	160	150	-	<0.010	2	<0.1	20	7	18	9	<0.05	11	44
10 -	343	Baseline	0-10	25-Aug-10	B078347	W59845	<0.0050	<0.020	<0.010	<0.040	<12	<10	75	32	-	<0.010	1	<0.1	10	4	10	14	<0.05	6	28
10 -	344		0-10	25-Aug-10	B078347	W59846	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	10	4	8	5	<0.05	5	23
10 -	426		0-10	6-Sep-10	B083208	W85596	<0.0050	<0.020	<0.010	<0.040	<12	<10	220	290	-	<0.010	2	<0.1	14	5	13	7	<0.05	8	33
10 -	428		0-10	6-Sep-10	B083208	W85598	<0.0050	<0.020	<0.010	<0.040	<12	<10	96	43	-	<0.010	1	<0.1	65	6	8	8	<0.05	30	31
10 -	430		0-10	6-Sep-10	B083208	W85600	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	14	4	9	5	<0.05	7	26

Table B-2. Analytical Summary of Baseline and Confirmatory Sampling at Barrel Processing Areas

Sample ID		Sampling Program	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons									PCBs	Heavy Metals								
							Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil							-	-	-	-	-	-	-	-	-	>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil							-	-	-	-	-	-	-	-	-	>5; <50	30	5	250	50	100	500	2	100	500
INAC AMSRP PHC Contaminated Soil							-	-	-	-	15,000	8,000	18,000	25,000	-	5	-	-	-	-	-	-	-	-	-
PHC Impacted Soil							0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-	-	-	-	-	-	-	-	-	-	-
INAC AMSRP Type B PHC Contaminated Soil							-	-	-	-	-	-	-	-	2,500	-	-	-	-	-	-	-	-	-	-
10 -	431 (d)	Confirmatory	0-10	6-Sep-10	B083208	W85601	<0.0050	<0.020	<0.010	<0.040	<12	<10	32	<10	-	<0.010	1	<0.1	20	4	6	5	<0.05	10	25
10 -	432		0-10	6-Sep-10	B083208	W85602	-	-	-	-	-	-	-	-	-	0.019	-	-	-	-	-	-	-	-	-
10 -	433 *		0-10	6-Sep-10	B083208	W85603	<0.0050	<0.020	<0.010	<0.040	<12	77	35	<10	-	2.99	2	<0.1	15	5	30	12	<0.05	8	38
10 -	434		0-10	6-Sep-10	B083160	W85414	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	48	7	13	9	<0.05	24	46
10 -	435		0-10	6-Sep-10	B083160	W85421	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-
10 -	522	Confirmatory-2	15	20-Sep-10	B091261	X19259	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-
Main Dump BPA																									
10 -	422	Baseline	0-10	4-Sep-10	B083208	W85587	<0.0050	<0.020	<0.010	<0.040	<12	<10	370	75	-	0.072	2	0.3	46	5	15	38	<0.05	21	110
10 -	423		0-10	4-Sep-10	B083208	W85593	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	0.019	<1	<0.1	10	3	13	9	<0.05	5	27
10 -	424		0-10	4-Sep-10	B083208	W85594	<0.0050	<0.020	<0.010	<0.040	<12	<10	170	51	-	0.333	2	0.3	31	5	14	29	<0.05	14	67
10 -	524	Confirmatory	0-10	21-Sep-10	B091261	X19261	<0.0050	<0.020	<0.010	<0.040	<12	<10	88	<10	-	0.489	2	0.2	21	5	16	41	<0.05	11	47
10 -	527		0-10	21-Sep-10	B091261	X19263	<0.0050	<0.020	<0.010	<0.040	<12	<10	110	14	-	0.386	2	0.2	24	6	10	22	<0.05	12	39
10 -	528		0-10	21-Sep-10	B091261	X19264	-	-	-	-	-	-	-	-	-	0.43	-	-	-	-	-	-	-	-	-
10 -	529		0-10	21-Sep-10	B091261	X19265	-	-	-	-	-	-	-	-	-	0.110	-	-	-	-	-	-	-	-	-
10 -	530 *		0-10	21-Sep-10	B091261	X19266	<0.0050	<0.020	<0.010	<0.040	<12	<10	150	16	-	1.49	2	0.4	24	5	13	36	<0.05	12	59
10 -	531 (d) *		0-10	21-Sep-10	B091261	X19267	<0.0050	<0.020	<0.010	<0.040	<12	<10	150	15	-	8.7	1	0.3	23	5	12	32	<0.05	11	56
10 -	532		0-10	21-Sep-10	B091261	X19268	-	-	-	-	-	-	-	-	-	0.93	-	-	-	-	-	-	-	-	-
10 -	533		0-10	21-Sep-10	B091261	X19269	<0.0050	<0.020	<0.010	<0.040	<12	<10	120	<10	-	0.76	1	0.3	22	5	12	30	<0.05	10	70
10 -	535		0-10	21-Sep-10	B091261	X19271	<0.0050	<0.020	<0.010	<0.040	<12	43	610	290	-	0.042	1	<0.1	25	5	7	10	<0.05	12	56
11 -	140	Confirmatory-2	30	10-Jul-11	B162696	AZ5172	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-
11 -	141 (d)		30	10-Jul-11	B162696	AZ5173	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-
Main Barrel Cache BPA-1																									
11 -	296	Baseline	0-10	23-Jul-11	B167044	BB9863	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	2	<0.1	19	6	9	8	<0.05	10	39
11 -	297		0-10	23-Jul-11	B167044	BB9864	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	2	<0.1	18	6	9	7	<0.05	15	35
11 -	298		0-10	23-Jul-11	B167044	BB9865	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	2	<0.1	17	5	7	5	<0.05	10	32
11 -	339	Confirmatory	0-10	26-Jul-11	B169210	BD1743	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	1	<0.1	11	4	<5	6	<0.05	6	23
11 -	340		0-10	26-Jul-11	B169210	BD1744	<0.0050	<0.020	<0.010	<0.040	<12	<10	280	<10	280	<0.010	2	<0.1	23	7	8	50	<0.05	12	56
11 -	341 (d)		0-10	26-Jul-11	B169210	BD1745	<0.0050	<0.020	<0.010	<0.040	<12	<10	260	35	260	<0.010	2	<0.1	27	7	8	71	<0.05	13	63
11 -	343		0-10	26-Jul-11	B169210	BD1784	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	2	<0.1	18	6	<5	8	<0.05	10	35
11 -	345		0-10	26-Jul-11	B169210	BD1808	<0.0050	<0.020	<0.010	<0.040	<12	<10	14	<10	14	<0.010	2	<0.1	25	8	6	8	<0.05	14	51
11 -	346		0-10	26-Jul-11	B169210	BD1809	<0.0050	<0.020	<0.010	<0.040	<12	<10	13	<10	13	<0.010	2	<0.1	17	6	8	6	<0.05	9	35
11 -	348		0-10	26-Jul-11	B169210	BD1815	<0.0050	<0.020	<0.010	<0.040	<12	<10	12	<10	12	<0.010	2	<0.1	22	7	12	7	0.05	13	47
Main Barrel Cache BPA-2																									
11 -	335	Baseline	0-10	26-Jul-11	B169210	BD1727	<0.0050	<0.020	<0.010	<0.040	<12	29	100	24	129	<0.010	2	<0.1	33	6	8	9	<0.05	16	37
11 -	336		0-10	26-Jul-11	B169210	BD1738	<0.0050	<0.020	<0.010	<0.040	<12	<10	25	<10	25	<0.010	2	<0.1	17	6	6	7	<0.05	10	37
11 -	337		0-10	26-Jul-11	B169210	BD1739	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	2	<0.1	18	6	5	7	<0.05	10	40
11 -	488	Confirmatory	0-10	5-Sep-11	B183875	BL6540	<0.0050	<0.020	<0.010	<0.040	<12	170	1200	140	1370	<0.010	<1	0.2	20	5	8	17	<0.05	11	59
11 -	489		0-10	5-Sep-11	B183875	BL6541	<0.0050	<0.020	<0.010	<0.040	<12	57	290	12	347	-	-	-	-	-	-	-	-	-	-
11 -	490 *		0-10	5-Sep-11	B183875	BL7069	<0.0050	<0.020	<0.010	<0.040	<12	220	2400	100	2620	<0.010	<1	0.3	26	6	8	100	0.06	10	160
11 -	491 *		0-10	5-Sep-11	B183875	BL7070	<0.0050	<0.020	<0.010	<0.040	<12	140	2500	94	2640	<0.010	1	0.2	20	6	7	26	<0.05	10	86
11 -	492		0-10	5-Sep-11	B183875	BL7071	<0.0050	<0.020	0.039	0.57	35	970	67	<10	1072	-	-	-	-	-	-	-	-	-	-
11 -	493		0-10	5-Sep-11	B183875	BL7072	<0.0050	<0.020	<0.010	<0.040	<12	<10	520	110	520	<0.010	<1	0.2	29	7	8	40	<0.05	14	230
11 -	495		0-10	5-Sep-11	B183875	BL7074	<0.0050	<0.020	<0.010	<0.040	<12	<10	24	<10	24	<0.010	<1	0.2	31	6	7	6	<0.05	15	32
11 -	496		0-10	5-Sep-11	B183875	BL7075	<0.0050	<0.020	<0.010	<0.040	<12	<10	64	<10	64	-	-	-	-	-	-	-	-	-	-

Table B-2. Analytical Summary of Baseline and Confirmatory Sampling at Barrel Processing Areas

Sample ID	Sampling Program	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons									PCBs	Heavy Metals								
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil						-	-	-	-	-	-	-	-	-	>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil						-	-	-	-	-	-	-	-	-	>5; <50	30	5	250	50	100	500	2	100	500
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000	-	5	-	-	-	-	-	-	-	-	-
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-	-	-	-	-	-	-	-	-	-	-
INAC AMSRP Type B PHC Contaminated Soil						-	-	-	-	-	-	-	-	2,500	-	-	-	-	-	-	-	-	-	-
11 -	497		0-10	5-Sep-11	B183875	BL7076	<0.0050	<0.020	<0.010	<0.040	<12	28	61	<10	89	-	-	-	-	-	-	-	-	-	-
11 -	498		0-10	5-Sep-11	B183875	BL7077	<0.0050	<0.020	<0.010	<0.040	<12	<10	68	30	68	<0.010	2	0.3	41	10	17	10	<0.05	21	71
11 -	500		0-10	5-Sep-11	B183875	BL7079	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	<1	0.2	25	6	8	8	<0.05	12	37
11 -	501		0-10	5-Sep-11	B183875	BL7080	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	<1	0.2	14	5	<5	5	<0.05	7	22
11 -	503		0-10	5-Sep-11	B183875	BL7082	<0.0050	<0.020	<0.010	<0.040	<12	27	44	<10	71	<0.010	<1	0.1	22	5	6	13	<0.05	10	29
11 -	505		0-10	5-Sep-11	B183875	BL7084	<0.0050	<0.020	<0.010	<0.040	<12	<10	21	19	21	<0.010	<1	0.1	23	5	6	9	<0.05	11	28
11 -	507		0-10	5-Sep-11	B183875	BL7086	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	<0.010	<1	0.1	21	5	6	6	<0.05	10	29

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-3. Analytical Summary of PCBs and Leachable Lead in Paint

Sample ID		Location	Sample Matrix	Date Collected	Maxxam Job No.	Maxxam Sample ID	Total PCBs (ppm)	Leachable Lead (mg/L)
Hazardous Materials							**50**	**5**
10 -	6	Square Tank	Paint	7-Jul-10	B058263	V48674	**1800**	<0.1
10 -	7	Pumphouse	Paint and Substrate	8-Jul-10	B058263	V48708	-	4.6
10 -	9	Yellow Grader	Paint and Substrate	8-Jul-10	B058263	V48710	-	1
10 -	10	Structural Steel - Garage	Paint and Substrate	11-Jul-10	B058263	V48711	-	**9.4**
10 -	21	Module Train (wood)	Paint and Substrate	15-Jul-10	B059981	V58292	-	<0.5
10 -	22	Module Train (metal)	Paint and Substrate	15-Jul-10	B059981	V58297	-	<0.5
10 -	**23**	Module Train	Paint	16-Jul-10	B059981	V58298	**3030**	-
10 -	41	Green Crane	Paint and Substrate	22-Jul-10	B063599	V77113	-	<0.5
10 -	162	Former Module Train Sewage Tank	Paint	6-Aug-10	B068549	W07598	**271**	-

Table B-4. Barrel Classification Summary

Barrel ID	Sample ID	Contents/Phase	Volume	% Glycols	Cadmium (ppm)	Chromium (ppm)	Total Chlorine (ppm)	Lead (ppm)	Total PCBs (ppm)	pH	Flashpoint	Disposal Method
BR-001	10-38	diesel/organic	1/2 full	-	<0.02	<0.05	28	<0.1	<0.3	5.7	66	On-Site Incineration
BR-011	10-36	used oil (black)/organic	1/2 full	-	<0.02	<0.05	**2420**	<0.1	<0.5	6.9	158	Ship South
BR-023	10-37	mixture (used oil and diesel)/organic	2/3 full	-	<0.02	<0.05	23	<0.1	<0.3	6.6	65	On-Site Incineration
BR-027	10-39	diesel/organic	1/2 full	-	<0.02	<0.05	25	<0.1	<0.3	5.9	63	On-Site Incineration
BR-031	10-35	diesel/organic	1/2 full	-	<0.02	<0.05	23	<0.1	<0.3	5.9	84	On-Site Incineration
BR-033	10-40	mixture (water and	2/3 full	-	<0.02	<0.05	20	<0.1	<0.3	7.6	75	On-Site Incineration
BR-114	10-145	mixture (used oil and water)/organic	1/4 full	-	1.6	<1	255	39	<1	6.9	>100	On-Site Incineration
BR-115	10-147	black oil/organic	1/2 full	-	**3.4**	1.1	**14268**	**2600**	<1	5.7	>100	Ship South
BR-117	10-146	mixture (red diesel and water)/organic	1 L	-	<1	<1	16	**7800**	<1	6.7	67	Ship South
BR-118	-	furnace oil (diesel)/organic	5-10 L	-	-	-	-	-	-	-	-	Ship South
BR-119	10-150	oil/organic	100 L	-	<1	<1	52	<1	<1	6.1	>100	On-Site Incineration
	10-151				<1	<1	55	<1	<1	6.8	69	
BR-120	10-152	mixture (oil and water)/organic	100 L	-	<1	<1	82	1	<1	6.7	69	On-Site Incineration
BR-121	10-153	oil/organic	100 L	-	<1	<1	108	<1	<1	6.7	49	On-Site Incineration
BR-122	10-154	black oil/organic	3/4 full	-	<1	<1	**17776**	2	<2	5.2	71	Ship South
BR-123	10-155	mixture (black oil and water)/organic	1/3 full	-	<0.02	<0.05	128	1.4	<2	4.6	>100	On-Site Incineration
BR-124	10-156	black oil/organic	60 L	-	<1	<1	104	**1200**	<1	5.7	48	Ship South
BR-125	10-157	used oil/organic	2 L	-	<1	8	**9812**	61	<1	7.4	>100	Ship South
BR-126	10-158	black oil/organic	1/2 full	-	<1	<1	**13236**	20	<1	3.6	72	Ship South
BR-127	10-159	mixture (red diesel and water)/organic	30 L	-	<1	<1	375	**5200**	<1	8.0	<40	Ship South
BR-128	10-160	mixture (gasoline and solvent)/organic	10 L	-	<1	<1	539	55	<1	3.1	47	On-Site Incineration
BR-100 to BR-112	10-230	diesel/organic	1,800 L	-	<0.02	<0.05	<2	<0.1	<1	4.0	66	On-Site Incineration
	10-231			-	<0.02	<0.05	<2	<0.1	<1	4.5	71	
BR-129	10-416	lube oil/organic	1/2 full	-	<0.02	<0.05	476	0.3	<1	6.3	174	On-Site Incineration
BR-130	10-232	diesel/organic	6 x 2/3 full	-	<0.02	<0.05	<2	<0.1	<0.3	5.8	**55**	On-Site Incineration
BR-131	10-346	mixture (black oil and diesel)/organic	10 L	-	<0.02	0.11	<2	<0.1	<1	5.8	>100	On-Site Incineration
BR-132	10-309	mixture (oil and water)/organic	20 L	-	<1	<1	135	44	<1	7.3	>100	On-Site Incineration
BR-135	10-420	diesel/organic	7 (1,080 L)	-	<0.02	<0.05	88	0.1	<1	6.0	65	On-Site Incineration
	10-421				<0.02	<0.05	80	0.2	<1	4.3	66	
BR-136	10-345	diesel/organic	full	-	<0.02	<0.05	<2	0.3	<1	6.4	>100	On-Site Incineration

Table B-4. Barrel Classification Summary

Barrel ID	Sample ID	Contents/Phase	Volume	% Glycols	Cadmium (ppm)	Chromium (ppm)	Total Chlorine (ppm)	Lead (ppm)	Total PCBs (ppm)	pH	Flashpoint	Disposal Method
BR-137	10-311	black oil/organic	20 L	-	<0.002	0.011	125	<0.01	<1	8.1	>100	On-Site Incineration
BR-138	10-402	oil/organic	full	-	0.20	<0.05	196	0.4	**3**	8.3	222	Ship South
BR-139	10-403	oil/organic	full	-	<0.02	<0.05	180	<0.1	**13**	11	186	Ship South
BR-142	10-417	used oil/organic	60 L	-	<1	<1	**17549**	4	<1	5.7	>100	Ship South
BR-143	10-418	mixture (lube oil and water)/organic	60 L	-	<1	<1	228	3	<1	4.6	>100	On-Site Incineration
BR-144	10-419	mixture (used oil and water)/organic	45 L	-	<1	<1	279	6	<1	6.6	>100	On-Site Incineration
BR-145	10-447	mixture (grease and soil)/organic	-	-	<0.3	3.4	166	13	<1	-	>75	On-Site Incineration
BR-146	10-448	water/aqueous	9,000 L	<0.1	-	-	-	-	-	-	-	Discard in accordance with wastewater discharge criteria
BR-147	10-452	oil/organic	200 L	-	<1	<1	165	<1	**3**	5.5	226	Ship South
BR-148	10-453	oil/organic	100 L	-	<1	<1	148	<1	**16**	5.9	224	Ship South
BR-149	10-454	oil/organic	40 L	-	<0.5	<1	122	<1	<0.5	6.3	220	On-Site Incineration
BR-150	10-455	oil/organic	full	-	<0.5	<1	66	<1	<0.5	8.0	202	On-Site Incineration
BR-151	10-456	mixture (grease and water)/organic	340 L	-	<0.5	<1	124	<1	1.0	5.6	>92	On-Site Incineration
BR-152	10-457	mixture (grease and water)/organic	90 L	**Not Submitted**								
BR-153	10-492	oil/organic	2/3 full	-	<0.5	<1	469	3	<0.5	6.4	214	On-Site Incineration
BR-154	10-493	mixture (oil and water)/organic	190 L	-	<0.5	<1	192	5	<0.5	7.1	>100	On-Site Incineration
BR-155	10-494	black oil/organic	100 L	-	<0.5	<1	412	4	0.5	5.7	57	On-Site Incineration
BR-156	10-495	black oil/organic	80 L	-	<0.5	<1	**11227**	**9200**	<0.5	6.4	148	Ship South
BR-157	10-496	oil/organic	100 L	-	<0.5	<1	399	2	<0.5	5.5	82	On-Site Incineration
BR-158	10-497	mixture (black oil and water)/organic	100 L	-	<0.5	1	357	2	1.5	7.3	>100	On-Site Incineration
BR-159	10-498	mixture (oil and water)/organic	40 L	-	<0.5	1	**6848**	**330**	<1	7.4	>100	Ship South
BR-160	10-499	black oil/organic	full	-	<0.5	<1	418	15	<1	5.8	75	On-Site Incineration
BR-161	10-500	oil/organic	15 L	-	<0.5	<1	313	<1	<0.5	5.8	>100	On-Site Incineration
BR-162	10-501	oil/organic	full	-	<0.2	<0.5	126	<1	<1	6.2	202	On-Site Incineration
BR-163	10-502	black oil/organic	100 L	-	1.1	<1	244	**560**	**17**	6.9	20	Ship South
BR-164	10-503	mixture (oil and water)/organic	120 L	-	<0.5	3	**2216**	44	<0.5	7.3	>100	Ship South
BR-165	10-504	mixture (oil and water)/organic	60 L	-	<0.5	<1	245	<1	<0.5	5.8	>100	On-Site Incineration

Table B-4. Barrel Classification Summary

Barrel ID	Sample ID	Contents/Phase	Volume	% Glycols	Cadmium (ppm)	Chromium (ppm)	Total Chlorine (ppm)	Lead (ppm)	Total PCBs (ppm)	pH	Flashpoint	Disposal Method
BR-166	10-505	mixture (oil and water)/organic	10 L	-	<0.5	<1	120	3	<0.5	7.2	>100	On-Site Incineration
BR-167	10-506	black oil/organic	180 L	-	<0.5	<1	192	19	**6.7**	4.1	152	Ship South
BR-168	10-507	oil/organic	full	-	<0.5	<1	89	<5	**3.1**	**13**	218	Ship South
BR-169	10-508	mixture (used oil and water)/organic	30 L	-	0.6	**28**	94	9	**7.5**	5.6	>100	Ship South
BR-170	10-509	oil/organic	60	-	<0.2	<0.5	157	<1	<1	5.6	212	On-Site Incineration
BR-171	10-510	oil/organic	60 L	-	<0.5	<1	199	<1	**3**	6.8	216	Ship South
	10-511			-	<0.5	<1	222	<1	**3**	7.5	222	
BR-172	10-512	oil/organic	120 L	-	<0.2	<0.5	138	<1	<1	6.6	194	On-Site Incineration
BR-173	10-513	black oil/organic	full	-	<0.5	<1	**20419**	<1	<1	3.4	>130	Ship South
BR-174	10-514	black oil/organic	40 L	-	0.7	2	385	84	<2	5.3	62	On-Site Incineration
BR-175	10-515	oil/organic	5 L	-	<0.5	<1	94	1	<1	6.8	210	On-Site Incineration
BR-176	10-519	oil/organic	2/3 full	-	<0.2	<0.5	116	2	<1	6.9	224	On-Site Incineration
BR-177	10-520	oil/organic	70 L	-	<0.2	<0.5	113	<1	<1	5.4	224	On-Site Incineration
BR-178	10-521	diesel/organic	4 (738 L)	-	<0.2	<0.5	16	6	<1	6.1	55	On-Site Incineration
BR-179	10-536	oil/organic	100 L	-	<0.2	<0.5	13	<1	<1	5.6	186	On-Site Incineration
BR-180	10-538	oil/organic	50 L	-	<0.2	<0.5	124	<1	<1	6.4	222	On-Site Incineration
BR-181	10-539	oil/organic	70 L	-	<0.2	<0.5	16	<1	**2.9**	5.7	220	Ship South
BR-186	11-349	black oil/organic	80 L	-	<0.02	<0.05	**37100**	3	<1	3.3	>100.0	Ship South
BR-187	11-350	mixture (black oil and water)/organic	15 L	-	<0.02	0.11	**17500**	0.3	<1	7.0	>100.0	Ship South
BR-188	11-351	red diesel/organic	18 L	-	<0.02	0.18	26	**510**	<1	5.3	16	Ship South
BR-189	11-419	diesel/organic	855 L	-	<0.02	<0.05	11	3.1	<1	7.4	59	On-Site Incineration
BR-190	11-420	water/aqueous	6,000 L	<0.1	-	-	-	-	-	-	-	Discard in accordance with wastewater discharge criteria
BR-192	11-446	mixture (used oil and water)/organic	50 L	-	<0.05	0.1	1	0.9	<1	8.0	>100	On-Site Incineration
BR-193	11-447	mixture (used oil and water)/organic	30 L	-	<0.05	<0.1	25	1.3	<1	8.5	>100	On-Site Incineration
BR-194	11-448	black oil/organic	10 L	-	<0.05	<0.1	**5445**	**2700**	<1	8.3	74	Ship South
BR-195	11-449	diesel/organic	325 L	-	0.07	<0.1	38	1.2	<1	8.6	55	On-Site Incineration
BR-196	11-450	diesel/organic	500 L	-	<0.05	<0.1	37	0.5	<1	6.8	67	On-Site Incineration
	11-451			-	<0.05	<0.1	22	<0.3	<1	12	68	
BR-197	11-452	diesel/organic	700 L	-	<0.05	<0.1	14	13	<1	8.9	67	On-Site Incineration
BR-198	11-453	diesel/organic	1,040 L	-	<0.05	<0.1	27	<0.3	<1	6.9	69	On-Site Incineration

Table B-4. Barrel Classification Summary

Barrel ID	Sample ID	Contents/Phase	Volume	% Glycols	Cadmium (ppm)	Chromium (ppm)	Total Chlorine (ppm)	Lead (ppm)	Total PCBs (ppm)	pH	Flashpoint	Disposal Method
BR-201	11-508	water/aqueous	40,000 L	0	-	-	-	-	-	-	-	Discard in accordance with wastewater discharge criteria
BR-202	11-454	diesel/organic	1,045 L	-	<0.02	<0.05	19	11	<1	5.8	62	On-Site Incineration
BR-203	11-455	diesel/organic	180 L	-	<0.02	<0.05	20	6.2	<1	6.2	67	On-Site Incineration
BR-204	11-456	lube oil/organic	20 L	-	0.15	0.32	16	2.9	<1	7.3	214	On-Site Incineration
BR-205	11-457	lube oil/organic	100 L	-	1.5	0.4	644	4.3	<1	7.7	210	On-Site Incineration
BR-206	11-458	lube oil/organic	20 L	-	<0.02	<0.05	76	0.1	<1	7.6	252	On-Site Incineration
BR-207	11-459	lube oil/organic	40 L	-	<0.02	<0.05	41	<0.1	<1	8.3	262	On-Site Incineration
BR-208	11-460	lube oil/organic	205	-	0.071	<0.005	17	1.7	<1	5.1	189	On-Site Incineration
BR-209	11-461	lube oil/organic	120	-	0.014	0.019	19	0.09	<1	9.7	154	On-Site Incineration

Table B-5. Analytical Summary of Baseline and Confirmatory Sampling at Temporary Storage Areas and Material Processing Areas

Sample ID		Sampling Program	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons									PCBs	Heavy Metals								
							Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil							-	-	-	-	-	-	-	-	-	>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil							-	-	-	-	-	-	-	-	-	>5; <50	30	5	250	50	100	500	2	100	500
INAC AMSRP PHC Contaminated Soil							-	-	-	-	15,000	8,000	18,000	25,000	-	5	-	-	-	-	-	-	-	-	-
PHC Impacted Soil							0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-	-	-	-	-	-	-	-	-	-	-
INAC AMSRP Type B PHC Contaminated Soil							-	-	-	-	-	-	-	-	2,500	-	-	-	-	-	-	-	-	-	-
Main Station TSA																									
10 -	24	Baseline	0-10	19-Jul-10	B063599	V77096	-	-	-	-	-	-	-	-	-	0.026	1	<0.1	29	5	7	5	0.08	14	27
10 -	25		0-10	19-Jul-10	B063599	V77097	-	-	-	-	-	-	-	-	-	0.028	1	<0.1	14	4	10	5	0.09	7	26
10 -	26		0-10	19-Jul-10	B063599	V77098	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	14	5	8	5	0.12	7	26
10 -	27		0-10	19-Jul-10	B063599	V77099	-	-	-	-	-	-	-	-	-	0.035	1	<0.1	15	5	8	6	0.09	8	28
10 -	28		0-10	19-Jul-10	B063599	V77100	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	17	5	9	5	<0.05	9	30
10 -	29		0-10	19-Jul-10	B063599	V77101	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	16	5	9	5	<0.05	8	28
10 -	30		0-10	19-Jul-10	B063599	V77102	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	14	5	7	5	<0.05	7	25
10 -	31 (d)		0-10	19-Jul-10	B063599	V77103	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	16	5	7	5	<0.05	7	26
10 -	32		0-10	19-Jul-10	B063599	V77104	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	16	5	8	5	<0.05	9	29
10 -	33		0-10	19-Jul-10	B063599	V77105	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	17	5	10	5	<0.05	9	30
10 -	34		0-10	19-Jul-10	B063599	V77106	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	16	5	8	5	<0.05	8	28
Shepherd Bay TSA																									
10 -	364	Baseline	0-10	27-Aug-10	B079383	W65595	-	-	-	-	-	-	-	-	-	<0.010	<1	<0.1	5	2	<5	2	<0.05	3	24
10 -	365		0-10	27-Aug-10	B079383	W65608	-	-	-	-	-	-	-	-	-	<0.010	<1	<0.1	5	2	<5	2	<0.05	3	16
10 -	366		0-10	27-Aug-10	B079383	W65609	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	6	2	7	3	<0.05	3	<10
10 -	367		0-10	27-Aug-10	B079383	W65610	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	5	2	<5	2	<0.05	2	11
10 -	368		0-10	27-Aug-10	B079383	W65611	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	4	2	<5	2	<0.05	2	<10
10 -	369		0-10	27-Aug-10	B079383	W65613	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	5	2	<5	2	<0.05	2	<10
10 -	370		0-10	27-Aug-10	B079383	W65614	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	4	1	<5	2	<0.05	2	<10
10 -	371 (d)		0-10	27-Aug-10	B079383	W65615	-	-	-	-	-	-	-	-	-	<0.010	<1	<0.1	4	2	<5	2	<0.05	2	11
10 -	372		0-10	27-Aug-10	B079383	W65618	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	5	2	<5	2	<0.05	3	10
10 -	373		0-10	27-Aug-10	B079383	W65619	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	5	2	<5	3	<0.05	2	11
10 -	374		0-10	27-Aug-10	B079383	W65620	-	-	-	-	-	-	-	-	-	<0.010	<1	<0.1	4	1	<5	2	<0.05	2	<10
10 -	375		0-10	27-Aug-10	B079383	W65621	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	5	2	<5	2	<0.05	2	<10
10 -	376		0-10	27-Aug-10	B079383	W65622	-	-	-	-	-	-	-	-	-	<0.010	<1	<0.1	3	2	<5	2	<0.05	3	<10
Pallet Line TSA																									
10 -	516	Baseline	0-10	20-Sep-10	B091261	X19255	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	1	<0.1	22	4	9	5	<0.05	11	23
10 -	517		0-10	20-Sep-10	B091261	X19257	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	<0.010	2	<0.1	49	8	14	7	<0.05	25	45
10 -	518		0-10	20-Sep-10	B091261	X19258	<0.0050	<0.020	<0.010	<0.040	<12	<10	240	97	-	0.015	1	<0.1	35	5	10	8	<0.05	18	32
11 -	509	Confirmatory	0-10	13-Sep-11	B187191	BN6474	<0.0050	<0.020	<0.010	<0.040	<12	<10	93	42	93	<0.010	<1	0.2	18	5	7	6	<0.05	9	31
Construction Camp MPA																									
11 -	292	Baseline	0-10	22-Jul-11	B167044	BB9859	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	13	4	<5	4	<0.05	7	23
11 -	293		0-10	22-Jul-11	B167044	BB9860	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	12	4	<5	4	<0.05	6	22
11 -	294		0-10	22-Jul-11	B167044	BB9861	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	15	5	5	4	<0.05	14	27
11 -	295		0-10	22-Jul-11	B167044	BB9862	-	-	-	-	-	-	-	-	-	<0.010	1	<0.1	15	4	<5	4	<0.05	7	25
11 -	470	Confirmatory	0-10	25-Aug-11	B180111	BJ4883	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	12	4	<5	4	<0.05	6	22
11 -	471 (d)		0-10	25-Aug-11	B180111	BJ4884	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	12	4	<5	4	0.06	6	24
11 -	472		0-10	25-Aug-11	B180111	BJ4885	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	12	4	<5	4	<0.05	6	25
11 -	473		0-10	25-Aug-11	B180111	BJ4886	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	14	4	<5	5	<0.05	7	26
11 -	474		0-10	25-Aug-11	B180111	BJ4887	-	-	-	-	-	-	-	-	-	<0.010	2	<0.1	11	4	5	4	<0.05	6	24

Notes:

(d) denotes duplicate sample

Table B-6. Analytical Summary of Buried Debris Stockpile Sampling at 2-BD-1 (East Station Buried Debris)

Sample ID	Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs		Heavy Metals															
						Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil						>1; <5		-		-		-		-		-		>200; <500		-		-		-	
Tier II Contaminated Soil						>5; <50		30		5		250		50		100		500		2		100		500	
10 -	627	ES-BD-1	D	25-Sep-10	B096249	X50136	<0.010	0	1	1	<0.1	0	19	22	5	5	7	9	5	7	<0.05	0	10	11	29	34
10 -	628		D	25-Sep-10	B096249	X50142	<0.010		1		<0.1		20		5		7		5		<0.05		11		34	
10 -	629		D	25-Sep-10	B096249	X50143	<0.010		1		<0.1		25		4		6		5		<0.05		12		26	
10 -	630		D	25-Sep-10	B096249	X50144	<0.010		1		<0.1		24		5		10		5		0.07		12		32	
10 -	631 (d)		D	25-Sep-10	B096249	X50145	<0.010		1		<0.1		24		5		6		6		0.06		11		31	
10 -	632		D	25-Sep-10	B096249	X50146	<0.010		1		<0.1		23		5		6		5		<0.05		11		32	
10 -	633		C	25-Sep-10	B096249	X50147	<0.010		1		<0.1		21		5		6		5		<0.05		10		30	
10 -	634	ES-BD-2	D	25-Sep-10	B096249	X50148	<0.010	0	1	1	<0.1	0	23	24	5	4	7	14	5	7	<0.05	0	12	13	36	57
10 -	635		D	25-Sep-10	B096249	X50149	<0.010		1		<0.1		24		4		10		5		<0.05		12		57	
10 -	636		D	25-Sep-10	B096249	X50150	<0.010		1		<0.1		28		5		14		16		<0.05		13		39	
10 -	637		D	25-Sep-10	B096249	X50151	<0.010		1		<0.1		20		4		16		5		<0.05		10		34	
10 -	638		D	25-Sep-10	B096249	X50152	<0.010		<1		0.2		17		4		9		6		<0.05		9		130	
10 -	639		C	25-Sep-10	B096249	X50165	<0.010		<1		0.2		23		4		11		5		<0.05		12		53	
10 -	640	ES-BD-3	D	25-Sep-10	B096249	X50167	<0.010	0	1	1	0.2	0	31	28	5	5	8	11	6	8	<0.05	0	15	14	37	41
10 -	641 (d)		D	25-Sep-10	B096249	X50168	<0.010		1		0.2		22		5		8		6		<0.05		11		37	
10 -	642		D	25-Sep-10	B096249	X50169	<0.010		1		0.3		30		6		9		6		<0.05		15		38	
10 -	643		D	25-Sep-10	B096249	X50170	<0.010		<1		0.2		32		4		6		6		<0.05		16		28	
10 -	644		D	25-Sep-10	B096249	X50171	<0.010		1		0.2		24		5		8		6		<0.05		12		37	
10 -	645		D	25-Sep-10	B096249	X50172	<0.010		1		0.2		34		5		8		6		<0.05		16		35	
10 -	646		C	25-Sep-10	B096249	X50173	<0.010		1		0.2		27		5		8		6		<0.05		13		37	
10 -	647	ES-BD-4	D	25-Sep-10	B096249	X50174	<0.010	0	<1	1	0.2	0	27	24	5	5	9	14	9	8	<0.05	0	13	12	84	62
10 -	648		D	25-Sep-10	B096249	X50175	<0.010		<1		0.2		19		5		8		6		<0.05		9		41	
10 -	649		D	25-Sep-10	B096249	X50176	0.011		2		0.2		21		5		15		7		<0.05		10		32	
10 -	650		D	25-Sep-10	B096249	X50177	<0.010		1		0.2		27		5		8		6		<0.05		13		38	
10 -	651 (d)		D	25-Sep-10	B096249	X50192	<0.010		<1		0.2		19		5		9		6		<0.05		9		39	
10 -	652		D	25-Sep-10	B096249	X50194	<0.010		1		0.3		36		5		9		7		<0.05		17		57	
10 -	653		C	25-Sep-10	B096249	X50195	<0.010		1		0.2		23		5		11		6		<0.05		11		58	
10 -	654	ES-BD-5	D	25-Sep-10	B096249	X50196	0.017	0	1	1	0.2	0	20	22	5	5	76	51	11	45	<0.05	0	10	11	93	91
10 -	655		D	25-Sep-10	B096249	X50197	<0.010		<1		0.2		33		5		20		6		<0.05		16		45	
10 -	656		D	25-Sep-10	B096249	X50198	<0.010		1		0.2		23		5		450		22		<0.05		11		130	
10 -	657		D	25-Sep-10	B096249	X50199	<0.010		<1		0.2		19		5		40		13		<0.05		10		83	
10 -	658		D	25-Sep-10	B096249	X50200	<0.010		<1		0.2		10		4		110		5		<0.05		6		36	
10 -	659		C	25-Sep-10	B096249	X50201	0.106		1		0.2		21		5		48		43		<0.05		10		87	
10 -	660	ES-BD-6	D	25-Sep-10	B096249	X50202	<0.010	0	1	1	0.1	0	20	19	4	4	66	46	9	10	<0.05	0	10	10	110	77
10 -	661 (d)		D	25-Sep-10	B096249	X50203	<0.010		<1		0.1		18		4		110		7		<0.05		9		56	
10 -	662		D	25-Sep-10	B096249	X50204	<0.010		1		0.2		19		4		87		12		<0.05		9		130	
10 -	663		D	25-Sep-10	B096249	X50211	<0.010		1		0.2		38		5		43		8		<0.05		18		75	
10 -	664		D	25-Sep-10	B096249	X50212	<0.010		1		0.2		22		5		15		10		<0.05		11		86	
10 -	665		D	25-Sep-10	B096249	X50213	<0.010		<1		0.2		17		4		19		7		<0.05		8		72	
10 -	666		C	25-Sep-10	B096249	X50214	<0.010		<1		0.2		18		4		43		8		<0.05		9		73	
10 -	667	ES-BD-7	D	25-Sep-10	B096249	X50215	<0.010	0	1	1	0.2	0	22	22	5	5	110	273	42	13	<0.05	0	11	12	230	98
10 -	668		D	25-Sep-10	B096249	X50216	<0.010		<1		0.2		25		5		23		9		<0.05		13		81	
10 -	669		D	25-Sep-10	B096249	X50217	<0.010		<1		0.2		19		5		46		16		<0.05		9		98	
10 -	670		D	25-Sep-10	B096249	X50218	<0.010		1		0.2		32		5		12		8		<0.05		16		73	
10 -	671 (d)		D	25-Sep-10	B096249	X50219	<0.010		1		0.2		21		5		12		8		<0.05		11		82	
10 -	672		D	25-Sep-10	B096249	X50220	<0.010		1		0.3		21		5		10		14		<0.05		10		160	
10 -	673		C	25-Sep-10	B096249	X50222	<0.010		1		0.2		21		5		270		11		<0.05		11		94	
10 -	674		D	25-Sep-10	B096249	X50223	<0.010		<1		0.2		21		5		11		6		<0.05		11		54	
10 -	675		D	25-Sep-10	B096249	X50228	<0.010		1		0.2		21		5		15		6		<0.05		11		57	

Table B-6. Analytical Summary of Buried Debris Stockpile Sampling at 2-BD-1 (East Station Buried Debris)

Sample ID	Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs		Heavy Metals															
						Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil						>1; <5		-		-		-		-		-		>200; <500		-		-		-	
Tier II Contaminated Soil						>5; <50		30		5		250		50		100		500		2		100		500	
10 -	676	ES-BD-8	D	25-Sep-10	B096249	X50229	<0.010	0	46	1	48	0	75	23	58	5	110	15	62	8	<0.05	0	57	12	120	52
10 -	677		D	25-Sep-10	B096249	X50230	<0.010		1		<0.1		25		5		8		6		<0.05		13		42	
10 -	678		D	25-Sep-10	B096249	X50231	<0.010		1		<0.1		24		5		16		6		<0.05		13		47	
10 -	679		C	25-Sep-10	B096249	X50232	<0.010		1		<0.1		22		5		12		6		<0.05		11		48	
10 -	680	ES-BD-9	D	25-Sep-10	B096249	X50233	<0.010	0	2	2	<0.1	0	24	25	5	5	13	18	7	9	<0.05	0	11	13	84	76
10 -	681 (d)		D	25-Sep-10	B096249	X50234	<0.010		2		<0.1		21		5		14		8		<0.05		11		74	
10 -	682		D	25-Sep-10	B096249	X50235	<0.010		2		<0.1		25		5		12		7		<0.05		12		70	
10 -	683		D	25-Sep-10	B096249	X50236	<0.010		3		<0.1		33		5		12		16		<0.05		16		49	
10 -	684		D	25-Sep-10	B096249	X50237	<0.010		2		<0.1		24		5		10		6		<0.05		12		58	
10 -	685		D	25-Sep-10	B096249	X50238	<0.010		2		<0.1		22		5		13		8		<0.05		11		92	
10 -	686		C	25-Sep-10	B096249	X50239	<0.010		2		<0.1		24		5		15		7		<0.05		12		72	
10 -	687	ES-BD-10	D	25-Sep-10	B096249	X50241	<0.010	0	2	2	<0.1	0	31	26	6	6	14	15	7	9	<0.05	0	16	14	53	64
10 -	688		D	25-Sep-10	B096249	X50242	<0.010		2		<0.1		21		6		12		7		<0.05		11		77	
10 -	689		D	25-Sep-10	B096249	X50243	<0.010		2		<0.1		21		6		10		7		<0.05		11		63	
10 -	690		D	25-Sep-10	B096249	X50244	<0.010		2		<0.1		31		7		17		8		<0.05		17		63	
10 -	691 (d)		D	25-Sep-10	B096249	X50245	<0.010		2		<0.1		42		6		11		8		<0.05		20		62	
10 -	692		D	25-Sep-10	B096249	X50246	<0.010		2		<0.1		23		5		11		8		<0.05		11		66	
10 -	693		C	25-Sep-10	B096249	X50257	<0.010		2		<0.1		25		6		12		7		<0.05		13		60	
10 -	694	ES-BD-11/12	D	25-Sep-10	B096249	X50258	<0.010	0	2	2	<0.1	0	19	28	5	5	8	20	6	13	<0.05	0	10	15	37	65
10 -	695		D	25-Sep-10	B096249	X50259	0.020		2		0.3		26		6		39		11		<0.05		13		84	
10 -	696		D	25-Sep-10	B096249	X50260	<0.010		2		<0.1		23		5		35		26		<0.05		11		57	
10 -	697		D	25-Sep-10	B096249	X50261	<0.010		2		<0.1		22		4		43		14		<0.05		12		93	
10 -	698		D	25-Sep-10	B096249	X50262	<0.010		2		<0.1		26		5		18		12		<0.05		13		58	
10 -	699		C	25-Sep-10	B096249	X50272	<0.010		2		<0.1		27		5		17		11		<0.05		14		61	

Table B-7. Analytical Summary of Confirmatory Sampling at Burried Debris Areas

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs	Heavy Metals								
					Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil					>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil					>5; <50	30	5	250	50	100	500	2	100	500
2-BD-1 (East Station Buried Debris)														
11 -	142	100	10-Jul-11	B162696	AZ5174	-	-	-	-	-	16	-	-	-	-
11 -	143	100	10-Jul-11	B162696	AZ5175	-	-	-	-	-	11	-	-	-	-
3-BD-1 (POL Buried Debris)														
11 -	237	120	17-Jul-11	B164800	BA7436	0.11	-	-	-	-	-	-	-	-	-
11 -	238	120	17-Jul-11	B164800	BA7437	0.036	-	-	-	-	-	-	-	-	-
3-BD-2 (Warehouse Buried Debris)														
11 -	299	40	23-Jul-11	B167044	BB9866	<0.010	-	-	-	-	-	-	-	-	-
11 -	300	40	23-Jul-11	B167044	BB9867	<0.010	-	-	-	-	-	-	-	-	-
11 -	301 (d)	40	23-Jul-11	B167044	BB9868	0.035	-	-	-	-	-	-	-	-	-
3-BD-3 (Module Train Buried Debris)														
11 -	303	60	24-Jul-11	B167044	BB9870	<0.010	-	-	-	-	-	-	-	-	-
11 -	305	60	24-Jul-11	B167044	BB9872	<0.010	-	-	-	-	-	-	-	-	-
11 -	307	60	24-Jul-11	B167044	BB9874	<0.010	-	-	-	-	-	-	-	-	-
11 -	308	60	24-Jul-11	B167044	BB9875	<0.010	-	-	-	-	-	-	-	-	-
11 -	310	60	24-Jul-11	B167044	BB9877	0.029	-	-	-	-	-	-	-	-	-
11 -	311 (d)	60	24-Jul-11	B167044	BB9878	0.075	-	-	-	-	-	-	-	-	-
11 -	313	60	24-Jul-11	B167044	BB9880	0.035	-	-	-	-	-	-	-	-	-
11 -	316	60	24-Jul-11	B167044	BB9883	<0.010	-	-	-	-	-	-	-	-	-
11 -	318	60	24-Jul-11	B167044	BB9885	<0.010	-	-	-	-	-	-	-	-	-
Main Dump - Lobe 1 Buried Debris														
11 -	352	50	27-Jul-11	B169210	BD1819	-	2	0.1	23	5	7	14	0.08	12	48
11 -	353 *	50	27-Jul-11	B169210	BD1822	1.2	2	0.7	41	5	470	160	0.10	10	130
11 -	354 *	50	27-Jul-11	B169210	BD1842	-	2	1.3	53	5	29	250	0.10	13	150
11 -	355	50	27-Jul-11	B169210	BD1843	0.72	2	0.8	25	6	56	120	0.09	10	140
11 -	357	50	27-Jul-11	B169210	BD1846	0.099	2	0.2	35	6	13	28	<0.05	19	80
11 -	359	50	27-Jul-11	B169210	BD1849	0.32	2	0.2	32	6	9	23	<0.05	16	69
11 -	362	50	27-Jul-11	B169210	BD1852	0.20	<1	0.1	12	4	<5	16	<0.05	8	30
11 -	364	50	27-Jul-11	B169210	BD1854	0.63	1	0.2	18	5	14	24	<0.05	8	51
11 -	365 *	50	27-Jul-11	B169210	BD1855	-	2	0.8	27	6	40	230	0.08	15	260
11 -	366 *	50	27-Jul-11	B169210	BD1856	1.1	2	0.8	51	6	59	130	0.14	24	930

Table B-7. Analytical Summary of Confirmatory Sampling at Burried Debris Areas

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs	Heavy Metals								
					Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil					**>1; <5**	**-**	**-**	**-**	**-**	**-**	**>200; <500**	**-**	**-**	**-**
Tier II Contaminated Soil					**>5; <50**	**30**	**5**	**250**	**50**	**100**	**500**	**2**	**100**	**500**
11 -	367	50	27-Jul-11	B169210	BD1857	-	2	0.5	28	7	63	110	0.06	15	120
11 -	**368 ***	50	27-Jul-11	B169210	BD1858	0.18	2	0.7	83	7	**110**	200	<0.05	40	250
11 -	369	50	27-Jul-11	B169210	BD1859	-	2	<0.1	25	7	9	7	<0.05	13	37
11 -	370	50	27-Jul-11	B169210	BD1861	<0.010	2	<0.1	23	7	10	110	<0.05	13	51
11 -	371 (d)	50	27-Jul-11	B169210	BD1862	<0.010	2	<0.1	24	7	12	11	<0.05	16	55
11 -	373	50	27-Jul-11	B169210	BD1876	0.44	2	0.8	17	5	36	44	<0.05	10	130
11 -	**423 ***	80	16-Aug-11	B177046	BH5137	-	1	0.3	**350**	4	8	4	<0.05	12	19
11 -	424	100	16-Aug-11	B177046	BH5141	**-**	-	-	100	-	-	-	-	-	-
11 -	425	80	16-Aug-11	B177046	BH5142	**-**	<1	0.3	19	5	10	17	<0.05	10	66
11 -	427	80	16-Aug-11	B177046	BH5147	-	<1	0.3	20	5	8	13	<0.05	11	30

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-8. Analytical Summary of Buried Debris Stockpile Sampling at 3-BD-1 (POL Buried Debris)

Sample ID	Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons																PCBs		Heavy Metals																	
						Benzene (ppm)	95 % UCL	Toluene (ppm)	95 % UCL	Ethylbenzene (ppm)	95 % UCL	Xylenes (ppm)	95 % UCL	F1 (ppm)	95 % UCL	F2 (ppm)	95 % UCL	F3 (ppm)	95 % UCL	F4 (ppm)	95 % UCL	Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil						-		-		-		-		-		-		-		-		>1; <5		-		-		-		-		>200; <500		-		-		-	
Tier II Contaminated Soil						-		-		-		-		-		-		-		-		>5; <50		30		5		250		50		100		500		2		100		500	
INAC AMSRP PHC Contaminated Soil						-		-		-		-		15,000		8,000		18,000		25,000		5		-		-		-		-		-		-		-		-		-	
PHC Impacted Soil						0.0068		0.08		0.018		2.4		260-15,000		900-8,000		800-18,000		5,600-25,000		-		-		-		-		-		-		-		-		-		-		-	
10 - 540	POL-BD-1	D	23-Sep-10	B092133	X24853	-		-		-		-		-		-		-		-		0.012		<1		0.2		8		3		9		4		<0.05		4		38	
10 - 541 (d)		D	23-Sep-10	B092133	X24855	-		-		-		-		-		-		-		-		<0.010		<1		0.1		9		3		11		5		0.06		4		32	
10 - 542		D	23-Sep-10	B092133	X24856	-		-		-		-		-		-		-		-		0.019		<1		0.1		7		3		<5		4		0.06		3		28	
10 - 543		D	23-Sep-10	B092133	X24857	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.016	0	<1	1	0.1	0	7	9	3	3	<5	21	4	6	<0.05	0	4	5	25	38
10 - 544		D	23-Sep-10	B092133	X24858	-		-		-		-		-		-		-		-		0.046		<1		0.1		7		3		<5		5		<0.05		4		27	
10 - 545		D	23-Sep-10	B092133	X24859	-		-		-		-		-		-		-		-		<0.010		<1		0.1		7		3		7		7		<0.05		3		29	
10 - 546		C	23-Sep-10	B092133	X24860	-		-		-		-		-		-		-		-		0.010		<1		0.1		8		3		18		4		0.05		4		34	
10 - 547	POL-BD-2	D	23-Sep-10	B092133	X24861	-		-		-		-		-		-		-		-		0.029		<1		<0.1		10		3		16		4		0.06		5		37	
10 - 548		D	23-Sep-10	B092133	X24862	-		-		-		-		-		-		-		-		0.011		<1		<0.1		9		3		15		4		<0.05		4		37	
10 - 549		D	23-Sep-10	B092133	X24863	-		-		-		-		-		-		-		-		<0.010		<1		<0.1		8		3		8		4		<0.05		4		37	
10 - 550		D	23-Sep-10	B092133	X24864	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.052	0	<1	1	<0.1	0	9	11	3	3	12	16	4	6	0.08	0	5	6	43	47
10 - 551 (d)		D	23-Sep-10	B092133	X24865	-		-		-		-		-		-		-		-		0.020		<1		<0.1		8		3		11		4		0.06		4		42	
10 - 552		D	23-Sep-10	B092133	X24866	-		-		-		-		-		-		-		-		0.023		<1		<0.1		10		3		11		4		<0.05		5		44	
10 - 553		C	23-Sep-10	B092133	X24867	-		-		-		-		-		-		-		-		0.015		<1		<0.1		10		3		13		4		<0.05		5		43	
10 - 554	POL-BD-3	D	23-Sep-10	B092133	X24868	-		-		-		-		-		-		-		-		0.019		<1		<0.1		9		3		8		4		<0.05		5		41	
10 - 555		D	23-Sep-10	B092133	X24869	-		-		-		-		-		-		-		-		0.024		1		<0.1		11		4		7		20		<0.05		6		44	
10 - 556		D	23-Sep-10	B092133	X24870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.050	0	1	1	<0.1	0	11	10	4	3	16	13	5	9	<0.05	0	5	6	42	43
10 - 557		D	23-Sep-10	B092133	X24871	-		-		-		-		-		-		-		-		<0.10		1		<0.1		10		3		11		5		<0.05		5		38	
10 - 558		D	23-Sep-10	B092133	X24872	-		-		-		-		-		-		-		-		<0.010		1		<0.1		9		3		8		4		<0.05		5		38	
10 - 559		C	23-Sep-10	B092133	X24873	-		-		-		-		-		-		-		-		0.016		<1		<0.1		9		3		10		7		<0.05		5		39	
10 - 560	POL-BD-4	D	23-Sep-10	B092133	X24874	-		-		-		-		-		-		-		-		0.16		1		0.7		11		4		14		8		<0.05		6		65	
10 - 561 (d)		D	23-Sep-10	B092133	X24875	-		-		-		-		-		-		-		-		0.12		1		1.1		11		4		21		8		<0.05		6		58	
10 - 562		D	23-Sep-10	B092133	X24876	-		-		-		-		-		-		-		-		0.13		1		0.2		11		4		17		8		<0.05		6		66	
10 - 563		D	23-Sep-10	B092133	X24877	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	1	<1	1	0.8	0	11	13	4	4	17	21	8	9	<0.05	0	6	8	60	75
10 - 564		D	23-Sep-10	B092133	X24878	-		-		-		-		-		-		-		-		0.20		1		0.1		11		4		15		8		<0.05		6		56	
10 - 565		D	23-Sep-10	B092133	X24879	-		-		-		-		-		-		-		-		1.5		1		0.3		12		4		22		8		<0.05		6		72	
10 - 566		C	23-Sep-10	B092133	X24880	-		-		-		-		-		-		-		-		0.38		1		0.3		12		4		18		7		<0.05		7		71	
10 - 567	POL-BD-5	D	23-Sep-10	B092133	X24881	-		-		-		-		-		-		-		-		<0.010		<1		0.1		10		3		12		5		<0.05		5		43	
10 - 568		D	23-Sep-10	B092133	X24882	-		-		-		-		-		-		-		-		0.048		<1		<0.1		10		3		10		6		<0.05		5		30	
10 - 569		D	23-Sep-10	B092133	X24883	-		-		-		-		-		-		-		-		<0.010		<1		<0.1		10		3		8		8		<0.05		5		37	
10 - 570		D	23-Sep-10	B092133	X24884	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027	0	<1	1	<0.1	0	10	11	3	3	12	15	5	7	<0.05	0	5	6	36	41
10 - 571 (d)		D	23-Sep-10	B092133	X24885	-		-		-		-		-		-		-		-		<0.010		<1		<0.1		10		3		10		6		<0.05		5		35	
10 - 572		D	23-Sep-10	B092133	X24886	-		-		-		-		-		-		-		-		<0.010		<1		<0.1		10		3		11		5		<0.05		5		34	
10 - 573		C	23-Sep-10	B092133	X24887	-		-		-		-		-		-		-		-		<0.010		<1		0.1		10		3		12		5		<0.05		5		37	
10 - 574	POL-BD-6	D	23-Sep-10	B092133	X24888	-		-		-		-		-		-		-		-		0.073		1		0.3		13		4		16		7		<0.05		7		59	
10 - 575		D	23-Sep-10	B092133	X24889	-		-		-		-		-		-		-		-		0.42		1		0.3		13		4		21		7		<0.05		7		57	
10 - 576		D	23-Sep-10	B092133	X24890	-		-		-		-		-		-		-		-		0.49		<1		0.6		14		4		18		13		<0.05		6		59	
10 - 577		D	23-Sep-10	B092133	X24891	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10	1	1	1	0.2	0	13	13	4	4	13	25	11	10	<0.05	0	7	8	57	65
10 - 578		D	23-Sep-10	B092133	X24892	-		-		-		-		-		-		-		-		0.127		1		0.1		12		4		12		6		<0.05		6		47	
10 - 579		C	23-Sep-10	B092133	X24893	-		-		-		-		-		-		-		-		0.383		<1		0.4		12		4		22		8		0.06		7		61	
10 - 580	POL-BD-7	D	23-Sep-10	B092133	X24894	-		-		-		-		-		-		-		-		<0.010		<1		0.2		9		3		12		9		<0.05		5		51	
10 - 581 (d)		D	23-Sep-10	B092133	X24895	-		-		-		-		-		-		-		-		<0.010		<1		0.4		9		3		9		5		<0.05		5		43	
10 - 582		D	23-Sep-10	B092133	X24896	-		-		-		-		-		-		-		-		0.045		<1		0.2		10		4		12		5		<0.05		5		42	
10 - 583		D	23-Sep-10	B092133	X24897	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.035	0	<1	1	0.2	0	10	11	3	3	12	25	5	9	<0.05	0	5	6	41	51
10 - 584		D	23-Sep-10	B092133	X24898	-		-		-		-		-		-		-		-		0.047		<1		0.3		9		3		6		5		<0.05		6		43	
10 - 585		D	23-Sep-10	B092133	X24899	-		-		-		-		-		-		-		-		<0.010		<1		0.4		11		4		10		7		<0.05		5		46	
10 - 586		C	23-Sep-10	B092133	X24900	-		-		-		-		-		-		-		-		<0.010		<1		0.3		10		3		22		7		<0.05		5		47	
10 - 587	POL-BD-8	D	23-Sep-10	B092133	X24901	-		-		-		-		-		-		-		-		<0.010		<1		0.1		10		3		8		4		<0.05		5		31	
10 - 588		D	23-Sep-10	B092133	X24902	-		-		-		-		-		-		-		-		<0.010		1		0.3		17		6		12		6		<0.05		9		36	
10 - 589		D	23-Sep-10	B092133	X24903	-		-		-		-		-		-		-		-		0.022		<1		0.1		9		3		8		4		<0.05		5		38	
10 - 590		D	23-Sep-10	B092133	X24904	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	0	<1	1	0.2	0	11	13	4	4	10	17	4	8	<0.05	0	5	7	41	42
10 - 591 (d)		D	23-Sep-10	B092133	X24905	-		-		-		-		-		-		-		-		<0.010		<1		0.2		10		3		12		5		<0.05		5		41	
10 - 592		D	23-Sep-10	B092133	X24906	-		-		-		-		-		-		-		-		<0.010		<1		0.2		9		3		7		6		<0.05		4		26	
10 - 593		C	23-Sep-10	B092133	X24907	-		-		-		-		-		-		-		-		<0.010		<1		0.2		12		4		14		6		<0.05		6		38	
10 - 594	POL-BD-9	D	23-Sep-10	B092133	X24908	-		-		-		-		-		-		-		-		2.09		<1		0.5		10		3		8		8		<0.05		7		58	
10 - 595		D	23-Sep-10	B092133	X24909	-		-		-		-		-		-		-		-		2.25		<1		0.6		11		3		12		9		<0.05		6		60	
10 - 596		D	23-Sep-10	B092133	X24910	-		-		-		-		-		-		-		-		0.93		<1		0.6		12		4		12		10		<0.05		6		59	
10 - 597		D	23-Sep-10	B092133	X24911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.76	4	<1	1	0.8	1	14	13	4	4	12	17	15	23	<0.05	0	8	9	56	69

Table B-8. Analytical Summary of Buried Debris Stockpile Sampling at 3-BD-1 (POL Buried Debris)

Sample ID	Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons																PCBs		Heavy Metals																			
						Benzene (ppm)	95 % UCL	Toluene (ppm)	95 % UCL	Ethylbenzene (ppm)	95 % UCL	Xylenes (ppm)	95 % UCL	F1 (ppm)	95 % UCL	F2 (ppm)	95 % UCL	F3 (ppm)	95 % UCL	F4 (ppm)	95 % UCL	Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil						-		-		-		-		-		-		-		-		>1; <5		-		-		-		-		>200; <500		-		-		-	
Tier II Contaminated Soil						-		-		-		-		-		-		-		-		>5; <50		30		5		250		50		100		500		2		100		500	
INAC AMSRP PHC Contaminated Soil						-		-		-		-		15,000		8,000		18,000		25,000		5		-		-		-		-		-		-		-		-		-	
PHC Impacted Soil						0.0068		0.08		0.018		2.4		260-15,000		900-8,000		800-18,000		5,600-25,000		-		-		-		-		-		-		-		-		-		-		-	
10 - 598		D	23-Sep-10	B092133	X24912	-		-		-		-		-		-		-		-		2.7		<1		0.8		14		4		9		18		<0.05		7		60	
10 - 599		C	23-Sep-10	B092133	X24913	-		-		-		-		-		-		-		-		3.9		<1		0.7		12		4		14		21		<0.05		8		65	
10 - 600		D	23-Sep-10	B092133	X24914	-		-		-		-		-		-		-		-		0.408		<1		0.3		12		4		13		10		<0.05		6		64	
10 - 601 (d)		D	23-Sep-10	B092133	X24915	-		-		-		-		-		-		-		-		0.58		<1		0.3		11		3		11		10		<0.05		6		55	
10 - 602		D	23-Sep-10	B092133	X24916	-		-		-		-		-		-		-		-		0.361		<1		0.4		12		4		13		8		<0.05		7		50	
10 - 603	POL-BD-10	D	23-Sep-10	B092133	X24917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.65	1	<1	1	0.4	0	14	14	4	4	13	19	9	12	<0.05	0	8	9	57	61
10 - 604		D	23-Sep-10	B092133	X24918	-		-		-		-		-		-		-		-		0.427		1		0.3		12		4		7		8		<0.05		6		49	
10 - 605		D	23-Sep-10	B092133	X24919	-		-		-		-		-		-		-		-		0.290		<1		0.4		12		4		13		11		<0.05		7		52	
10 - 606		C	23-Sep-10	B092133	X24920	-		-		-		-		-		-		-		-		0.442		<1		0.4		13		4		16		10		<0.05		8		57	
10 - 607		D	23-Sep-10	B092133	X24921	<0.0050		<0.020		<0.010		<0.040		13		870		52		<10		0.034		<1		0.2		9		3		16		5		<0.05		5		30	
10 - 608		D	23-Sep-10	B092133	X24922	<0.0050		<0.020		<0.010		<0.040		12		780		49		<10		<0.010		<1		0.1		10		3		9		4		<0.05		5		24	
10 - 609		D	23-Sep-10	B092133	X24926	<0.0050		<0.020		<0.010		<0.040		29		840		20		<10		<0.010		<1		0.1		9		3		7		4		<0.05		4		23	
10 - 610	POL-BD-11	D	23-Sep-10	B092133	X24928	<0.0050	**0.0085**	<0.020	0.02	<0.010	0.013	<0.040	0.0	29	14	670	730	32	38	<10	10	<0.010	0	<1	1	0.1	0	9	9	3	3	<5	11	3	6	<0.05	0	4	5	20	27
10 - 611 (d)		D	23-Sep-10	B092133	X24929	<0.0050		<0.020		<0.010		<0.040		29		770		32		<10		<0.010		<1		0.1		8		3		5		4		<0.05		4		19	
10 - 612		D	23-Sep-10	B092133	X24930	<0.0050		<0.020		<0.010		<0.040		16		890		18		<10		0.015		<1		0.1		10		3		6		5		<0.05		5		26	
10 - 613		C	23-Sep-10	B092133	X24931	<0.0050		<0.020		<0.010		<0.040		14		730		38		<10		0.013		<1		0.1		8		3		8		4		<0.05		4		23	
10 - 614		D	23-Sep-10	B092133	X24932	<0.0050		<0.020		<0.010		0.11		39		810		100		<10		0.079		<1		0.3		11		4		9		5		<0.05		5		37	
10 - 615		D	23-Sep-10	B092133	X24933	<0.0050		<0.020		<0.010		0.15		30		1000		71		<10		0.120		<1		0.2		10		3		7		6		<0.05		5		53	
10 - 616	POL-BD-12	D	23-Sep-10	B092133	X24934	<0.0050	**0.0205**	<0.020	**0.21**	<0.010	**0.028**	0.26	0.7	27	49	510	870	260	57	20	10	0.250	0	<1	1	0.2	0	13	11	4	3	11	9	9	10	<0.05	0	6	6	45	50
10 - 617		D	23-Sep-10	B092133	X24935	<0.0050		<0.020		<0.010		0.10		25		770		130		<10		0.207		<1		0.2		10		3		8		6		<0.05		5		46	
10 - 618		D	23-Sep-10	B092133	X24936	<0.0050		0.037		0.035		0.81		63		900		120		<10		1.32		<1		0.2		11		4		6		7		<0.05		7		39	
10 - 619		C	23-Sep-10	B092133	X24938	0.017		0.21		0.025		0.69		49		870		57		<10		0.17		<1		0.2		10		3		6		8		0.07		5		46	
10 - 620		D	23-Sep-10	B092133	X24939	0.051		0.49		0.32		2.1		67		1200		660		18		<0.010		<1		0.3		21		5		11		7		<0.05		14		44	
10 - 621 (d)		D	23-Sep-10	B092133	X24940	0.034		0.38		0.18		1.3		36		910		450		20		<0.010		1		0.2		14		4		16		6		<0.05		8		43	
10 - 622	POL-BD-13	D	23-Sep-10	B092133	X24941	0.034	**0.0455**	0.43	**0.45**	0.22	**0.403**	1.6	**3.2**	33	58	610	**1400**	300	690	13	43	0.035	0	<1	1	0.2	0	14	20	4	5	33	20	6	10	<0.05	0	10	15	44	54
10 - 623		D	23-Sep-10	B092133	X24942	0.037		0.42		0.21		1.5		23		610		360		13		<0.010		1		0.3		14		4		10		7		<0.05		9		40	
10 - 624		C	23-Sep-10	B092133	X24943	0.042		0.45		0.40		3.2		58		1400		690		43		<0.010		1		0.3		19		5		17		8		<0.05		14		50	

Table B-9. Analytical Summary of Buried Debris Stockpile Sampling at 3-BD-2 (Warehouse Buried Debris)

Sample ID		Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs		Heavy Metals															
							Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil							>1; <5		-		-		-		-		-		>200; <500		-		-		-	
Tier II Contaminated Soil							>5; <50		30		5		250		50		100		500		2		100		500	
11 -	34	WH-BD-1	D	10-Jul-11	B162645	AZ4669	0.35	0.6	<1	1	0.2	0	21	22	4	6	7	8	5	7	0.05	0	10	12	33	35
11 -	35		D	10-Jul-11	B162645	AZ4670	0.35		<1		0.2		17		4		6		5		<0.05		9		30	
11 -	36		D	10-Jul-11	B162645	AZ4671	0.17		<1		0.2		18		4		7		6		0.05		9		33	
11 -	37		D	10-Jul-11	B162645	AZ4672	0.05		<1		0.2		20		5		8		7		<0.05		10		33	
11 -	38		D	10-Jul-11	B162645	AZ4673	0.23		<1		0.2		15		4		7		5		<0.05		8		32	
11 -	39		C	10-Jul-11	B162645	AZ4674	0.24		<1		0.2		18		5		7		5		<0.05		10		32	
11 -	40	WH-BD-2	D	10-Jul-11	B162645	AZ4675	0.41	0.9	3	1	0.2	0	22	25	4	5	5	11	5	7	<0.05	0	11	13	30	33
11 -	41 (d)		D	10-Jul-11	B162645	AZ4676	0.7		<1		0.2		32		3		5		5		<0.05		16		26	
11 -	42		D	10-Jul-11	B162645	AZ4677	0.6		<1		0.2		20		3		<5		4		<0.05		10		23	
11 -	43		D	10-Jul-11	B162645	AZ4678	0.35		<1		0.2		23		3		<5		6		<0.05		11		22	
11 -	44		D	10-Jul-11	B162645	AZ4679	0.08		2		0.2		29		5		9		6		<0.05		15		33	
11 -	45		D	10-Jul-11	B162645	AZ4680	0.48		<1		0.2		36		3		<5		5		<0.05		18		23	
11 -	46		C	10-Jul-11	B162645	AZ4681	0.53		<1		0.2		21		4		10		5		<0.05		11		30	
11 -	47	WH-BD-3	D	10-Jul-11	B162645	AZ4682	2.1	0.6	<1	1	0.2	0	19	27	3	6	<5	9	5	8	<0.05	0	9	14	26	36
11 -	48		D	10-Jul-11	B162645	AZ4683	1		<1		0.3		16		3		5		23		<0.05		8		31	
11 -	49		D	10-Jul-11	B162645	AZ4684	0.02		<1		0.2		30		6		10		6		<0.05		16		37	
11 -	50		D	10-Jul-11	B162645	AZ4685	0.31		<1		0.2		17		4		7		5		<0.05		8		30	
11 -	51 (d)		D	10-Jul-11	B162645	AZ4686	0.3		<1		0.2		18		4		6		5		<0.05		9		28	
11 -	52		D	10-Jul-11	B162645	AZ4687	0.12		1		0.4		24		5		6		5		<0.05		12		29	
11 -	53		C	10-Jul-11	B162645	AZ4688	0.25		<1		0.2		23		5		8		6		<0.05		12		33	
11 -	54	WH-BD-4	D	10-Jul-11	B162645	AZ4689	0.7	1.3	<1	1	0.2	0	21	15	3	4	5	7	4	6	<0.05	0	11	8	29	28
11 -	55		D	10-Jul-11	B162645	AZ4690	0.19		<1		0.2		15		3		<5		4		<0.05		7		22	
11 -	56		D	10-Jul-11	B162645	AZ4691	0.3		<1		0.2		23		3		6		4		<0.05		11		25	
11 -	57		D	10-Jul-11	B162645	AZ4692	0.44		<1		0.2		13		3		11		8		<0.05		7		30	
11 -	58		D	10-Jul-11	B162645	AZ4693	0.9		<1		0.6		18		3		6		5		<0.05		9		26	
11 -	59		C	10-Jul-11	B162645	AZ4694	1		<1		0.2		11		3		6		4		<0.05		6		25	
11 -	60	WH-BD-5	D	10-Jul-11	B162645	AZ4695	0.62	0.6	<1	1	0.2	0	12	26	3	4	<5	6	5	6	<0.05	0	6	13	28	32
11 -	61 (d)		D	10-Jul-11	B162645	AZ4696	0.9		<1		0.2		19		3		5		4		<0.05		10		34	
11 -	62		D	10-Jul-11	B162645	AZ4697	0.51		<1		0.2		20		4		5		4		<0.05		16		30	
11 -	63		D	10-Jul-11	B162645	AZ4698	0.32		<1		0.2		17		3		5		8		<0.05		9		30	
11 -	64		D	10-Jul-11	B162645	AZ4699	0.15		1		0.2		25		4		7		5		<0.05		13		34	
11 -	65		D	10-Jul-11	B162645	AZ4700	0.23		1		0.3		18		4		6		5		<0.05		9		36	
11 -	66		C	10-Jul-11	B162645	AZ4701	0.28		<1		0.2		22		3		<5		4		<0.05		11		29	

Table B-10. Analytical Summary of Buried Debris Stockpile Sampling at 3-BD-3 (Module Train Buried Debris)

Sample ID		Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs		Heavy Metals															
							Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil							>1; <5		-		-		-		-		-		>200; <500		-		-		-	
Tier II Contaminated Soil							>5; <50		30		5		250		50		100		500		2		100		500	
11 -	1	MT-BD-1	D	10-Jul-11	B162645	AZ4609	1.2	3.2	1	1	0.8	1	28	28	6	6	14	11	7	12	0.08	0	14	13	55	70
11 -	2		D	10-Jul-11	B162645	AZ4637	5.4		1		0.8		35		4		7		8		0.06		17		57	
11 -	3		D	10-Jul-11	B162645	AZ4638	1.6		<1		0.3		29		4		7		7		<0.05		13		51	
11 -	4		D	10-Jul-11	B162645	AZ4639	0.18		1		0.6		36		5		11		8		0.12		17		51	
11 -	5		D	10-Jul-11	B162645	AZ4640	0.72		<1		1.3		13		3		6		8		<0.05		6		56	
11 -	6		C	10-Jul-11	B162645	AZ4641	0.52		1		0.9		21		5		8		9		<0.05		10		59	
11 -	7	MT-BD-2	D	10-Jul-11	B162645	AZ4642	2.1	4.6	<1	1	1.2	2	26	35	4	6	7	13	10	12	0.06	0	12	17	72	93
11 -	8		D	10-Jul-11	B162645	AZ4643	1.5		1		1.1		28		6		12		8		<0.05		15		63	
11 -	9		D	10-Jul-11	B162645	AZ4644	2.2		<1		1.0		36		4		8		19		<0.05		17		75	
11 -	10		D	10-Jul-11	B162645	AZ4645	1.5		<1		1.1		22		4		8		11		<0.05		10		82	
11 -	11 (d)		D	10-Jul-11	B162645	AZ4646	1.3		2		1.0		34		4		9		10		0.48		17		100	
11 -	12		D	10-Jul-11	B162645	AZ4647	15		<1		1.0		20		5		11		12		<0.05		10		81	
11 -	13		C	10-Jul-11	B162645	AZ4648	1.9		<1		1.4		28		5		10		9		<0.05		14		82	
11 -	14	MT-BD-3	D	10-Jul-11	B162645	AZ4649	1.2	3.5	<1	1	0.5	1	26	27	5	6	9	12	10	11	<0.05	0	13	14	60	61
11 -	15		D	10-Jul-11	B162645	AZ4650	9		<1		1.4		22		5		15		10		<0.05		13		94	
11 -	16		D	10-Jul-11	B162645	AZ4651	0.26		<1		1.1		29		5		11		8		<0.05		15		80	
11 -	17		D	10-Jul-11	B162645	AZ4652	3.8		<1		0.7		26		4		9		8		<0.05		15		52	
11 -	18		D	10-Jul-11	B162645	AZ4653	0.7		<1		1.3		43		5		10		16		<0.05		22		66	
11 -	19		C	10-Jul-11	B162645	AZ4654	0.75		<1		0.6		20		5		9		8		<0.05		11		50	
11 -	20	MT-BD-4	D	10-Jul-11	B162645	AZ4655	2.2	4.9	<1	1	1.2	1	16	29	4	5	8	11	10	12	<0.05	0	7	14	88	82
11 -	21 (d)		D	10-Jul-11	B162645	AZ4656	1.9		<1		1.0		32		4		8		19		0.10		16		88	
11 -	22		D	10-Jul-11	B162645	AZ4657	1.6		<1		1.0		31		4		8		20		0.07		14		71	
11 -	23		D	10-Jul-11	B162645	AZ4658	2.4		<1		1.0		23		4		22		9		<0.05		11		73	
11 -	24		D	10-Jul-11	B162645	AZ4659	4.6		<1		1.2		20		4		8		10		0.10		9		77	
11 -	25		D	10-Jul-11	B162645	AZ4660	2.7		<1		1.0		19		3		8		13		0.26		9		72	
11 -	26		C	10-Jul-11	B162645	AZ4661	2.2		<1		1.1		22		4		8		9		<0.05		11		71	
11 -	27	MT-BD-5	D	10-Jul-11	B162645	AZ4662	6	4.9	<1	1	1.7	3	22	35	4	5	9	12	13	19	<0.05	0	10	16	100	141
11 -	28		D	10-Jul-11	B162645	AZ4663	2.1		1		2.8		23		4		12		8		<0.05		11		77	
11 -	29		D	10-Jul-11	B162645	AZ4664	1.6		<1		1.5		19		4		6		9		<0.05		9		72	
11 -	30		D	10-Jul-11	B162645	AZ4665	4.3		<1		2.8		31		4		12		13		<0.05		15		130	
11 -	31 (d)		D	10-Jul-11	B162645	AZ4666	6.5		<1		1.8		26		5		10		11		<0.05		13		110	
11 -	32		D	10-Jul-11	B162645	AZ4667	6.6		<1		1.2		38		4		8		10		<0.05		17		110	
11 -	33		C	10-Jul-11	B162645	AZ4668	2.2		<1		2.4		28		4		9		16		<0.05		13		130	

Table B-11. Analytical Summary of Buried Debris Stockpile Sampling at Main Dump - Lobe 1 Buried Debris

Sample ID		Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs		Heavy Metals															
							Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil							>1; <5		-		-		-		-		-		>200; <500		-		-		-	
Tier II Contaminated Soil							>5; <50		30		5		250		50		100		500		2		100		500	
11 -	67	MDL1-BD-1	D	10-Jul-11	B162645	AZ4702	1.9	1.1	3	7	5.4	2	39	51	7	8	68	138	420	30472	0.15	0	20	23	420	326
11 -	68		D	10-Jul-11	B162645	AZ4703	1.6		2		1.4		45		6		72		350		0.12		18		290	
11 -	69		D	10-Jul-11	B162645	AZ4704	0.6		2		0.8		28		6		31		53		0.06		15		150	
11 -	70		D	10-Jul-11	B162645	AZ4705	0.64		2		1.0		61		6		180		1200		0.09		27		440	
11 -	71 (d)		D	10-Jul-11	B162645	AZ4706	0.48		2		0.9		33		6		100		850		0.09		16		340	
11 -	72		D	10-Jul-11	B162645	AZ4707	1.6		2		1.5		36		6		94		720		0.09		16		350	
11 -	73		C	10-Jul-11	B162696	AZ5095	0.83		6		1.1		41		7		79		30000		0.09		19		260	
11 -	74	MDL1-BD-2	D	10-Jul-11	B162696	AZ5096	0.75	1.8	2	2	1.7	2	31	57	6	6	36	87	440	912	0.08	0	11	14	240	246
11 -	75		D	10-Jul-11	B162696	AZ5097	0.26		1		1.0		24		5		36		330		<0.05		11		99	
11 -	76		D	10-Jul-11	B162696	AZ5098	0.43		1		1.2		76		5		22		230		<0.05		18		100	
11 -	77		D	10-Jul-11	B162696	AZ5099	1.1		2		2.4		120		6		31		1600		0.14		12		320	
11 -	78		D	10-Jul-11	B162696	AZ5100	1.2		1		1.6		48		6		38		510		0.08		14		270	
11 -	79		C	10-Jul-11	B162696	AZ5101	1.5		1		1.4		47		5		28		440		0.06		10		180	
11 -	80	MDL1-BD-3	D	10-Jul-11	B162696	AZ5102	1.4	0.9	2	3	2.4	2	39	49	6	7	110	379	910	1012	0.05	0	16	24	490	446
11 -	81 (d)		D	10-Jul-11	B162696	AZ5103	0.82		4		1.9		29		5		87		830		<0.05		15		360	
11 -	82		D	10-Jul-11	B162696	AZ5104	0.89		2		1.9		32		6		150		250		<0.05		15		450	
11 -	83		D	10-Jul-11	B162696	AZ5105	0.57		2		1.1		48		13		76		2900		<0.05		29		370	
11 -	84		D	10-Jul-11	B162696	AZ5106	1.5		2		0.9		46		6		64		190		<0.05		32		280	
11 -	85		D	10-Jul-11	B162696	AZ5107	0.33		<1		0.5		35		5		35		92		0.15		21		220	
11 -	86		C	10-Jul-11	B162696	AZ5108	0.59		2		1.3		39		6		320		540		<0.05		20		380	
11 -	87	MDL1-BD-4	D	10-Jul-11	B162696	AZ5109	0.36	4.0	1	2	1.3	1	25	32	5	6	38	78	150	632	<0.05	0	11	15	190	157
11 -	88		D	10-Jul-11	B162696	AZ5110	0.013		1		0.5		42		6		19		24		<0.05		22		58	
11 -	89		D	10-Jul-11	B162696	AZ5111	1.2		2		0.7		35		5		32		200		0.11		17		150	
11 -	90		D	10-Jul-11	B162696	AZ5112	0.49		<1		0.5		23		5		46		62		<0.05		11		99	
11 -	91 (d)		D	10-Jul-11	B162696	AZ5113	0.18		<1		0.8		25		5		120		370		<0.05		12		140	
11 -	92		D	10-Jul-11	B162696	AZ5114	<0.10		<1		0.2		18		5		9		27		<0.05		9		48	
11 -	93		C	10-Jul-11	B162696	AZ5115	3.7		1		0.6		22		5		19		160		<0.05		11		91	
11 -	94	MDL1-BD-5	D	10-Jul-11	B162696	AZ5116	0.45	0.6	<1	21	0.4	1	18	39	4	6	22	107	36	3572	<0.05	0	10	21	78	266
11 -	95		D	10-Jul-11	B162696	AZ5117	0.25		1		0.5		29		6		28		62		<0.05		16		140	
11 -	96		D	10-Jul-11	B162696	AZ5118	2.0		5		1.1		55		7		120		980		<0.05		32		230	
11 -	97		D	10-Jul-11	B162696	AZ5119	0.13		<1		0.3		18		5		15		31		<0.05		10		78	
11 -	98		D	10-Jul-11	B162696	AZ5120	0.18		2		0.3		21		5		12		34		0.09		11		63	
11 -	99		C	10-Jul-11	B162696	AZ5121	0.25		20		0.8		29		5		48		3100		<0.05		17		200	
11 -	100	MDL1-BD-6	D	10-Jul-11	B162696	AZ5122	0.35	8.6	<1	4	1.0	1	37	39	5	7	12	81	36	4572	<0.05	0	19	46	100	206
11 -	101 (d)		D	10-Jul-11	B162696	AZ5123	0.20		<1		0.4		23		5		13		39		<0.05		13		73	
11 -	102		D	10-Jul-11	B162696	AZ5124	0.34		<1		0.4		27		5		660		64		<0.05		14		84	
11 -	103		D	10-Jul-11	B162696	AZ5125	0.63		2		0.8		29		5		30		4800		<0.05		17		230	
11 -	104		D	10-Jul-11	B162696	AZ5126	1.1		1		0.8		34		6		41		160		<0.05		21		230	
11 -	105		D	10-Jul-11	B162696	AZ5127	0.43		2		0.3		35		6		19		66		0.08		19		110	
11 -	106		C	10-Jul-11	B162696	AZ5128	8.3		3		0.6		29		6		22		4100		<0.05		42		140	
11 -	107	MDL1-BD-7	D	10-Jul-11	B162696	AZ5129	0.11	0.6	<1	2	0.3	1	17	54	5	6	20	105	24	1012	<0.05	0	11	25	82	236
11 -	108		D	10-Jul-11	B162696	AZ5130	0.50		1		0.9		34		6		50		390		<0.05		21		240	
11 -	109		D	10-Jul-11	B162696	AZ5131	0.67		1		0.5		25		5		25		140		<0.05		14		150	
11 -	110		D	10-Jul-11	B162696	AZ5132	0.42		2		0.8		22		5		31		1300		<0.05		12		210	
11 -	111 (d)		D	10-Jul-11	B162696	AZ5133	0.39		<1		3.7		33		5		19		260		0.05		19		150	
11 -	112		D	10-Jul-11	B162696	AZ5134	0.80		1		0.7		37		6		33		420		<0.05		20		210	
11 -	113		C	10-Jul-11	B162696	AZ5135	0.27		1		0.7		44		5		46		540		0.10		21		170	
11 -	114		D	10-Jul-11	B162696	AZ5136	0.19		<1		0.3		39		5		15		77		<0.05		13		74	
11 -	115		D	10-Jul-11	B162696	AZ5137	0.39		2		0.6		44		5		28		200		<0.05		15		150	

Table B-11. Analytical Summary of Buried Debris Stockpile Sampling at Main Dump - Lobe 1 Buried Debris

Sample ID	Location	Sample Type	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs		Heavy Metals															
						Total PCBs (ppm)	95 % UCL	Arsenic (ppm)	95 % UCL	Cadmium (ppm)	95 % UCL	Chromium (ppm)	95 % UCL	Cobalt (ppm)	95 % UCL	Copper (ppm)	95 % UCL	Lead (ppm)	95 % UCL	Mercury (ppm)	95 % UCL	Nickel (ppm)	95 % UCL	Zinc (ppm)	95 % UCL
Tier I Contaminated Soil						**>1; <5**		**-**		**-**		**-**		**-**		**-**		**>200; <500**		**-**		**-**		**-**	
Tier II Contaminated Soil						**>5; <50**		**30**		**5**		**250**		**50**		**100**		**500**		**2**		**100**		**500**	
11 -	116	MDL1-BD-8	D	10-Jul-11	B162696	AZ5138	0.18	0.5	<1	2	0.4	1	18	38	5	6	460	74	80	546	<0.05	0	11	19	80	137
11 -	117		D	10-Jul-11	B162696	AZ5139	0.16		<1		0.4		24		5		21		27		0.07		12		67	
11 -	118		D	10-Jul-11	B162696	AZ5140	0.31		1		0.3		19		5		18		44		<0.05		10		60	
11 -	119		C	10-Jul-11	B162696	AZ5141	0.24		1		0.3		28		5		15		74		<0.05		15		71	
11 -	120	MDL1-BD-9	D	10-Jul-11	B162696	AZ5142	0.56	1.1	<1	2	0.8	1	22	37	5	6	22	84	55	582	0.11	0	12	21	260	206
11 -	121 (d)		D	10-Jul-11	B162696	AZ5143	0.62		2		0.9		31		5		27		860		0.10		19		130	
11 -	122		D	10-Jul-11	B162696	AZ5144	0.30		2		0.7		39		6		84		290		0.11		31		200	
11 -	123		D	10-Jul-11	B162696	AZ5145	0.41		2		0.6		31		6		20		38		<0.05		15		86	
11 -	124		D	10-Jul-11	B162696	AZ5146	0.37		2		0.5		33		5		38		38		0.06		18		100	
11 -	125		D	10-Jul-11	B162696	AZ5147	0.64		1		0.6		26		5		27		37		0.06		14		180	
11 -	126		C	10-Jul-11	B162696	AZ5148	0.75		1		0.7		27		5		25		110		0.07		17		140	
11 -	127	MDL1-BD-10	D	10-Jul-11	B162696	AZ5149	0.13	0.4	<1	2	0.3	1	20	43	5	6	11	70	13	486	<0.05	0	10	21	51	116
11 -	128		D	10-Jul-11	B162696	AZ5150	0.037		1		0.2		24		6		20		16		<0.05		13		54	
11 -	129		D	10-Jul-11	B162696	AZ5151	0.050		<1		0.2		19		5		11		15		<0.05		10		53	
11 -	130		D	10-Jul-11	B162696	AZ5162	0.11		1		0.2		22		5		10		15		<0.05		11		49	
11 -	131 (d)		D	10-Jul-11	B162696	AZ5163	0.16		1		0.2		31		5		14		36		<0.05		14		57	
11 -	132		D	10-Jul-11	B162696	AZ5164	0.047		1		0.2		30		5		10		10		<0.05		15		41	
11 -	133		C	10-Jul-11	B162696	AZ5165	<0.10		<1		0.2		33		5		11		14		<0.05		17		50	
11 -	134	MDL1-BD-11	D	10-Jul-11	B162696	AZ5166	0.29	1.5	1	2	0.4	1	27	34	5	6	18	73	21	491	<0.05	0	14	16	280	196
11 -	135		D	10-Jul-11	B162696	AZ5167	0.26		<1		0.4		21		5		18		34		<0.05		11		92	
11 -	136		D	10-Jul-11	B162696	AZ5168	0.19		<1		0.3		26		5		11		25		<0.05		13		64	
11 -	137		D	10-Jul-11	B162696	AZ5169	0.23		1		0.3		26		5		16		20		<0.05		14		250	
11 -	138		D	10-Jul-11	B162696	AZ5170	0.22		<1		0.4		40		6		13		63		0.09		15		100	
11 -	139		C	10-Jul-11	B162696	AZ5171	1.2		1		0.3		24		5		14		19		<0.05		12		130	

Table B-12. Analytical Summary of Confirmatory Sampling at 2-PHC-1 (Pallet Line - Contaminated)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000
10 -	164	60	10-Aug-10	B070686	W17387	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	166	60	10-Aug-10	B070686	W17391	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	168	60	10-Aug-10	B070686	W17393	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	170	60	10-Aug-10	B070686	W17395	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	171 (d)	60	10-Aug-10	B070686	W17396	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	174	60	10-Aug-10	B070686	W17399	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	175	60	10-Aug-10	B070686	W17400	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	176 *	60	10-Aug-10	B070686	W17401	<0.0050	<0.020	<0.010	<0.040	58	910	27	<10
10 -	177	60	10-Aug-10	B070686	W17402	<0.0050	<0.020	<0.010	<0.040	<12	610	37	<10
10 -	178	60	10-Aug-10	B070686	W17403	<0.0050	<0.020	<0.010	<0.040	<12	74	250	<10
10 -	180	60	10-Aug-10	B070686	W17405	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	181 (d)	60	10-Aug-10	B070686	W17406	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	183 *	60	10-Aug-10	B070686	W17408	<0.0050	<0.020	<0.010	9.0	1100	15000	1900	<10
10 -	185	60	10-Aug-10	B070686	W17410	<0.0050	<0.020	<0.010	<0.040	<12	<10	48	<10
10 -	186 *	60	10-Aug-10	B070686	W17411	<0.0050	<0.020	<0.010	<0.040	23	1700	170	44
10 -	187	60	10-Aug-10	B070686	W17412	<0.0050	<0.020	<0.010	<0.040	<12	160	<10	<10
10 -	188	60	10-Aug-10	B070755	W17762	<0.0050	<0.020	<0.010	<0.040	<12	<10	77	49
10 -	190	60	10-Aug-10	B070755	W17765	<0.0050	<0.020	<0.010	<0.040	<12	75	270	370
10 -	191 (d)	60	10-Aug-10	B070755	W17766	<0.0050	<0.020	<0.010	<0.040	<12	68	120	120
10 -	393	90	29-Aug-10	B079383	W65763	0.0058	<0.020	<0.010	<0.040	<12	120	26	<10
10 -	394	90	29-Aug-10	B079383	W65765	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	395 *	60	2-Sep-10	B081104	W76241	<0.0050	<0.020	<0.010	<0.040	93	2400	61	<10
10 -	396	60	2-Sep-10	B081104	W76242	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	397	60	2-Sep-10	B081104	W76247	<0.0050	<0.020	<0.010	<0.040	39	480	17	<10
10 -	398	60	2-Sep-10	B081104	W76248	<0.0050	<0.020	<0.010	<0.040	24	680	53	<10
10 -	399	100	2-Sep-10	B081104	W76249	<0.0050	<0.020	<0.010	<0.040	<12	370	<10	<10
10 -	449	100	15-Sep-10	B088460	X07266	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-13. Analytical Summary of Confirmatory Sampling at 3-PHC-1 (POL - Contaminated)

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)
INAC AMSRP PHC Contaminated Soil					-	-	-	-	15,000	8,000	18,000	25,000
PHC Impacted Soil					0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000
10 - 124	40	2-Aug-10	B067137	V98485	<0.0050	<0.020	<0.010	<0.040	100	2700	72	<10
10 - 126	40	2-Aug-10	B067137	V98491	<0.0050	<0.020	<0.010	0.64	190	930	<10	<10
10 - 128	40	2-Aug-10	B067137	V98493	<0.0050	<0.020	<0.010	0.067	170	4200	33	<10
10 - 130	40	2-Aug-10	B067137	V98495	<0.0050	<0.020	<0.010	<0.040	190	3900	29	<10
10 - 131 (d)	40	2-Aug-10	B067137	V98496	<0.0050	<0.020	<0.010	<0.040	140	4400	16	<10
10 - 133	40	2-Aug-10	B067137	V98498	<0.0050	<0.020	<0.010	<0.040	96	31	<10	<10
10 - 135	40	2-Aug-10	B067137	V98500	<0.0050	<0.020	<0.010	<0.040	<12	10	10	10
10 - 136	40	2-Aug-10	B067137	V98532	<0.0050	<0.020	<0.010	<0.040	42	450	<10	<10
10 - 137	40	2-Aug-10	B067137	V98533	<0.0050	0.052	0.11	9.6	1000	11000	110	<10
10 - 138	40	2-Aug-10	B067137	V98534	<0.0050	<0.020	<0.010	4.1	1200	690	<10	<10
10 - 140	40	2-Aug-10	B067137	V98536	<0.0050	<0.020	<0.010	17	1700	8300	130	<10
10 - 141 (d)	40	2-Aug-10	B067137	V98537	<0.0050	<0.020	<0.010	14	1900	11000	250	<10
10 - 142	40	2-Aug-10	B067137	V98538	<0.0050	<0.020	<0.010	1.8	190	430	<10	<10
10 - 143	40	2-Aug-10	B067137	V98539	<0.0050	<0.020	<0.010	<0.040	160	5000	32	<10
10 - 144	40	2-Aug-10	B067137	V98540	<0.0050	<0.020	<0.010	0.043	48	390	<10	<10
10 - 384	70	28-Aug-10	B079383	W65732	0.096	3.7	2.4	37	1600	12000	500	<10
10 - 385	70	28-Aug-10	B079383	W65751	0.027	0.62	0.22	33	480	7800	490	<10
10 - 386	70	28-Aug-10	B079383	W65753	0.0062	0.092	0.046	7.3	530	8300	450	<10
10 - 387	70	28-Aug-10	B079383	W65754	<0.0050	<0.020	<0.010	0.82	80	540	15	<10
10 - 388	40	28-Aug-10	B079383	W65755	<0.0050	<0.020	<0.010	0.75	340	2300	57	<10
10 - 390	40	28-Aug-10	B079383	W65757	0.0052	0.020	0.040	0.42	24	310	13	<10
10 - 391 (d)	40	28-Aug-10	B079383	W65759	<0.0050	<0.020	0.067	0.58	150	840	46	<10
10 - 392	70	28-Aug-10	B079383	W65760	0.0076	0.13	0.033	6.0	220	5200	230	<10

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-14. Analytical Summary of Confirmatory Sampling at 4-METPHC-1 (Airstrip - Contaminated)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons								Heavy Metals								
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil						-	-	-	-	-	-	-	-	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil						-	-	-	-	-	-	-	-	30	5	250	50	100	500	2	100	500
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000	-	-	-	-	-	-	-	-	-
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-	-	-	-	-	-	-	-	-
10 -	58	0-20	28-Jul-10	B064264	V80847	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	1	0.1	14	5	10	7	<0.05	8	110
10 -	59	0-20	28-Jul-10	B064264	V80848	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	1	<0.1	10	4	5	4	<0.05	5	32
10 -	60	20	28-Jul-10	B064264	V80849	<0.0050	<0.020	<0.010	<0.040	<12	<10	20	<10	2	0.2	17	5	21	10	<0.05	9	140
10 -	61 (d)	20	28-Jul-10	B064264	V80850	<0.0050	<0.020	<0.010	<0.040	<12	<10	35	21	2	0.3	18	6	37	11	<0.05	9	160
10 -	62	0-20	28-Jul-10	B064264	V80851	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	1	<0.1	13	4	8	5	<0.05	7	59
10 -	63	0-20	28-Jul-10	B064264	V80852	<0.0050	<0.020	<0.010	<0.040	<12	<10	60	<10	1	0.5	14	4	16	11	<0.05	7	220
10 -	64	0-20	28-Jul-10	B064264	V80853	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	2	0.1	24	7	15	8	<0.05	13	58
10 -	65 *	20	28-Jul-10	B064264	V80854	<0.0050	<0.020	<0.010	<0.040	<12	<10	440	190	2	1.2	17	5	28	40	<0.05	9	850
10 -	66 *	0-20	28-Jul-10	B064264	V80855	<0.0050	<0.020	<0.010	<0.040	<12	<10	130	<10	2	4.7	21	6	66	50	<0.05	10	1400
10 -	67	0-20	28-Jul-10	B064264	V80856	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	2	0.8	14	4	16	13	<0.05	7	160
10 -	68	0-20	28-Jul-10	B064264	V80857	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	2	0.4	20	6	16	12	<0.05	10	120
10 -	69	20	28-Jul-10	B064264	V80858	<0.0050	<0.020	<0.010	<0.040	<12	16	550	100	2	0.9	18	6	18	24	<0.05	10	120
10 -	70	20	28-Jul-10	B064264	V80859	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	2	<0.1	18	5	22	6	<0.05	9	37
10 -	71 (d)	20	28-Jul-10	B064264	V80860	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	2	<0.1	21	6	12	6	<0.05	11	73
10 -	72	0-20	28-Jul-10	B064264	V80861	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	2	<0.1	17	5	12	7	<0.05	9	34
10 -	73	0-20	28-Jul-10	B064264	V80862	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	2	<0.1	29	8	15	8	<0.05	16	48
10 -	74	0-20	28-Jul-10	B064264	V80863	<0.0050	<0.020	<0.010	<0.040	<12	<10	19	<10	2	0.2	21	5	19	17	<0.05	10	91
10 -	75	0-20	28-Jul-10	B064264	V80864	<0.0050	<0.020	<0.010	<0.040	<12	<10	88	12	2	<0.1	20	6	10	9	<0.05	10	54
10 -	76	0-20	28-Jul-10	B064264	V80865	<0.0050	<0.020	<0.010	<0.040	<12	<10	180	37	2	0.3	21	6	15	11	<0.05	11	100
10 -	77	20	28-Jul-10	B064264	V80866	<0.0050	<0.020	<0.010	<0.040	<12	<10	25	<10	2	<0.1	19	6	21	7	<0.05	10	49
10 -	192	40	10-Aug-10	B070755	W17767	-	-	-	-	-	-	-	-	2	<0.1	38	6	8	6	<0.05	18	35
10 -	193	40	10-Aug-10	B070755	W17780	-	-	-	-	-	-	-	-	1	0.6	110	6	11	8	<0.05	49	93
10 -	194	40	10-Aug-10	B070755	W17781	-	-	-	-	-	-	-	-	2	<0.1	39	7	10	7	<0.05	19	44
10 -	195	40	10-Aug-10	B070755	W17782	-	-	-	-	-	-	-	-	2	<0.1	44	6	7	6	<0.05	21	34

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-15. Analytical Summary of Soil Sampling Program near 4-METPHC-1 (Airstrip - Contaminated)

Sample ID		Sampling Program	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons								PCBs	Heavy Metals								
							Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil							-	-	-	-	-	-	-	-	>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil							-	-	-	-	-	-	-	-	>5; <50	30	5	250	50	100	500	2	100	500
INAC AMSRP PHC Contaminated Soil							-	-	-	-	15,000	8,000	18,000	25,000	5	-	-	-	-	-	-	-	-	-
PHC Impacted Soil							0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-	-	-	-	-	-	-	-	-	-
Stained Area near 4-METPHC-1 (Airstrip - Contaminated)																								
10 -	229 *	Identification	0-10	14-Aug-10	B073236	W31789	<0.0050	<0.020	<0.010	<0.040	<12	<10	1900	100	<0.010	1	<0.1	13	4	18	24	0.06	7	36
10 -	325	Delineation	20	25-Aug-10	B078347	W59807	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	326	Delineation	0-10	25-Aug-10	B078347	W59809	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	327	Delineation	0-10	25-Aug-10	B078347	W59810	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	328	Delineation	0-10	25-Aug-10	B078347	W59811	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	329	Delineation	0-10	25-Aug-10	B078347	W59812	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	443	Confirmatory	15	7-Sep-10	B083160	W85429	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	444	Confirmatory	15	7-Sep-10	B083160	W85430	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
Broken Batteries near 4-METPHC-1 (Airstrip - Contaminated)																								
10 -	440	Confirmatory	C	7-Sep-10	B083160	W85426	-	-	-	-	-	-	-	-	-	2	<0.1	27	5	7	98	<0.05	14	31
10 -	441 (d) *	Confirmatory	C	7-Sep-10	B083160	W85427	-	-	-	-	-	-	-	-	-	2	<0.1	42	5	7	1000	<0.05	21	31
10 -	442	Confirmatory	C	7-Sep-10	B083160	W85428	-	-	-	-	-	-	-	-	-	2	<0.1	24	7	27	21	<0.05	13	45
10 -	626	Confirmatory-2	C	24-Sep-10	B092133	X24945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	-	-	-

Notes:

(d) denotes duplicate sample

** Excavated*

C - composite sample

Table B-16. Analytical Summary of Confirmatory Sampling at 2-PHC-I-1 (Pallet Line - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)
INAC AMSRP PHC Contaminated Soil						**-**	**-**	**-**	**-**	**15,000**	**8,000**	**18,000**	**25,000**
PHC Impacted Soil						**0.0068**	**0.08**	**0.018**	**2.4**	**260-15,000**	**900-8,000**	**800-18,000**	**5,600-25,000**
10 -	196	60	12-Aug-10	B071889	W25204	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	198	60	12-Aug-10	B071889	W25210	<0.0050	<0.020	<0.010	<0.040	<12	<10	150	42
10 -	200	60	12-Aug-10	B071889	W25212	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	201 (d)	60	12-Aug-10	B071889	W25213	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	205	60	12-Aug-10	B071889	W25217	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	207	60	12-Aug-10	B071889	W25219	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	210	60	12-Aug-10	B071889	W25229	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	211 (d)	60	12-Aug-10	B071889	W25230	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	213	60	12-Aug-10	B071889	W25234	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	214	60	12-Aug-10	B071889	W25235	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10

Notes:

(d) denotes duplicate sample

Table B-17. Analytical Summary of Confirmatory Sampling at 2-PHC-I-2 (Portable Fuel Tanks - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons								Polycyclic Aromatic Hydrocarbons							
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Napthalene (ppm)	Phenanthrene (ppm)	Pyrene (ppm)	Benzo(a) anthracene (ppm)	Benzo(b&j) fluoranthene (ppm)	Benzo(a) pyrene (ppm)	Indeno(1,2,3-cd) pyrene (ppm)	Dibenzo(a,h) anthracene (ppm)
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000								
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	0.6	5	10	1	1	0.7	1	1
10 -	234	100	18-Aug-10	B074526	W38777	<0.0050	<0.020	<0.010	<0.040	<12	590	610	150	-	-	-	-	-	-	-	-
10 -	235	50	18-Aug-10	B074526	W38778	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	237 *	50	18-Aug-10	B074526	W38781	<0.0050	<0.020	<0.010	<0.040	23	2000	430	32	-	-	-	-	-	-	-	-
10 -	238	100	18-Aug-10	B074526	W38782	<0.0050	<0.020	<0.010	<0.040	<12	210	14	<10	-	-	-	-	-	-	-	-
10 -	239 *	50	18-Aug-10	B074526	W38783	<0.0050	<0.020	<0.010	<0.040	34	1500	870	250	-	-	-	-	-	-	-	-
10 -	242 *	50	18-Aug-10	B074526	W38786	<0.0050	<0.020	<0.010	<0.040	<12	1200	450	84	-	-	-	-	-	-	-	-
10 -	243	100	18-Aug-10	B074526	W38787	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	244 *	50	18-Aug-10	B074526	W38788	<0.0050	<0.020	<0.010	<0.040	<12	190	2600	740	-	-	-	-	-	-	-	-
10 -	245	100	18-Aug-10	B074526	W38789	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	246	50	18-Aug-10	B074526	W38790	<0.0050	<0.020	<0.010	<0.040	<12	49	590	190	-	-	-	-	-	-	-	-
10 -	249	100	18-Aug-10	B074526	W38793	<0.0050	<0.020	<0.010	<0.040	<12	380	440	35	-	-	-	-	-	-	-	-
10 -	250	50	18-Aug-10	B074526	W38794	<0.0050	<0.020	<0.010	<0.040	<12	39	430	120	-	-	-	-	-	-	-	-
10 -	251 (d)	50	18-Aug-10	B074526	W38795	<0.0050	<0.020	<0.010	<0.040	<12	33	330	86	-	-	-	-	-	-	-	-
10 -	254	100	18-Aug-10	B074526	W38798	<0.0050	<0.020	<0.010	<0.040	<12	33	79	<10	-	-	-	-	-	-	-	-
10 -	255	50	18-Aug-10	B074526	W38799	<0.0050	<0.020	<0.010	<0.040	<12	48	720	230	-	-	-	-	-	-	-	-
10 -	257	50	18-Aug-10	B074526	W38801	<0.0050	<0.020	<0.010	<0.040	<12	<10	360	87	-	-	-	-	-	-	-	-
10 -	260	100	18-Aug-10	B074526	W38804	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	261 (d)	100	18-Aug-10	B074526	W38805	<0.0050	<0.020	<0.010	<0.040	<12	<10	16	<10	-	-	-	-	-	-	-	-
10 -	262	50	18-Aug-10	B074526	W38806	<0.0050	<0.020	<0.010	<0.040	<12	13	670	200	-	-	-	-	-	-	-	-
10 -	264	50	18-Aug-10	B074526	W38808	<0.0050	<0.020	<0.010	<0.040	<12	<10	640	230	-	-	-	-	-	-	-	-
10 -	265	100	18-Aug-10	B074526	W38809	<0.0050	<0.020	<0.010	<0.040	<12	<10	32	<10	-	-	-	-	-	-	-	-
10 -	266 *	50	18-Aug-10	B074526	W38810	<0.0050	0.029	0.026	0.27	19	630	620	120	-	-	-	-	-	-	-	-
10 -	267	100	18-Aug-10	B074526	W38811	<0.0050	<0.020	<0.010	<0.040	<12	18	<10	<10	-	-	-	-	-	-	-	-
10 -	268 *	50	18-Aug-10	B074526	W38812	<0.0050	<0.020	<0.010	0.20	32	910	800	210	-	-	-	-	-	-	-	-
10 -	269	100	18-Aug-10	B074526	W38813	<0.0050	<0.020	0.012	0.16	25	40	<10	<10	-	-	-	-	-	-	-	-
10 -	270	100	18-Aug-10	B074526	W38814	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	271 (d)	100	18-Aug-10	B074526	W38815	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	272 *	100	18-Aug-10	B074526	W38816	<0.0050	<0.020	<0.010	<0.040	<12	1800	19	<10	-	-	-	-	-	-	-	-
10 -	273 *	100	18-Aug-10	B074526	W38817	<0.0050	0.64	0.95	11	480	1600	330	14	-	-	-	-	-	-	-	-
10 -	275	100	18-Aug-10	B074526	W38819	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	277 *	100	18-Aug-10	B074526	W38821	<0.0050	0.41	0.18	4.0	120	3000	130	<10	-	-	-	-	-	-	-	-
10 -	278	100	18-Aug-10	B074526	W38822	<0.0050	<0.020	<0.010	<0.040	31	870	360	24	-	-	-	-	-	-	-	-
10 -	280	100	18-Aug-10	B074526	W38824	<0.0050	<0.020	<0.010	<0.040	15	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	281 (d)	100	18-Aug-10	B074526	W38825	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	283	100	18-Aug-10	B074526	W38827	<0.0050	<0.020	<0.010	0.70	57	500	<10	<10	-	-	-	-	-	-	-	-
10 -	285	100	18-Aug-10	B074526	W38829	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	286	50	18-Aug-10	B074526	W38830	<0.0050	<0.020	<0.010	<0.040	<12	390	420	260	-	-	-	-	-	-	-	-
10 -	316	100	24-Aug-10	B077228	W53315	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	<0.0050	<0.0050
10 -	317	100	24-Aug-10	B077228	W53316	-	-	-	-	-	-	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.1	<0.0050	<0.0050
10 -	318	100	24-Aug-10	B077228	W53317	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	319	100	24-Aug-10	B077228	W53318	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	320	100	24-Aug-10	B077228	W53319	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-

Table B-17. Analytical Summary of Confirmatory Sampling at 2-PHC-I-2 (Portable Fuel Tanks - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons								Polycyclic Aromatic Hydrocarbons							
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Napthalene (ppm)	Phenanthrene (ppm)	Pyrene (ppm)	Benzo(a) anthracene (ppm)	Benzo(b&j) fluoranthene (ppm)	Benzo(a) pyrene (ppm)	Indeno(1,2,3-cd) pyrene (ppm)	Dibenzo(a,h) anthracene (ppm)
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000								
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	0.6	5	10	1	1	0.7	1	1
10 -	321 (d)	100	24-Aug-10	B077228	W53320	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	323	100	24-Aug-10	B077228	W53322	-	-	-	-	-	-	-	-	0.12	0.0056	<0.0050	<0.0050	<0.0050	<0.1	<0.0050	<0.0050
10 -	324 *	100	24-Aug-10	B077228	W53323	<0.0050	0.041	0.022	0.26	33	740	1200	210	-	-	-	-	-	-	-	-
10 -	404	130	2-Sep-10	B081044	W75970	<0.0050	<0.020	<0.010	0.045	<12	78	130	<10	0.062	0.022	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
10 -	405 *	80	2-Sep-10	B081044	W75971	<0.0050	<0.020	<0.010	<0.040	<12	19	1100	330	<0.0050	<0.0050	0.023	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
10 -	406	80	2-Sep-10	B081044	W75972	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	407	80	2-Sep-10	B081044	W75973	-	-	-	-	-	-	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
10 -	409	80	3-Sep-10	B081044	W75981	<0.0050	<0.020	<0.010	<0.040	<12	<10	95	10	0.0069	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
10 -	410	130	3-Sep-10	B081044	W75982	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
10 -	411	130	3-Sep-10	B081044	W75983	0.026	0.11	0.032	0.13	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	450	120	15-Sep-10	B088460	X07271	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-
10 -	451 (d)	120	15-Sep-10	B088460	X07272	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-18. Analytical Summary of Confirmatory Sampling at 3-PHC-I-1 (POL - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons									Polycyclic Aromatic Hydrocarbons							
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)	Napthalene (ppm)	Phenanthrene (ppm)	Pyrene (ppm)	Benzo(a) anthracene (ppm)	Benzo(b&j) fluoranthene (ppm)	Benzo(a) pyrene (ppm)	Indeno(1,2,3-cd) pyrene (ppm)	Dibenzo(a,h) anthracene (ppm)
~~INAC AMSRP PHC Contaminated Soil~~						-	-	-	-	~~15,000~~	~~8,000~~	~~18,000~~	~~25,000~~	-	-	-	-	-	-	-	-	-
~~PHC Impacted Soil~~						~~0.0068~~	~~0.08~~	~~0.018~~	~~2.4~~	~~260-15,000~~	~~900-8,000~~	~~800-18,000~~	~~5,600-25,000~~	-	0.6	5	10	1	1	0.7	1	1
INAC AMSRP Type B PHC Contaminated Soil						-	-	-	-	-	-	-	-	2,500	-	-	-	-	-	-	-	-
11 -	240	150	20-Jul-11	B166143	BB3717	<0.0050	<0.020	<0.010	<0.040	<12	30	11	<10	41	0.017	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
11 -	241 (d)	150	20-Jul-11	B166143	BB3723	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	11	0	0.0071	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
11 -	244	150	20-Jul-11	B166143	BB3726	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	245	150	20-Jul-11	B166143	BB3741	<0.0050	<0.020	<0.010	<0.040	<12	<10	10	<10	10	-	-	-	-	-	-	-	-
11 -	247	50	21-Jul-11	B166143	BB3751	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	250 *	50	21-Jul-11	B166143	BB3754	0.18	3.4	2.9	24	370	5400	90	<10	5860	-	-	-	-	-	-	-	-
11 -	251 (d) *	50	21-Jul-11	B166143	BB3765	0.048	0.93	0.86	7.2	110	3400	59	<10	3569	-	-	-	-	-	-	-	-
11 -	252	80	21-Jul-11	B166143	BB3766	<0.0050	0.030	0.020	0.10	13	18	<10	<10	31	-	-	-	-	-	-	-	-
11 -	253	60	21-Jul-11	B166143	BB3898	<0.0050	<0.020	<0.010	<0.040	<12	120	<10	<10	120	-	-	-	-	-	-	-	-
11 -	255 *	65	21-Jul-11	B166143	BB3900	<0.0050	<0.020	<0.010	50	3400	25000	990	<10	29390	-	-	-	-	-	-	-	-
11 -	256	120	21-Jul-11	B166143	BB3901	<0.0050	<0.020	<0.010	0.056	<12	360	29	<10	389	-	-	-	-	-	-	-	-
11 -	257	150	21-Jul-11	B166143	BB3902	<0.0050	<0.020	<0.010	0.15	15	240	18	<10	273	-	-	-	-	-	-	-	-
11 -	258 *	70	21-Jul-11	B166143	BB3912	0.011	0.11	0.76	9.7	450	3700	140	<10	4290	-	-	-	-	-	-	-	-
11 -	259	70	21-Jul-11	B166143	BB3913	<0.0050	<0.020	<0.010	<0.040	<12	17	50	32	67	-	-	-	-	-	-	-	-
11 -	262	150	21-Jul-11	B166143	BB3917	<0.0050	<0.020	<0.010	<0.040	<12	56	55	32	111	-	-	-	-	-	-	-	-
11 -	265	70	21-Jul-11	B166143	BB3921	<0.0050	<0.020	<0.010	0.45	34	1100	110	34	1244	-	-	-	-	-	-	-	-
11 -	266	150	21-Jul-11	B166143	BB3922	<0.0050	<0.020	<0.010	0.26	34	450	75	30	559	-	-	-	-	-	-	-	-
11 -	270	80	21-Jul-11	B166143	BB3931	<0.0050	<0.020	<0.010	<0.040	<12	21	26	16	47	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
11 -	271 (d)	80	21-Jul-11	B166143	BB3932	<0.0050	<0.020	<0.010	<0.040	<12	34	27	18	61	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
11 -	272	150	21-Jul-11	B166143	BB3933	<0.0050	<0.020	<0.010	<0.040	14	900	75	16	989	0.10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
11 -	273 *	60	21-Jul-11	B166143	BB3934	<0.0050	0.054	0.68	4.9	210	3000	61	<10	3271	-	-	-	-	-	-	-	-
11 -	275 *	60	21-Jul-11	B166143	BB3936	0.0090	0.10	1.6	9.3	570	3900	66	<10	4536	-	-	-	-	-	-	-	-
11 -	276	150	21-Jul-11	B166143	BB3937	<0.0050	<0.020	0.089	0.96	89	1200	31	10	1320	-	-	-	-	-	-	-	-
11 -	277	50	21-Jul-11	B166143	BB3938	<0.0050	<0.020	<0.010	<0.040	<12	720	62	<10	782	-	-	-	-	-	-	-	-
11 -	280	50	21-Jul-11	B166143	BB3941	<0.0050	<0.020	<0.010	<0.040	<12	76	<10	<10	76	-	-	-	-	-	-	-	-
11 -	281 (d)	50	21-Jul-11	B166143	BB3942	<0.0050	<0.020	<0.010	<0.040	<12	120	22	17	142	-	-	-	-	-	-	-	-
11 -	282	100	21-Jul-11	B166143	BB3943	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	283	150	21-Jul-11	B166143	BB3944	<0.0050	<0.020	<0.010	<0.040	<12	34	<10	<10	34	-	-	-	-	-	-	-	-
11 -	284	150	21-Jul-11	B166143	BB3945	<0.0050	<0.020	<0.010	<0.040	<12	680	39	<10	719	-	-	-	-	-	-	-	-
11 -	286	150	21-Jul-11	B166143	BB3948	<0.0050	<0.020	<0.010	<0.040	12	130	<10	<10	142	-	-	-	-	-	-	-	-
11 -	290	150	21-Jul-11	B166143	BB3965	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	291 (d)	150	21-Jul-11	B166143	BB3966	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	375	50	27-Jul-11	B169210	BD1882	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	376	100	27-Jul-11	B169210	BD1883	0.0099	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	379	50	27-Jul-11	B169210	BD1886	0.015	0.038	0.023	0.14	<12	260	<10	<10	260	-	-	-	-	-	-	-	-
11 -	380	100	27-Jul-11	B169210	BD1887	0.012	<0.020	0.043	0.29	<12	130	<10	<10	130	-	-	-	-	-	-	-	-
11 -	381 (d)	100	27-Jul-11	B169210	BD1888	<0.0050	<0.020	0.028	0.13	<12	120	<10	<10	120	-	-	-	-	-	-	-	-
11 -	384	100	27-Jul-11	B169210	BD1891	0.011	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	386	100	27-Jul-11	B169210	BD1894	<0.0050	<0.020	<0.010	<0.040	<12	18	<10	<10	18	-	-	-	-	-	-	-	-
11 -	387	50	28-Jul-11	B169210	BD1895	<0.0050	0.036	0.027	0.44	<12	470	<10	<10	470	-	-	-	-	-	-	-	-
11 -	388	100	28-Jul-11	B169210	BD1896	0.012	0.091	0.095	0.63	43	330	<10	<10	373	-	-	-	-	-	-	-	-

Table B-18. Analytical Summary of Confirmatory Sampling at 3-PHC-I-1 (POL - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Petroleum Hydrocarbons									Polycyclic Aromatic Hydrocarbons							
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)	Napthalene (ppm)	Phenanthrene (ppm)	Pyrene (ppm)	Benzo(a) anthracene (ppm)	Benzo(b&j) fluoranthene (ppm)	Benzo(a) pyrene (ppm)	Indeno(1,2,3-cd) pyrene (ppm)	Dibenzo(a,h) anthracene (ppm)
~~INAC AMSRP PHC Contaminated Soil~~						-	-	-	-	~~15,000~~	~~8,000~~	~~18,000~~	~~25,000~~	-	-	-	-	'	'	'	'	'
~~PHC Impacted Soil~~						~~0.0068~~	~~0.08~~	~~0.018~~	~~2.4~~	~~260-15,000~~	~~900-8,000~~	~~800-18,000~~	~~5,600-25,000~~	-	0.6	5	10	1	1	0.7	1	1
INAC AMSRP Type B PHC Contaminated Soil						-	-	-	-	-	-	-	-	2,500	-	-	-	-	-	-	-	-
11 -	389 *	50	28-Jul-11	B169210	BD1898	<0.0050	0.040	0.13	2.3	130	3600	54	<10	3784	-	-	-	-	-	-	-	-
11 -	392 *	50	28-Jul-11	B169210	BD1901	0.47	11	9.3	82	2900	15000	110	<10	18010	-	-	-	-	-	-	-	-
11 -	393	100	28-Jul-11	B169210	BD1902	0.012	0.044	0.027	0.31	<12	88	<10	<10	88	-	-	-	-	-	-	-	-
11 -	394 *	50	28-Jul-11	B169210	BD1903	<0.0050	0.41	1.7	16	580	5100	38	<10	5718	-	-	-	-	-	-	-	-
11 -	396 *	50	28-Jul-11	B169210	BD1905	0.013	0.045	0.28	9.8	2400	7100	61	<10	9561	-	-	-	-	-	-	-	-
11 -	397	100	28-Jul-11	B169210	BD1906	<0.0050	<0.020	0.017	0.11	<12	24	<10	<10	24	-	-	-	-	-	-	-	-
11 -	398	50	28-Jul-11	B169210	BD1907	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	400	100	28-Jul-11	B169210	BD1911	<0.0050	<0.020	<0.010	0.090	12	65	<10	<10	77	-	-	-	-	-	-	-	-
11 -	401 (d)	100	28-Jul-11	B169210	BD1912	<0.0050	<0.020	<0.010	0.098	14	110	<10	<10	124	-	-	-	-	-	-	-	-
11 -	403	100	28-Jul-11	B169210	BD1915	<0.0050	0.084	0.063	1.4	110	930	<10	<10	1040	-	-	-	-	-	-	-	-
11 -	405	100	28-Jul-11	B169210	BD1917	0.011	0.090	0.091	0.81	74	200	<10	<10	274	-	-	-	-	-	-	-	-
11 -	429	75	16-Aug-11	B177046	BH5149	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	430	75	16-Aug-11	B177046	BH5150	<0.0050	0.026	0.027	0.28	21	210	<10	<10	231	-	-	-	-	-	-	-	-
11 -	435	50	16-Aug-11	B177046	BH5155	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-
11 -	436	100	16-Aug-11	B177046	BH5156	<0.0050	<0.020	<0.010	<0.040	<12	130	<10	<10	130	-	-	-	-	-	-	-	-
11 -	437	100	27-Jul-11	B169210	BD1882	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0	-	-	-	-	-	-	-	-

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-19. Analytical Summary of Confirmatory Sampling at 3-PHC-I-2 (Burn Pit - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000
10 -	105 *	0-70	29-Jul-10	B065096	V87483	<0.0050	<0.020	<0.010	0.97	180	1800	260	61
10 -	106 *	0-70	29-Jul-10	B065096	V87491	<0.0050	<0.020	<0.010	32	1000	8700	2300	840
10 -	107	0-70	29-Jul-10	B065096	V87492	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	108 *	0-70	29-Jul-10	B065096	V87493	<0.0050	<0.020	<0.010	0.16	56	1200	890	410
10 -	109	0-70	29-Jul-10	B065096	V87494	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	110	0-70	29-Jul-10	B065096	V87495	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	111 (d)	0-70	29-Jul-10	B065096	V87496	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	112	0-70	29-Jul-10	B065096	V87497	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	113	0-70	29-Jul-10	B065096	V87498	<0.0050	<0.020	<0.010	<0.040	<12	<10	200	100
10 -	114	0-70	29-Jul-10	B065096	V87499	<0.0050	<0.020	<0.010	<0.040	13	490	160	66
10 -	115	0-70	29-Jul-10	B065096	V87500	<0.0050	<0.020	<0.010	<0.040	<12	74	220	86
10 -	116	70	29-Jul-10	B065096	V87501	<0.0050	<0.020	<0.010	<0.040	29	190	91	39
10 -	117 *	70	29-Jul-10	B065096	V87502	0.054	0.67	0.45	4.3	91	2600	6800	4300
10 -	118	70	29-Jul-10	B065096	V87503	<0.0050	<0.020	<0.010	<0.040	<12	<10	13	29
10 -	119	70	29-Jul-10	B065096	V87504	<0.0050	<0.020	<0.010	<0.040	<12	47	50	29
10 -	120	70	29-Jul-10	B065096	V87505	<0.0050	<0.020	<0.010	<0.040	16	100	310	220
10 -	121 (d)	70	29-Jul-10	B065096	V87506	<0.0050	0.061	0.018	0.15	32	120	280	190
10 -	122	70	29-Jul-10	B065096	V87507	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	217 *	100	12-Aug-10	B071889	W25238	0.0093	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	218 *	100	12-Aug-10	B071889	W25239	0.0080	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	219	100	12-Aug-10	B071889	W25240	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	220	100	12-Aug-10	B071890	W25181	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	221 (d)	100	12-Aug-10	B071890	W25183	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	222	100	12-Aug-10	B071890	W25184	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	223 *	100	12-Aug-10	B071890	W25185	<0.0050	0.038	0.16	1.2	48	310	59	23
10 -	224 *	50	12-Aug-10	B071890	W25186	<0.0050	<0.020	<0.010	<0.040	53	2000	94	<10
10 -	225 *	70	12-Aug-10	B071890	W25187	<0.0050	<0.020	<0.010	<0.040	31	2000	95	<10
10 -	288	100	19-Aug-10	B074526	W38837	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10

Table B-19. Analytical Summary of Confirmatory Sampling at 3-PHC-I-2 (Burn Pit - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)
INAC AMSRP PHC Contaminated Soil						**-**	**-**	**-**	**-**	**15,000**	**8,000**	**18,000**	**25,000**
PHC Impacted Soil						**0.0068**	**0.08**	**0.018**	**2.4**	**260-15,000**	**900-8,000**	**800-18,000**	**5,600-25,000**
10 -	378	100	28-Aug-10	B079383	W65630	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	379	100	28-Aug-10	B079383	W65726	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	380	100	28-Aug-10	B079383	W65727	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	381 (d)	100	28-Aug-10	B079383	W65728	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	382	100	28-Aug-10	B079383	W65730	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10
10 -	383	100	28-Aug-10	B079383	W65731	0.0060	<0.020	0.012	0.26	18	24	<10	<10

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-20. Analytical Summary of Confirmatory Sampling at 3-PHC-I-1 (Garage - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000	-
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-
INAC AMSRP Type B PHC Contaminated Soil						-	-	-	-	-	-	-	-	2,500
10 -	347	110	26-Aug-10	B078347	W59849	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-
10 -	350	110	26-Aug-10	B078347	W59871	<0.0050	<0.020	<0.010	<0.040	<12	68	130	35	-
10 -	351 (d)	110	26-Aug-10	B078347	W59872	<0.0050	<0.020	<0.010	<0.040	<12	49	81	<10	-
10 -	352	110	26-Aug-10	B078347	W59873	<0.0050	<0.020	<0.010	<0.040	<12	16	100	23	-
10 -	353 *	110	26-Aug-10	B078347	W59874	<0.0050	<0.020	<0.010	<0.040	<12	940	23	<10	-
10 -	355	110	26-Aug-10	B078347	W59876	<0.0050	<0.020	<0.010	<0.040	<12	230	92	<10	-
10 -	356	110	26-Aug-10	B078347	W59877	<0.0050	<0.020	<0.010	0.081	21	490	<10	<10	-
10 -	357	110	26-Aug-10	B078347	W59878	<0.0050	<0.020	<0.010	<0.040	<12	15	<10	<10	-
10 -	358 *	110	26-Aug-10	B078347	W59879	<0.0050	0.076	0.14	2.9	190	3400	400	60	-
10 -	359 *	110	26-Aug-10	B078347	W59880	<0.0050	0.24	0.33	9.6	120	3400	260	<10	-
10 -	360	110	26-Aug-10	B078347	W59881	<0.0050	<0.020	<0.010	<0.040	33	420	110	<10	-
10 -	361 (d)	110	26-Aug-10	B078347	W59899	<0.0050	<0.020	<0.010	<0.040	14	290	<10	<10	-
10 -	362	110	26-Aug-10	B078347	W59900	<0.0050	<0.020	<0.010	0.14	16	720	200	21	-
10 -	437	210	7-Sep-10	B083160	W85423	<0.0050	<0.020	<0.010	<0.040	<12	36	<10	<10	-
10 -	438 *	210	7-Sep-10	B083160	W85424	<0.0050	<0.020	0.014	0.87	80	1900	120	<10	-
10 -	439 *	210	7-Sep-10	B083160	W85425	<0.0050	0.25	0.35	3.8	150	2900	320	<10	-
10 -	473	50	16-Sep-10	B088460	X07299	<0.0050	<0.020	<0.010	<0.040	<12	34	<10	<10	-
10 -	474 *	50	16-Sep-10	B088460	X07300	<0.0050	0.11	0.33	3.8	270	3500	230	<10	-
10 -	475 *	50	16-Sep-10	B088460	X07301	<0.0050	<0.020	<0.010	<0.040	120	3500	1000	<10	-
11 -	180	70	16-Jul-11	B164800	BA6878	<0.0050	<0.020	<0.010	<0.040	<12	58	270	32	328
11 -	181 (d)	70	16-Jul-11	B164800	BA6890	<0.0050	<0.020	<0.010	<0.040	<12	43	790	460	833
11 -	182	140	16-Jul-11	B164800	BA6891	<0.0050	<0.020	<0.010	<0.040	<12	30	<10	<10	30
11 -	183	70	16-Jul-11	B164800	BA6893	0.013	<0.020	<0.010	<0.040	<12	460	<10	<10	460
11 -	185 *	60	16-Jul-11	B164800	BA6895	<0.0050	<0.020	<0.010	<0.040	98	6200	190	<10	6488
11 -	186	120	16-Jul-11	B164800	BA6896	<0.0050	<0.020	<0.010	0.058	18	950	100	<10	1068
11 -	187	70	16-Jul-11	B164800	BA6909	0.0074	<0.020	<0.010	0.25	120	2300	55	<10	2475
11 -	189 *	70	16-Jul-11	B164800	BA6911	<0.0050	<0.020	<0.010	0.70	240	5000	500	<10	5740
11 -	190	140	16-Jul-11	B164800	BA6912	<0.0050	<0.020	<0.010	0.28	52	890	100	<10	1042
11 -	191 (d)	140	16-Jul-11	B164800	BA6913	<0.0050	<0.020	<0.010	<0.040	<12	320	56	<10	376
11 -	192 *	70	16-Jul-11	B164800	BA6989	<0.0050	<0.020	<0.010	0.093	190	3100	190	<10	3480
11 -	194	70	16-Jul-11	B164800	BA6991	<0.0050	<0.020	<0.010	<0.040	21	750	130	<10	901

Table B-20. Analytical Summary of Confirmatory Sampling at 3-PHC-I-1 (Garage - Impacted)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)
INAC AMSRP PHC Contaminated Soil						-	-	-	-	15,000	8,000	18,000	25,000	-
PHC Impacted Soil						0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-
INAC AMSRP Type B PHC Contaminated Soil						-	-	-	-	-	-	-	-	2,500
11 -	195	140	16-Jul-11	B164800	BA6992	<0.0050	<0.020	<0.010	<0.040	<12	32	<10	<10	32
11 -	197	140	16-Jul-11	B164800	BA6994	0.0077	<0.020	<0.010	<0.040	<12	390	73	<10	463
11 -	198	70	16-Jul-11	B164800	BA6995	<0.0050	<0.020	<0.010	<0.040	<12	280	41	<10	321
11 -	199 *	140	16-Jul-11	B164800	BA6996	<0.0050	<0.020	<0.010	2.3	240	6000	870	<10	7110
11 -	202	140	16-Jul-11	B164800	BA6999	0.0072	<0.020	<0.010	<0.040	<12	300	17	<10	317
11 -	203	70	16-Jul-11	B164800	BA7000	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	204	140	16-Jul-11	B164800	BA7107	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	207	70	16-Jul-11	B164800	BA7110	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	208	140	16-Jul-11	B164800	BA7111	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	212	60	16-Jul-11	B164800	BA7115	<0.0050	<0.020	<0.010	<0.040	<12	120	300	<10	420
11 -	213	120	16-Jul-11	B164800	BA7116	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	217	250	16-Jul-11	B164800	BA7123	<0.0050	<0.020	<0.010	<0.040	<12	540	150	<10	690
11 -	218	350	16-Jul-11	B164800	BA7124	<0.0050	<0.020	<0.010	<0.040	<12	230	48	<10	278
11 -	219 *	140	16-Jul-11	B164800	BA7125	<0.0050	<0.020	<0.010	0.30	63	3800	790	<10	4653
11 -	220 *	140	16-Jul-11	B164800	BA7126	0.0070	0.18	0.40	2.8	130	2900	330	<10	3360
11 -	221 (d)	140	16-Jul-11	B164800	BA7127	<0.0050	<0.020	0.074	0.58	190	520	87	<10	797
11 -	223	140	16-Jul-11	B164800	BA7129	<0.0050	<0.020	<0.010	<0.040	32	1600	420	<10	2052
11 -	224	250	16-Jul-11	B164800	BA7131	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	226	140	16-Jul-11	B164800	BA7133	<0.0050	<0.020	<0.010	<0.040	<12	210	140	<10	350
11 -	230	140	16-Jul-11	B164800	BA7426	<0.0050	<0.020	0.013	0.081	60	220	26	<10	306
11 -	231 (d)	140	16-Jul-11	B164800	BA7427	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	233	350	16-Jul-11	B164800	BA7430	<0.0050	<0.020	<0.010	<0.040	24	1300	350	<10	1674
11 -	320	150	25-Jul-11	B169210	BD1692	<0.0050	<0.020	<0.010	0.21	28	810	26	<10	864
11 -	321 (d)	150	25-Jul-11	B169210	BD1693	<0.0050	<0.020	<0.010	<0.040	21	260	33	<10	314
11 -	323	200	25-Jul-11	B169210	BD1700	<0.0050	<0.020	<0.010	0.085	40	270	<10	<10	310
11 -	324	200	25-Jul-11	B169210	BD1701	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	326	100	25-Jul-11	B169210	BD1703	<0.0050	<0.020	<0.010	<0.040	<12	45	<10	<10	45
11 -	327	120	25-Jul-11	B169210	BD1705	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	328	120	25-Jul-11	B169210	BD1706	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0
11 -	330	120	25-Jul-11	B169210	BD1714	<0.0050	<0.020	<0.010	<0.040	<12	75	<10	<10	75
11 -	332	140	25-Jul-11	B169210	BD1716	0.035	0.77	1.0	8.9	230	2000	16	<10	2246

Table B-20. Analytical Summary of Confirmatory Sampling at 3-PHC-I-1 (Garage - Impacted)

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)
INAC AMSRP PHC Contaminated Soil					-	-	-	-	15,000	8,000	18,000	25,000	-
PHC Impacted Soil					0.0068	0.08	0.018	2.4	260-15,000	900-8,000	800-18,000	5,600-25,000	-
INAC AMSRP Type B PHC Contaminated Soil					-	-	-	-	-	-	-	-	2,500
11 -	333 *	190	26-Jul-11	B169210	BD1725	0.054	2.1	2.4	18	860	13000	560	<10	14420
11 -	334	190	26-Jul-11	B169210	BD1726	<0.0050	0.12	0.11	0.91	36	1100	55	<10	1191
11 -	422	240	16-Aug-11	B177046	BH5131	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	0

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-21. Analytical Summary of Confirmatory Sampling at 3-MET-1 (Electrical Cabinets - Contaminated)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil						-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil						30	5	250	50	100	500	2	100	500
10 -	87	0-30	29-Jul-10	B065096	V87465	<1	0.1	9	3	<5	4	<0.05	5	20
10 -	88	0-30	29-Jul-10	B065096	V87466	1	0.2	33	6	9	6	<0.05	16	35
10 -	89	0-30	29-Jul-10	B065096	V87467	1	0.2	17	5	9	5	<0.05	9	32
10 -	90	0-30	29-Jul-10	B065096	V87468	<1	0.2	12	4	<5	4	<0.05	6	19
10 -	91 (d)	0-30	29-Jul-10	B065096	V87469	<1	0.2	21	4	7	4	<0.05	10	23
10 -	92	0-30	29-Jul-10	B065096	V87470	<1	0.2	22	6	6	5	<0.05	11	31
10 -	93	0-30	29-Jul-10	B065096	V87471	<1	0.1	16	5	9	5	<0.05	8	29
10 -	94	0-30	29-Jul-10	B065096	V87472	1	0.3	19	6	10	6	<0.05	10	37
10 -	95	0-30	29-Jul-10	B065096	V87473	1	0.2	16	5	9	7	<0.05	8	34
10 -	96	0-30	29-Jul-10	B065096	V87474	<1	0.2	15	5	7	5	<0.05	7	31
10 -	97	0-30	29-Jul-10	B065096	V87475	1	0.2	20	6	10	6	<0.05	10	37
10 -	98	0-30	29-Jul-10	B065096	V87476	2	0.3	29	9	16	8	<0.05	15	54
10 -	99	0-30	29-Jul-10	B065096	V87477	<1	0.8	15	5	8	6	<0.05	8	32
10 -	100	30	29-Jul-10	B065096	V87478	1	0.4	22	7	14	6	<0.05	12	41
10 -	101 (d)	30	29-Jul-10	B065096	V87479	1	0.7	21	7	12	6	<0.05	11	39
10 -	102	30	29-Jul-10	B065096	V87480	1	0.5	29	6	9	6	<0.05	15	35
10 -	103	30	29-Jul-10	B065096	V87481	1	0.2	27	8	16	7	<0.05	14	53
10 -	104	30	29-Jul-10	B065096	V87482	1	0.5	22	7	13	6	<0.05	12	47

Notes:

(d) denotes duplicate sample

Table B-22. Analytical Summary of Soil Sampling at 6-MET-1 (Plumber's Dump - Contaminated)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil						-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil						30	5	250	50	100	500	2	100	500
10 -	2	0-10	6-Jul-10	B058263	V48670	1	1.4	13	4	10	4	<0.05	7	38
10 -	3	0-10	6-Jul-10	B058263	V48671	1	<0.1	15	5	8	4	<0.05	8	31
10 -	5	20-30	6-Jul-10	B058263	V48673	1	<0.1	10	3	<5	4	<0.05	5	21
10 -	19	0-10	13-Jul-10	B058790	V52363	1	0.4	28	6	8	6	<0.05	15	41
10 -	163	0-20	7-Aug-10	B068549	W07612	2	1.1	14	5	7	6	<0.05	7	32
10 -	289	0-10	20-Aug-10	B077228	W53239	<1	<0.1	8	3	<5	4	<0.05	4	14
10 -	290	0-10	20-Aug-10	B077228	W53240	<1	0.8	8	3	<5	3	<0.05	4	19
10 -	291 (d)	0-10	20-Aug-10	B077228	W53241	1	1.2	13	3	<5	4	<0.05	5	21
10 -	292	0-10	20-Aug-10	B077228	W53242	<1	2.7	7	3	<5	4	<0.05	4	27

Notes:

(d) denotes duplicate sample

Table B-23. Analytical Summary of Confirmatory Sampling at 7-MET-1 (Simpson lake - Contaminated)

Sample ID	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil					-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil					30	5	250	50	100	500	2	100	500
10 -	315	20	22-Aug-10	B077228	W53314	1	<0.1	9	4	7	15	<0.05	5	58

Table B-24. Analytical Summary of Confirmatory Sampling at 3-METPCB-1 (Outfall - Contaminated)

Sample ID		Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs	Heavy Metals								
						Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil						**>1; <5**	**-**	**-**	**-**	**-**	**-**	**>200; <500**	**-**	**-**	**-**
Tier II Contaminated Soil						**>5; <50**	**30**	**5**	**250**	**50**	**100**	**500**	**2**	**100**	**500**
10 -	78	0-20	28-Jul-10	B064264	V80867	0.032	1	<0.1	14	5	8	5	<0.05	8	28
10 -	79	0-20	28-Jul-10	B064264	V80868	<0.010	2	<0.1	22	7	15	6	<0.05	12	44
10 -	80	0-20	28-Jul-10	B064264	V80869	0.082	1	<0.1	16	5	20	6	0.28	9	34
10 -	81 (d)	0-20	28-Jul-10	B064264	V80870	<0.010	2	<0.1	22	6	12	6	<0.05	12	37
10 -	82	0-20	28-Jul-10	B064264	V80871	<0.010	1	<0.1	12	4	7	4	<0.05	7	22
10 -	83	0-20	28-Jul-10	B064264	V80872	<0.010	1	<0.1	17	5	10	5	<0.05	9	36
10 -	84	0-20	28-Jul-10	B064264	V80873	<0.010	2	<0.1	17	5	9	5	<0.05	9	30
10 -	85	20	28-Jul-10	B064264	V80874	0.108	2	<0.1	15	5	9	5	<0.05	8	32
10 -	86	20	28-Jul-10	B064264	V80875	0.091	2	<0.1	18	6	16	7	0.08	9	41

Notes:

(d) denotes duplicate sample

Table B-25. Analytical Summary of Confirmatory Sampling at Battery/Capacitor Locations Within Site Debris Area 1 (Main Dump)

Sample ID		Sampling Program	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs	Heavy Metals								
							Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil							>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil							>5; <50	30	5	250	50	100	500	2	100	500
11 -	156	Confirmatory	20	14-Jul-11	B163938	BA2357	-	1	<0.1	20	4	6	5	0.12	10	27
11 -	157		20	14-Jul-11	B163938	BA2358	-	2	0.2	21	7	17	10	0.11	12	79
11 -	158		20	14-Jul-11	B163938	BA2359	-	2	<0.1	17	6	9	280	0.08	9	35
11 -	159		20	14-Jul-11	B163938	BA2360	-	3	25	22	6	9	1900	0.07	11	76
11 -	160		20	14-Jul-11	B163938	BA2361	-	2	0.4	20	6	7	140	0.06	10	32
11 -	161 (d)		20	14-Jul-11	B163938	BA2362	-	2	0.7	18	6	8	640	0.07	9	34
11 -	162		30	14-Jul-11	B163938	BA2363	-	3	120	30	5	67	1800	0.07	15	210
11 -	163		20	14-Jul-11	B163938	BA2364	-	2	0.6	27	6	13	750	0.11	15	52
11 -	164		30	14-Jul-11	B163938	BA2365	-	2	0.8	26	6	11	10	0.06	15	47
11 -	165		20	14-Jul-11	B163938	BA2366	-	2	<0.1	16	3	36	1400	0.05	8	25
11 -	166		5	14-Jul-11	B163938	BA2367	-	3	0.7	40	12	220	530	0.14	21	280
11 -	167		20	14-Jul-11	B163938	BA2368	-	1	<0.1	24	4	6	4600	<0.05	11	32
11 -	168		30	14-Jul-11	B163938	BA2369	-	2	<0.1	16	4	6	1600	<0.05	8	93
11 -	169		20	14-Jul-11	B163938	BA2370	-	2	<0.1	18	5	7	1800	<0.05	9	30
11 -	170		30	14-Jul-11	B163938	BA2371	-	1	<0.1	18	5	7	9	0.10	9	29
11 -	171 (d)		30	14-Jul-11	B163938	BA2372	-	1	<0.1	23	5	7	7	0.07	12	30
11 -	172		20	14-Jul-11	B163938	BA2373	-	1	<0.1	16	5	6	10	0.06	8	26
11 -	173		20	14-Jul-11	B163938	BA2374	5.6	-	-	-	-	-	-	-	-	-
11 -	174		20	14-Jul-11	B163938	BA2375	0.056	-	-	-	-	-	-	-	-	-
11 -	175		30	14-Jul-11	B163938	BA2376	-	2	<0.1	19	5	8	9	0.07	10	36
11 -	176		30	14-Jul-11	B163938	BA2377	-	2	<0.1	23	6	9	780	0.08	13	50
11 -	177		30	14-Jul-11	B163938	BA2378	-	3	0.1	30	7	15	14	0.07	17	49
11 -	178		20	15-Jul-11	B164800	BA7438	-	1	0.8	38	6	16	21	0.27	19	63
11-	179		25	15-Jul-11	B164800	BA7449	<0.010	-	-	-	-	-	-	-	-	-
11 -	406		40	29-Jul-11	B169443	BD3830	-	2	<0.1	28	6	5	17	<0.05	14	34
11 -	407		30	29-Jul-11	B169443	BD3831	-	2	1.6	29	6	<5	40	<0.05	14	32
11 -	408		35	29-Jul-11	B169443	BD3832	-	2	0.7	31	5	<5	340	<0.05	15	30
11 -	409		30	29-Jul-11	B169443	BD3833	-	3	16	32	7	38	450	<0.05	19	110
11 -	410		25	29-Jul-11	B169443	BD3834	-	2	0.7	40	7	<5	340	<0.05	20	34

Table B-25. Analytical Summary of Confirmatory Sampling at Battery/Capacitor Locations Within Site Debris Area 1 (Main Dump)

Sample ID		Sampling Program	Depth (cm)	Date Collected	Maxxam Job No.	Maxxam Sample ID	PCBs	Heavy Metals								
							Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Tier I Contaminated Soil							>1; <5	-	-	-	-	-	>200; <500	-	-	-
Tier II Contaminated Soil							>5; <50	30	5	250	50	100	500	2	100	500
11 -	411 (d)	Confirmatory-2	25	29-Jul-11	B169443	BD3835	-	2	0.1	26	6	<5	70	<0.05	13	29
11 -	412		30	29-Jul-11	B169443	BD3836	-	2	0.4	46	7	5	41	<0.05	23	48
11 -	413		35	29-Jul-11	B169443	BD3837	-	1	0.1	18	4	19	35	0.06	9	39
11 -	414		35	29-Jul-11	B169443	BD3838	-	3	0.2	36	5	17	12000	0.06	18	62
11 -	415		30	29-Jul-11	B169443	BD3839	-	2	<0.1	34	6	9	99	<0.05	18	32
11 -	416		40	29-Jul-11	B169443	BD3840	-	1	<0.1	21	5	6	60	<0.05	11	25
11 -	417		35	29-Jul-11	B169443	BD3841	1.3	-	-	-	-	-	-	-	-	-
11 -	418		40	29-Jul-11	B169443	BD3842	-	2	<0.1	19	6	7	8	<0.05	11	31
11 -	439	Confirmatory-3	40	17-Aug-11	B177046	BH5177	0.40	-	-	-	-	-	-	-	-	-
11 -	440		35	17-Aug-11	B177046	BH5178	-	2	0.4	28	6	10	230	<0.05	14	41
11 -	441 (d)		35	17-Aug-11	B177046	BH5179	-	1	0.4	20	6	9	280	<0.05	11	39
11 -	442		40	17-Aug-11	B177046	BH5181	-	1	4.2	18	5	12	20	0.12	9	37
11 -	443		50	17-Aug-11	B177046	BH5182	-	1	31	18	6	60	1100	0.08	11	190
11 -	463	Confirmatory-4	50	24-Aug-11	B180111	BJ4874	-	2	0.2	17	5	7	7	<0.05	10	26
11 -	464		50	24-Aug-11	B180111	BJ4877	-	2	<0.1	21	5	6	6	<0.05	11	28

Notes:

(d) denotes duplicate sample

** Excavated*

Table B-26. Analytical Summary of Confirmatory Sampling at Landfarm

Sample ID		Date Collected	Maxxam Job No.	Maxxam Sample ID	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Σ F1-F3 (ppm)
INAC AMSRP Type B PHC Contaminated Soil					-	-	-	-	-	-	-	-	2,500
11 -	146	13-Jul-11	B163938	BA2347	<0.0050	<0.020	<0.010	<0.040	20	1400	250	<10	1670
11 -	147	13-Jul-11	B163938	BA2348	<0.0050	<0.020	<0.010	<0.040	22	930	80	<10	1032
11 -	148	13-Jul-11	B163938	BA2349	<0.0050	<0.020	<0.010	<0.040	17	1300	210	<10	1527
11 -	149	13-Jul-11	B163938	BA2350	<0.0050	<0.020	<0.010	<0.040	19	1200	210	45	1429
11 -	150	13-Jul-11	B163938	BA2351	<0.0050	<0.020	<0.010	<0.040	<12	690	240	61	930
11 -	151 (d)	13-Jul-11	B163938	BA2352	<0.0050	<0.020	<0.010	<0.040	<12	720	190	<10	910
11 -	152	13-Jul-11	B163938	BA2353	<0.0050	<0.020	<0.010	<0.040	<12	380	170	15	550
11 -	153	13-Jul-11	B163938	BA2354	<0.0050	<0.020	<0.010	<0.040	<12	550	310	40	860
11 -	154	13-Jul-11	B163938	BA2355	<0.0050	<0.020	<0.010	<0.040	<12	660	120	<10	780
11 -	155	13-Jul-11	B163938	BA2356	<0.0050	<0.020	<0.010	<0.040	25	1400	190	<10	1615
11 -	465	24-Aug-11	B180111	BJ4878	<0.0050	<0.020	<0.010	0.048	25	1000	<10	<10	1025
11 -	466	24-Aug-11	B180111	BJ4879	<0.0050	<0.020	<0.010	<0.040	<12	730	<10	<10	730
11 -	467	24-Aug-11	B180111	BJ4880	<0.0050	<0.020	0.015	0.19	28	980	<10	<10	1008
11 -	468	24-Aug-11	B180111	BJ4881	<0.0050	<0.020	<0.010	<0.040	<12	840	<10	<10	840
11 -	469	24-Aug-11	B180111	BJ4882	<0.0050	<0.020	<0.010	<0.040	14	650	<10	<10	664

Notes:

(d) denotes duplicate sample

Table B-27. Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	Petroleum Hydrocarbons								PCBs	Heavy Metals							
					Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
Reported Detection Limit					**0.0050**	**0.020**	**0.010**	**0.040**	**12**	**10**	**10**	**10**	**0.010**	**1**	**0.1**	**1**	**1**	**5**	**1**	**0.05**	**1**	**10**
10 - 30	Main Station TSA	Main Station	0-10	19-Jul-10	-	-	-	-	-	-	-	-	<0.010	1	<0.1	14	5	7	5	<0.05	7	25
10 - 31					-	-	-	-	-	-	-	-	<0.010	1	<0.1	16	5	7	5	<0.05	7	26
RPD					-	-	-	-	-	-	-	-	NC	0	NC	13	0	0	0	NC	0	4
10 - 50	Electrical Cabinets - Contaminated	Main Station	30	24-Jul-10	-	-	-	-	-	-	-	-	-	1	<0.1	15	5	8	5	<0.05	7	25
10 - 51					-	-	-	-	-	-	-	-	-	1	<0.1	16	6	8	5	<0.05	8	28
RPD					-	-	-	-	-	-	-	-	-	0	NC	6	18	0	0	NC	13	11
10 - 60	Airstrip - Contaminated	Airstrip	20	28-Jul-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	20	<10	-	2	0.2	17	5	21	10	<0.05	9	140
10 - 61					<0.0050	<0.020	<0.010	<0.040	<12	<10	35	21	-	2	0.3	18	6	37	11	<0.05	9	160
RPD					NC	NC	NC	NC	NC	NC	**55***	NC	-	0	**40***	6	18	**55***	10	NC	0	13
10 - 70	Airstrip - Contaminated	Airstrip	20	28-Jul-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	2	<0.1	18	5	22	6	<0.05	9	37
10 - 71					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	2	<0.1	21	6	12	6	<0.05	11	73
RPD					NC	NC	NC	NC	NC	NC	NC	NC	-	0	NC	15	18	**59***	0	NC	20	**65***
10 - 79	Outfall - Contaminated	Main Station	0-20	28-Jul-10	-	-	-	-	-	-	-	-	<0.010	2	<0.1	22	7	15	6	<0.05	12	44
10 - 81					-	-	-	-	-	-	-	-	<0.010	2	<0.1	22	6	12	6	<0.05	12	37
RPD					-	-	-	-	-	-	-	-	NC	0	NC	0	15	22	0	NC	0	17
10 - 90	Electrical Cabinets - Contaminated	Main Station	0-30	29-Jul-10	-	-	-	-	-	-	-	-	-	<1	0.2	12	4	<5	4	<0.05	6	19
10 - 91					-	-	-	-	-	-	-	-	-	<1	0.2	21	4	7	4	<0.05	10	23
RPD					-	-	-	-	-	-	-	-	-	NC	0	**55**	0	NC	0	NC	**50**	19
10 - 100	Electrical Cabinets - Contaminated	Main Station	30	29-Jul-10	-	-	-	-	-	-	-	-	-	1	0.4	22	7	14	6	<0.05	12	41
10 - 101					-	-	-	-	-	-	-	-	-	1	0.7	21	7	12	6	<0.05	11	39
RPD					-	-	-	-	-	-	-	-	-	0	**55***	5	0	15	0	NC	9	5
10 - 110	Burn Pit - Impacted	Main Station	0-70	29-Jul-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 111					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 120	Burn Pit - Impacted	Main Station	70	29-Jul-10	<0.0050	<0.020	<0.010	<0.040	16	100	310	220	-	-	-	-	-	-	-	-	-	-
10 - 121					<0.0050	0.061	0.018	0.15	32	120	280	190	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	NC	**67***	18	10	15	-	-	-	-	-	-	-	-	-	-
10 - 130	POL - Contaminated	Main Station	40	2-Aug-10	<0.0050	<0.020	<0.010	<0.040	190	3900	29	<10	-	-	-	-	-	-	-	-	-	-
10 - 131					<0.0050	<0.020	<0.010	<0.040	140	4400	16	<10	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	NC	30	12	**58***	NC	-	-	-	-	-	-	-	-	-	-
10 - 140	POL - Contaminated	Main Station	40	2-Aug-10	<0.0050	<0.020	<0.010	17	1700	8300	130	<10	-	-	-	-	-	-	-	-	-	-
10 - 141					<0.0050	<0.020	<0.010	14	1900	11000	250	<10	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	19	11	28	**63**	NC	-	-	-	-	-	-	-	-	-	-
10 - 170	Pallet Line - Contaminated	Main Station	60	10-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 171					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 180	Pallet Line - Contaminated	Main Station	60	10-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 181					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 190	Pallet Line - Contaminated	Main Station	60	10-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	75	270	370	-	-	-	-	-	-	-	-	-	-
10 - 191					<0.0050	<0.020	<0.010	<0.040	<12	68	120	120	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	NC	NC	10	**77**	**102**	-	-	-	-	-	-	-	-	-	-

Table B-27. Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID		Location	Area	Depth (cm)	Date Collected	Petroleum Hydrocarbons								PCBs	Heavy Metals							
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
10 -	200	Pallet Line - Impacted	Main Station	60	12-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	201					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 -	210	Pallet Line - Impacted	Main Station	60	12-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	211					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 -	220	Burn Pit - Impacted	Main Station	100	12-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	221					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 -	250	Portable Fuel Tanks - Impacted	Main Station	50	18-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	39	430	120	-	-	-	-	-	-	-	-	-	-
10 -	251					<0.0050	<0.020	<0.010	<0.040	<12	33	330	86	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	17	26	33	-	-	-	-	-	-	-	-	-	-
10 -	260	Portable Fuel Tanks - Impacted	Main Station	100	18-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	261					<0.0050	<0.020	<0.010	<0.040	<12	<10	16	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 -	270	Portable Fuel Tanks - Impacted	Main Station	100	18-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	271					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 -	280	Portable Fuel Tanks - Impacted	Main Station	100	18-Aug-10	<0.0050	<0.020	<0.010	<0.040	15	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	281					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 -	290	Plumbers Dump	Site Debris Area 9	0-10	20-Aug-10	-	-	-	-	-	-	-	-	-	<1	0.8	8	3	<5	3	<0.05	4	19
10 -	291					-	-	-	-	-	-	-	-	-	1	1.2	13	3	<5	4	<0.05	5	21
					RPD	-	-	-	-	-	-	-	-	-	NC	**40**	**48**	0	NC	29	NC	22	10
10 -	300	POL BPA	Main Station	0-10	21-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	2	<0.1	28	7	13	11	<0.05	15	43
10 -	301					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	2	<0.1	39	8	13	11	<0.05	20	44
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	NC	0	NC	33	13	0	0	NC	29	2
10 -	320	Portable Fuel Tanks - Impacted	Main Station	100	24-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 -	321					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 -	330	Pallet Line BPA - 1	Main Station	0-10	25-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	1	<0.1	20	4	6	6	0.05	11	29
10 -	331					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	2	0.2	34	5	8	24	<0.05	17	45
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	NC	**67***	NC	**52**	22	29	**120**	NC	**43**	**43***
10 -	340	Pallet Line BPA - 1	Main Station	0-10	25-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	2	<0.1	14	5	12	6	<0.05	8	31
10 -	341					<0.0050	<0.020	<0.010	<0.040	<12	<10	15	<10	<0.010	1	<0.1	14	5	17	6	<0.05	8	35
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	NC	**67***	NC	0	0	34	0	NC	0	12
10 -	350	Garage - Impacted	Main Station	110	26-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	68	130	35	-	-	-	-	-	-	-	-	-	-
10 -	351					<0.0050	<0.020	<0.010	<0.040	<12	49	81	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	NC	32	46	NC	-	-	-	-	-	-	-	-	-	-
10 -	360	Garage - Impacted	Main Station	110	26-Aug-10	<0.0050	<0.020	<0.010	<0.040	33	420	110	<10	-	-	-	-	-	-	-	-	-	-
10 -	361					<0.0050	<0.020	<0.010	<0.040	14	290	<10	<10	-	-	-	-	-	-	-	-	-	-
					RPD	NC	NC	NC	NC	**81***	37	NC	NC	-	-	-	-	-	-	-	-	-	-

Table B-27. Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	Petroleum Hydrocarbons								PCBs	Heavy Metals							
					Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
10 - 370	PCB Storage Area	CAM-3	0-10	27-Aug-10	-	-	-	-	-	-	-	-	<0.010	1	<0.1	4	1	<5	2	<0.05	2	<10
10 - 371					-	-	-	-	-	-	-	-	<0.010	<1	<0.1	4	2	<5	2	<0.05	2	11
				RPD	-	-	-	-	-	-	-	-	NC	NC	NC	0	**67***	NC	0	NC	0	NC
10 - 380	Burn Pit - Impacted	Main Station	100	28-Aug-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 381					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 390	POL - Contaminated	Main Station	40	28-Aug-10	0.0052	0.020	0.040	0.42	24	310	13	<10	-	-	-	-	-	-	-	-	-	-
10 - 391					<0.0050	<0.020	0.067	0.58	150	840	46	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	50	32	**145***	**92**	**112***	NC	-	-	-	-	-	-	-	-	-	-
10 - 430	Pallet Line BPA - 2	Main Station	0-10	6-Sep-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	2	<0.1	14	4	9	5	<0.05	7	26
10 - 431					<0.0050	<0.020	<0.010	<0.040	<12	<10	32	<10	<0.010	1	<0.1	20	4	6	5	<0.05	10	25
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	NC	**67***	NC	35	0	**40***	0	NC	35	4
10 - 440	Broken Battery at Airstrip	Airstrip	C	7-Sep-10	-	-	-	-	-	-	-	-	-	2	<0.1	27	5	7	98	<0.05	14	31
10 - 441					-	-	-	-	-	-	-	-	-	2	<0.1	42	5	7	1000	<0.05	21	31
				RPD	-	-	-	-	-	-	-	-	-	0	NC	**43**	0	0	**164**	NC	**40**	0
10 - 450	Portable Fuel Tanks - Impacted	Main Station	120	15-Sep-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 451					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 460	Garage - Impacted	Main Station	80-100	16-Sep-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 461					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 470	Garage - Impacted	Main Station	C	16-Sep-10	<0.0050	0.031	0.082	1.9	130	1100	88	<10	-	-	-	-	-	-	-	-	-	-
10 - 471					<0.0050	0.066	0.17	4.7	250	3400	220	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	**72***	**70**	**85**	**63**	**102**	**86**	NC	-	-	-	-	-	-	-	-	-	-
10 - 480	POL - Impacted	Main Station	100	17-Sep-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 481					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 490	POL - Impacted	Main Station	100	17-Sep-10	<0.0050	<0.020	<0.010	<0.040	<12	35	<10	<10	-	-	-	-	-	-	-	-	-	-
10 - 491					<0.0050	<0.020	<0.010	<0.040	<12	58	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	49	NC	NC	-	-	-	-	-	-	-	-	-	-
10 - 530	Main Dump BPA	Site Debris Area 1	0-10	21-Sep-10	<0.0050	<0.020	<0.010	<0.040	<12	<10	150	16	1.49	2	0.4	24	5	13	36	<0.05	12	59
10 - 531					<0.0050	<0.020	<0.010	<0.040	<12	<10	150	15	8.7	1	0.3	23	5	12	32	<0.05	11	56
				RPD	NC	NC	NC	NC	NC	NC	0	6	**142**	**67***	29	4	0	8	12	NC	9	5
10 - 540	POL-BD-1	POL Buried Debris	D	23-Sep-10	-	-	-	-	-	-	-	-	0.012	<1	0.2	8	3	9	4	<0.05	4	38
10 - 541					-	-	-	-	-	-	-	-	<0.010	<1	0.1	9	3	11	5	0.06	4	32
				RPD	-	-	-	-	-	-	-	-	NC	NC	**67***	12	0	20	22	NC	0	17
10 - 550	POL-BD-2	POL Buried Debris	D	23-Sep-10	-	-	-	-	-	-	-	-	0.052	<1	<0.1	9	3	12	4	0.08	5	43
10 - 551					-	-	-	-	-	-	-	-	0.020	<1	<0.1	8	3	11	4	0.06	4	42
				RPD	-	-	-	-	-	-	-	-	**89***	NC	NC	12	0	9	0	29	22	2
10 - 560	POL-BD-4	POL Buried Debris	D	23-Sep-10	-	-	-	-	-	-	-	-	0.16	1	0.7	11	4	14	8	<0.05	6	65
10 - 561					-	-	-	-	-	-	-	-	0.12	1	1.1	11	4	21	8	<0.05	6	58
				RPD	-	-	-	-	-	-	-	-	29	0	**44**	0	0	**40***	0	NC	0	11

Table B-27. Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	Petroleum Hydrocarbons								PCBs	Heavy Metals							
					Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
10 - 570	POL-BD-5	POL Buried Debris	D	23-Sep-10	-	-	-	-	-	-	-	-	0.027	<1	<0.1	10	3	12	5	<0.05	5	36
10 - 571					-	-	-	-	-	-	-	-	<0.010	<1	<0.1	10	3	10	6	<0.05	5	35
				RPD	-	-	-	-	-	-	-	-	NC	NC	NC	0	0	18	18	NC	0	3
10 - 580	POL-BD-7	POL Buried Debris	D	23-Sep-10	-	-	-	-	-	-	-	-	<0.010	<1	0.2	9	3	12	9	<0.05	5	51
10 - 581					-	-	-	-	-	-	-	-	<0.010	<1	0.4	9	3	9	5	<0.05	5	43
				RPD	-	-	-	-	-	-	-	-	NC	NC	**67***	0	0	29	**57**	NC	0	17
10 - 590	POL-BD-8	POL Buried Debris	D	23-Sep-10	-	-	-	-	-	-	-	-	<0.010	<1	0.2	11	4	10	4	<0.05	5	41
10 - 591					-	-	-	-	-	-	-	-	<0.010	<1	0.2	10	3	12	5	<0.05	5	41
				RPD	-	-	-	-	-	-	-	-	NC	NC	0	10	29	18	22	NC	0	0
10 - 600	POL-BD-10	POL Buried Debris	D	23-Sep-10	-	-	-	-	-	-	-	-	0.408	<1	0.3	12	4	13	10	<0.05	6	64
10 - 601					-	-	-	-	-	-	-	-	0.58	<1	0.3	11	3	11	10	<0.05	6	55
				RPD	-	-	-	-	-	-	-	-	35	NC	0	9	29	17	0	NC	0	15
10 - 610	POL-BD-11	POL Buried Debris	D	23-Sep-10	<0.0050	<0.020	<0.010	<0.040	29	670	32	<10	<0.010	<1	0.1	9	3	<5	3	<0.05	4	20
10 - 611					<0.0050	<0.020	<0.010	<0.040	29	770	32	<10	<0.010	<1	0.1	8	3	5	4	<0.05	4	19
				RPD	NC	NC	NC	NC	0	14	0	NC	NC	NC	0	12	0	NC	29	NC	0	5
10 - 620	POL-BD-13	POL Buried Debris	D	23-Sep-10	0.051	0.49	0.32	2.1	67	1200	660	18	<0.010	<1	0.3	21	5	11	7	<0.05	14	44
10 - 621					0.034	0.38	0.18	1.3	36	910	450	20	<0.010	1	0.2	14	4	16	6	<0.05	8	43
				RPD	40	25	**56**	47	**60***	27	38	11	NC	NC	**40***	**40**	22	**37***	15	NC	**55**	2
10 - 630	ES-BD-1	East Station Buried Debris	D	25-Sep-10	-	-	-	-	-	-	-	-	<0.010	1	<0.1	24	5	10	5	0.07	12	32
10 - 631					-	-	-	-	-	-	-	-	<0.010	1	<0.1	24	5	6	6	0.06	11	31
				RPD	-	-	-	-	-	-	-	-	NC	0	NC	0	0	**50***	18	15	9	3
10 - 640	ES-BD-3	East Station Buried Debris	D	25-Sep-10	-	-	-	-	-	-	-	-	<0.010	1	0.2	31	5	8	6	<0.05	15	37
10 - 641					-	-	-	-	-	-	-	-	<0.010	1	0.2	22	5	8	6	<0.05	11	37
				RPD	-	-	-	-	-	-	-	-	NC	0	0	34	0	0	0	NC	31	0
10 - 650	ES-BD-4	East Station Buried Debris	D	25-Sep-10	-	-	-	-	-	-	-	-	<0.010	1	0.2	27	5	8	6	<0.05	13	38
10 - 651					-	-	-	-	-	-	-	-	<0.010	<1	0.2	19	5	9	6	<0.05	9	39
				RPD	-	-	-	-	-	-	-	-	NC	NC	0	35	0	12	0	NC	**36**	3
10 - 660	ES-BD-6	East Station Buried Debris	D	25-Sep-10	-	-	-	-	-	-	-	-	<0.010	1	0.1	20	4	66	9	<0.05	10	110
10 - 661					-	-	-	-	-	-	-	-	<0.010	<1	0.1	18	4	110	7	<0.05	9	56
				RPD	-	-	-	-	-	-	-	-	NC	NC	0	11	0	**50**	25	NC	11	**65**
10 - 670	ES-BD-7	East Station Buried Debris	D	25-Sep-10	-	-	-	-	-	-	-	-	<0.010	1	0.2	32	5	12	8	<0.05	16	73
10 - 671					-	-	-	-	-	-	-	-	<0.010	1	0.2	21	5	12	8	<0.05	11	82
				RPD	-	-	-	-	-	-	-	-	NC	0	0	**42**	0	0	0	NC	**37**	12
10 - 680	ES-BD-9	East Station Buried Debris	D	25-Sep-10	-	-	-	-	-	-	-	-	<0.010	2	<0.1	24	5	13	7	<0.05	11	84
10 - 681					-	-	-	-	-	-	-	-	<0.010	2	<0.1	21	5	14	8	<0.05	11	74
				RPD	-	-	-	-	-	-	-	-	NC	0	NC	13	0	7	13	NC	0	13
10 - 690	ES-BD-10	East Station Buried Debris	D	25-Sep-10	-	-	-	-	-	-	-	-	<0.010	2	<0.1	31	7	17	8	<0.05	17	63
10 - 691					-	-	-	-	-	-	-	-	<0.010	2	<0.1	42	6	11	8	<0.05	20	62
				RPD	-	-	-	-	-	-	-	-	NC	0	NC	30	15	**43***	0	NC	16	2
10 - 700	Lobe 2 (west side)	Main Dump	0-10	26-Sep-10	-	-	-	-	-	-	-	-	<0.010	1	0.5	31	5	12	11	<0.05	15	77
10 - 701					-	-	-	-	-	-	-	-	0.085	2	1.4	32	5	12	22	<0.05	15	200
				RPD	-	-	-	-	-	-	-	-	NC	**67***	**95**	3	0	0	**67**	NC	0	**89**
11 - 10	MT-BD-2	Module Train Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	1.5	<1	1.1	22	4	8	11	<0.05	10	82
11 - 11					-	-	-	-	-	-	-	-	1.3	2	1.0	34	4	9	10	0.48	17	100
				RPD	-	-	-	-	-	-	-	-	14	NC	10	**43**	0	12	10	NC	**52**	20
11 - 20	MT-BD-4	Module Train Buried	D	10-Jul-11	-	-	-	-	-	-	-	-	2.2	<1	1.2	16	4	8	10	<0.05	7	88

Table B-27. Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	Petroleum Hydrocarbons								PCBs	Heavy Metals							
					Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
11 - 21	MT-BD-4	Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	1.9	<1	1.0	32	4	8	19	0.10	16	88
RPD					-	-	-	-	-	-	-	-	15	NC	18	**67**	0	0	**62**	NC	**78**	0
11 - 30	MT-BD-5	Module Train Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	4.3	<1	2.8	31	4	12	13	<0.05	15	130
11 - 31					-	-	-	-	-	-	-	-	6.5	<1	1.8	26	5	10	11	<0.05	13	110
RPD					-	-	-	-	-	-	-	-	41	NC	**43**	18	22	18	17	NC	14	17
11 - 40	WH-BD-2	Warehouse Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.41	3	0.2	22	4	5	5	<0.05	11	30
11 - 41					-	-	-	-	-	-	-	-	0.7	<1	0.2	32	3	5	5	<0.05	16	26
RPD					-	-	-	-	-	-	-	-	**52**	NC	0	**37**	29	0	0	NC	**37**	14
11 - 50	WH-BD-3	Warehouse Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.31	<1	0.2	17	4	7	5	<0.05	8	30
11 - 51					-	-	-	-	-	-	-	-	0.3	<1	0.2	18	4	6	5	<0.05	9	28
RPD					-	-	-	-	-	-	-	-	3	NC	0	6	0	15	0	NC	12	7
11 - 60	WH-BD-5	Warehouse Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.62	<1	0.2	12	3	<5	5	<0.05	6	28
11 - 61					-	-	-	-	-	-	-	-	0.9	<1	0.2	19	3	5	4	<0.05	10	34
RPD					-	-	-	-	-	-	-	-	37	NC	0	**45**	0	NC	22	NC	**50**	19
11 - 70	MDL1-BD-1	Lobe 1 Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.64	2	1.0	61	6	180	1200	0.09	27	440
11 - 71					-	-	-	-	-	-	-	-	0.48	2	0.9	33	6	100	850	0.09	16	340
RPD					-	-	-	-	-	-	-	-	29	0	11	**60**	0	**57**	34	0	**51**	26
11 - 80	MDL1-BD-3	Lobe 1 Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	1.4	2	2.4	39	6	110	910	0.05	16	490
11 - 81					-	-	-	-	-	-	-	-	0.82	4	1.9	29	5	87	830	<0.05	15	360
RPD					-	-	-	-	-	-	-	-	**52**	**67***	23	29	18	23	9	NC	6	31
11 - 90	MDL1-BD-4	Lobe 1 Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.49	<1	0.5	23	5	46	62	<0.05	11	99
11 - 91					-	-	-	-	-	-	-	-	0.18	<1	0.8	25	5	120	370	<0.05	12	140
RPD					-	-	-	-	-	-	-	-	**93**	NC	**46**	8	0	**89**	**143**	NC	9	34
11 - 100	MDL1-BD-6	Lobe 1 Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.35	<1	1.0	37	5	12	36	<0.05	19	100
11 - 101					-	-	-	-	-	-	-	-	0.20	<1	0.4	23	5	13	39	<0.05	13	73
RPD					-	-	-	-	-	-	-	-	**55**	NC	**86***	**47**	0	8	8	NC	**38**	31
11 - 110	MDL1-BD-7	Lobe 1 Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.42	2	0.8	22	5	31	1300	<0.05	12	210
11 - 111					-	-	-	-	-	-	-	-	0.39	<1	3.7	33	5	19	260	0.05	19	150
RPD					-	-	-	-	-	-	-	-	7	NC	**129**	**40**	0	**48***	**133**	NC	**45**	33
11 - 120	MDL1-BD-9	Lobe 1 Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.56	<1	0.8	22	5	22	55	0.11	12	260
11 - 121					-	-	-	-	-	-	-	-	0.62	2	0.9	31	5	27	860	0.10	19	130
RPD					-	-	-	-	-	-	-	-	10	NC	12	34	0	20	**176**	10	**45**	**67**
11 - 130	MDL1-BD-10	Lobe 1 Buried Debris	D	10-Jul-11	-	-	-	-	-	-	-	-	0.11	1	0.2	22	5	10	15	<0.05	11	49
11 - 131					-	-	-	-	-	-	-	-	0.16	1	0.2	31	5	14	36	<0.05	14	57
RPD					-	-	-	-	-	-	-	-	37	0	0	34	0	33	**82**	NC	24	15
11 - 140	Main Dump BPA	Site Debris Area 1	30	10-Jul-11	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-
11 - 141					-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-
RPD					-	-	-	-	-	-	-	-	NC	-	-	-	-	-	-	-	-	-
11 - 150	Landfarm Treatment Cell	Main Station	C	13-Jul-11	<0.0050	<0.020	<0.010	<0.040	<12	690	240	61	-	-	-	-	-	-	-	-	-	-
11 - 151					<0.0050	<0.020	<0.010	<0.040	<12	720	190	<10	-	-	-	-	-	-	-	-	-	-
RPD					NC	NC	NC	NC	NC	4	23	NC	-	-	-	-	-	-	-	-	-	-
11 - 160	Broken Battery at Main Dump	Site Debris Area 1	20	14-Jul-11	-	-	-	-	-	-	-	-	-	2	0.4	20	6	7	140	0.06	10	32
11 - 161					-	-	-	-	-	-	-	-	-	2	0.7	18	6	8	640	0.07	9	34
RPD					-	-	-	-	-	-	-	-	-	0	**55***	11	0	13	**128**	15	11	6
11 - 170	Broken Battery at Main Dump	Site Debris Area 1	30	14-Jul-11	-	-	-	-	-	-	-	-	-	1	<0.1	18	5	7	9	0.10	9	29
11 - 171					-	-	-	-	-	-	-	-	-	1	<0.1	23	5	7	7	0.07	12	30
RPD					-	-	-	-	-	-	-	-	-	0	NC	24	0	0	25	35	29	3
11 - 180	Garage - Impacted	Main Station	70	16-Jul-11	<0.0050	<0.020	<0.010	<0.040	<12	58	270	32	-	-	-	-	-	-	-	-	-	-
11 - 181					<0.0050	<0.020	<0.010	<0.040	<12	43	790	460	-	-	-	-	-	-	-	-	-	-

Table B-27. Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID	Location	Area	Depth (cm)	Date Collected	Petroleum Hydrocarbons								PCBs	Heavy Metals								
					Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
				RPD	NC	NC	NC	NC	NC	30	**98**	**174***	-	-	-	-	-	-	-	-	-	-
11 - 190	Garage - Impacted	Main Station	140	16-Jul-11	<0.0050	<0.020	<0.010	0.28	52	890	100	<10	-	-	-	-	-	-	-	-	-	-
11 - 191					<0.0050	<0.020	<0.010	<0.040	<12	320	56	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	**94**	**56**	NC	-	-	-	-	-	-	-	-	-	-
11 - 220	Garage - Impacted	Main Station	140	16-Jul-11	0.0070	0.18	0.40	2.8	130	2900	330	<10	-	-	-	-	-	-	-	-	-	-
11 - 221					<0.0050	<0.020	0.074	0.58	190	520	87	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	**138**	**131**	38	**139**	**117**	NC	-	-	-	-	-	-	-	-	-	-
11 - 230	Garage - Impacted	Main Station	140	16-Jul-11	<0.0050	<0.020	0.013	0.081	60	220	26	<10	-	-	-	-	-	-	-	-	-	-
11 - 231					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
11 - 240	POL - Impacted	Main Station	150	20-Jul-11	<0.0050	<0.020	<0.010	<0.040	<12	30	11	<10	-	-	-	-	-	-	-	-	-	-
11 - 241					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	11	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
11 - 250	POL - Impacted	Main Station	50	21-Jul-11	0.18	3.4	2.9	24	370	5400	90	<10	-	-	-	-	-	-	-	-	-	-
11 - 251					0.048	0.93	0.86	7.2	110	3400	59	<10	-	-	-	-	-	-	-	-	-	-
				RPD	**116**	**114**	**109**	**108**	**108**	45	42	NC	-	-	-	-	-	-	-	-	-	-
11 - 270	POL - Impacted	Main Station	80	21-Jul-11	<0.0050	<0.020	<0.010	<0.040	<12	21	26	16	-	-	-	-	-	-	-	-	-	-
11 - 271					<0.0050	<0.020	<0.010	<0.040	<12	34	27	18	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	47	4	12	-	-	-	-	-	-	-	-	-	-
11 - 280	POL - Impacted	Main Station	50	21-Jul-11	<0.0050	<0.020	<0.010	<0.040	<12	76	<10	<10	-	-	-	-	-	-	-	-	-	-
11 - 281					<0.0050	<0.020	<0.010	<0.040	<12	120	22	17	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	45	NC	NC	-	-	-	-	-	-	-	-	-	-
11 - 290	POL - Impacted	Main Station	150	21-Jul-11	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
11 - 291					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	NC	NC	NC	NC	-	-	-	-	-	-	-	-	-	-
11 - 300	Warehouse Buried Debris	Main Station	40	23-Jul-11	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-
11 - 301					-	-	-	-	-	-	-	-	0.035	-	-	-	-	-	-	-	-	-
				RPD	-	-	**-**	-	-	-	-	-	NC	-	-	-	-	-	-	-	-	-
11 - 310	Module Train Buried Debris	Main Station	60	24-Jul-11	-	-	-	-	-	-	-	-	0.029	-	-	-	-	-	-	-	-	-
11 - 311					-	-	-	-	-	-	-	-	0.075	-	-	-	-	-	-	-	-	-
				RPD	-	-	**-**	-	-	-	-	-	**88***	-	-	-	-	-	-	-	-	-
11 - 320	Garage - Impacted	Main Station	150	25-Jul-11	<0.0050	<0.020	<0.010	0.21	28	810	26	<10	-	-	-	-	-	-	-	-	-	-
11 - 321					<0.0050	<0.020	<0.010	<0.040	21	260	33	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	NC	29	**103**	24	NC	-	-	-	-	-	-	-	-	-	-
11 - 340	Main Barrel Cache BPA-1	Site Debris Area 4	0-10	26-Jul-11	<0.0050	<0.020	<0.010	<0.040	<12	<10	280	<10	<0.010	2	<0.1	23	7	8	50	<0.05	12	56
11 - 341					<0.0050	<0.020	<0.010	<0.040	<12	<10	260	35	<0.010	2	<0.1	27	7	8	71	<0.05	13	63
				RPD	NC	NC	NC	NC	NC	NC	7	NC	NC	0	NC	16	0	0	35	NC	8	12
11 - 370	Lobe 1 Buried Debris	Site Debris Area 1	50	27-Jul-11	-	-	-	-	-	-	-	-	<0.010	2	<0.1	23	7	10	110	<0.05	13	51
11 - 371					-	-	-	-	-	-	-	-	<0.010	2	<0.1	24	7	12	11	<0.05	16	55
				RPD	-	-	**-**	-	-	-	-	-	NC	0	NC	4	0	18	**164**	NC	21	8
11 - 380	POL - Impacted	Main Station	100	27-Jul-11	0.012	<0.020	0.043	0.29	<12	130	<10	<10	-	-	-	-	-	-	-	-	-	-
11 - 381					<0.0050	<0.020	0.028	0.13	<12	120	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	42	**76***	NC	8	NC	NC	-	-	-	-	-	-	-	-	-	-
11 - 400	POL - Impacted	Main Station	100	28-Jul-11	<0.0050	<0.020	<0.010	0.090	12	65	<10	<10	-	-	-	-	-	-	-	-	-	-
11 - 401					<0.0050	<0.020	<0.010	0.098	14	110	<10	<10	-	-	-	-	-	-	-	-	-	-
				RPD	NC	NC	NC	9	15	**51**	NC	NC	-	-	-	-	-	-	-	-	-	-
11 - 410	Broken Battery at	Site Debris Area 1	25	29-Jul-11	-	-	-	-	-	-	-	-	-	2	0.7	40	7	<5	340	<0.05	20	34

Table B-27. Summary of Relative Percent Difference (RPD) of Duplicate Soil Samples

Sample ID		Location	Area	Depth (cm)	Date Collected	Petroleum Hydrocarbons								PCBs	Heavy Metals								
						Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	F1 (ppm)	F2 (ppm)	F3 (ppm)	F4 (ppm)	Total PCBs (ppm)	Arsenic (ppm)	Cadmium (ppm)	Chromium (ppm)	Cobalt (ppm)	Copper (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Zinc (ppm)
11 -	411	Main Dump	Site Debris Area 1	25	25-Jul-11	-	-	-	-	-	-	-	-	-	2	0.1	26	6	<5	70	<0.05	13	29
					RPD	-	-	-	-	-	-	-	-	-	0	**150***	**42**	15	NC	**132**	NC	**42**	16
11 -	440	Broken Battery at Main Dump	Site Debris Area 1	35	17-Aug-11	-	-	-	-	-	-	-	-	-	2	0.4	28	6	10	230	<0.05	14	41
11 -	441					-	-	-	-	-	-	-	-	-	1	0.4	20	6	9	280	<0.05	11	39
					RPD	-	-	-	-	-	-	-	-	-	**67***	0	33	0	11	20	NC	24	5
11 -	470	Construction Camp MPA	East of Camp	0-10	25-Aug-11	-	-	-	-	-	-	-	-	<0.010	2	<0.1	12	4	<5	4	<0.05	6	22
11 -	471					-	-	-	-	-	-	-	-	<0.010	2	<0.1	12	4	<5	4	0.06	6	24
					RPD	-	-	-	-	-	-	-	-	NC	0	NC	0	0	NC	0	NC	0	9
11 -	490	Main Barrel Cache BPA-2	Site Debris Area 4	0-10	5-Sep-11	<0.0050	<0.020	<0.010	<0.040	<12	220	2400	100	<0.010	<1	0.3	26	6	8	100	0.06	10	160
11 -	491					<0.0050	<0.020	<0.010	<0.040	<12	140	2500	94	<0.010	1	0.2	20	6	7	26	<0.05	10	86
					RPD	NC	NC	NC	NC	NC	44	4	6	NC	NC	**40***	26	0	13	**117**	NC	0	**60**
11 -	500	Main Barrel Cache BPA-2	Site Debris Area 4	0-10	5-Sep-11	<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	<1	0.2	25	6	8	8	<0.05	12	37
11 -	501					<0.0050	<0.020	<0.010	<0.040	<12	<10	<10	<10	<0.010	<1	0.2	14	5	<5	5	<0.05	7	22
					RPD	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0	**56**	18	NC	**46**	NC	**53**	**51***

Notes:

BOLD *RPD exceeds Recommended Alert Criteria*

* *RPD exceeds Recommended Altert Criteria but is not considered to be strictly valid*

Table B-28. Summary of Relative Percent Difference (RPD) of Duplicate Barrel Samples

Sample ID		Location	Depth (cm)	Date Collected	Total PCBs (ppm)	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)	Flashpoint	Total Chlorine (ppm)	pH
Reported Detection Limit (RDL)					**1**	**0.02**	**0.05**	**0.1**	**100**	**2**	**-**
10 -	150	BR-119	Grab	6-Aug-10	<1	<1	<1	<1	>100	52	6.1
10 -	151				<1	<1	<1	<1	69	55	6.8
RPD					NC	NC	NC	NC	NC	6	11
10 -	230	Fluid from POL Tank	Grab	15-Aug-10	<1	<0.02	<0.05	<0.1	66	<2	4.0
10 -	231				<1	<0.02	<0.05	<0.1	71	<2	4.5
RPD					NC	NC	NC	NC	7	NC	12
10 -	420	BR-135	Grab	4-Sep-10	<1	<0.02	<0.05	0.1	65.0	88	6.0
10 -	421				<1	<0.02	<0.05	0.2	66.0	80	4.3
RPD					NC	NC	NC	**67***	2	10	**33**
10 -	510	BR-171	Grab	18-Sep-10	3	<0.5	<1	<1	216	199	6.8
10 -	511				3	<0.5	<1	<1	222	222	7.5
RPD					0	NC	NC	NC	3	11	10

Appendix C

Select Site Photographs

(not included in Draft submission)

PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
1	22-03-2010

Photo Direction:

West

Description:

CAT train route through mountain pass



Photo No.	Date:
2	23-03-2010

Photo Direction:

East

Description:

CAT train en route to CAM-D



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
3	24-03-2010

Photo Direction:

East

Description:

CAT train route
Shepherd Bay to CAM-D



Photo No.	Date:
4	24-03-2010

Photo Direction:

South

Description:

loading sleds at
Shepherd Bay camp



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
5	22-03-2010

Photo Direction:

North

Description:

CAM-D camp
March 22, 2010



Photo No.	Date:
6	05-07-2010

Photo Direction:

North

Description:

CAM-D camp
July 5, 2010



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
7	16-08-2010

Photo Direction:

North

Description:

CAM-D camp
August 16, 2010



Photo No.	Date:
8	12-09-2011

Photo Direction:

North

Description:

CAM-D Camp
September 12, 2011



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
9	07-07-2010

Photo Direction:

Northwest

Description:

CAM-D camp
July 7, 2010



Photo No.	Date:
10	31-08-2010

Photo Direction:

Northwest

Description:

CAM-D camp
August 31, 2010



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
11	23-09-2011

Photo Direction:

Northwest

Description:

CAM-D camp
September 23, 2011



Photo No.	Date:
12	05-09-2012

Photo Direction:

Northwest

Description:

CAM-D camp
September 5, 2012



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
13	06-09-2010

Photo Direction:

Northwest



Description:

CAM-D camp
September 6, 2010

Photo No.	Date:
14	05-09-2012

Photo Direction:

Northwest



Description:

CAM-D camp
September 5, 2012

PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
15	28-08-2005

Photo Direction:

West

Description:

CAM-D camp
August 28, 2005



Photo No.	Date:
16	06-07-2010

Photo Direction:

West

Description:

CAM-D camp
July 6, 2010



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
17	05-09-2012

Photo Direction:

West

Description:

CAM-D camp
September 5, 2012



Photo No.	Date:
18	05-07-2010

Photo Direction:

North

Description:

CAM-D camp
Dorm trailers, with interconnecting walkway



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
19	05-07-2010

Photo Direction:

Northeast

Description:

CAM-D camp Departmental Representative and Lab Tents



Photo No.	Date:
20	07-07-2010

Photo Direction:

North

Description:

CAM-D camp Bionest sewage treatment system



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
21	16-07-2011

Photo Direction:

North

Description:

CAM-D camp
Kudlik barrel wash area



Photo No.	Date:
22	05-09-2012

Photo Direction:

West

Description:

CAM-D camp
Backfilling pit from temporary camp



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
23	22-03-2010

Photo Direction:

Northeast

Description:

Shepherd Bay camp
March 22, 2010



Photo No.	Date:
24	22-03-2010

Photo Direction:

South

Description:

Grey water privy at
Shepherd Bay camp



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
25	03-04-2011

Photo Direction:

Southwest

Description:

Collecting drinking water from freshwater lake, East of CAM-3



Photo No.	Date:
26	24-03-2010

Photo Direction:

South

Description:

Shepherd Bay camp
Loading sleds for CAT train to CAM-D



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
27	16-09-2012

Photo Direction:

South

Description:

Shepherd Bay camp
Post demobilization



Photo No.	Date:
28	14-09-2012

Photo Direction:

Southeast

Description:

Shepherd Bay camp
Camp removal and demobilization



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
29	15-09-2012

Photo Direction:

Southeast

Description:

Reshaping Shepherd Bay camp area



Photo No.	Date:
30	16-09-2012

Photo Direction:

Southeast

Description:

Shepherd Bay camp Post demobilization



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
31	05-07-2010

Photo Direction:

Southwest

Description:

CAM-D airstrip

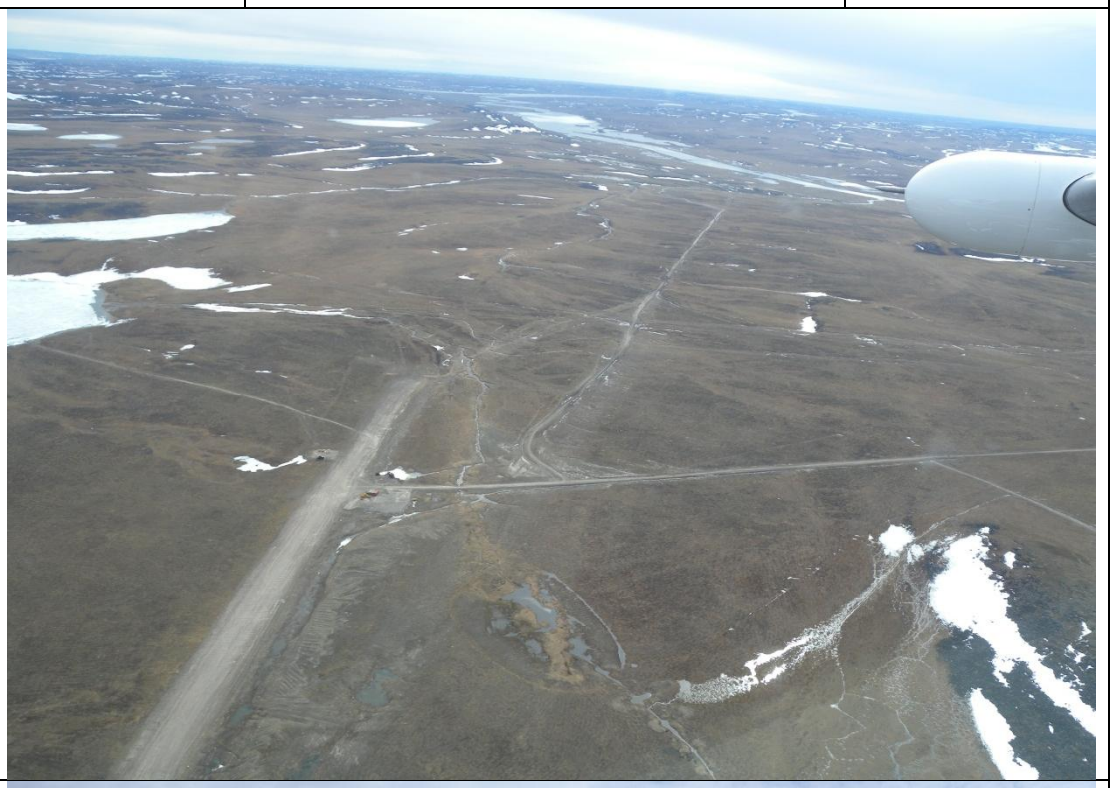


Photo No.	Date:
32	08-07-2010

Photo Direction:

Southeast

Description:

haul road construction



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
33	06-07-2010

Photo Direction:

South

Description:

haul road drainage

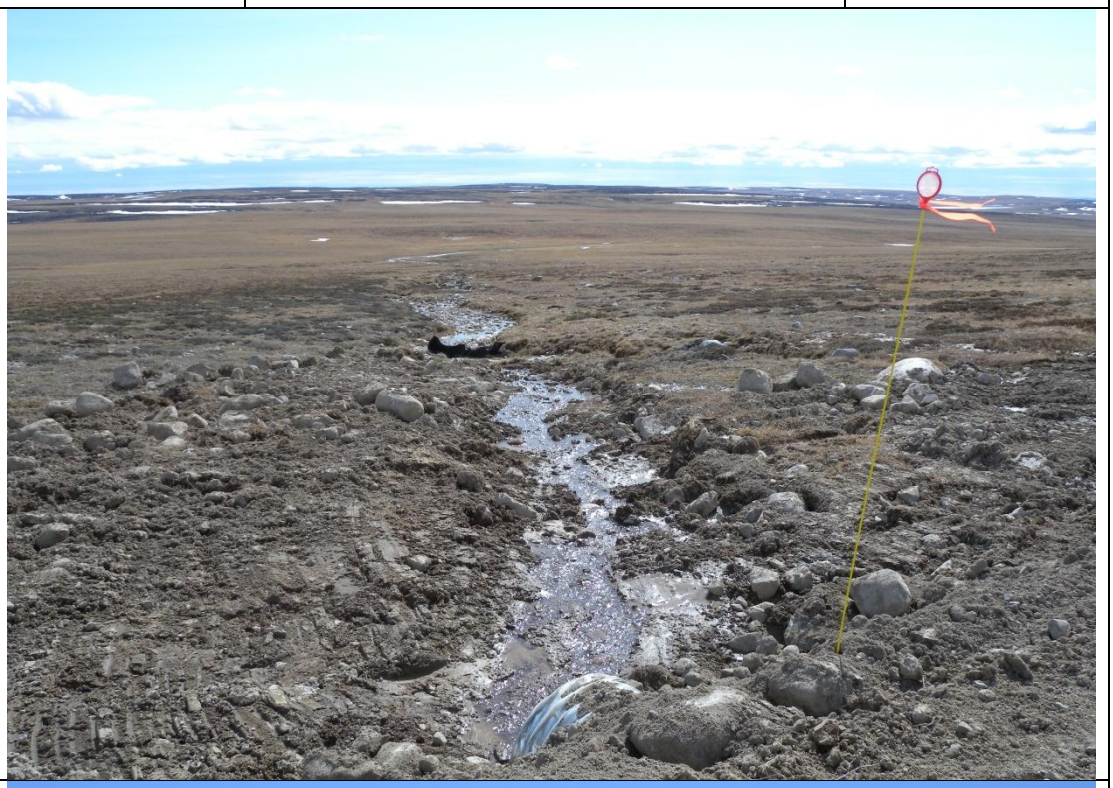


Photo No.	Date:
34	15-07-2010

Photo Direction:

East

Description:

Ongoing maintenance during hauling of Type 2 material from Borrow Area No.2 to NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
35	21-08-2010

Photo Direction:

Southwest

Description:

Very soft conditions on haul road



Photo No.	Date:
36	31-07-2010

Photo Direction:

Southwest

Description:

Poor conditions on haul road



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
37	20-07-2010

Photo Direction:

Southeast

Description:

Shortcut road to CAM-D site



Photo No.	Date:
38	26-08-2011

Photo Direction:

Southeast

Description:

Reclaimed shortcut road to CAM-D site



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
39	12-07-2011

Photo Direction:

North

Description:

Shortcut road to CAM-D site



Photo No.	Date:
40	15-07-2011

Photo Direction:

North

Description:

Reclaimed shortcut road to CAM-D site



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
41	15-07-2010

Photo Direction:

West

Description:

Hauling and maintenance operations



Photo No.	Date:
42	05-09-2012

Photo Direction:

East

Description:

Reclaimed haul road, final inspection



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
43	27-08-2005

Photo Direction:

Southwest

Description:

CAM-D Main Station Area, site for NHWL



Photo No.	Date:
44	05-07-2010

Photo Direction:

South

Description:

CAM-D Main Station Area, site for NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
45	30-07-2010

Photo Direction:

South

Description:

CAM-D Main Station Area
Construction of NHWL

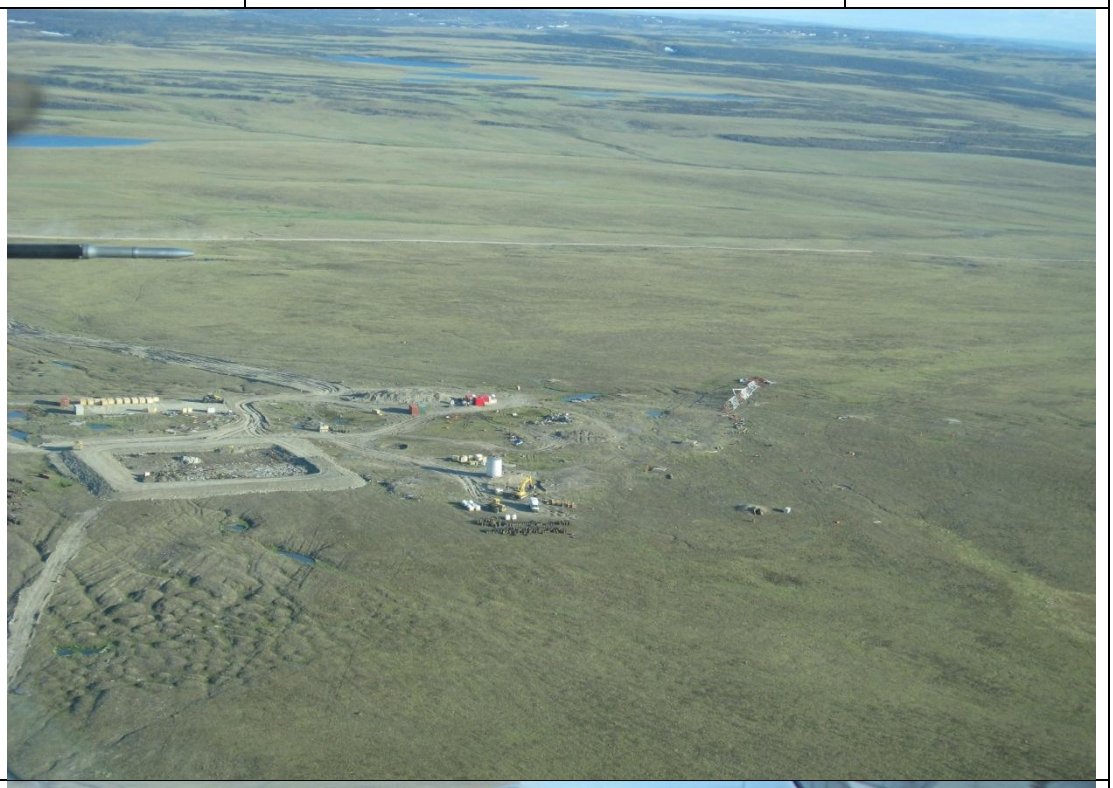


Photo No.	Date:
46	16-08-2010

Photo Direction:

South

Description:

CAM-D Main Station Area
Construction of NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
47	12-09-2011

Photo Direction:

South

Description:

CAM-D Main Station Area
Closure of NHWL

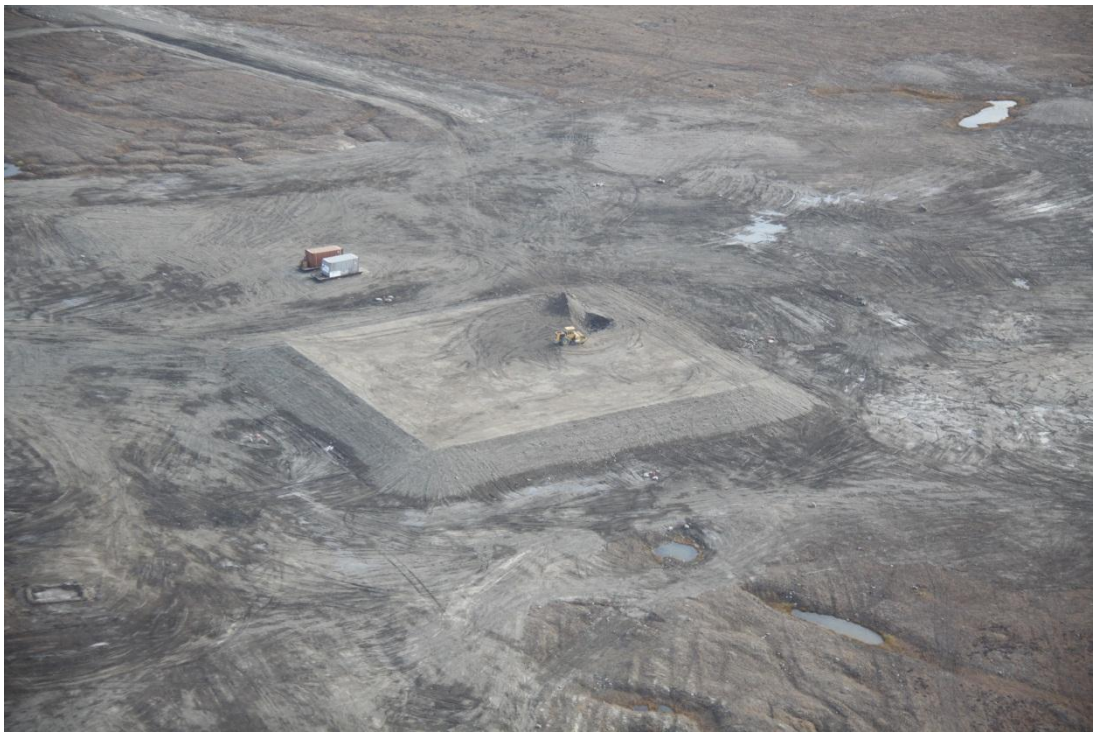


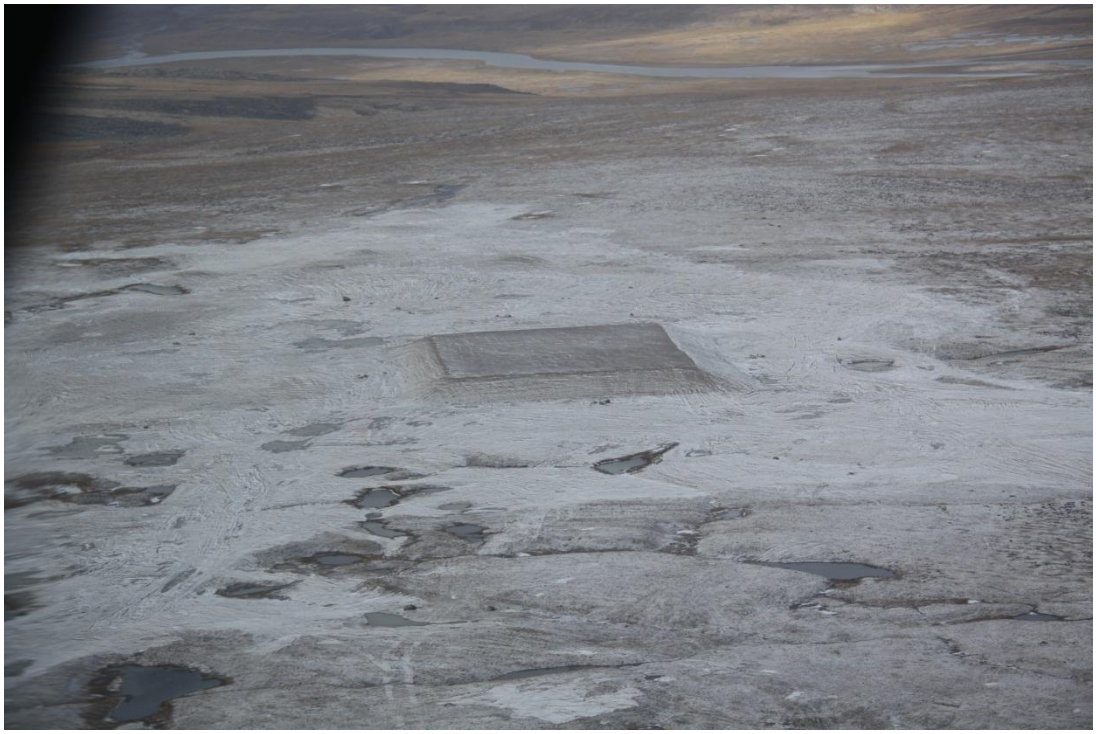
Photo No.	Date:
48	05-09-2012

Photo Direction:

Southwest

Description:

CAM-D Main Station Area
NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
49	15-07-2010

Photo Direction:

East

Description:

NHWL berm construction



Photo No.	Date:
50	29-07-2010

Photo Direction:

Northwest

Description:

NHWL berm construction



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
51	20-07-2010

Photo Direction:

East

Description:

Importing debris, NHWL



Photo No.	Date:
52	03-08-2010

Photo Direction:

Northwest

Description:

Importing and ongoing berm construction, NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
53	15-08-2010

Photo Direction:

Northwest

Description:

Importing debris and equipment to NHWL



Photo No.	Date:
54	01-09-2010

Photo Direction:

North

Description:

Crushed barrels in NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
55	13-09-2010

Photo Direction:

East

Description:

Placing intermediate cover over crushed barrels



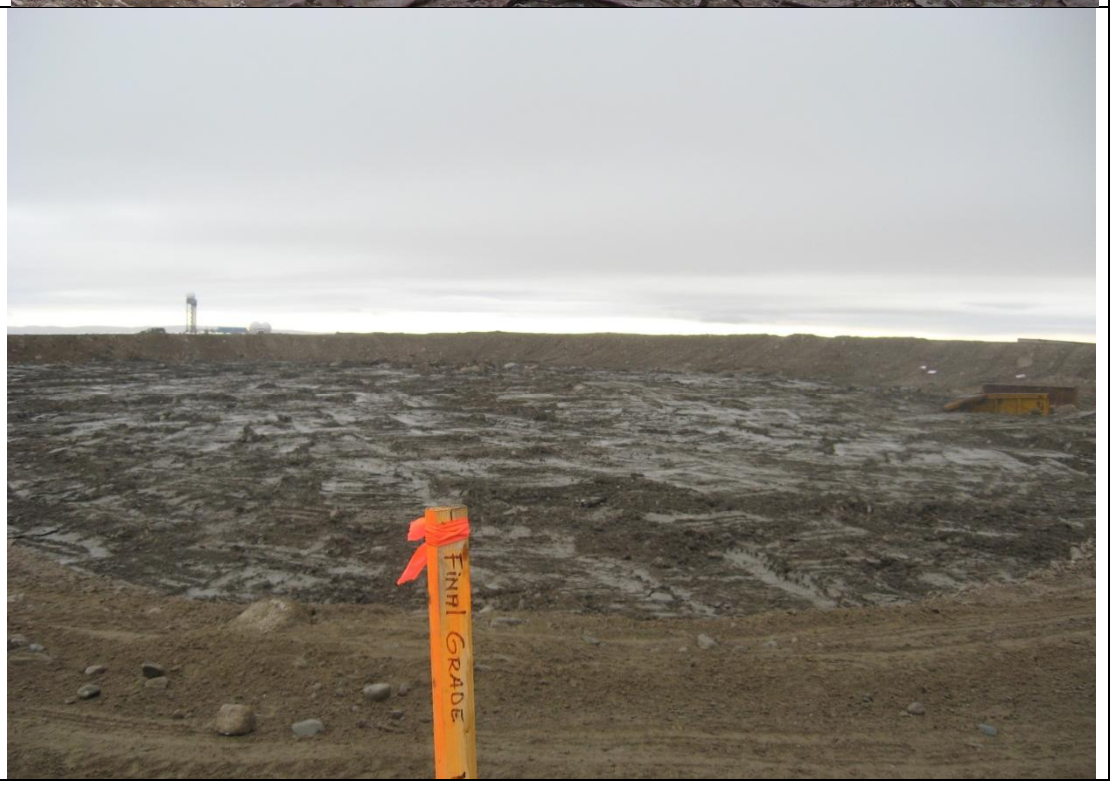
Photo No.	Date:
56	14-09-2010

Photo Direction:

Southeast

Description:

Interseason cover on NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
57	23-09-2010

Photo Direction:

Southwest

Description:

Debris stockpiled in NHWL, from East Station buried debris excavation



Photo No.	Date:
58	21-07-2011

Photo Direction:

East

Description:

Crushing empty barrels in NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
59	19-07-2011

Photo Direction:

N/A

Description:

Installing groundwater monitoring wells at NHWL



Photo No.	Date:
60	19-07-2011

Photo Direction:

East

Description:

Groundwater monitoring well at NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
61	28-08-2011

Photo Direction:

North

Description:

Correction of intermediate fill elevation, prior to placement of NHWL final cover

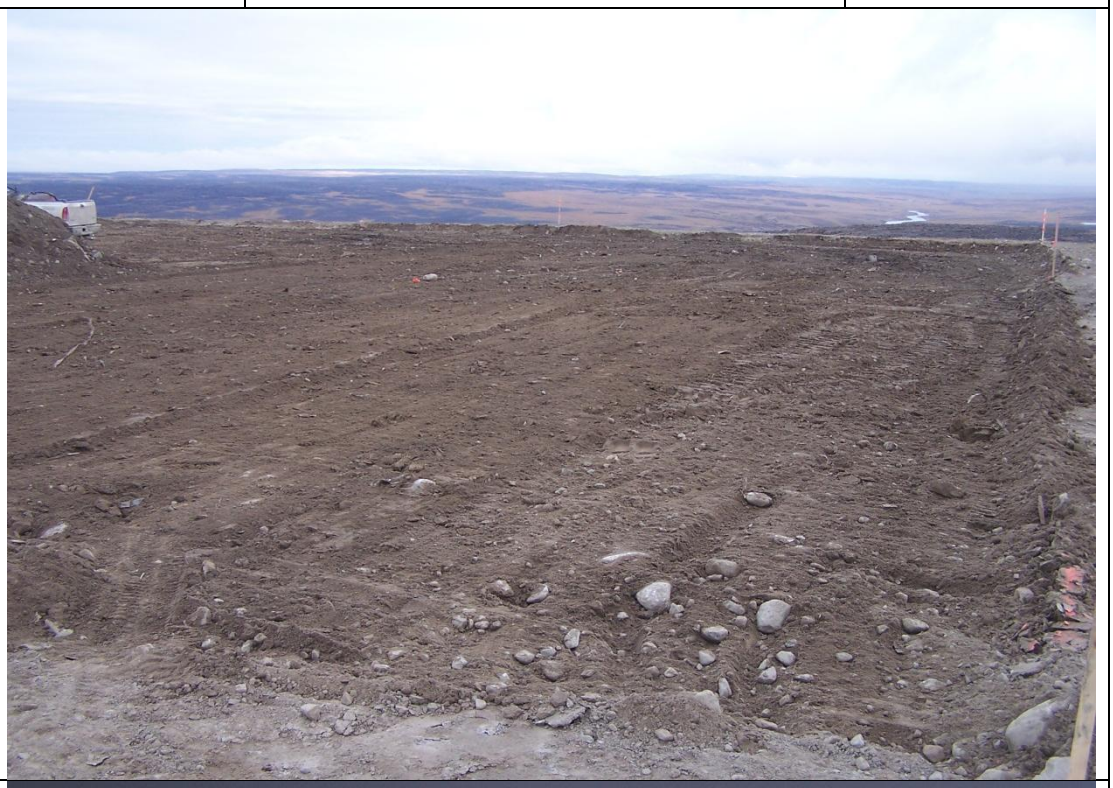


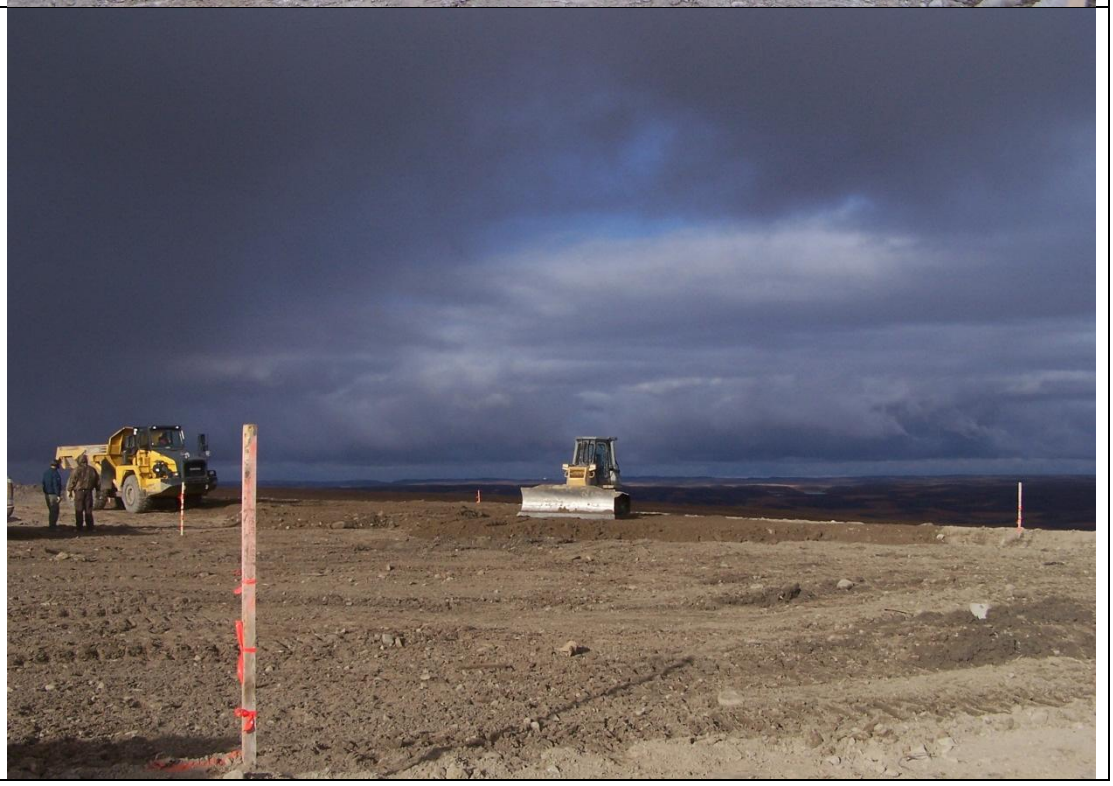
Photo No.	Date:
62	28-08-2011

Photo Direction:

Northwest

Description:

Placing first lift of final cover on NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
63	14-09-2011

Photo Direction:

Northeast

Description:

Testing final lift of NWHL cover

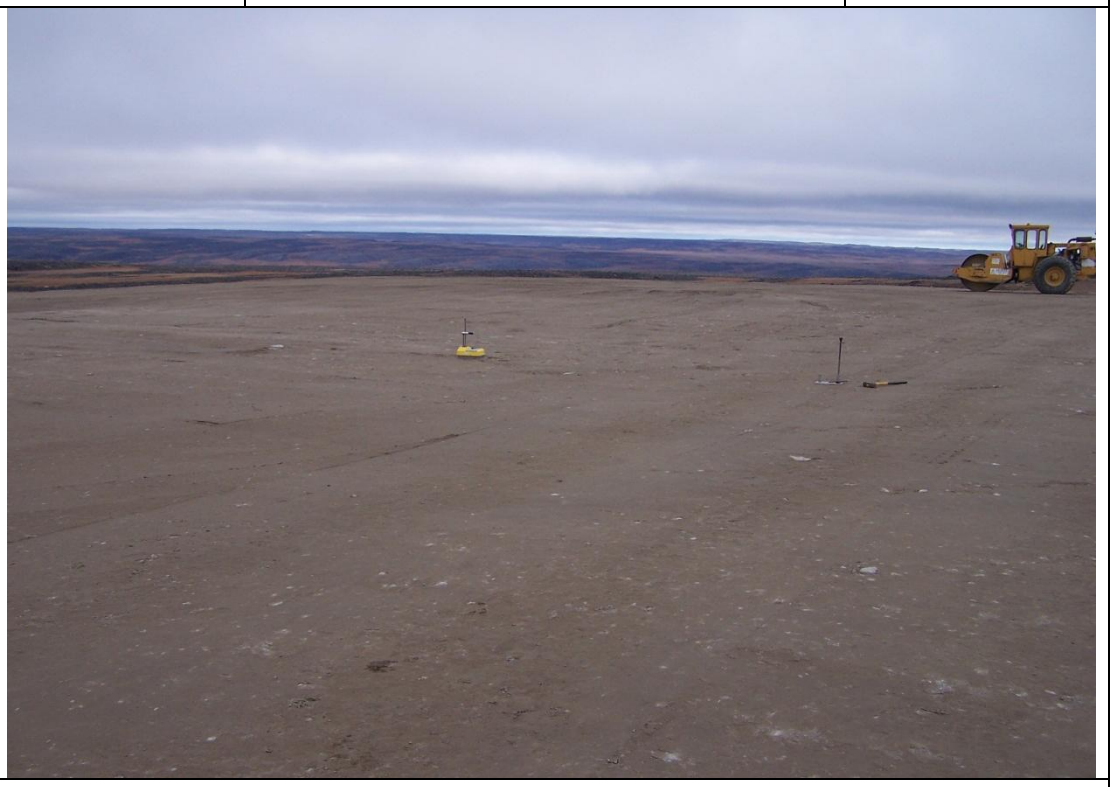


Photo No.	Date:
64	05-09-2012

Photo Direction:

South

Description:

NHWL
September 5, 2012



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
65	06-07-2010

Photo Direction:

Southwest

Description:

Warehouse foundation, prior to abatement and demolition



Photo No.	Date:
66	19-07-2010

Photo Direction:

East

Description:

Waste segregation, Warehouse



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
67	20-07-2010

Photo Direction:

Northwest

Description:

Waste segregation, Warehouse



Photo No.	Date:
68	18-09-2011

Photo Direction:

Southwest

Description:

Warehouse area
Post demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
69	06-07-2010

Photo Direction:

Southeast

Description:

Garage interior prior to hazmat abatement



Photo No.	Date:
70	13-07-2010

Photo Direction:

East

Description:

Garage interior during hazmat abatement



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
71	11-07-2010

Photo Direction:

Southeast

Description:

Garage interior during hazmat abatement



Photo No.	Date:
72	20-07-2010

Photo Direction:

Southeast

Description:

Garage interior after hazmat abatement



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
73	06-07-2010

Photo Direction:

North

Description:

PAP metal cladding and steel



Photo No.	Date:
74	23-07-2010

Photo Direction:

N/A

Description:

Containerization of PAP materials



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
75	06-07-2010

Photo Direction:

West

Description:

Garage prior to abatement and demolition



Photo No.	Date:
76	18-09-2011

Photo Direction:

West

Description:

Garage area
Post demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
77	06-07-2010

Photo Direction:

South

Description:

Garage prior to abatement and demolition



Photo No.	Date:
78	18-09-2011

Photo Direction:

South

Description:

Garage area
Post demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
79	28-08-2005

Photo Direction:

Southeast

Description:

Garage prior to abatement and demolition



Photo No.	Date:
80	18-07-2010

Photo Direction:

Southeast

Description:

Garage during demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
81	22-07-2010

Photo Direction:

Southeast

Description:

Garage during demolition



Photo No.	Date:
82	18-09-2011

Photo Direction:

Southeast

Description:

Garage area
Post demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
83	06-07-2010

Photo Direction:

Northwest

Description:

Drums containing fuel transferred from POL Tank No. 5



Photo No.	Date:
84	06-07-2010

Photo Direction:

N/A

Description:

Drum containing fuel transferred from POL Tank No. 5, sampled following AMSRP



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
85	19-08-2010

Photo Direction:

North

Description:

Preparing for tank cleaning



Photo No.	Date:
86	29-09-2011

Photo Direction:

N/A

Description:

Removing residual sludge from sump in POL Tank No. 5



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
87	29-09-2011

Photo Direction:

Northwest

Description:

Demolition of POL Tank No. 5



Photo No.	Date:
88	29-09-2011

Photo Direction:

N/A

Description:

Containerization of POL Tank No. 5



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
89	28-08-2005

Photo Direction:

North

Description:

SRR camp prior to demolition



Photo No.	Date:
90	18-09-2011

Photo Direction:

North

Description:

SRR camp area
Post demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
91	28-08-2005

Photo Direction:

East

Description:

SRR camp shed prior to demolition



Photo No.	Date:
92	18-09-2011

Photo Direction:

East

Description:

SRR camp shed area Post demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
93	04-07-2011

Photo Direction:

N/A

Description:

PCB light ballasts in SRR camp



Photo No.	Date:
94	08-07-2011

Photo Direction:

N/A

Description:

Adding lime to SRR camp sewage vault



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
95	08-07-2011

Photo Direction:

Northwest

Description:

SRR camp prior to demolition



Photo No.	Date:
96	08-07-2011

Photo Direction:

Southwest

Description:

Transporting SRR camp trailer to the CAM-D NHWL



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
97	05-07-2010

Photo Direction:

South

Description:

CAM-D Main Station Area (Main Dump in lower centre of photo)

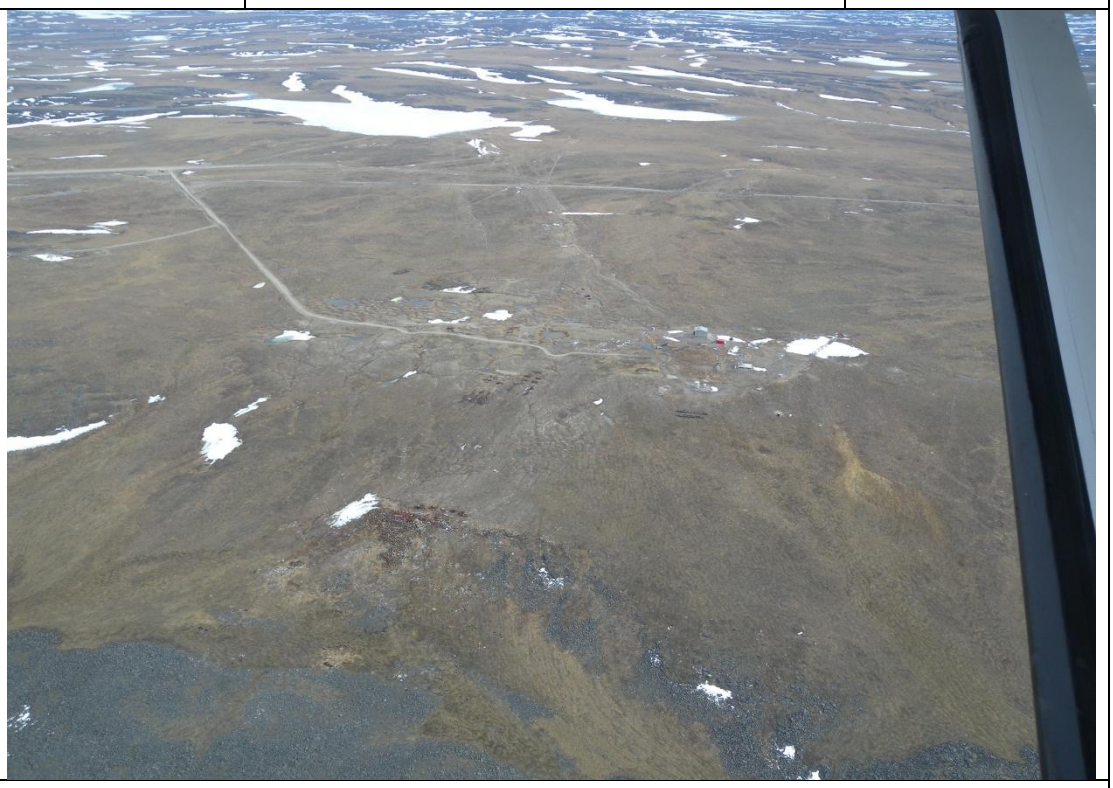


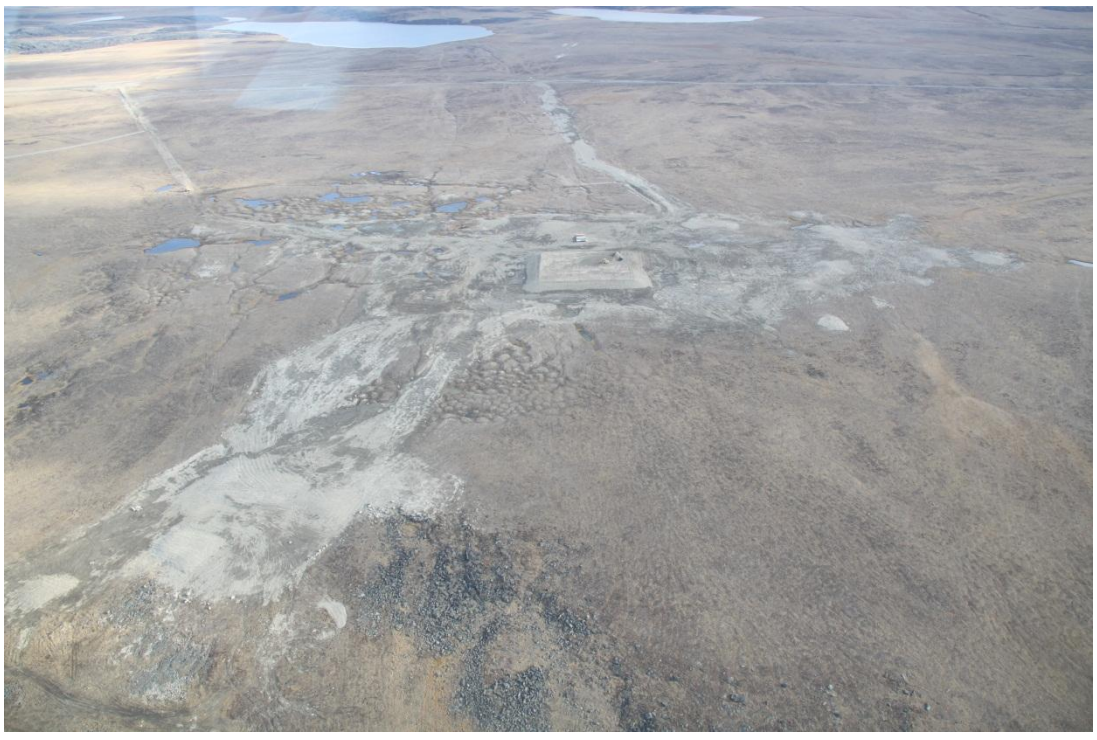
Photo No.	Date:
98	12-09-2011

Photo Direction:

South

Description:

CAM-D Main Station Area (Main Dump in lower centre of photo)



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
99	?-09-2010

Photo Direction:

Southeast

Description:

CAM-D Main Station Area (Main Dump in lower centre of photo)



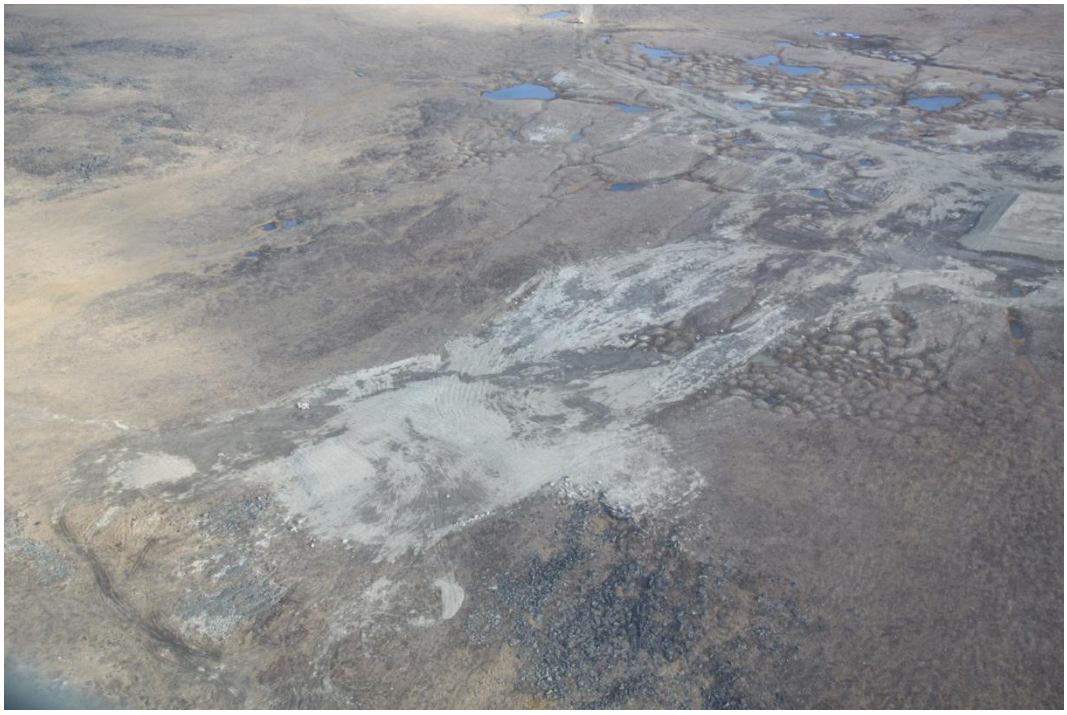
Photo No.	Date:
100	12-09-2011

Photo Direction:

Southeast

Description:

CAM-D Main Station Area (Main Dump in lower centre of photo)



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
101	02-09-2010

Photo Direction:

West

Description:

Debris sorting, Main Dump



Photo No.	Date:
102	04-09-2010

Photo Direction:

Northwest

Description:

Debris sorting, Main Dump



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
103	04-09-2010

Photo Direction:

Southwest

Description:

Asbestos debris, Main Dump



Photo No.	Date:
104	07-09-2010

Photo Direction:

East

Description:

Debris collection at Main Dump



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
105	09-09-2010

Photo Direction:

Northwest

Description:

Debris sorting and collection, Main Dump



Photo No.	Date:
106	12-09-2010

Photo Direction:

Northwest

Description:

Debris sorting and collection, Main Dump



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
107	12-09-2010

Photo Direction:

Northeast

Description:

Debris sorting and collection, Main Dump



Photo No.	Date:
108	14-09-2010

Photo Direction:

West

Description:

Debris sorting and collection, Main Dump



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
109	17-09-2010

Photo Direction:

West

Description:

Test pit investigation, Lobe 1 Main Dump



Photo No.	Date:
110	02-07-2011

Photo Direction:

Northwest

Description:

Burning untreated/unpainted wood at Main Dump



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
111	04-07-2011

Photo Direction:

East

Description:

Loading debris from Main Dump for disposal in NHWL



Photo No.	Date:
112	23-07-2011

Photo Direction:

Northwest

Description:

Debris collection at Main Dump area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
113	17-08-2011

Photo Direction:

N/A

Description:

Typical surface conditions prior to debris collection at Main Dump area



Photo No.	Date:
114	17-08-2011

Photo Direction:

N/A

Description:

Debris collected from area shown in above photo (Photo 113), Main Dump area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
115	30-08-2005

Photo Direction:

East

Description:

Main Dump prior to surface debris collection and excavation and capping of buried debris Lobes 1 and 2



Photo No.	Date:
116	18-09-2011

Photo Direction:

East

Description:

Main Dump after surface debris collection and excavation and capping of buried debris Lobes 1 and 2



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
117	06-07-2010

Photo Direction:

North

Description:

Main Dump prior to surface debris collection and excavation and capping of buried debris Lobes



Photo No.	Date:
118	18-09-2011

Photo Direction:

North

Description:

Main Dump after to surface debris collection and excavation and capping of buried debris Lobes



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
119	27-08-2005

Photo Direction:

West

Description:

Main Dump prior to surface debris collection and excavation and capping of buried debris Lobe 3



Photo No.	Date:
120	18-09-2011

Photo Direction:

West

Description:

Main Dump after surface debris collection and capping of buried debris Lobe 3



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
121	27-08-2005

Photo Direction:

South

Description:

Main Dump prior to surface debris collection and excavation and capping of buried debris Lobe 1



Photo No.	Date:
122	18-09-2011

Photo Direction:

South

Description:

Main Dump after surface debris collection and excavation and capping of buried debris Lobe 1



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
123	30-08-2005

Photo Direction:

Southwest

Description:

Main Dump prior to surface debris collection and excavation and capping of buried debris Lobes



Photo No.	Date:
124	18-09-2011

Photo Direction:

Southwest

Description:

Main Dump after surface debris collection and excavation and capping of buried debris Lobes



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
125	30-08-2005

Photo Direction:

Southwest

Description:

Main Dump prior to surface debris collection and excavation and capping of buried debris Lobes



Photo No.	Date:
126	18-09-2011

Photo Direction:

Southwest

Description:

Main Dump after surface debris collection and excavation and capping of buried debris Lobes



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Dates:
127	02-09-2010 09-09-2010 24-08-2011

Photo Direction:

East

Description:

Main Dump during and after surface debris collection and excavation and capping of buried debris Lobes







PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
128	27-08-2005

Photo Direction:

North

Description:
Debris Area 2 (Pallet Line) before



Photo No.	Date:
129	18-09-2011

Photo Direction:

North

Description:

Debris Area 2 (Pallet Line) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
130	06-07-2010

Photo Direction:

Northeast

Description:

Site Debris Area 2 (Pallet Line) before



Photo No.	Date:
131	

Photo Direction:

Northeast

Description:

Site Debris Area 3 (Portable Fuel Tanks) before



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
132	15-07-2010

Photo Direction:

West

Description:

Site Debris Area 3 (Inuit House) before



Photo No.	Date:
133	18-09-2011

Photo Direction:

West

Description:

Site Debris Area 3 (Inuit House) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
134	30-05-2005

Photo Direction:

North

Description:

Site Debris Area 4 (Main Barrel Cache) before



Photo No.	Date:
135	18-09-2011

Photo Direction:

North

Description:

Site Debris Area 4 (Main Barrel Cache) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
136	30-08-2005

Photo Direction:

South

Description:

Site Debris Area 4 (Main Barrel Cache) before

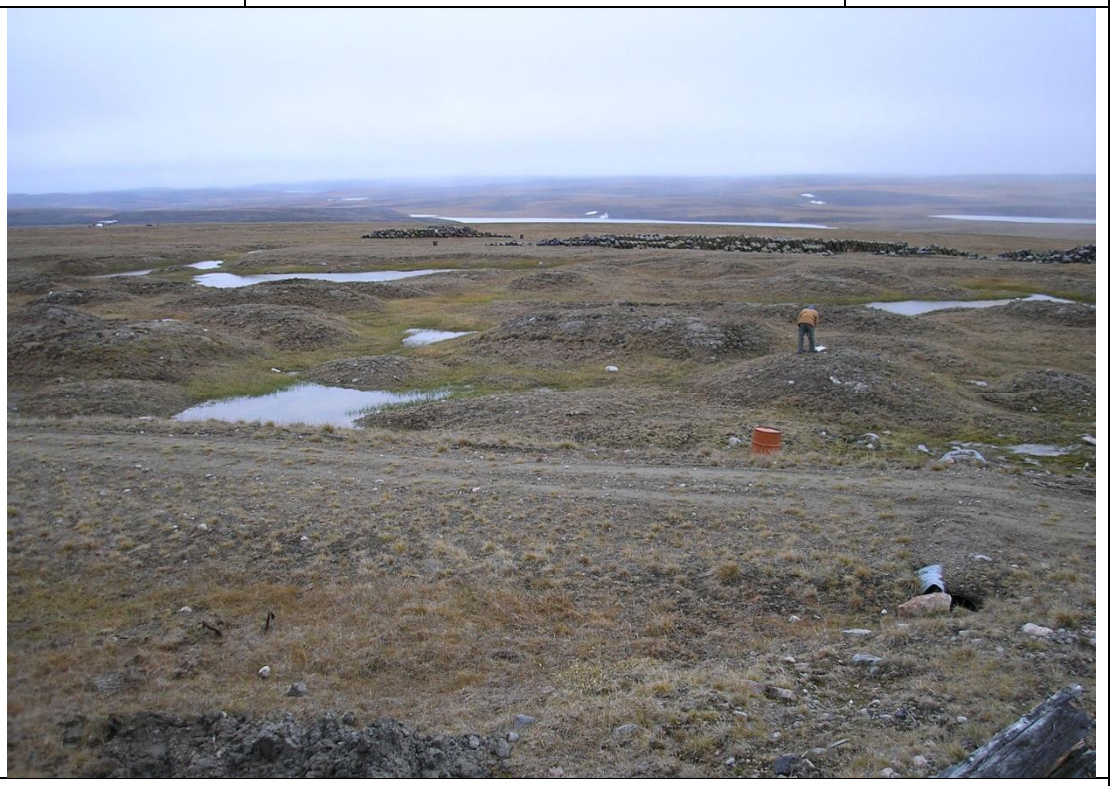


Photo No.	Date:
137	18-09-2011

Photo Direction:

South

Description:

Site Debris Area 4 (Main Barrel Cache) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
138	06-07-2010

Photo Direction:

East

Description:

Site Debris Area 4 (Main Barrel Cache) before



Photo No.	Date:
139	18-09-2011

Photo Direction:

East

Description:

Site Debris Area 4 (Main Barrel Cache) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
140	06-07-2010

Photo Direction:

South

Description:

Site Debris Area 5 (Vehicle Dump) before



Photo No.	Date:
141	18-09-2011

Photo Direction:

South

Description:

Site Debris Area 5 (Vehicle Dump) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
142	06-07-2010

Photo Direction:

South

Description:

Site Debris Area 5 (Main Station Cold Storage) before



Photo No.	Date:
143	28-08-2011

Photo Direction:

South

Description:

Site Debris Area 5 (Main Station Cold Storage) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
144	23-07-2011

Photo Direction:

North

Description:

Site Debris Area 5 (Main Station, antenna anchor) before



Photo No.	Date:
145	23-07-2011

Photo Direction:

North

Description:

Site Debris Area 5 (Main Station, antenna anchor) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
146	06-07-2010

Photo Direction:

Southeast

Description:

Site Debris Area 5 (Main Station, Electrical Cabinets) before



Photo No.	Date:
147	06-07-2010

Photo Direction:

East

Description:

Site Debris Area 5 (Main Station, Electrical Cabinets) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
148	06-07-2010

Photo Direction:

Southwest

Description:

Site Debris Area 5 (Main Station, Antenna area) before



Photo No.	Date:
149	18-09-2011

Photo Direction:

Southwest

Description:

Site Debris Area 5 (Main Station, Antenna area) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
150	25-08-2005

Photo Direction:

South

Description:

Site Debris Area 6 (Airstrip) before



Photo No.	Date:
151	14-09-2011

Photo Direction:

South

Description:

Site Debris Area 6 (Airstrip) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
152	27-08-2011

Photo Direction:

N/A

Description:

Site Debris Area 6 partially buried barrel left in place due to presence of wildlife



Photo No.	Date:
153	08-07-2010

Photo Direction:

Southwest

Description:

Site Debris Area 6 (Airstrip) before



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
154	?-04-2011

Photo Direction:

unknown

Description:

Site Debris Area 7 (Simpson Lake) – collecting empty barrels during CAT train



Photo No.	Date:
155	?-04-2011

Photo Direction:

unknown

Description:

Site Debris Area 7 (Simpson Lake) – collecting empty barrels during CAT train



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
156	11-08-2010

Photo Direction:

North

Description:

Site Debris Area 8
(Freshwater Lake)



Photo No.	Date:
157	06-07-2010

Photo Direction:

West

Description:

Site Debris Area 8
(Freshwater Lake)



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
158	01-08-2010

Photo Direction:

Northeast

Description:

Site Debris Area 8 (Freshwater Lake) before



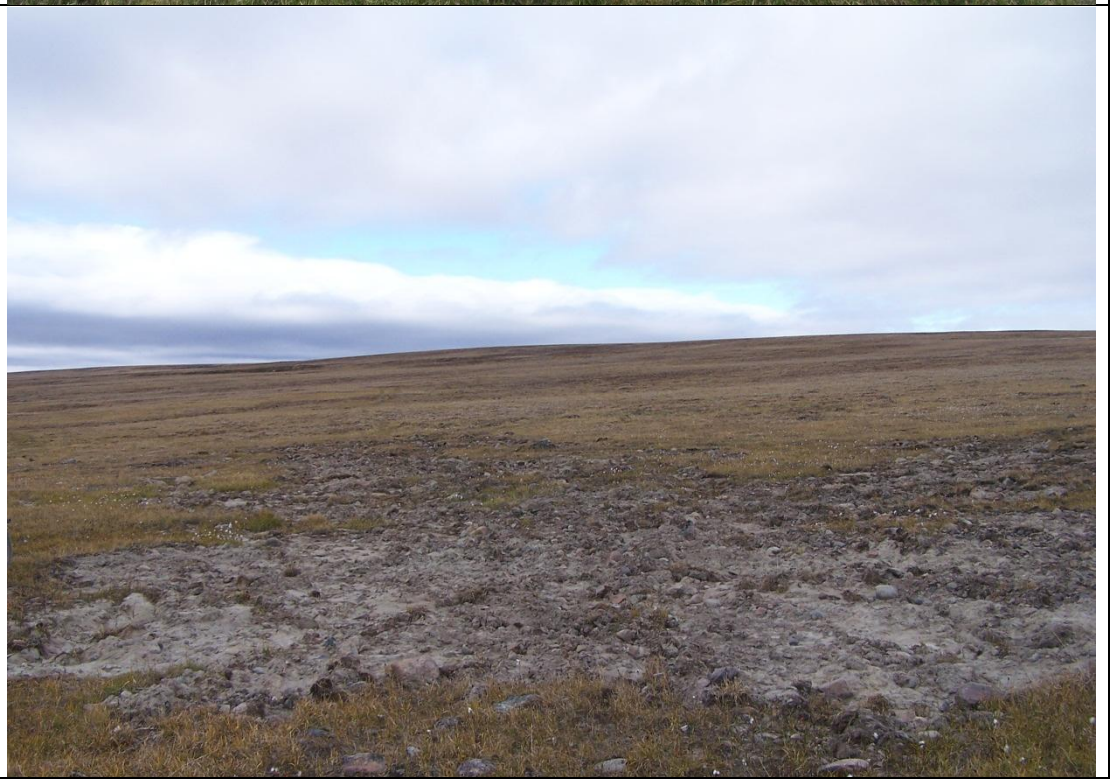
Photo No.	Date:
159	21-08-2011

Photo Direction:

Northeast

Description:

Site Debris Area 8 (Freshwater Lake) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
160	06-07-2010

Photo Direction:

West

Description:

Site Debris Area 9 (Plumber's Dump) before



Photo No.	Date:
161	21-09-2010

Photo Direction:

West

Description:

Site Debris Area 9 (Plumber's Dump) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
162	13-08-2010

Photo Direction:

North

Description:

Site Debris Area 10



Photo No.	Date:
163	21-08-2011

Photo Direction:

North

Description:

Site Debris Area 10, steel left in place due to presence of wildlife



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
164	20-08-2011

Photo Direction:

Southwest

Description:

Site Debris Area 13 (Winter Airstrip) before



Photo No.	Date:
165	20-08-2011

Photo Direction:

Southwest

Description:

Site Debris Area 13 (Winter Airstrip) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
166	07-07-2010

Photo Direction:

Southwest

Description:

Site Debris Area 14 (Borrow Area No. 2) barrels North of CAM-D camp - before



Photo No.	Date:
167	01-09-2010

Photo Direction:

Southwest

Description:

Site Debris Area 14 (Borrow Area No. 2) after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
168	07-07-2010

Photo Direction:

Southeast

Description:

Barrels collected from Borrow Area No. 2



Photo No.	Date:
169	31-07-2010

Photo Direction:

North

Description:

Sorting barrels at the Pallet Line



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
170	02-08-2010

Photo Direction:

N/A

Description:

Barrel sampling



Photo No.	Date:
171	06-08-2010

Photo Direction:

N/A

Description:

Barrel sample



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
172	31-07-2010

Photo Direction:

Northeast

Description:

Open barrels containing grease at the Pallet Line



Photo No.	Date:
173	12-08-2010

Photo Direction:

North

Description:

Mobile barrel processing unit



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
174	13-08-2010

Photo Direction:

Northeast

Description:

Rinsing barrels



Photo No.	Date:
175	14-08-2010

Photo Direction:

North

Description:

Barrel processing at the POL BPA



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
176	07-09-2010

Photo Direction:

Southwest

Description:

Barrel processing at the Main Dump BPA



Photo No.	Date:
177	20-09-2010

Photo Direction:

Southwest

Description:

Pallet Line TSA, baseline sampling



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
178	26-09-2010

Photo Direction:

Northeast

Description:

Pallet Line TSA



Photo No.	Date:
179	28-08-2011

Photo Direction:

Southeast

Description:

Barrel processing at the Main Barrel Cache



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
180	28-08-2011

Photo Direction:

West

Description:

Barrel processing at the Main Barrel Cache BPA-2



Photo No.	Date:
181	14-09-2011

Photo Direction:

West

Description:

Excavation of the PHC exceedance at the Main Barrel Cache BPA-2



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
182	19-09-2011

Photo Direction:

Southwest

Description:

Discharging process water at the Main Barrel Cache

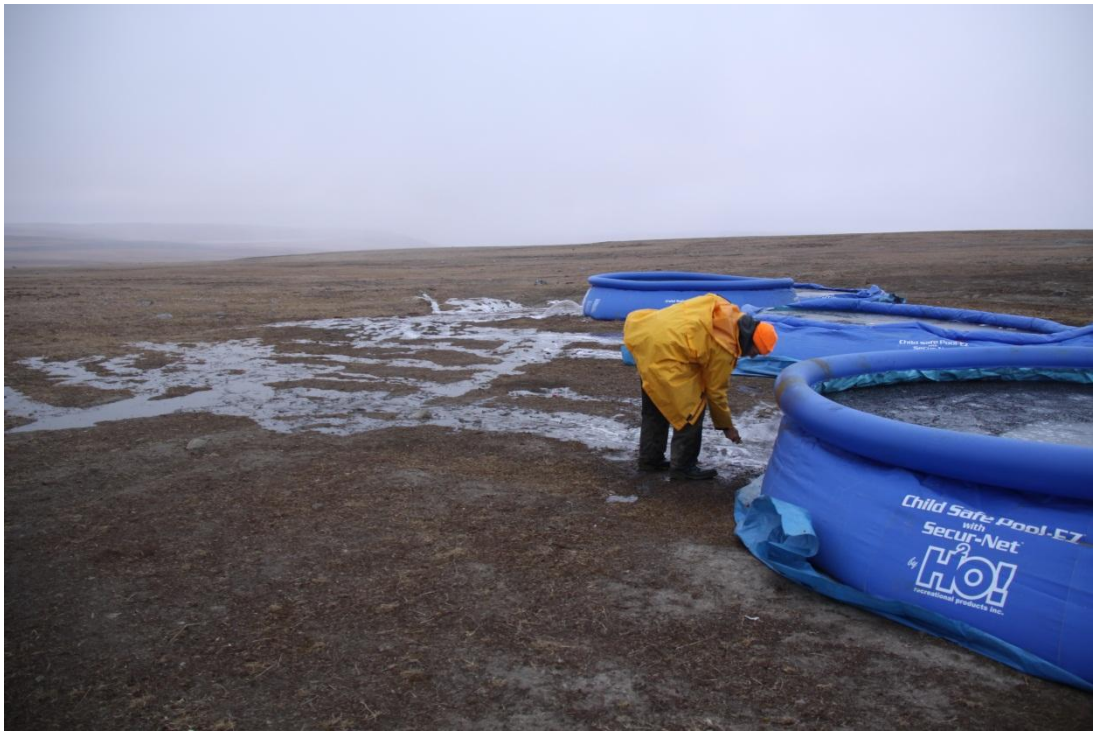


Photo No.	Date:
183	19-09-2011

Photo Direction:

South

Description:

Discharging process water at the Main Barrel Cache



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
184	21-09-2011

Photo Direction:

South

Description:

Cleaning activated carbon off the surface of the frozen process water



Photo No.	Date:
185	21-09-2011

Photo Direction:

East

Description:

Cleaning sorbents and sediment from the bottom of the frozen process water



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
186	21-09-2011

Photo Direction:

East

Description:

Rolling the process water containment pools containing contaminated solids



Photo No.	Date:
187	22-09-2011

Photo Direction:

Southwest

Description:

Former location of the process water containment pools at the Main Barrel Cache



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
188	02-09-2010

Photo Direction:

Northeast

Description:

East Station Buried Debris - before



Photo No.	Date:
189	18-09-2011

Photo Direction:

Northeast

Description:

East Station Buried Debris - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
190	24-09-2010

Photo Direction:

North

Description:

Excavation and stockpiling activities, East Station Buried Debris area



Photo No.	Date:
191	24-09-2010

Photo Direction:

North

Description:

Excavation and stockpiling activities, East Station Buried Debris area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
192	28-08-2005

Photo Direction:

South

Description:

POL Buried Debris - before



Photo No.	Date:
193	18-09-2011

Photo Direction:

South

Description:

POL Buried Debris - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
194	21-09-2010

Photo Direction:

Northwest

Description:

Excavation and stockpiling activities, POL Buried Debris area



Photo No.	Date:
195	21-09-2010

Photo Direction:

West

Description:

Excavation and debris sorting, POL Buried Debris area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
196	21-09-2010

Photo Direction:

East

Description:

Excavated debris from POL Buried Debris place in NWHL



Photo No.	Date:
197	23-09-2010

Photo Direction:

Northwest

Description:

Stockpile sampling, POL Buried Debris area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
198	07-07-2011

North

Description:

Soil stockpiles, Warehouse Buried Debris area



Photo No.	Date:
199	23-07-2011

Photo Direction:

West

Description:

Warehouse Buried Debris excavation, prior to backfilling



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
200	07-09-2010

Photo Direction:

West

Description:

Module Train Buried Debris area - before



Photo No.	Date:
201	29-07-2011

Photo Direction:

West

Description:

Module Train Buried Debris area - before



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
202	29-07-2011

Photo Direction:

Southwest

Description:

Soil stockpiles, Module Train Buried Debris area



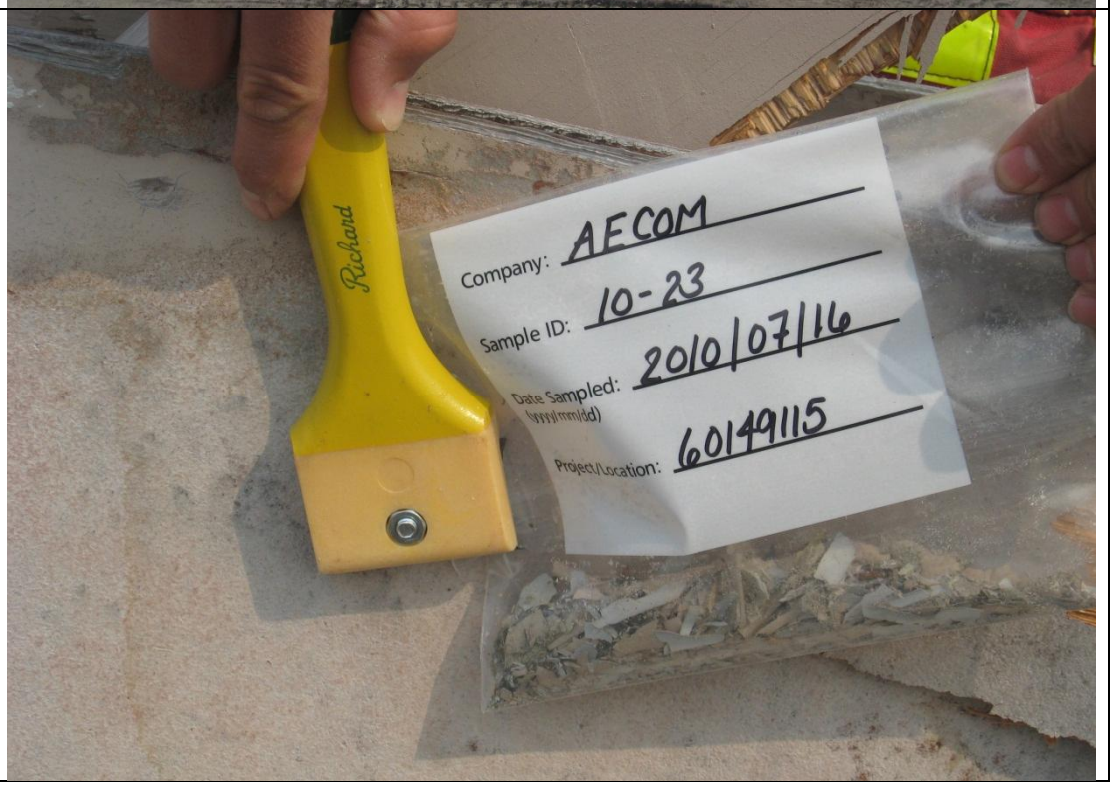
Photo No.	Date:
203	16-07-2010

Photo Direction:

N/A

Description:

Module Train Buried Debris, paint sample



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
204	06-07-2011

Photo Direction:

South

Description:

Soil stockpiles, Main Dump Lobe 1 Buried Debris excavation



Photo No.	Date:
205	22-07-2011

Photo Direction:

North

Description:

Excavation and sorting, Main Dump Lobe 1 Buried Debris



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
206	27-07-2011

Photo Direction:

East

Description:

Preliminary excavation of Main Dump Lobe 1 Buried Debris



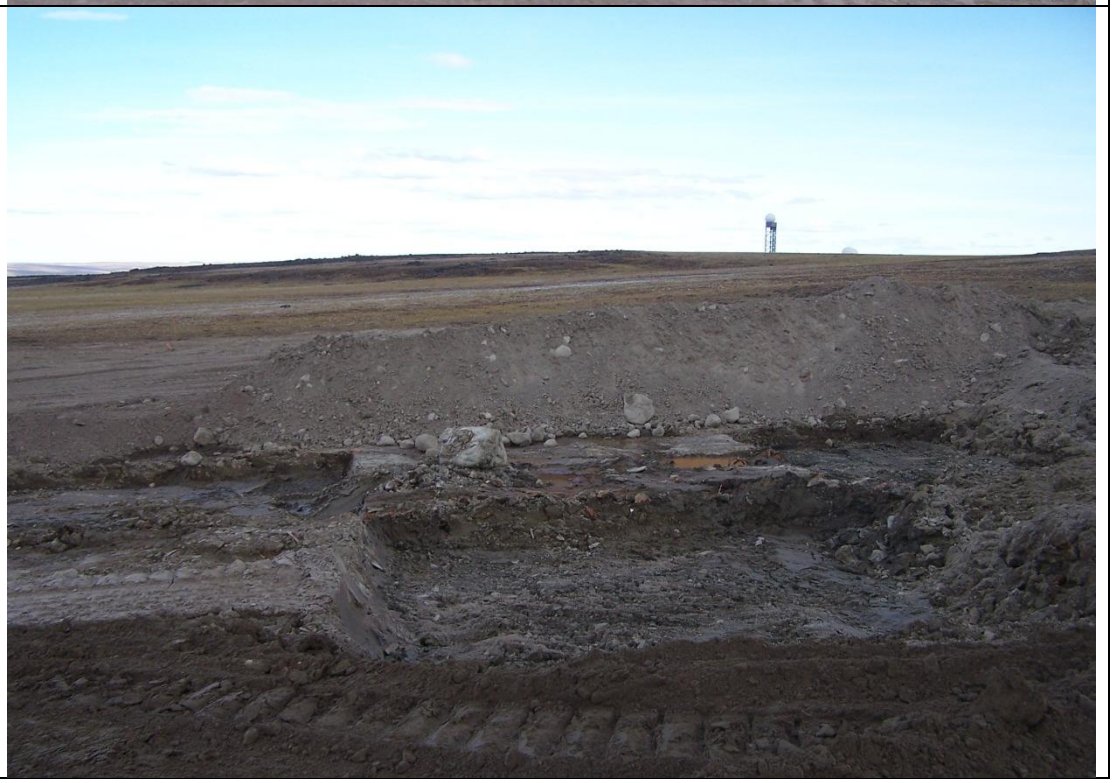
Photo No.	Date:
207	18-08-2011

Photo Direction:

East

Description:

Secondary excavation of Main Dump Lobe 1



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
208	26-06-2011

Photo Direction:

Northwest

Description:

Preliminary excavation of Main Dump Lobe 1 Buried Debris



Photo No.	Date:
209	23-08-2011

Photo Direction:

Northwest

Description:

Testing final lift of Main Dump Lobe 1 cap



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
210	27-07-2011

Photo Direction:

East

Description:

Main Dump Lobe 1 – before capping

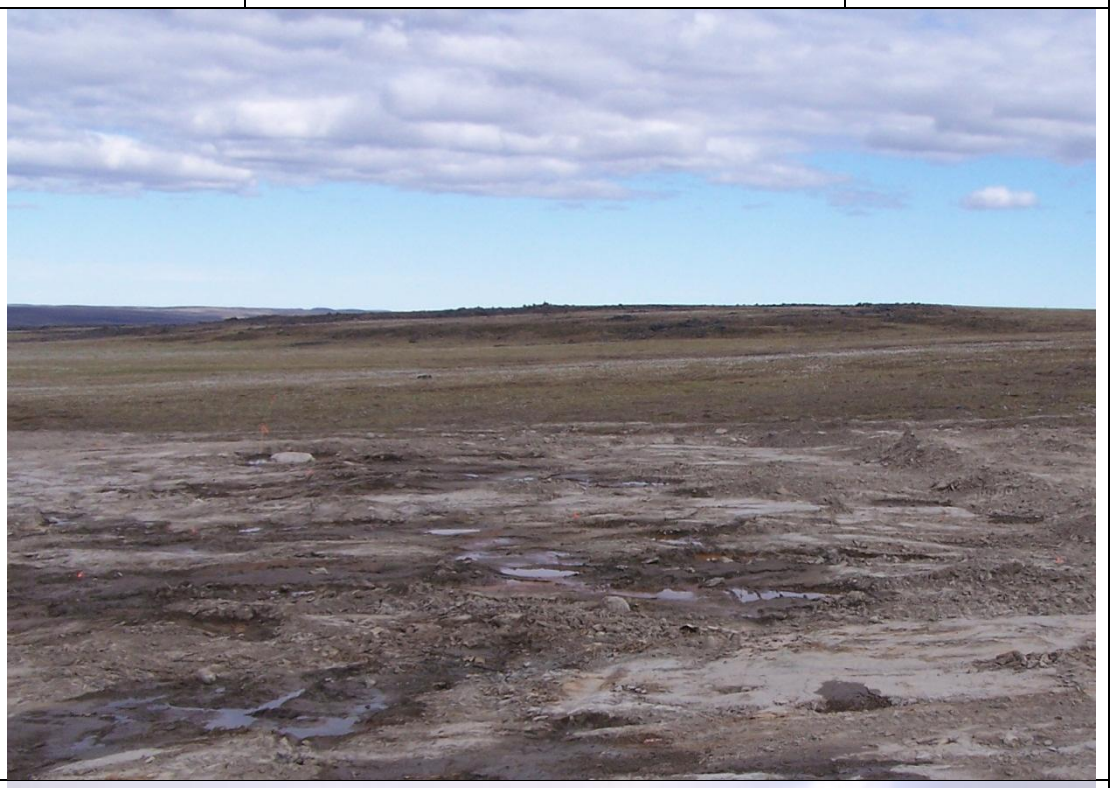


Photo No.	Date:
211	18-09-2011

Photo Direction:

East

Description:

Main Dump Lobe 1 - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
212	21-07-2011

Photo Direction:

Northwest

Description:

Prepping the Camp MPA



Photo No.	Date:
213	24-07-2011

Photo Direction:

Northwest

Description:

Containerized Main Dump Lobe 1 contaminated soil, Camp MPA



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
214	23-07-2011

Photo Direction:

North

Description:

Containerization of Main Dump Lobe 1 contaminated soil, Camp MPA



Photo No.	Date:
215	23-07-2011

Photo Direction:

North

Description:

Containerization of Main Dump Lobe 1 contaminated soil, Camp MPA



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
216	15-08-2011

Photo Direction:

West

Description:

Desiccation cracks, Main Dump Lobe 2



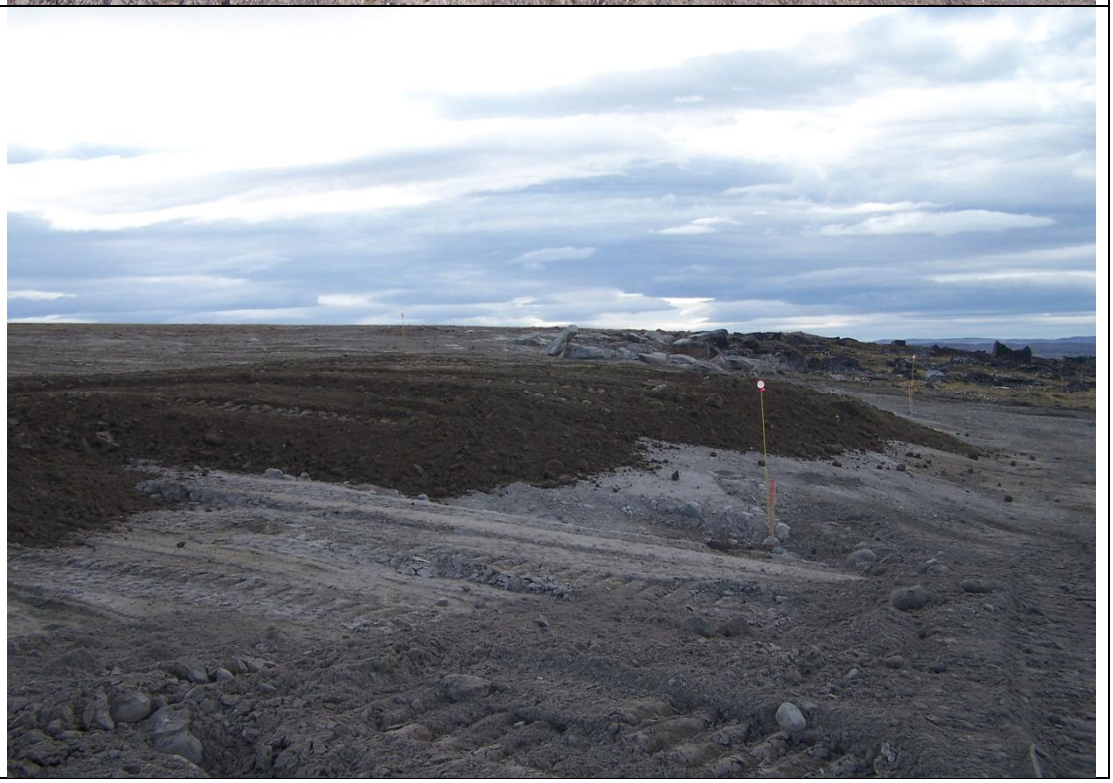
Photo No.	Date:
217	18-08-2011

Photo Direction:

Southwest

Description:

Covering cracked regrades with organic rich soil



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
218	17-09-2010

Photo Direction:

Northeast

Description:

Main Dump Lobe 3 (foreground) and Lobe 4, before capping



Photo No.	Date:
219	06-07-2011

Photo Direction:

Northeast

Description:

Capping Main Dump Lobe 3 (foreground) and Lobe 4



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
220	29-07-2011

Photo Direction:

Northeast

Description:

Capping activities at the Main Dump



Photo No.	Date:
221	24-08-2011

Photo Direction:

Northeast

Description:

Main Dump Lobe 3 (foreground) and Lobe 4, after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
222	06-07-2010

Photo Direction:

North

Description:

Pallet Line
Contaminated area - before



Photo No.	Date:
223	18-09-2011

Photo Direction:

North

Description:

Pallet Line
Contaminated area - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
224	02-08-2010

Photo Direction:

Northeast

Description:

Pumping surface water prior to excavation of Pallet Line Contaminated area



Photo No.	Date:
225	10-08-2010

Photo Direction:

North

Description:

Pallet Line Contaminated area, excavated to design limits



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
226	09-08-2010

Photo Direction:

Northeast

Description:

Superbags containing contaminated soil from Pallet Line Contaminated area

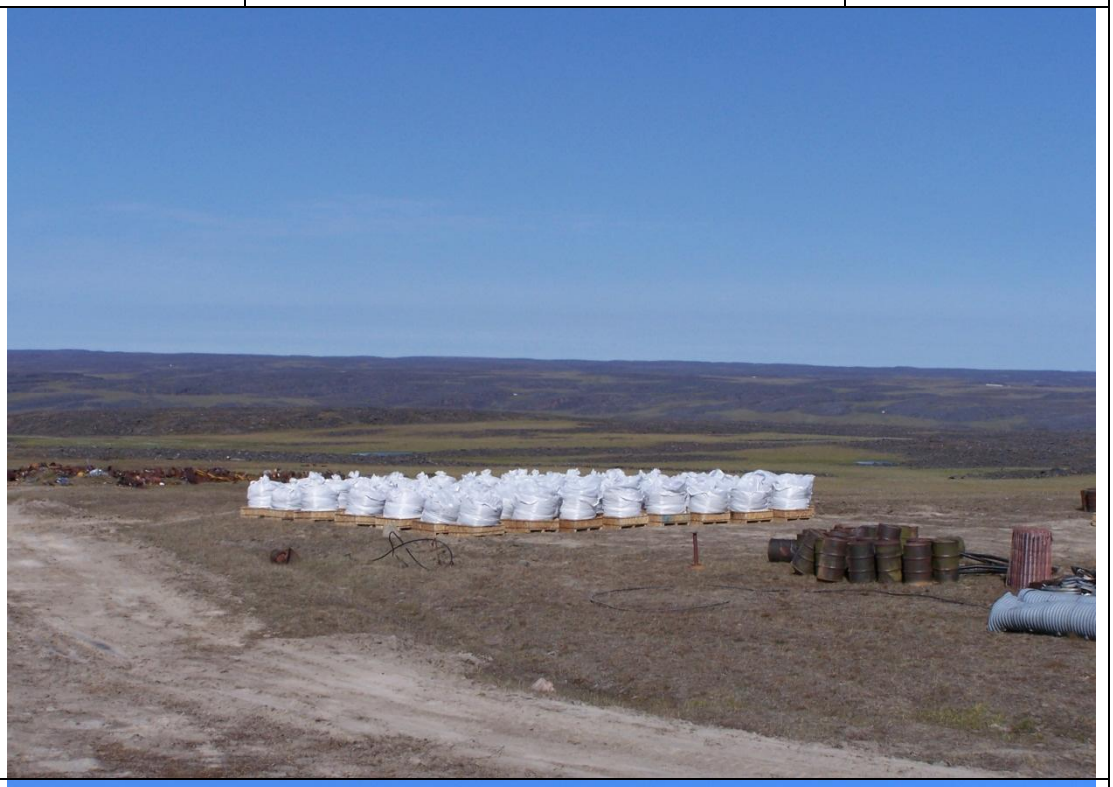


Photo No.	Date:
227	02-09-2010

Photo Direction:

Northwest

Description:

Secondary excavation at Pallet Line Contaminated area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
228	09-08-2010

Photo Direction:

West

Description:

Containerization of contaminated soil at Pallet Line Contaminated area



Photo No.	Date:
229	20-09-2010

Photo Direction:

West

Description:

Backfilling and reshaping Pallet Line Contaminated area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
230	06-07-2010

Photo Direction:

South

Description:

POL Contaminated area - before



Photo No.	Date:
231	31-07-2010

Photo Direction:

South

Description:

Excavation of POL Contaminated area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
232	30-07-2010

Photo Direction:

West

Description:

Excavation of POL Contaminated area



Photo No.	Date:
233	31-07-2010

Photo Direction:

West

Description:

Confirmatory sampling POL Contaminated excavated to design limits



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
234	31-08-2010

Photo Direction:

West

Description:

Soft and wet conditions during secondary excavation at POL Contaminated area

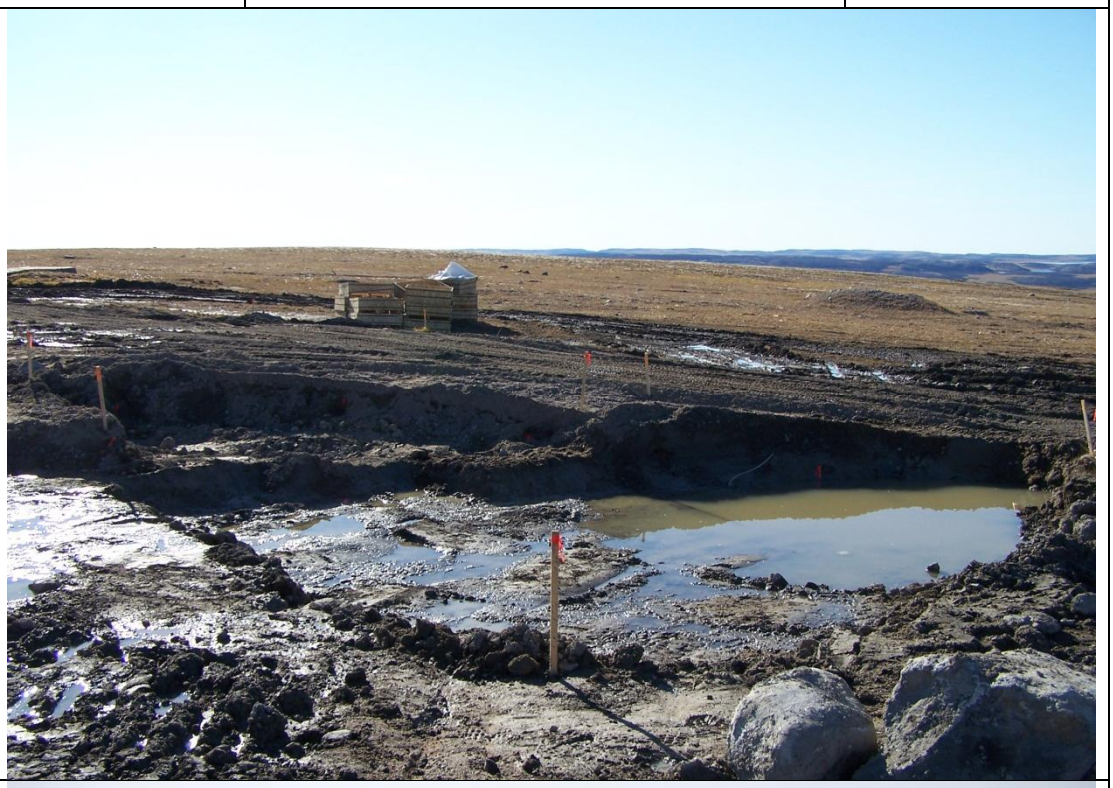


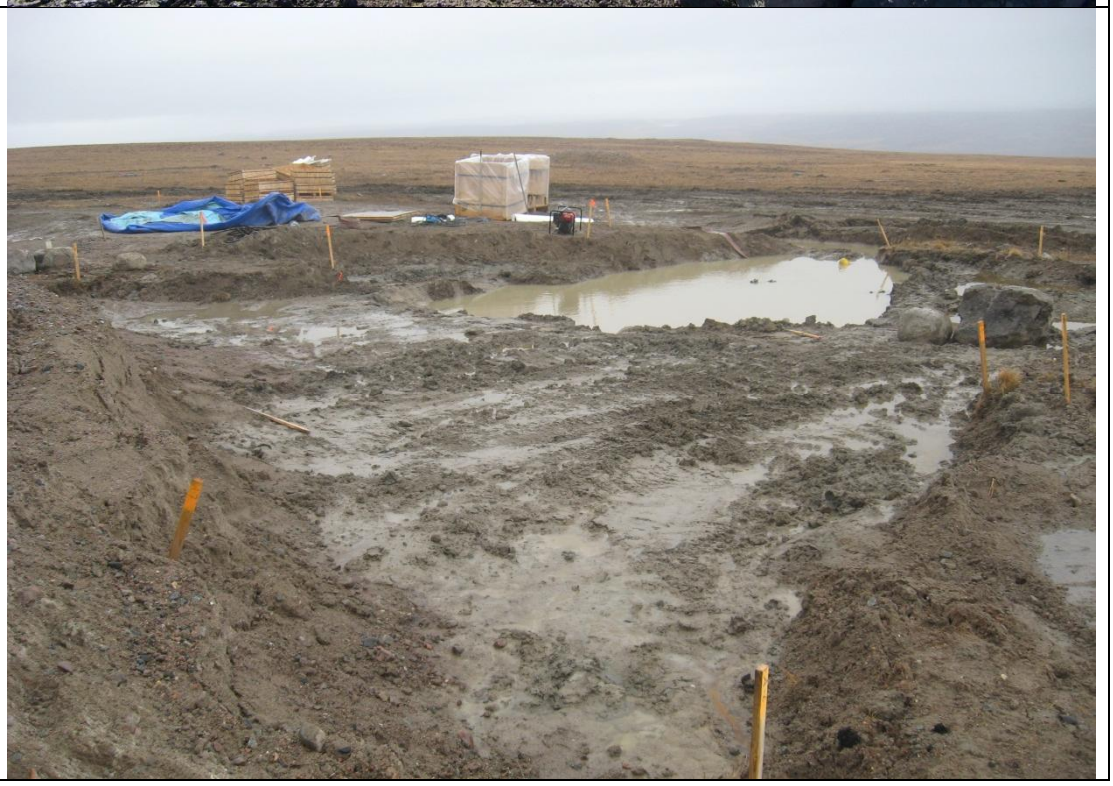
Photo No.	Date:
235	14-09-2010

Photo Direction:

West

Description:

Soft and wet conditions during tertiary excavation at POL Contaminated area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
236	10-09-2010

Photo Direction:

East

Description:

Preparing for tertiary excavation at POL Contaminated area



Photo No.	Date:
237	10-09-2010

Photo Direction:

East

Description:

Area requiring tertiary excavation at POL Contaminated area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
238	25-08-2005

Photo Direction:

Southeast

Description:

Airstrip Contaminated area - before



Photo No.	Date:
239	14-09-2011

Photo Direction:

Southeast

Description:

POL Contaminated area - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
240	28-07-2010

Photo Direction:

East

Description:

Confirmatory sampling Airstrip Contaminated area, excavated to design limits



Photo No.	Date:
241	10-08-2010

Photo Direction:

South

Description:

Secondary excavation at the Airstrip Contaminated area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
242	10-08-2010

Photo Direction:

Southeast

Description:

Stained area near Airstrip Contaminated area



Photo No.	Date:
243	07-09-2010

Photo Direction:

West

Description:

Excavation of stained area near Airstrip Contaminated area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
244	28-07-2010

Photo Direction:

N/A

Description:

Broken batteries at Airstrip



Photo No.	Date:
245	07-09-2010

Photo Direction:

North

Description:

Broken Batteries excavation at Airstrip



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
246	11-08-2010

Photo Direction:

East

Description:

Pallet Line Impacted area after excavation



Photo No.	Date:
247	02-09-2010

Photo Direction:

East

Description:

Pallet Line Impacted area after backfilling and reshaping



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
248	12-08-2010

Photo Direction:

West

Description:

Pallet Line Impacted area confirmatory sampling



Photo No.	Date:
249	02-09-2010

Photo Direction:

West

Description:

Pallet Line Impacted area after backfilling and reshaping



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
250	30-08-2005

Photo Direction:

East

Description:

Portable Fuel Tanks
Impacted area - before



Photo No.	Date:
251	18-09-2011

Photo Direction:

East

Description:

Portable Fuel Tanks
Impacted area - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
252	?-07-2010

Photo Direction:

Southwest

Description:

Portable Fuel Tanks
Impacted area - before



Photo No.	Date:
253	18-09-2011

Photo Direction:

Southwest

Description:

Portable Fuel Tanks
Impacted area - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
254	02-09-2010

Photo Direction:

Southeast

Description:

Secondary excavation to permafrost at Portable Fuel Tanks Impacted area



Photo No.	Date:
255	03-09-2010

Photo Direction:

Southwest

Description:

Tertiary excavation in Portable Fuel Tanks Impacted area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
256	10-09-2010

Photo Direction:

Southwest

Description:

Saturated soil filling in Portable Fuel Tanks Impacted excavation



Photo No.	Date:
257	20-09-2010

Photo Direction:

Southwest

Description:

Portable Fuel Tanks Impacted area after backfilling and reshaping



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
258	27-08-2005

Photo Direction:

Southeast

Description:

POL Impacted area - before



Photo No.	Date:
259	18-09-2011

Photo Direction:

Southeast

Description:

POL Impacted area - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
260	30-08-2005

Photo Direction:

South

Description:

POL Impacted area - before



Photo No.	Date:
261	18-09-2011

Photo Direction:

South

Description:

POL Impacted area - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
262	17-07-2011

Photo Direction:

East

Description:

Excavation of POL Impacted soil to permafrost



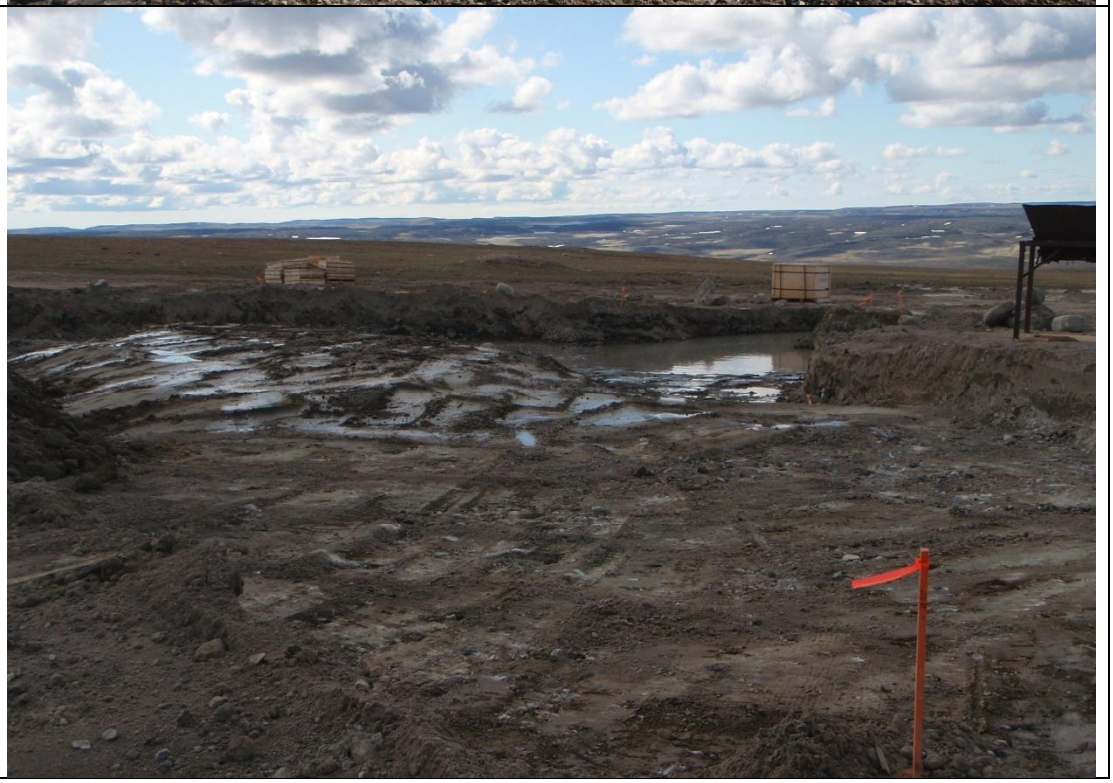
Photo No.	Date:
263	17-07-2011

Photo Direction:

West

Description:

Excavation of POL Impacted soil to design limits



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
264	17-07-2011

Photo Direction:

Southeast

Description:

Permafrost melt water collecting in POL Impacted excavation



Photo No.	Date:
265	26-07-2011

Photo Direction:

Northwest

Description:

Discharging (tested) contact water from POL Impacted excavation



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
266	27-07-2011

Photo Direction:

Northwest

Description:

Secondary excavation, and preliminary backfilling, of POL Impacted area

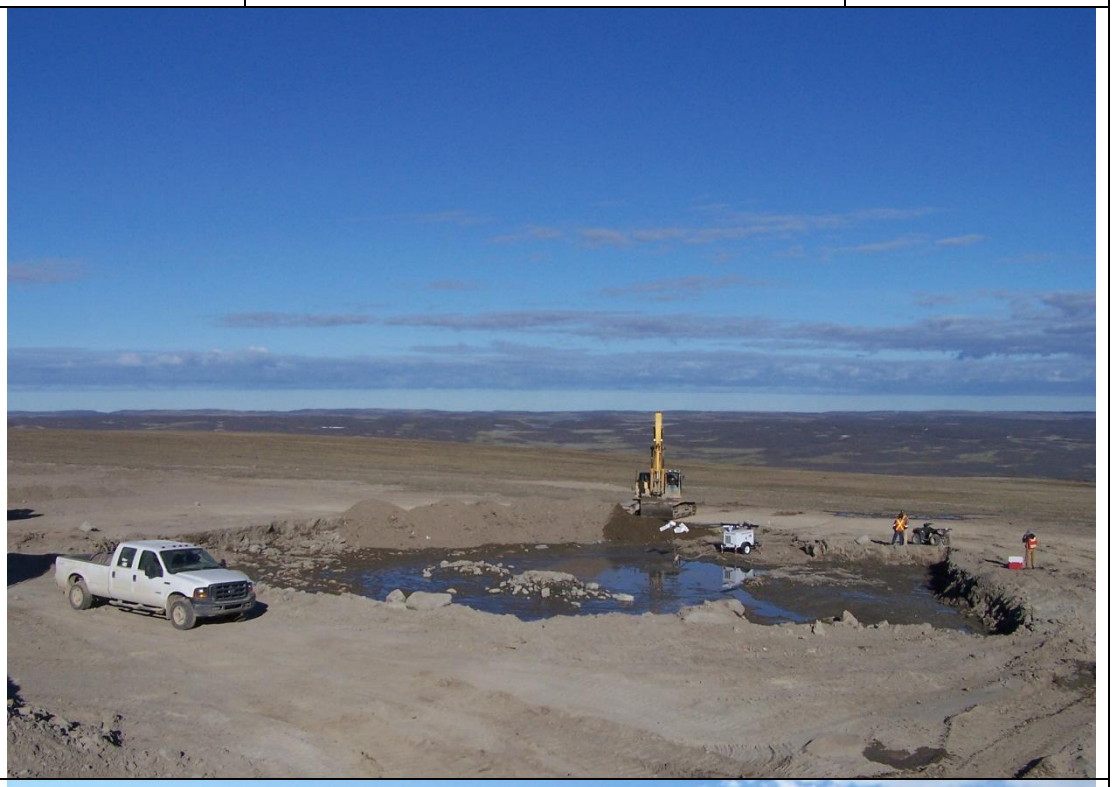


Photo No.	Date:
267	22-08-2011

Photo Direction:

Northwest

Description:

POL Impacted area after backfilling and reshaping



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
268	10-07-2010

Photo Direction:

Northeast

Description:

POL Impacted area - before



Photo No.	Date:
269	31-07-2010

Photo Direction:

Northeast

Description:

Excavation of Burn Pit Impacted soil to design limits



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
270	12-08-2010

Photo Direction:

North

Description:

Area requiring secondary excavation at Burn Pit Impacted area



Photo No.	Date:
271	12-08-2010

Photo Direction:

North

Description:

Secondary excavation of Burn Pit Impacted area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
272	12-08-2010

Photo Direction:

North

Description:

Containerization of contaminated soil from Burn Pit excavation



Photo No.	Date:
273	06-09-2010

Photo Direction:

North

Description:

Burn Pit excavation after backfilling and reshaping



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
274	18-07-2010

Photo Direction:

West

Description:

Garage Impacted area - before



Photo No.	Date:
275	26-08-2010

Photo Direction:

Northwest

Description:

Confirmatory sampling Garage Impacted area following excavation to design limits



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
276	03-09-2010

Photo Direction:

Southwest

Description:

Test pitting at Garage Impacted area



Photo No.	Date:
277	16-09-2010

Photo Direction:

North

Description:

Test pit investigation at Garage Impacted area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
278	21-09-2010

Photo Direction:

South

Description:

Garage Impacted area
September 21, 2010



Photo No.	Date:
279	07-07-2011

Photo Direction:

South

Description:

Garage Impacted area
July 7, 2011



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
280	18-07-2011

Photo Direction:

West

Description:

Excavation of the Garage Impacted area to the redesign limits



Photo No.	Date:
281	25-07-2011

Photo Direction:

Northeast

Description:

Pumping contact water from Garage Impacted excavation



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
282	25-07-2011

Photo Direction:

East

Description:

Secondary excavation, through permafrost, at the Garage Impacted area



Photo No.	Date:
283	25-07-2011

Photo Direction:

Southeast

Description:

Secondary excavation, through permafrost, at the Garage Impacted area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
284	15-08-2011

Photo Direction:

Southwest

Description:

Areas requiring tertiary excavation at the Garage Impacted area

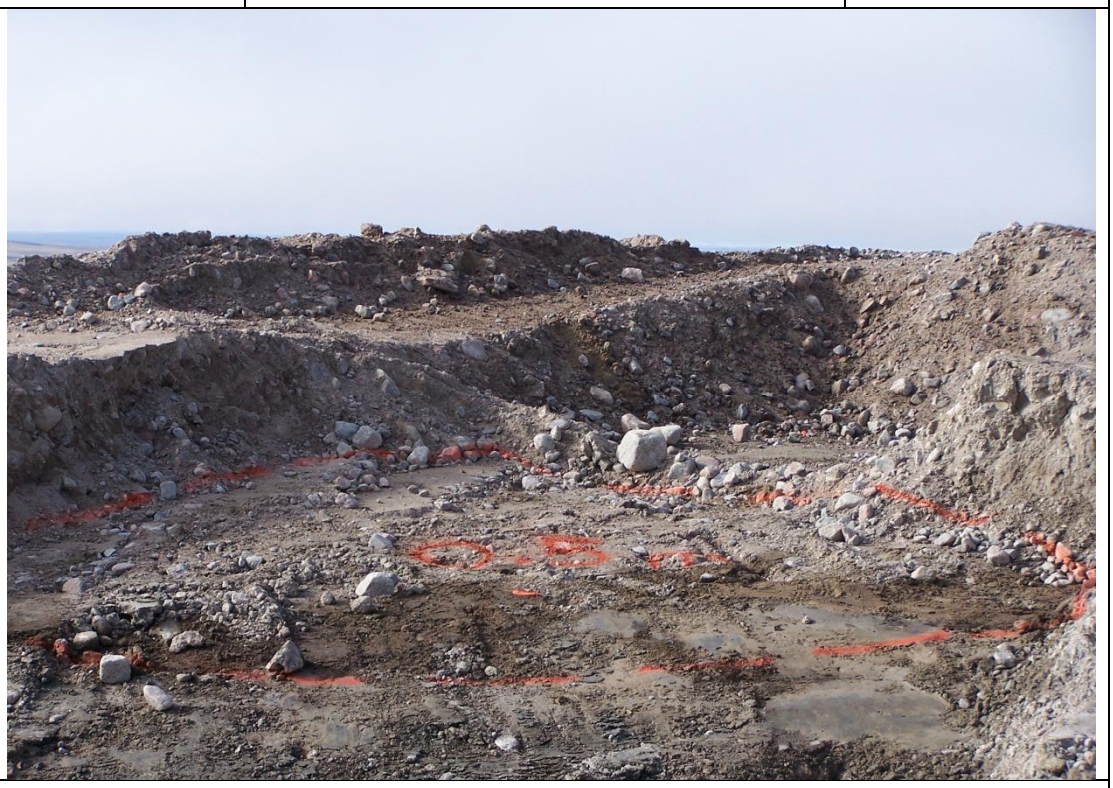


Photo No.	Date:
285	15-08-2011

Photo Direction:

Southwest

Description:

Tertiary excavation at the Garage Impacted area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
286	18-07-2010

Photo Direction:

North

Description:

Electrical Cabinets Contaminated area - before



Photo No.	Date:
287	31-07-2010

Photo Direction:

Northeast

Description:

Electrical Cabinets Contaminated area excavation to design limits



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
288	06-07-2010

Photo Direction:

West

Description:

Plumber's Dump



Photo No.	Date:
289	31-08-2010

Photo Direction:

West

Description:

Collecting confirmatory samples at Plumber's Dump



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
290	25-08-2005

Photo Direction:

North

Description:

Outfall Contaminated area - before



Photo No.	Date:
291	18-09-2011

Photo Direction:

North

Description:

Outfall Contaminated area - after



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
292	30-08-2005

Photo Direction:

Southeast

Description:

Outfall Contaminated area - before



Photo No.	Date:
293	28-07-2010

Photo Direction:

Southeast

Description:

Outfall Contaminated area excavation to design limits



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
294	14-07-2011

Photo Direction:

N/A

Description:

Main Dump battery excavation



Photo No.	Date:
295	02-07-2011

Photo Direction:

Southwest

Description:

Construction and preparation of the PHC Soil Treatment area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
296	07-07-2011

Photo Direction:

East

Description:

PHC Soil Treatment signage, installed on all four sides



Photo No.	Date:
297	15-08-2011

Photo Direction:

East

Description:

Aeration treatment of the PHC impacted soils



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
298	28-08-2005

Photo Direction:

West

Description:

Borrow Area No. 2 - before



Photo No.	Date:
299	08-08-2010

Photo Direction:

West

Description:

Borrow Area No. 2 during strip and thaw activities associated with granular material production



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
300	23-09-2011

Photo Direction:

West

Description:

Borrow Area No. 2 – one year after restoration



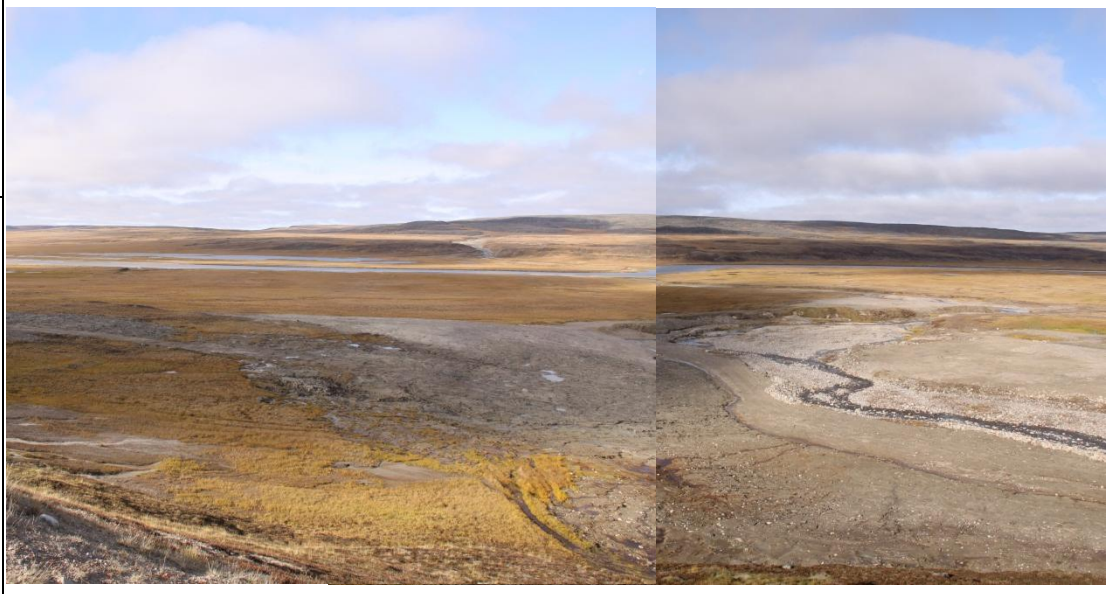
Photo No.	Date:
301	05-09-2012

Photo Direction:

West

Description:

Borrow Area No. 2 – two years after restoration



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
302	28-08-2005

Photo Direction:

West

Description:

Borrow Area No. 2 - before

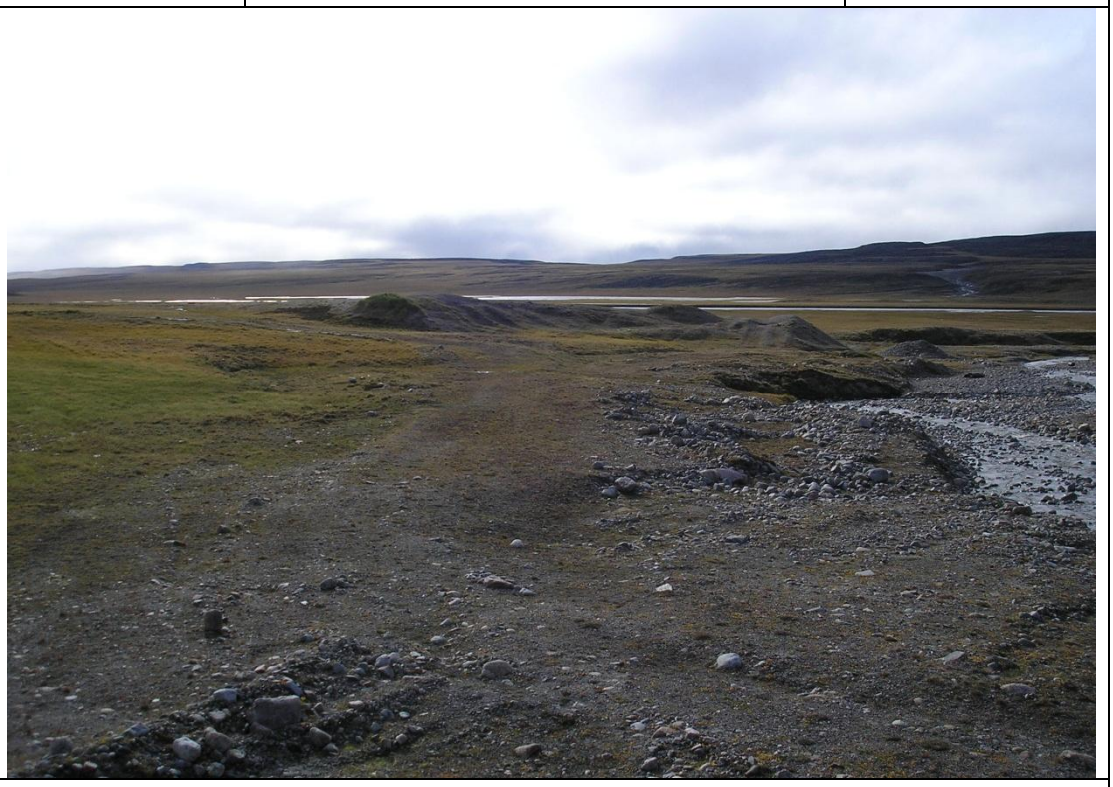


Photo No.	Date:
303	05-09-2012

Photo Direction:

West

Description:

Borrow Area No. 2 – after restoration



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
304	21-07-2010

Photo Direction:

West

Description:

Strip and thaw activities at Borrow Area No. 2



Photo No.	Date:
305	23-09-2011

Photo Direction:

West

Description:

Borrow Area No. 2 – after restoration



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
306	10-07-2010

Photo Direction:

South

Description:

Stockpiling granular material in Borrow Area No. 2



Photo No.	Date:
307	11-07-2010

Photo Direction:

West

Description:

Perimeter berm installed during quarrying to prevent melt water and precipitation runoff from draining immediately in to the adjacent stream



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
308	13-07-2010

Photo Direction:

West

Description:

Hauling Type 2 material from Borrow Area No. 2



Photo No.	Date:
309	24-07-2011

Photo Direction:

Southwest

Description:

Sloped drainage installed within Borrow Area No. 2 during restoration activities



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
310	05-07-2010

Photo Direction:

South

Description:

Test pitting in Borrow Area No. 2, 40 m South of the stream



Photo No.	Date:
311	07-07-2010

Photo Direction:

South

Description:

Test pitting in Borrow Area No. 2, approximately 100 m South of the stream



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
312	11-08-2010

Photo Direction:

Northeast

Description:

Type 2 stockpile on North side of the stream, awaiting transport to the NHWL



Photo No.	Date:
313	14-08-2010

Photo Direction:

East

Description:

Backfilling Borrow Area No. 2 with sand during restoration activities



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
314	04-09-2010

Photo Direction:

Northwest

Description:

Collecting boulders from the side of the haul road, to be used as rip rap for the restoration of Borrow Area No. 2



Photo No.	Date:
315	11-09-2010

Photo Direction:

Southwest

Description:

Stream bank armoured with riprap to deflect flow away from Borrow Area No. 2



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
316	13-09-2010

Photo Direction:

West

Description:

Check-dams installed at the western boundary of Borrow Area No. 2



Photo No.	Date:
317	13-09-2010

Photo Direction:

West

Description:

Precipitation draining parallel to the stream, and towards the series of check dams prior to reaching the stream



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
318	12-09-2010

Photo Direction:

Southwest

Description:

Removing the stream crossing access to Borrow Area No. 2



Photo No.	Date:
319	13-09-2010

Photo Direction:

Southwest

Description:

Stream crossing removed



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
320	01-04-2011

Photo Direction:

N/A

Description:

Community Meeting in Gjoa Haven, NU



Photo No.	Date:
321	04-09-2012

Photo Direction:

N/A

Description:

Community Meeting in Kugaaruk, NU



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
322	04-09-2012

Photo Direction:

N/A

Description:

Community Meeting in Kugaaruk, NU



Photo No.	Date:
323	05-09-2012

Photo Direction:

N/A

Description:

Community Meeting in Taloyoak, NU



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
324	03-08-2010

Photo Direction:

South

Description:

Arctic ground squirrel (Sik-sik)



Photo No.	Date:
325	04-04-2011

Photo Direction:

Southwest

Description:

Wolves Southwest of CAM-D camp during 2011 CAT train



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
326	04-04-2011

Photo Direction:

West

Description:

Wolf near CAM-D camp during 2011 CAT train



Photo No.	Date:
327	09-07-2011

Photo Direction:

South

Description:

Herd of caribou South of CAM-D airstrip



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
328	26-07-2011

Photo Direction:

unknown

Description:

Arctic fox with Sik-sik in his mouth



Photo No.	Date:
329	17-08-2011

Photo Direction:

North

Description:

Caribou passing through the CAM-D area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
330	12-09-2011

Photo Direction:

South

Description:

Arctic foxes near the CAM-D site

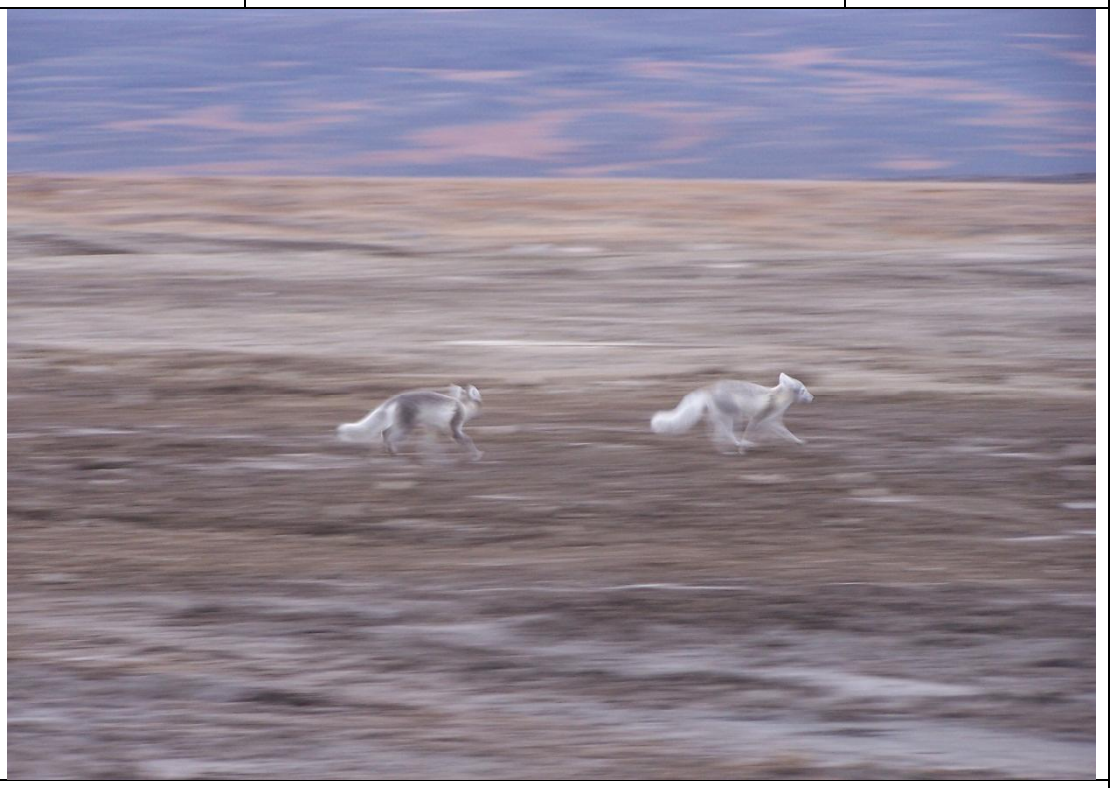


Photo No.	Date:
331	18-09-2011

Photo Direction:

North

Description:

Rough-legged hawk, between the CAM-D Site and Borrow Area No. 2



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
332	03-04-2012

Photo Direction:

Southeast

Description:

Arctic fox with lemming captured from beneath the snow, along the CAT train route



Photo No.	Date:
333	06-08-2010

Photo Direction:

Southwest

Description:

Caribou passing through Borrow Area No. 2



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
334	08-08-2010

Photo Direction:

South

Description:

Caribou feeding in ponds adjacent to the Main Barrel Cache



Photo No.	Date:
335	08-08-2010

Photo Direction:

Northwest

Description:

Caribou near the CAM-D camp



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
336	10-08-2010

Photo Direction:

Southeast

Description:

Caribou and fawn along the haul road, between the CAM-D site and Borrow Area No. 2



Photo No.	Date:
337	21-09-2011

Photo Direction:

North

Description:

Sik-sik looking for shelter as the CAM-D camp is disassembled and prepared for demobilization



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
338	04-09-2010

Photo Direction:

Southeast

Description:

CAM-D PCB Storage Area inspection



Photo No.	Date:
339	04-09-2010

Photo Direction:

N/A

Description:

Marine container marked with PCB signage



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
340	06-09-2010

Photo Direction:

Southeast

Description:

Main station TSA and PCB storage area, South of the NHWL



Photo No.	Date:
341	02-04-2011

Photo Direction:

Northeast

Description:

Temporary PCB storage area at Shepherd Bay



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
342	05-09-2011

Photo Direction:

Southeast

Description:

CAM-D PCB Storage Area



Photo No.	Date:
343	22-09-2011

Photo Direction:

East

Description:

CAM-D PCB Storage Area with signage on containers



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
344	23-09-2011

Photo Direction:

North

Description:

Temporary storage area at the CAM-D camp, during preparation for final demobilization



Photo No.	Date:
345	23-09-2011

Photo Direction:

Northeast

Description:

Barrels containing waste liquids (foreground) from processing activities, in the CAM-D temporary storage area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
346	23-09-2011

Photo Direction:

Southwest

Description:

Superbags with contaminated soil, in the CAM-D temporary storage area



Photo No.	Date:
347	07-09-2012

Photo Direction:

South

Description:

Superbags with contaminated soil, marked and prepared for shipment from the Shepherd Bay temporary storage area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
348	07-09-2012

Photo Direction:

West

Description:

Barrels, marked and prepared for shipment from the Shepherd Bay temporary storage area



Photo No.	Date:
349	09-09-2012

Photo Direction:

Southeast

Description:

Wooden boxes with batteries, marked and prepared for shipment from the Shepherd Bay temporary storage area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
350	?-09-2011

Photo Direction:

South

Description:

Restoring the CAM-D camp area



Photo No.	Date:
351	?-09-2011

Photo Direction:

North

Description:

Restoring the CAM-D camp area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
352	20-09-2011

Photo Direction:

Northwest

Description:

Dismantling the Habatiflex (dining) building



Photo No.	Date:
353	20-09-2011

Photo Direction:

Northwest

Description:

Dismantling the Habatiflex (dining) building



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
354	20-09-2011

Photo Direction:

West

Description:

Dismantling the camp and arranging containers in preparation for the final demobilization CAT train



Photo No.	Date:
355	23-09-2011

Photo Direction:

South

Description:

Packing containers in preparation for the final demobilization CAT train



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
356	02-04-2011

Photo Direction:

North

Description:

Shepherd Bay camp during 2011 CAT train



Photo No.	Date:
357	04-04-2011

Photo Direction:

Northeast

Description:

Superbags containing contaminated soil, prepared for the CAT train haul from CAM-D to Shepherd Bay



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
358	03-04-2012

Photo Direction:

West

Description:

CAT train shipment containing barrels with waste liquids



Photo No.	Date:
359	03-04-2012

Photo Direction:

East

Description:

Load of barrels with waste liquids, prepared for CAT train haul from CAM-D camp to Shepherd Bay



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
360	03-04-2012

Photo Direction:

East

Description:

Loading barrels containing waste liquids, at the CAM-D camp



Photo No.	Date:
361	06-04-2012

Photo Direction:

Southwest

Description:

CAM-D temporary camp for the 2012 CAT train



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
362	10-04-2012

Photo Direction:

North

Description:

Equipment that was demobilized to Kugaaruk, NU

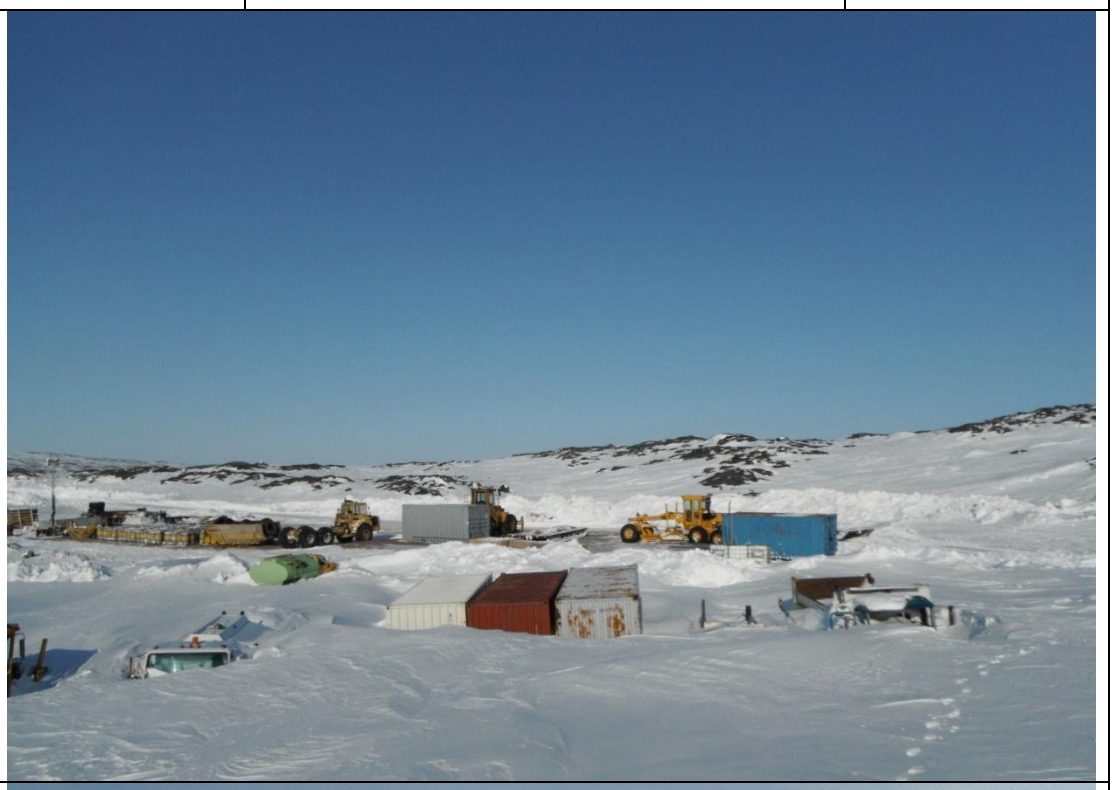


Photo No.	Date:
363	11-04-2012

Photo Direction:

East

Description:

CAT train route between CAM-D and Kugaaruk, NU



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
364	12-04-2012

Photo Direction:

North

Description:

CAM-D temporary camp burn bin, during the 2012 CAT train



Photo No.	Date:
365	15-04-2012

Photo Direction:

Northwest

Description:

Shepherd Bay barrel storage area, during the 2012 CAT train



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
366	07-09-2012

Photo Direction:

West

Description:

Soil boxes containing contaminated soil, prepared for shipment



Photo No.	Date:
367	07-09-2012

Photo Direction:

Northwest

Description:

Dismantling the Shepherd Bay camp, and preparing for final sealift demobilization



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
368	09-09-2012

Photo Direction:

Northwest

Description:

Preparing for final sealift demobilization from Shepherd Bay



Photo No.	Date:
369	14-09-2012

Photo Direction:

West

Description:

Barging equipment to the ship



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
370	14-09-2012

Photo Direction:

West

Description:

Barging contaminated soil bags and soil boxes to the ship



Photo No.	Date:
371	15-09-2012

Photo Direction:

West

Description:

Shepherd Bay camp area with demobilization nearly completed



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
372	15-09-2012

Photo Direction:

N/A

Description:

Hoisting fuel drums from the barge to the ship



Photo No.	Date:
373	16-09-2012

Photo Direction:

Southeast

Description:

Shepherd Bay camp area at final departure



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
374	05-09-2012

Photo Direction:

East

Description:

NHWL and CAM-D site area

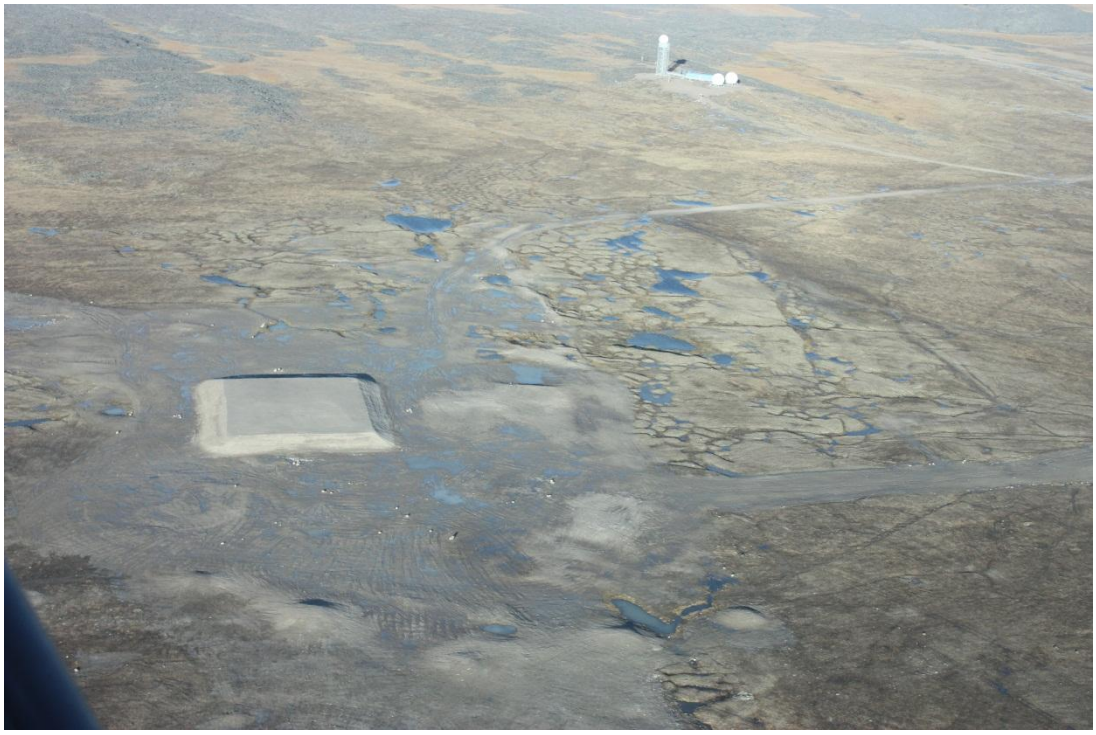


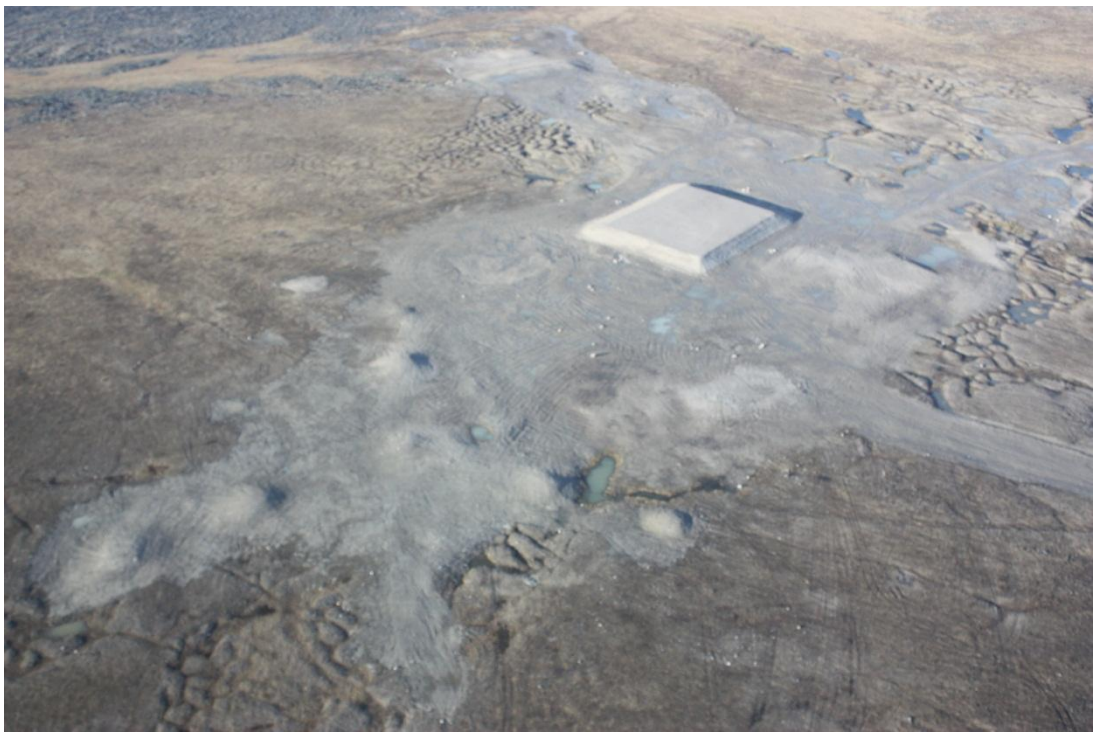
Photo No.	Date:
375	05-09-2012

Photo Direction:

Northeast

Description:

NHWL and CAM-D site area



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
376	05-09-2012

Photo Direction:

South

Description:

CAM-D camp area, and Borrow Area No. 2



Photo No.	Date:
377	05-09-2013

Photo Direction:

South

Description:

Burning unpainted/untreated wood, and collecting non-combustible debris, at the CAM-D camp during the final inspection



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
378	22-07-2010

Photo Direction:

South

Description:

Marine Container 01 (374 666 7) - PCBs / lead contaminated painted steel and wood from the garage



Photo No.	Date:
379	22-07-2010

Photo Direction:

South

Description:

Marine Container 01 (374 666 7) - PCBs / lead contaminated painted steel and wood from the garage



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
380	24-07-2010

Photo Direction:

South

Description:

Marine Container 02 (260 968 5) - PCBs / lead contaminated painted steel from the garage



Photo No.	Date:
381	24-07-2010

Photo Direction:

South

Description:

Marine Container 02 (260 968 5) - PCBs / lead contaminated painted steel from the garage



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
382	27-09-2010

Photo Direction:

N/A

Description:

Marine Container 03 (372 197 2) - PCBs/Lead contaminated painted steel structure from the garage



Photo No.	Date:
383	unknown

Photo Direction:

N/A

Description:

Marine Container 03 (372 197 2) - PCBs/Lead contaminated painted steel structure from the garage



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
384	27-09-2010

Photo Direction:

N/A

Description:

Marine Container 04 (220 915 7) - CBs/Lead contaminated painted steel structure from the garage



Photo No.	Date:
385	27-09-2010

Photo Direction:

N/A

Description:

Marine Container 04 (220 915 7) - PCBs/Lead contaminated painted steel structure from the garage



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
386	24-09-2010

Photo Direction:

N/A

Description:

Marine Container 05 (245 141 8) - module train dispersed painted debris (lead / PCBs); 1 barrel filled with 2 PCB transformers; 1 barrel filled with 2 dry transformers + ballasts, capacitors; 1 box 6'x4'x4' filled with paint chips and concrete chips from garage floor and Tyvek suits used in garage demolition



Photo No.	Date:
387	24-09-2010

Photo Direction:

South

Description:

Marine Container 05 (245 141 8) - module train dispersed painted debris (lead / PCBs); 1 barrel filled with 2 PCB transformers; 1 barrel filled with 2 dry transformers + ballasts, capacitors; 1 box 6'x4'x4' filled with paint chips and concrete chips from garage floor and Tyvek suits used in garage demolition



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
388	25-08-2011

Photo Direction:

N/A

Description:

Marine Container 06 (2577685) - Dispersed painted debris (PAP)



Photo No.	Date:
389	25-08-2011

Photo Direction:

N/A

Description:

Marine Container 06 (2577685) - Dispersed painted debris (PAP)



PHOTOGRAPHIC RECORD

Site Name:	Site Location:	Project No.
CAM-D	Simpson Lake, NU	60149115

Photo No.	Date:
390	29-08-2011

Photo Direction:

South

Description:

Marine Container 07 (2587764) - POL tank No.5



Photo No.	Date:
391	29-08-2011

Photo Direction:

N/A

Description:

Marine Container 07 (2587764) - POL tank No.5



Appendix D

Geotechnical Data Summary

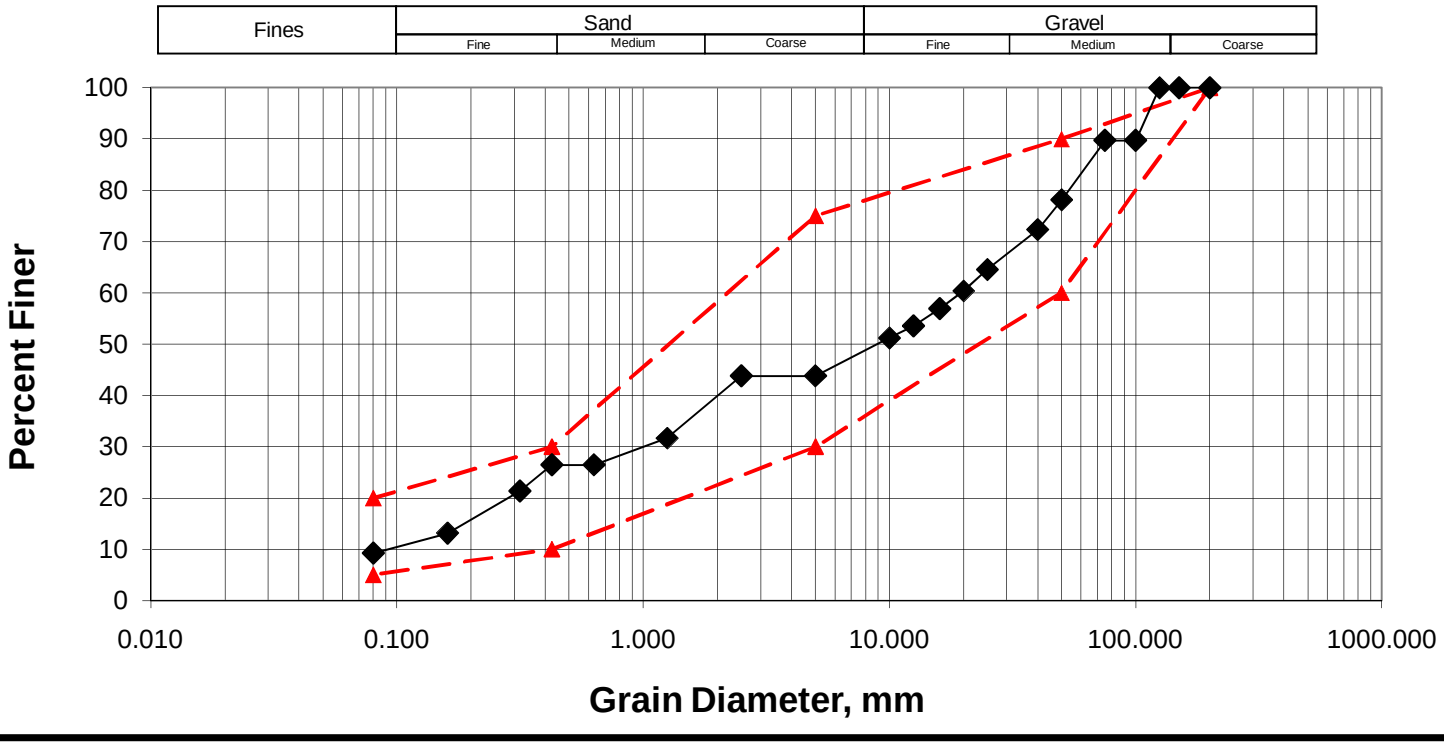
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-01
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	14-Jul-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	89.7	
75.0	-	89.7	
50.0	-	78.1	60 - 90
40.0	-	72.4	
25.0	-	64.6	
16.0	-	56.9	
12.5	-	53.6	
10.0	-	51.2	
5.0	-	43.8	30 - 75
2.50	-	43.8	
1.250	-	31.7	
0.630	-	26.5	
0.425	-	26.5	10 - 30
0.315	-	21.3	
0.160	-	13.1	
0.080	-	9.2	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



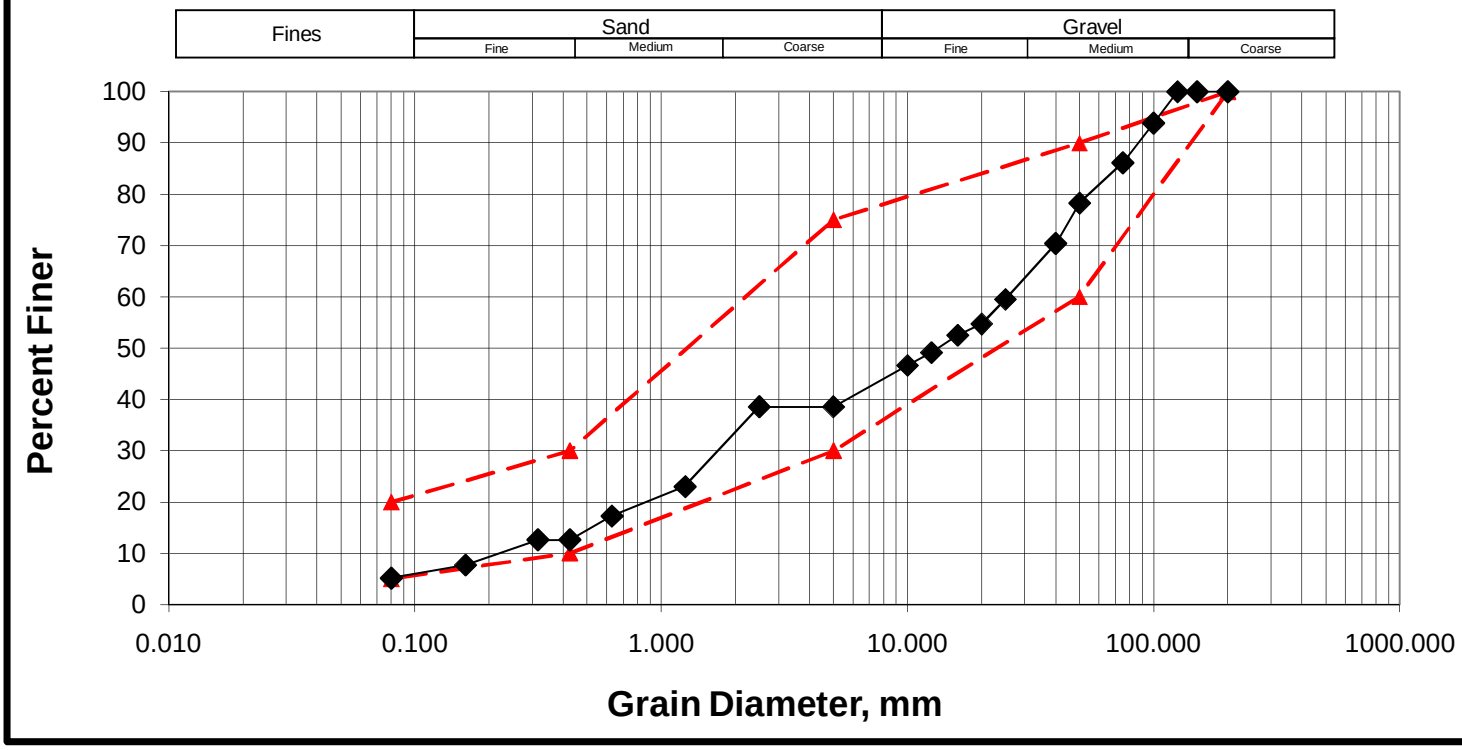
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-02
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	16-Jul-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	93.9	
75.0	-	86.2	
50.0	-	78.3	60 - 90
40.0	-	70.4	
25.0	-	59.5	
16.0	-	52.5	
12.5	-	49.1	
10.0	-	46.6	
5.0	-	38.6	30 - 75
2.50	-	38.6	
1.250	-	23.0	
0.630	-	17.3	
0.425	-	12.6	10 - 30
0.315	-	12.6	
0.160	-	7.7	
0.080	-	5.2	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



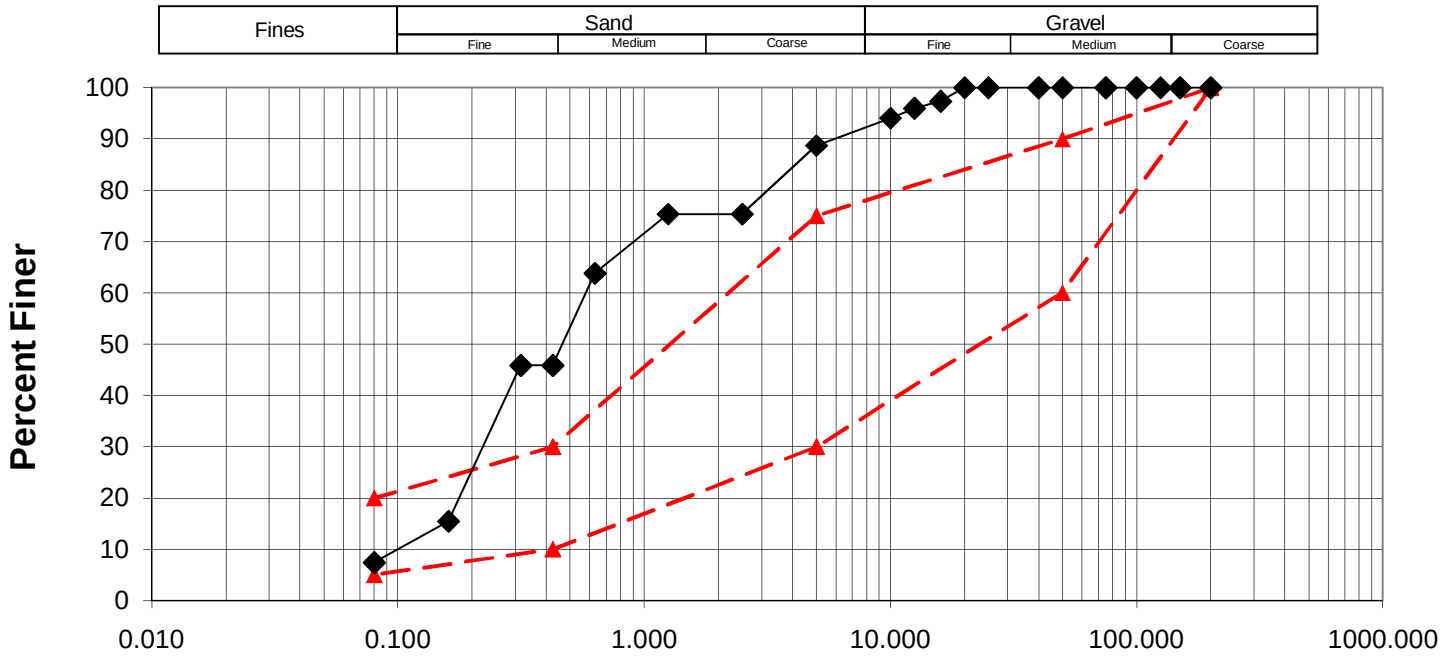
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-03
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	16-Jul-10	Sample Description:	Proposed filler sand

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	100.0	
50.0	-	100.0	60 - 90
40.0	-	100.0	
25.0	-	100.0	
16.0	-	97.4	
12.5	-	96.0	
10.0	-	94.1	
5.0	-	88.7	30 - 75
2.50	-	75.4	
1.250	-	75.4	
0.630	-	63.8	
0.425	-	45.9	10 - 30
0.315	-	45.9	
0.160	-	15.5	
0.080	-	7.4	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



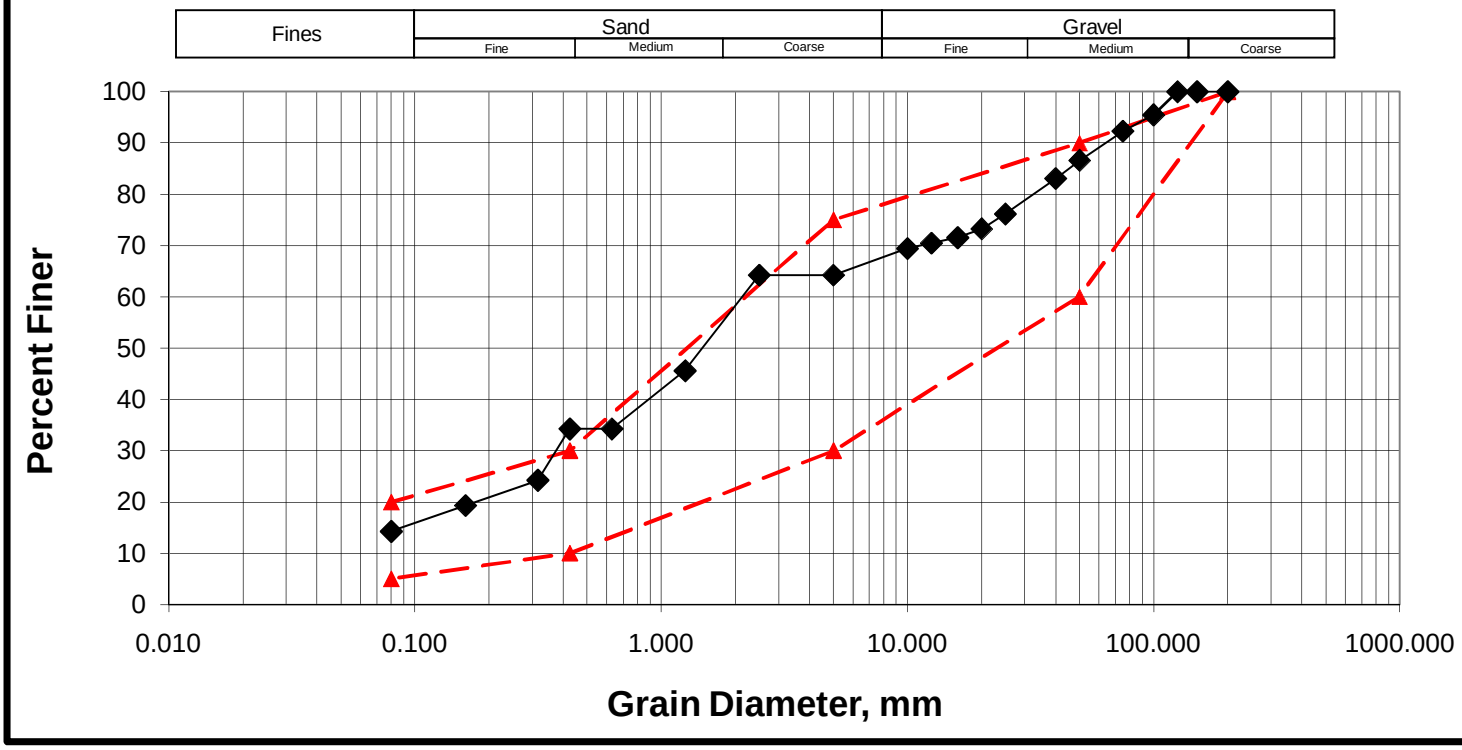
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-04
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	20-Jul-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	95.5	
75.0	-	92.3	
50.0	-	86.6	60 - 90
40.0	-	83.1	
25.0	-	76.2	
16.0	-	71.5	
12.5	-	70.5	
10.0	-	69.4	
5.0	-	64.2	30 - 75
2.50	-	64.2	
1.250	-	45.6	
0.630	-	34.3	
0.425	-	34.3	10 - 30
0.315	-	24.2	
0.160	-	19.3	
0.080	-	14.3	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



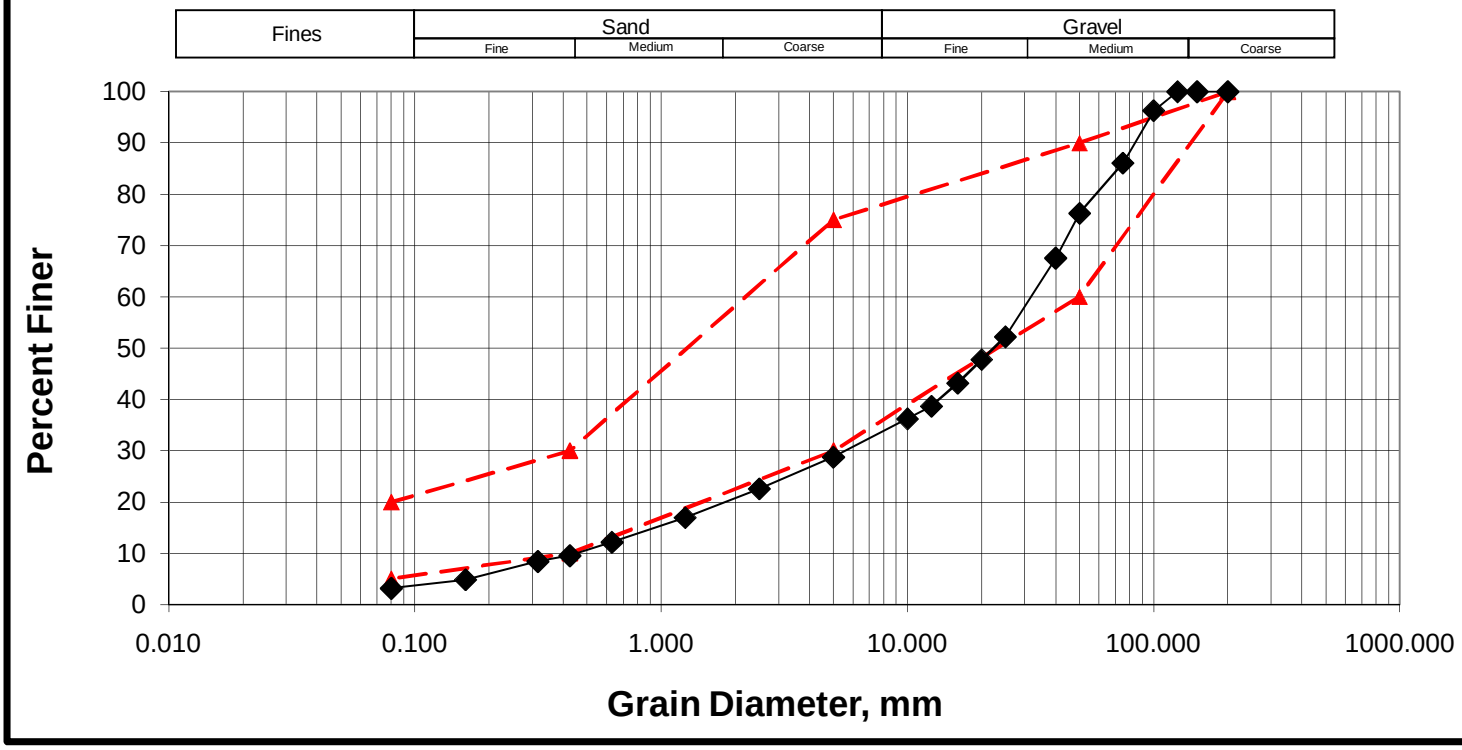
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-05
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	27-Jul-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	96.3	
75.0	-	86.1	
50.0	-	76.3	60 - 90
40.0	-	67.6	
25.0	-	52.2	
16.0	-	43.2	
12.5	-	38.7	
10.0	-	36.2	
5.0	-	28.8	30 - 75
2.50	-	22.6	
1.250	-	17.0	
0.630	-	12.2	
0.425	-	9.6	10 - 30
0.315	-	8.4	
0.160	-	4.9	
0.080	-	3.2	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



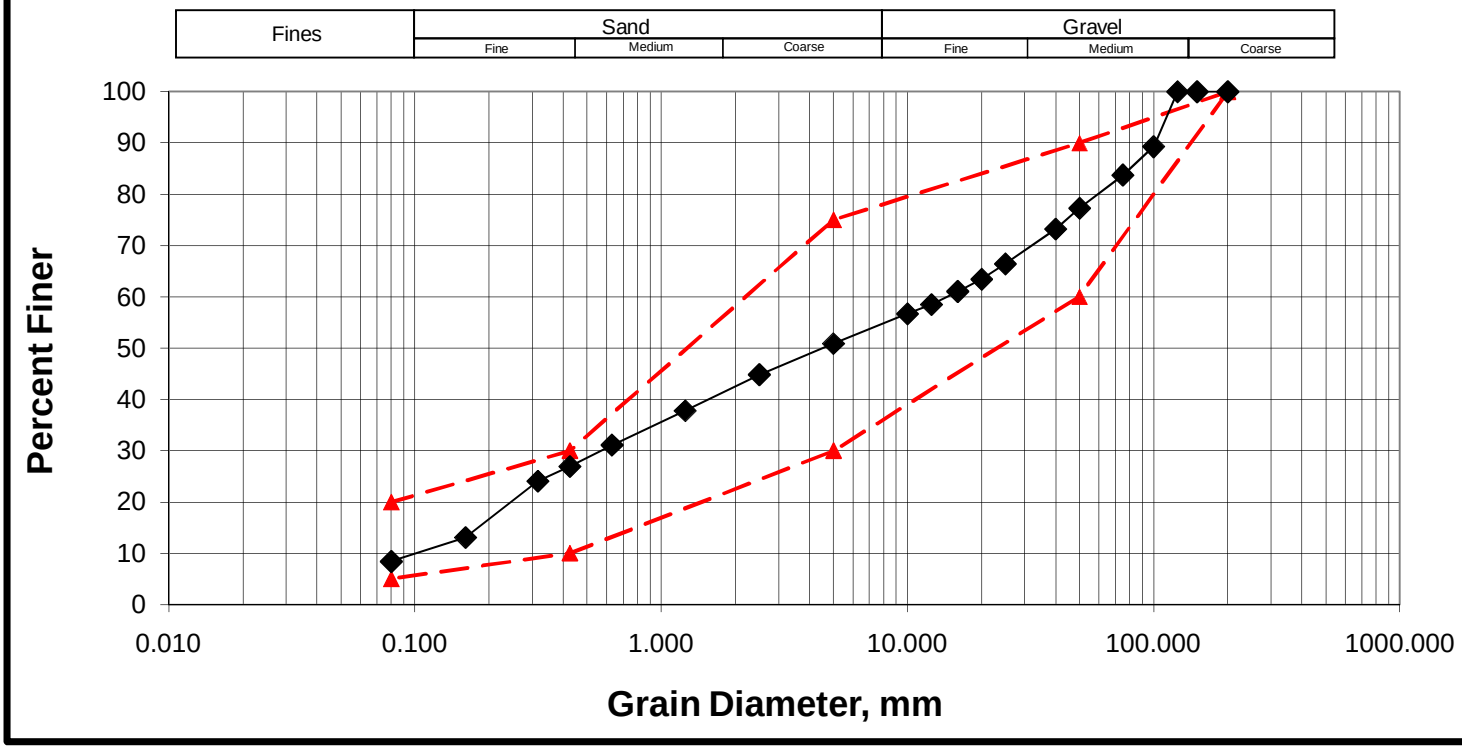
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-06
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	14-Jul-10	Sample Description:	Type 2 Material - Blended

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	89.3	
75.0	-	83.8	
50.0	-	77.3	60 - 90
40.0	-	73.2	
25.0	-	66.4	
16.0	-	61.0	
12.5	-	58.5	
10.0	-	56.7	
5.0	-	50.9	30 - 75
2.50	-	44.8	
1.250	-	37.8	
0.630	-	31.1	
0.425	-	26.9	10 - 30
0.315	-	24.1	
0.160	-	13.1	
0.080	-	8.4	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



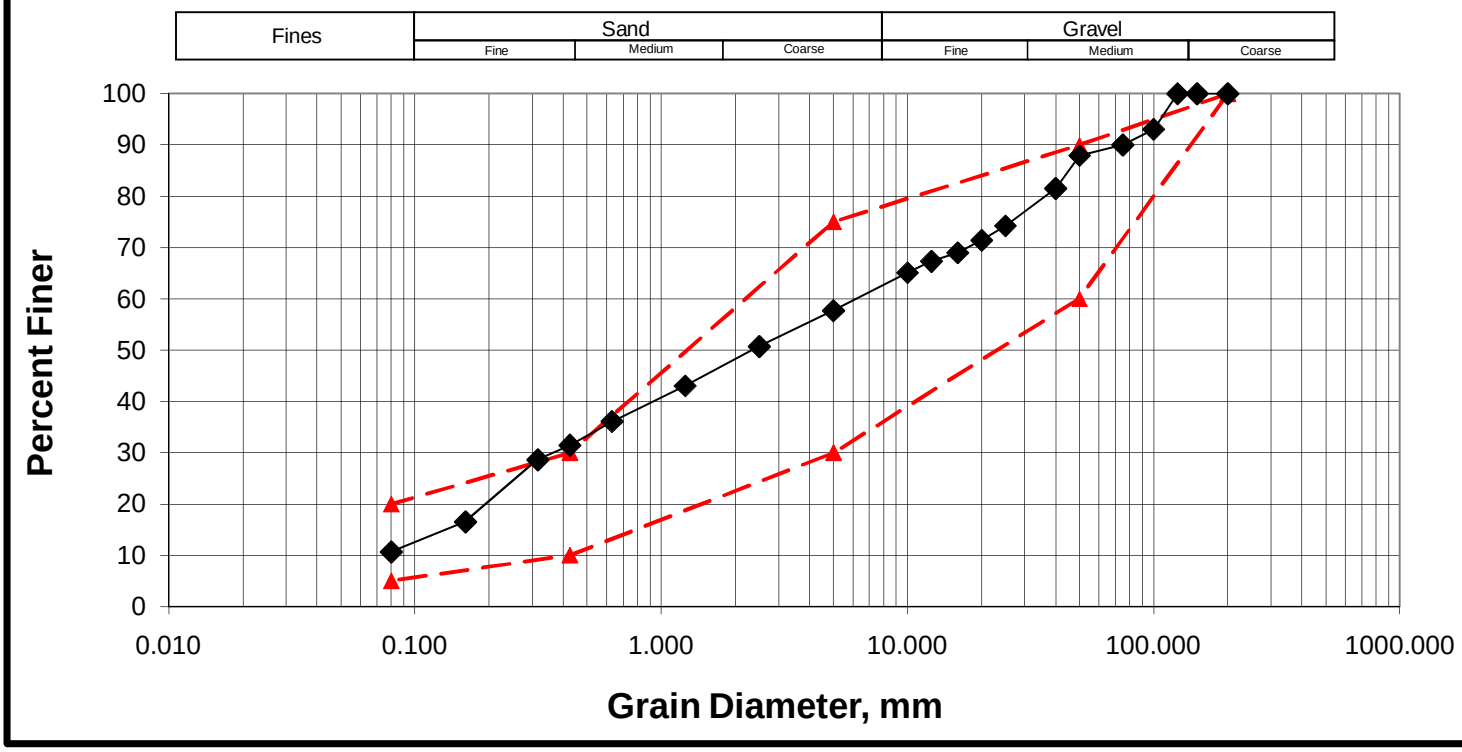
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-07
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	29-Jul-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	93.1	
75.0	-	90.0	
50.0	-	87.9	60 - 90
40.0	-	81.5	
25.0	-	74.2	
16.0	-	69.0	
12.5	-	67.4	
10.0	-	65.1	
5.0	-	57.7	30 - 75
2.50	-	50.7	
1.250	-	43.1	
0.630	-	36.1	
0.425	-	31.5	10 - 30
0.315	-	28.6	
0.160	-	16.5	
0.080	-	10.7	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



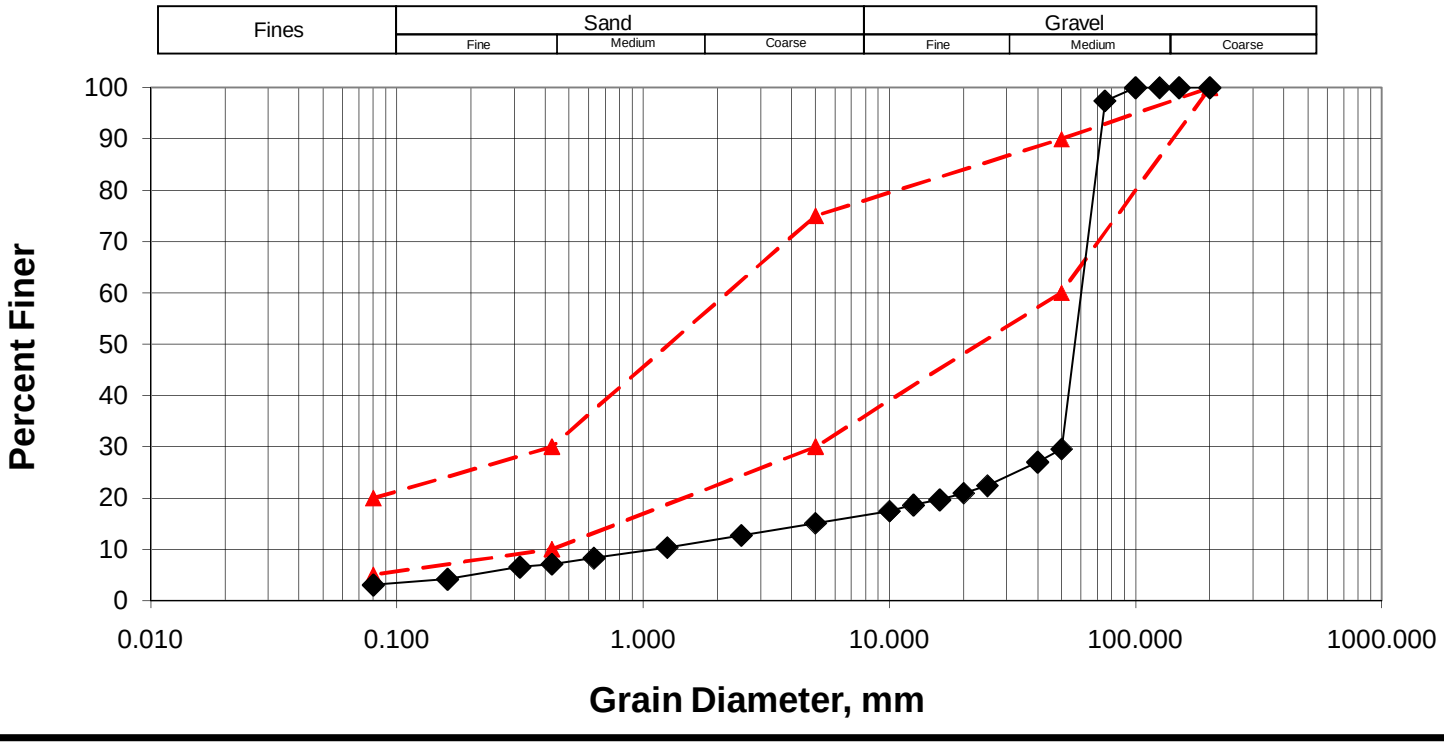
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-08
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	31-Jul-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	97.4	
50.0	-	29.6	60 - 90
40.0	-	27.0	
25.0	-	22.4	
16.0	-	19.6	
12.5	-	18.6	
10.0	-	17.5	
5.0	-	15.1	30 - 75
2.50	-	12.7	
1.250	-	10.4	
0.630	-	8.3	
0.425	-	7.2	10 - 30
0.315	-	6.6	
0.160	-	4.2	
0.080	-	3.1	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



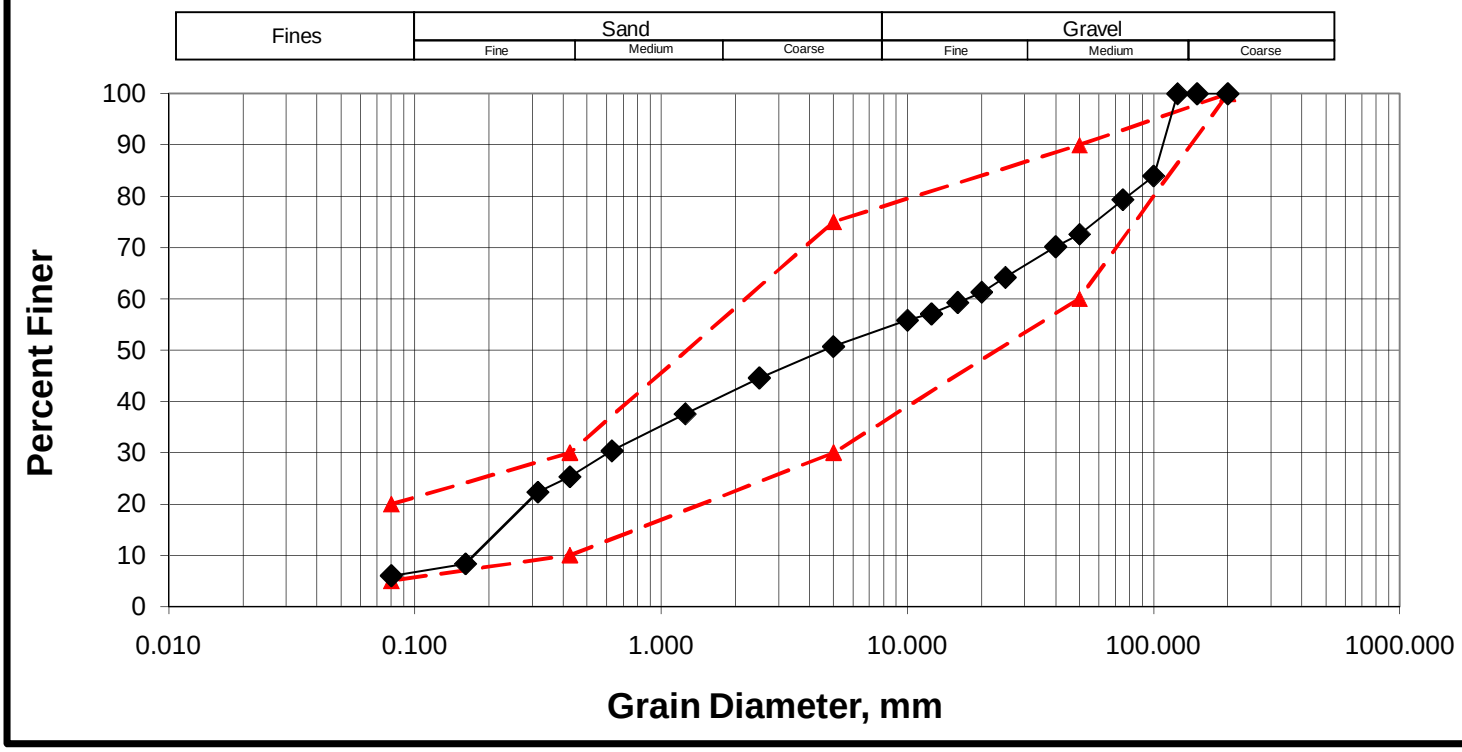
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-09
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	1-Aug-10	Sample Description:	Type 2 Material, Blended

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	84.0	
75.0	-	79.4	
50.0	-	72.6	60 - 90
40.0	-	70.2	
25.0	-	64.2	
16.0	-	59.3	
12.5	-	57.1	
10.0	-	55.8	
5.0	-	50.7	30 - 75
2.50	-	44.6	
1.250	-	37.6	
0.630	-	30.4	
0.425	-	25.3	10 - 30
0.315	-	22.3	
0.160	-	8.3	
0.080	-	6.0	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



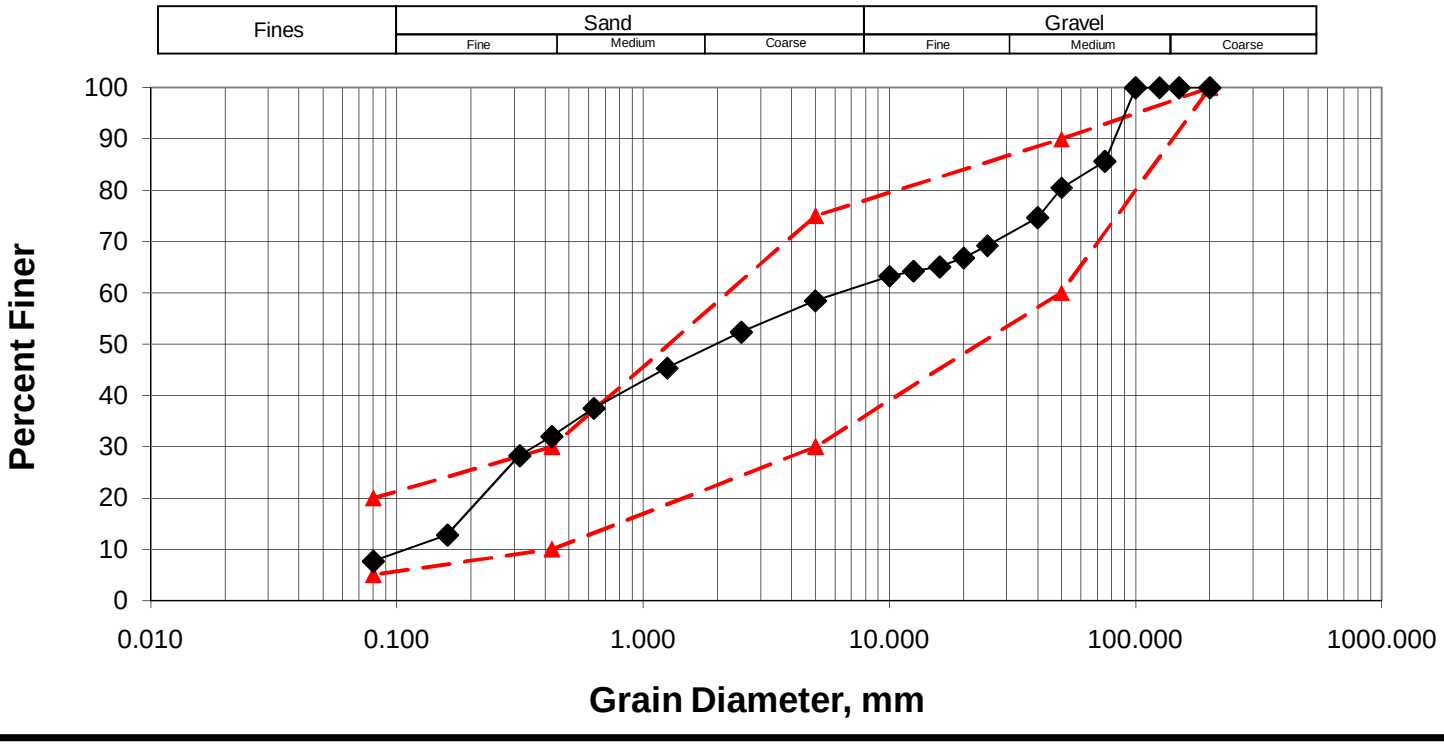
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-10
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	2-Aug-10	Sample Description:	Type 2 Material, Blended

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	85.7	
50.0	-	80.5	60 - 90
40.0	-	74.7	
25.0	-	69.2	
16.0	-	65.1	
12.5	-	64.3	
10.0	-	63.3	
5.0	-	58.5	30 - 75
2.50	-	52.4	
1.250	-	45.3	
0.630	-	37.5	
0.425	-	32.0	10 - 30
0.315	-	28.3	
0.160	-	12.8	
0.080	-	7.7	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



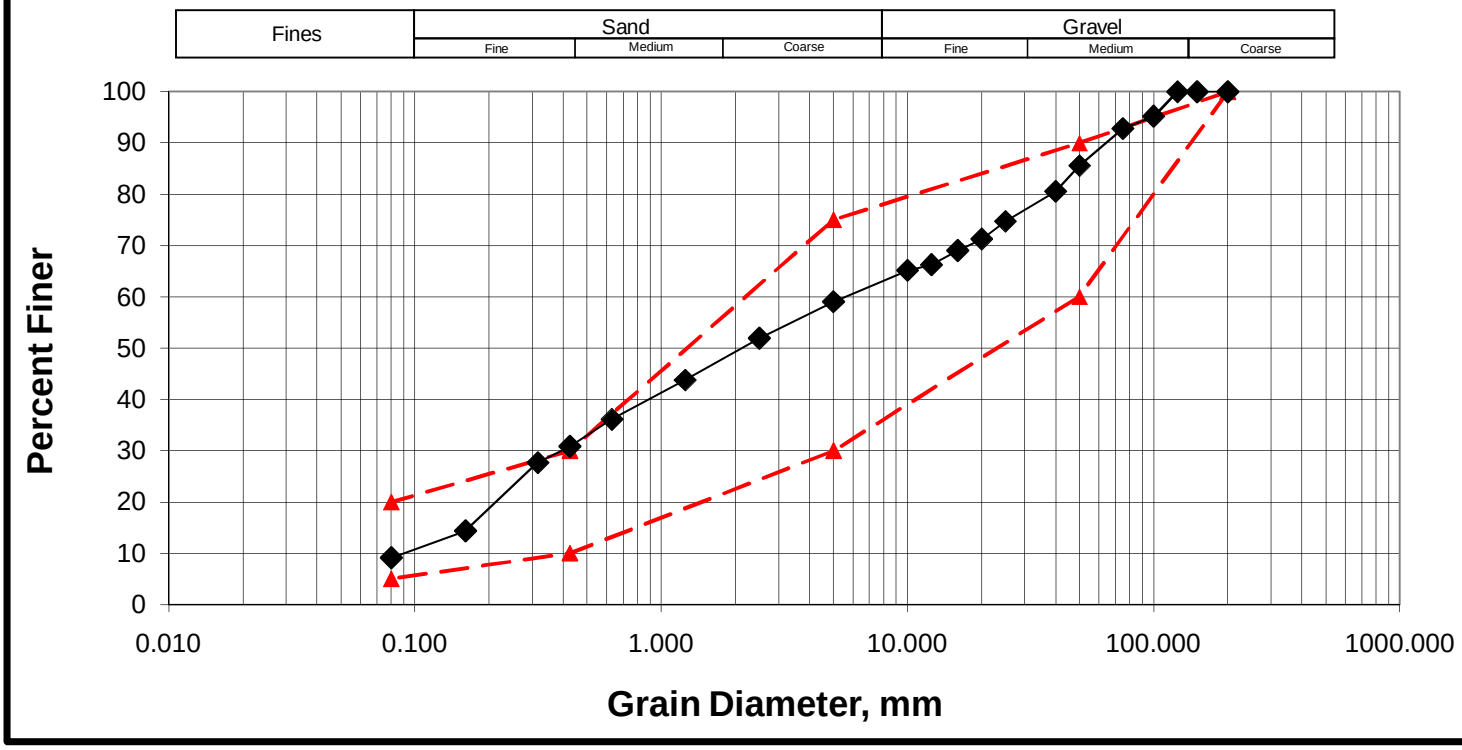
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-11
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	3-Aug-10	Sample Description:	Type 2 Material, Blended

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	95.2	
75.0	-	92.8	
50.0	-	85.6	60 - 90
40.0	-	80.6	
25.0	-	74.7	
16.0	-	69.0	
12.5	-	66.3	
10.0	-	65.2	
5.0	-	59.0	30 - 75
2.50	-	51.9	
1.250	-	43.8	
0.630	-	36.1	
0.425	-	30.8	10 - 30
0.315	-	27.7	
0.160	-	14.4	
0.080	-	9.1	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



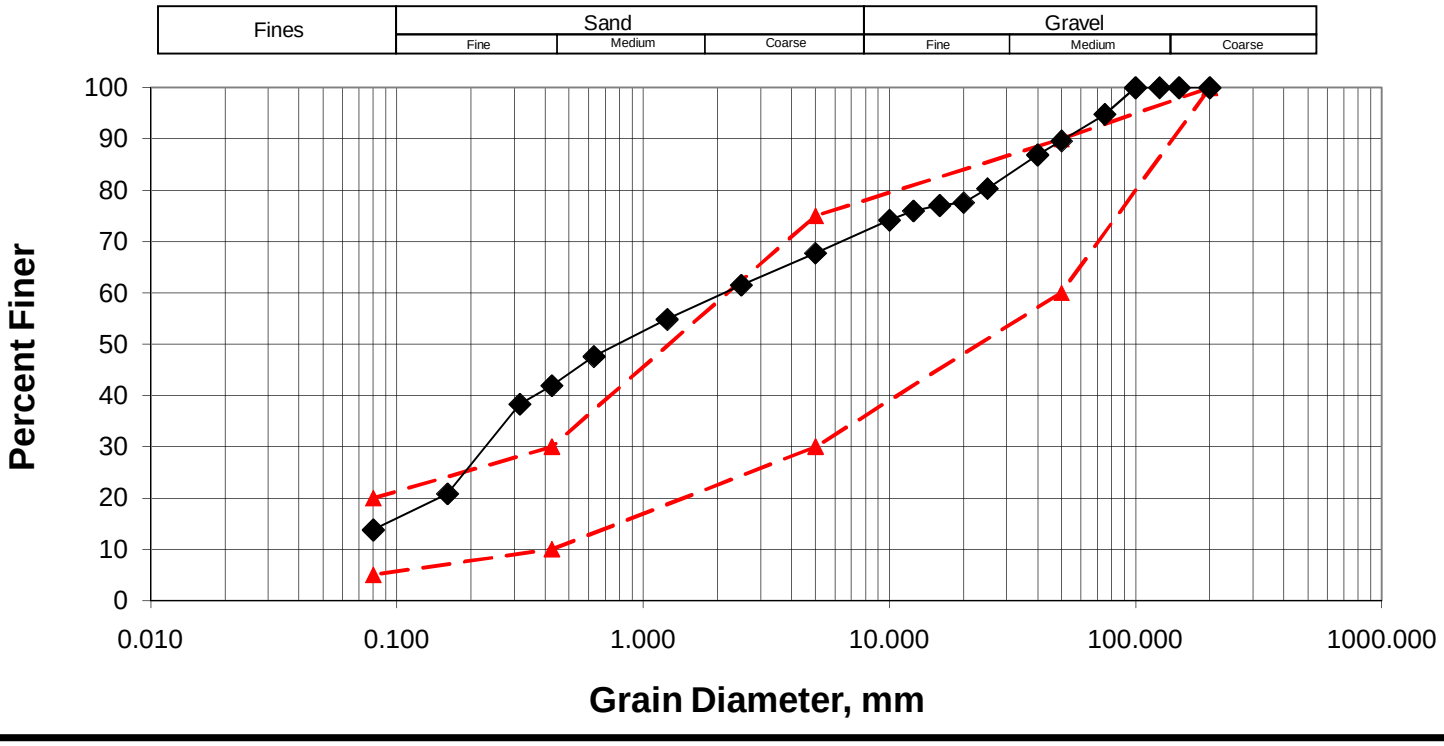
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-12
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	4-Aug-10	Sample Description:	Type 2 Material, Blended

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	94.8	
50.0	-	89.6	60 - 90
40.0	-	86.9	
25.0	-	80.4	
16.0	-	77.1	
12.5	-	76.0	
10.0	-	74.2	
5.0	-	67.7	30 - 75
2.50	-	61.5	
1.250	-	54.8	
0.630	-	47.6	
0.425	-	42.0	10 - 30
0.315	-	38.3	
0.160	-	20.8	
0.080	-	13.8	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



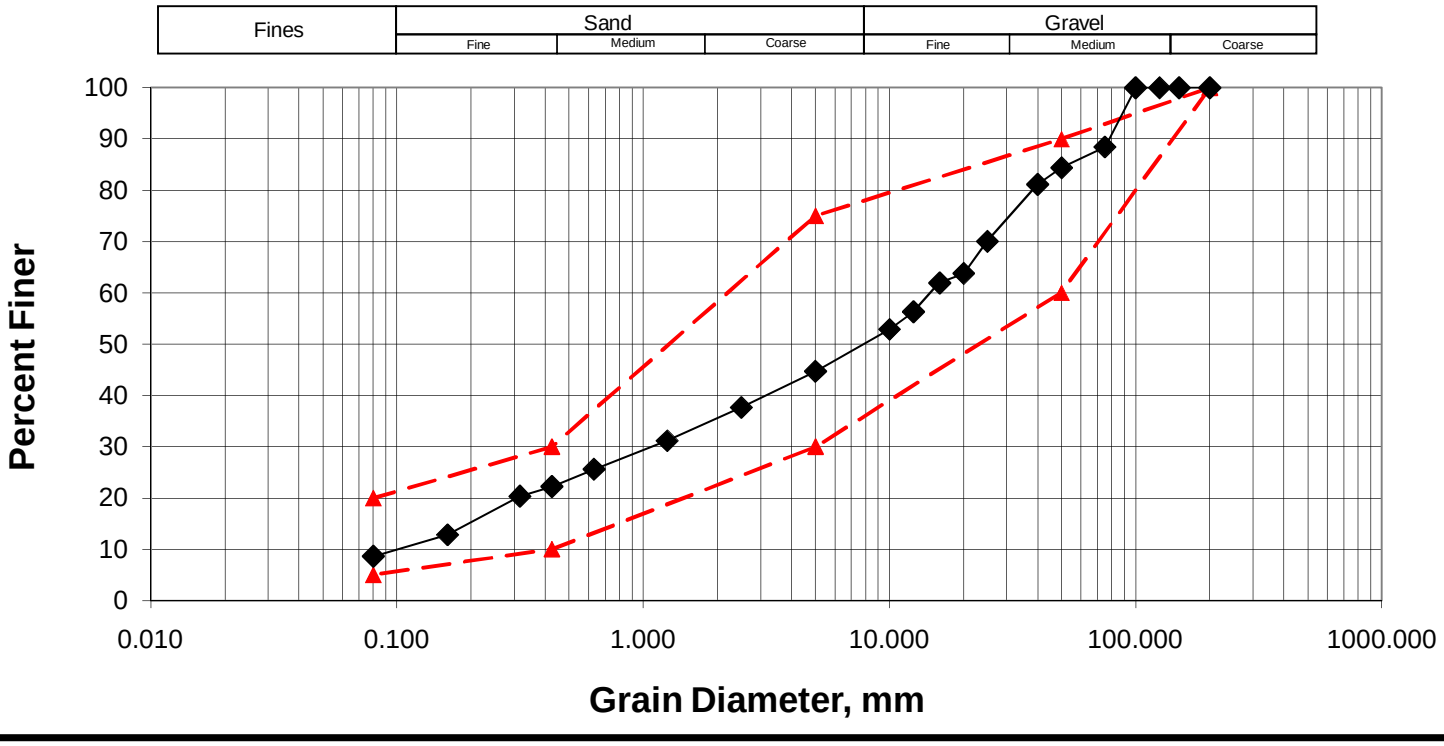
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-13
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	7-Aug-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	88.5	
50.0	-	84.4	60 - 90
40.0	-	81.1	
25.0	-	70.0	
16.0	-	61.9	
12.5	-	56.3	
10.0	-	52.9	
5.0	-	44.7	30 - 75
2.50	-	37.6	
1.250	-	31.1	
0.630	-	25.6	
0.425	-	22.2	10 - 30
0.315	-	20.3	
0.160	-	12.8	
0.080	-	8.6	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



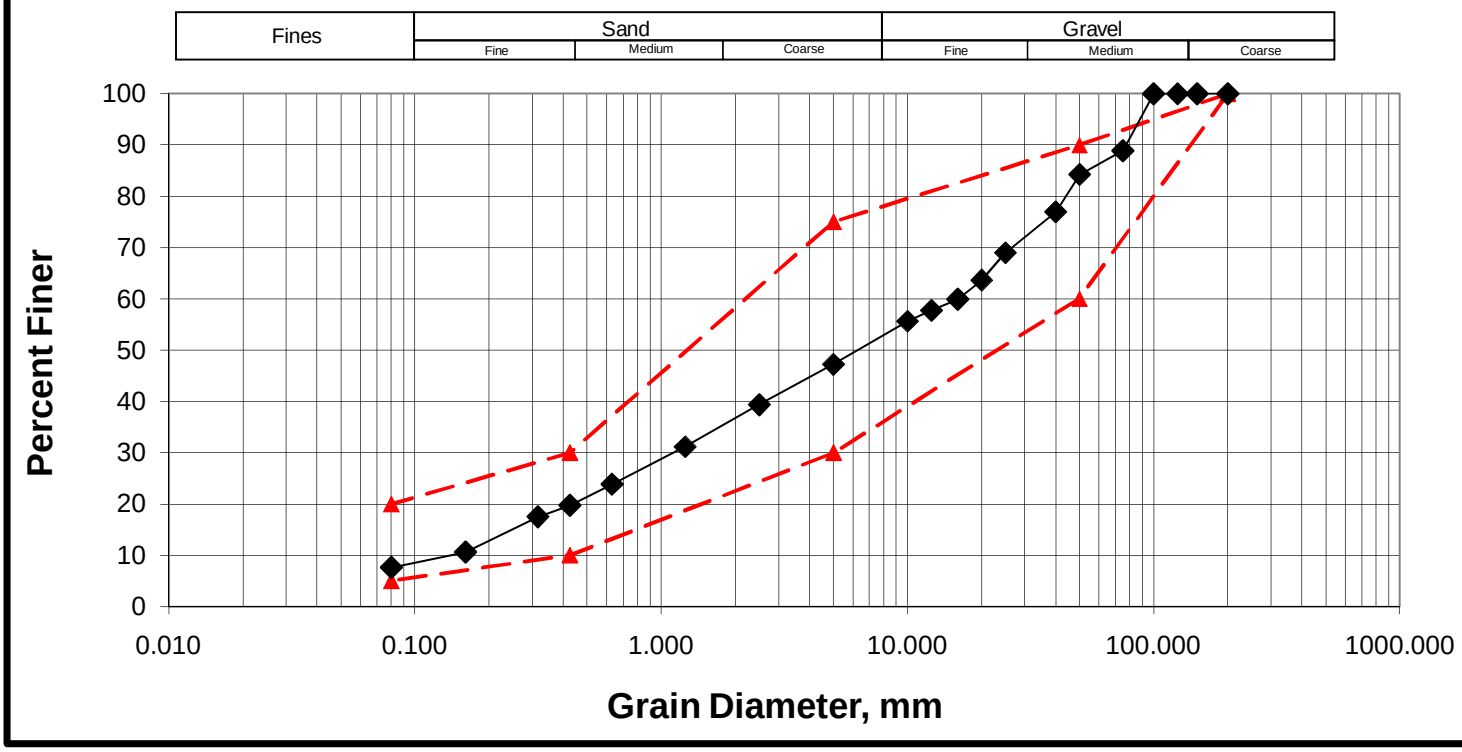
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-14
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	7-Aug-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	88.9	
50.0	-	84.3	60 - 90
40.0	-	77.0	
25.0	-	69.0	
16.0	-	59.9	
12.5	-	57.7	
10.0	-	55.6	
5.0	-	47.2	30 - 75
2.50	-	39.4	
1.250	-	31.1	
0.630	-	23.9	
0.425	-	19.7	10 - 30
0.315	-	17.5	
0.160	-	10.6	
0.080	-	7.6	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



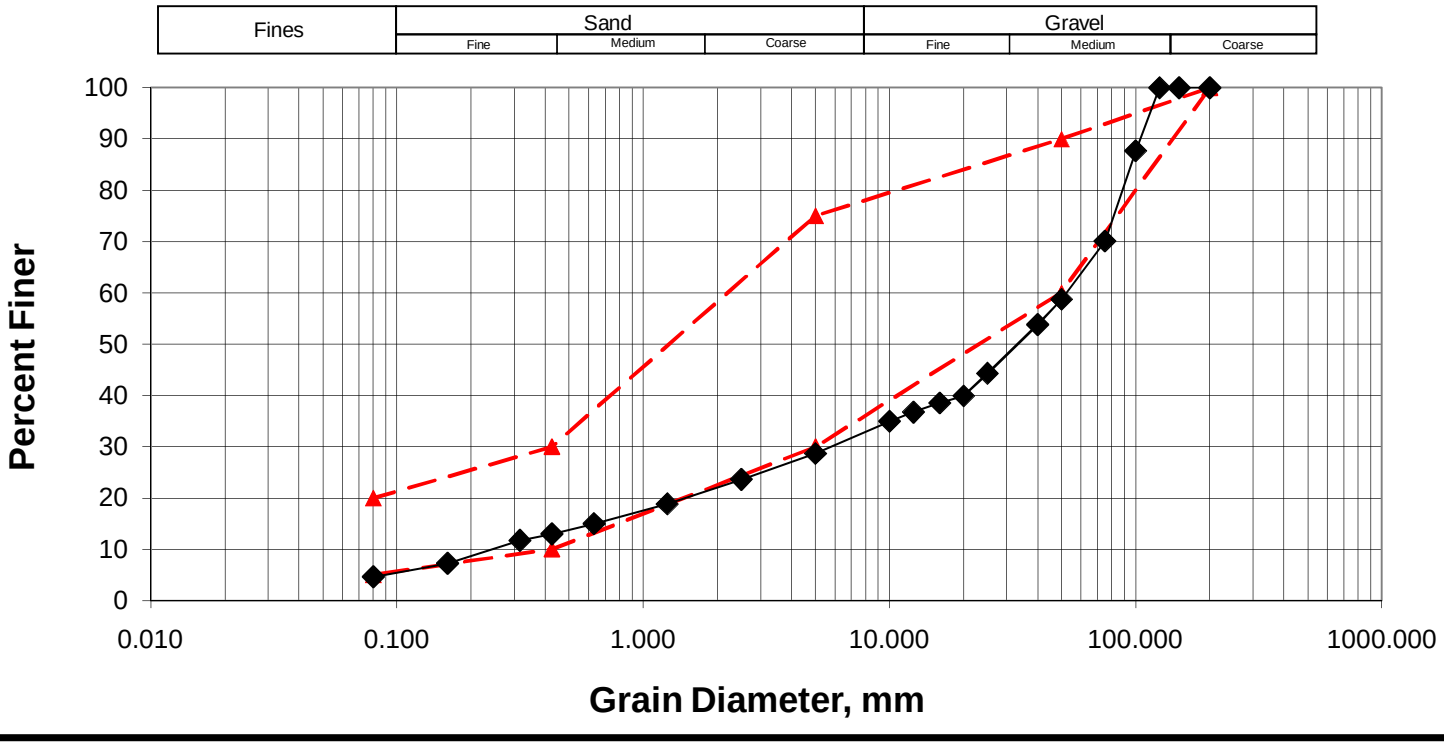
GRAIN SIZE DISTRIBUTION

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AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-015
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	10-Aug-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	87.7	
75.0	-	70.1	
50.0	-	58.7	60 - 90
40.0	-	53.8	
25.0	-	44.3	
16.0	-	38.5	
12.5	-	36.7	
10.0	-	34.9	
5.0	-	28.6	30 - 75
2.50	-	23.6	
1.250	-	18.8	
0.630	-	15.0	
0.425	-	13.0	10 - 30
0.315	-	11.7	
0.160	-	7.3	
0.080	-	4.6	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



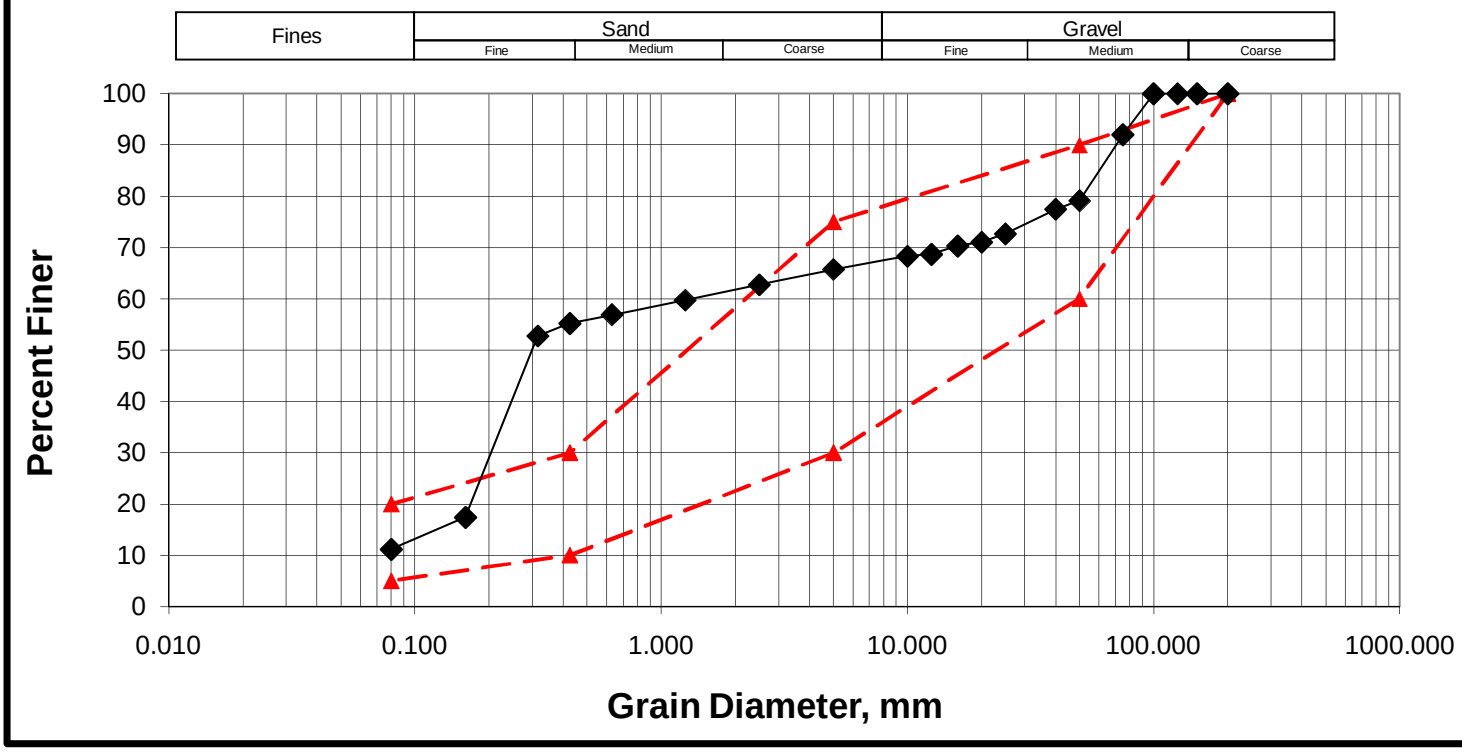
GRAIN SIZE DISTRIBUTION

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AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-016
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	11-Aug-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	92.0	
50.0	-	79.1	60 - 90
40.0	-	77.5	
25.0	-	72.7	
16.0	-	70.3	
12.5	-	68.7	
10.0	-	68.3	
5.0	-	65.8	30 - 75
2.50	-	62.8	
1.250	-	59.8	
0.630	-	56.9	
0.425	-	55.2	10 - 30
0.315	-	52.8	
0.160	-	17.4	
0.080	-	11.2	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



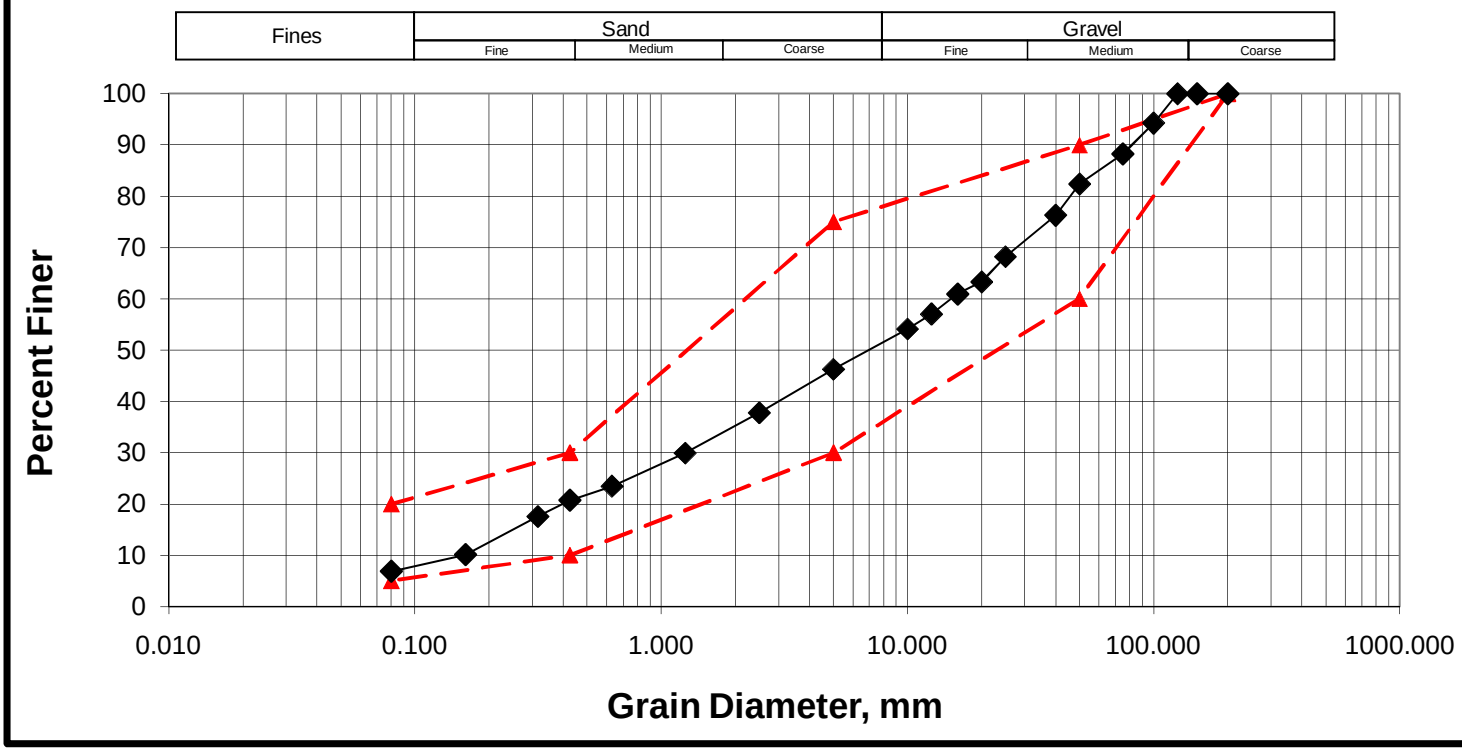
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-017
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	11-Aug-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	94.3	
75.0	-	88.3	
50.0	-	82.4	60 - 90
40.0	-	76.3	
25.0	-	68.2	
16.0	-	60.9	
12.5	-	57.0	
10.0	-	54.1	
5.0	-	46.2	30 - 75
2.50	-	37.8	
1.250	-	29.9	
0.630	-	23.4	
0.425	-	20.7	10 - 30
0.315	-	17.5	
0.160	-	10.1	
0.080	-	6.9	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



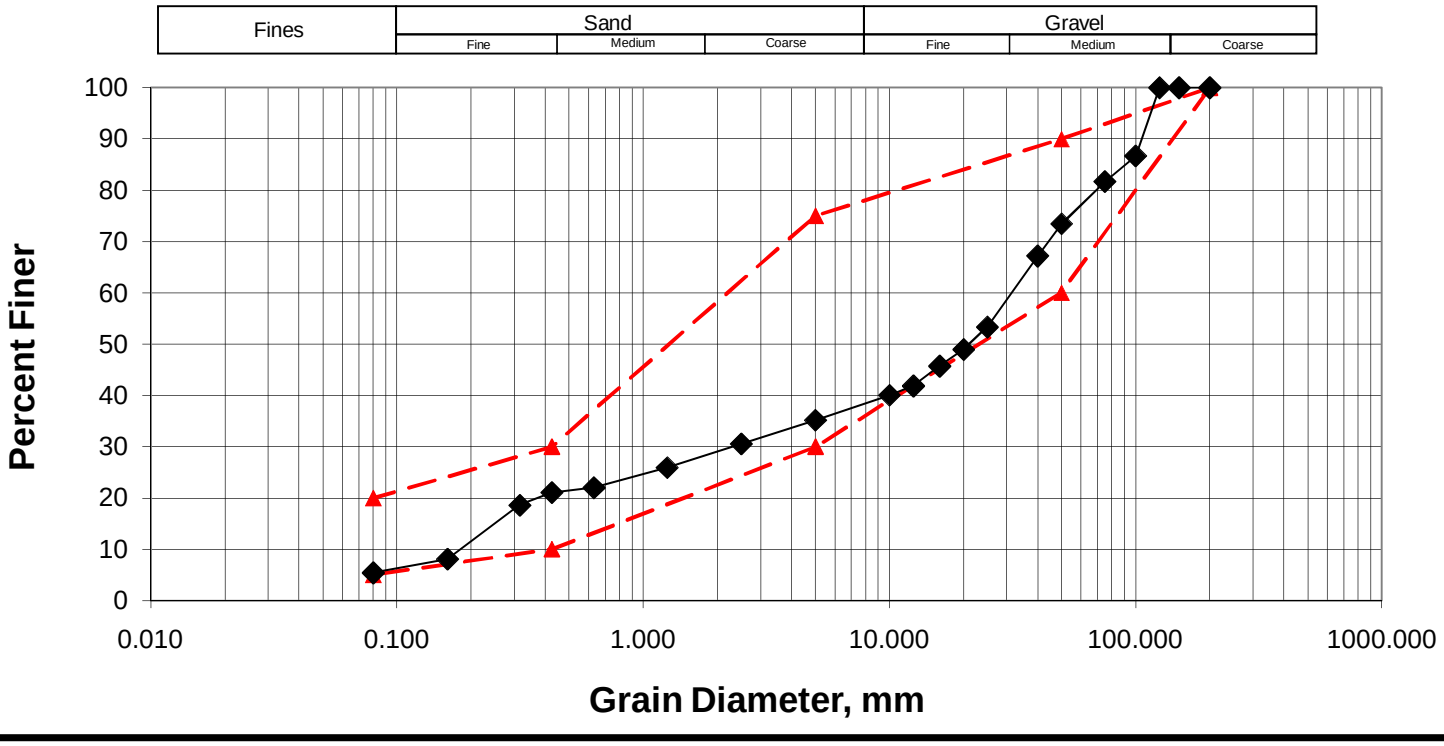
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MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-018
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	13-Aug-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	86.7	
75.0	-	81.7	
50.0	-	73.5	60 - 90
40.0	-	67.2	
25.0	-	53.4	
16.0	-	45.7	
12.5	-	41.9	
10.0	-	40.1	
5.0	-	35.2	30 - 75
2.50	-	30.6	
1.250	-	26.0	
0.630	-	22.0	
0.425	-	21.1	10 - 30
0.315	-	18.6	
0.160	-	8.1	
0.080	-	5.5	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



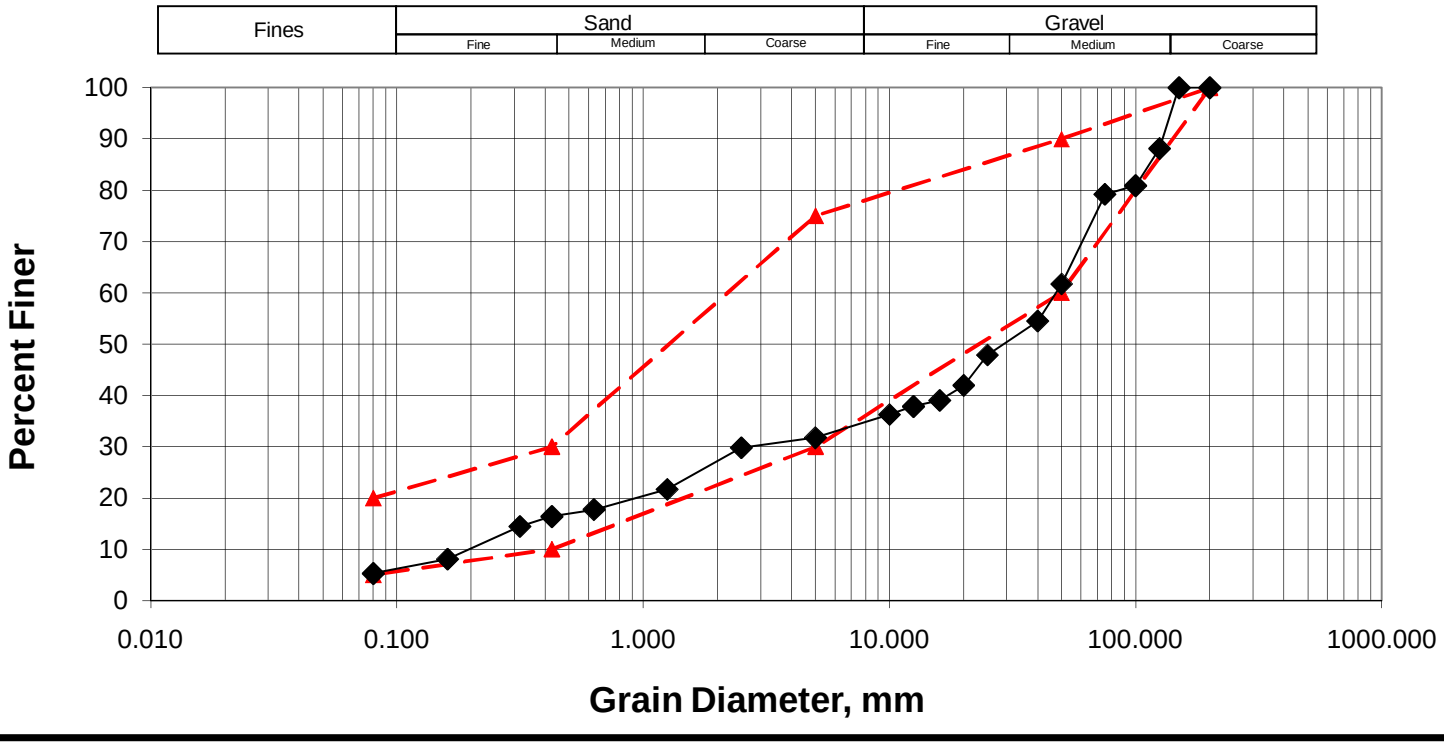
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S10-019
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	BA# 2 Stockpile
Date :	19-Aug-10	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	88.1	
100.0	-	80.9	
75.0	-	79.2	
50.0	-	61.7	60 - 90
40.0	-	54.5	
25.0	-	47.9	
16.0	-	39.0	
12.5	-	37.9	
10.0	-	36.3	
5.0	-	31.8	30 - 75
2.50	-	29.8	
1.250	-	21.7	
0.630	-	17.8	
0.425	-	16.4	10 - 30
0.315	-	14.5	
0.160	-	8.1	
0.080	-	5.3	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



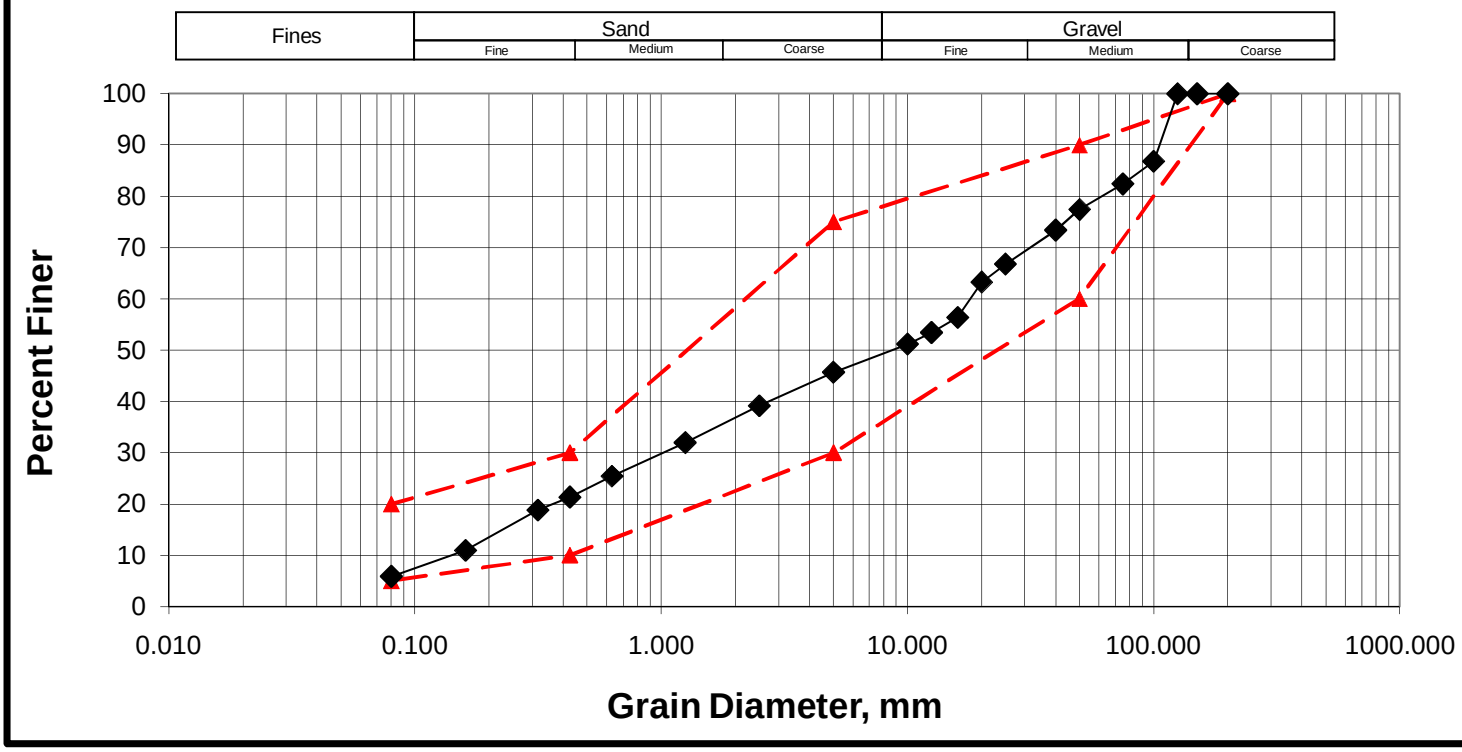
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S11-01
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	Short Cut Road
Date :	13-Jul-11	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	86.8	
75.0	-	82.4	
50.0	-	77.4	60 - 90
40.0	-	73.4	
25.0	-	66.8	
16.0	-	56.4	
12.5	-	53.4	
10.0	-	51.2	
5.0	-	45.7	30 - 75
2.50	-	39.1	
1.250	-	31.9	
0.630	-	25.4	
0.425	-	21.3	10 - 30
0.315	-	18.8	
0.160	-	10.9	
0.080	-	5.9	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



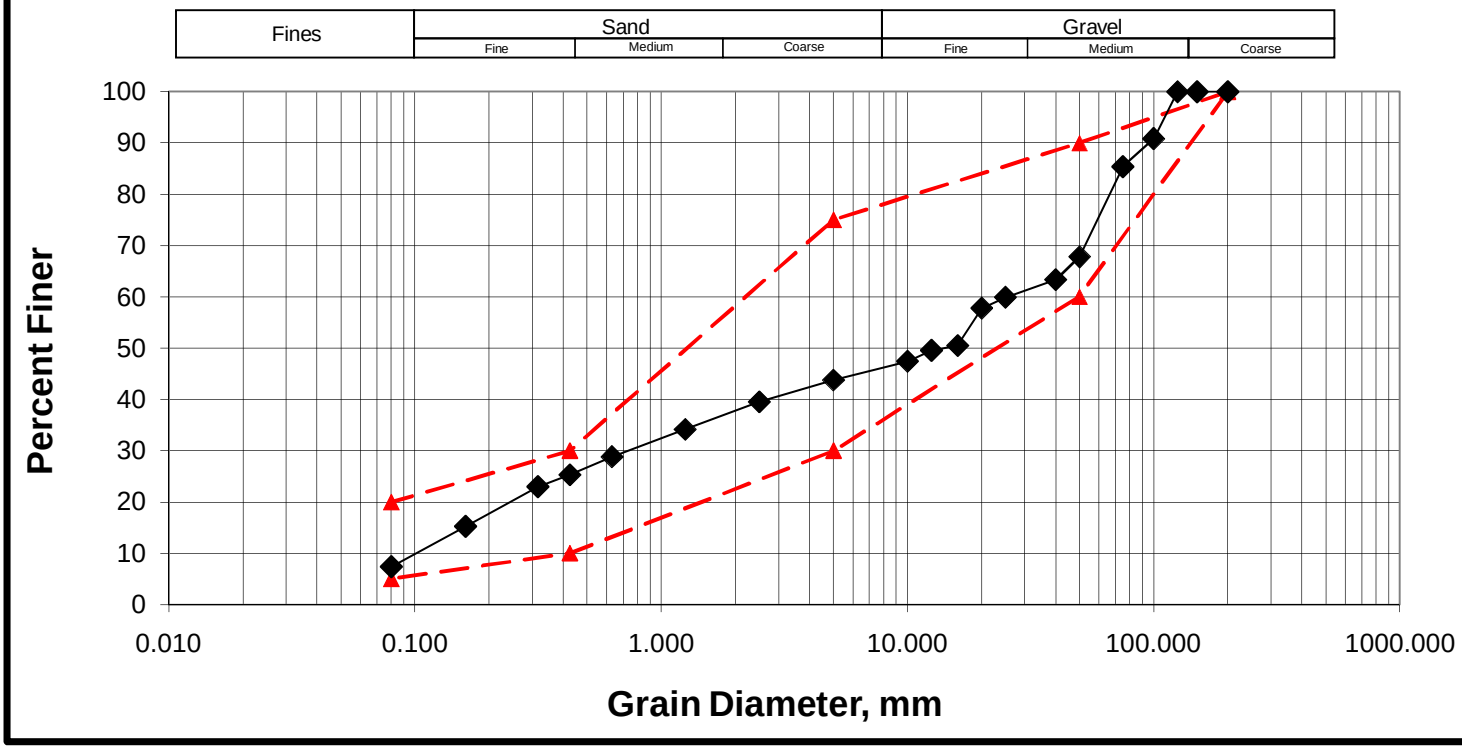
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S11-02
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	Short Cut Road
Date :	13-Jul-11	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	90.9	
75.0	-	85.4	
50.0	-	67.8	60 - 90
40.0	-	63.4	
25.0	-	59.9	
16.0	-	50.5	
12.5	-	49.6	
10.0	-	47.4	
5.0	-	43.8	30 - 75
2.50	-	39.5	
1.250	-	34.2	
0.630	-	28.8	
0.425	-	25.3	10 - 30
0.315	-	23.0	
0.160	-	15.2	
0.080	-	7.4	5 - 20

GRAIN SIZE DISTRIBUTION CURVE



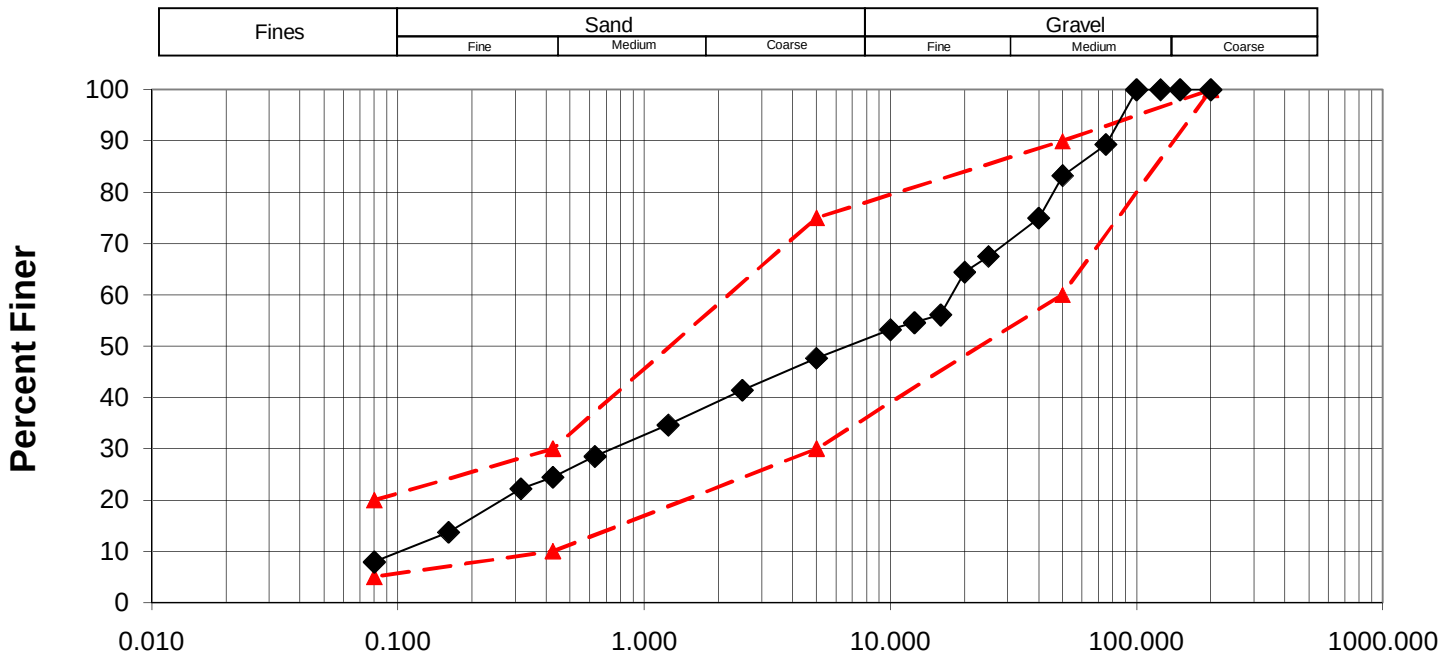
GRAIN SIZE DISTRIBUTION

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client:	Public Works and Government Services Canada	Sample No.:	S11-03
Project:	CAM-D Dew Line Cleanup	Supplier:	On Site
Job No:	60149115	Sample Location:	Short Cut Road
Date :	13-Jul-11	Sample Description:	Type 2 Material

Sieve (mm.)	Sieve No.	Total Percent Passing	Specification (min - max)
200.0	-	100.0	100 - 100
150.0	-	100.0	
125.0	-	100.0	
100.0	-	100.0	
75.0	-	89.4	
50.0	-	83.3	60 - 90
40.0	-	75.0	
25.0	-	67.5	
16.0	-	56.1	
12.5	-	54.6	
10.0	-	53.2	
5.0	-	47.7	30 - 75
2.50	-	41.4	
1.250	-	34.7	
0.630	-	28.5	
0.425	-	24.5	10 - 30
0.315	-	22.2	
0.160	-	13.7	
0.080	-	7.9	5 - 20

GRAIN SIZE DISTRIBUTION CURVE

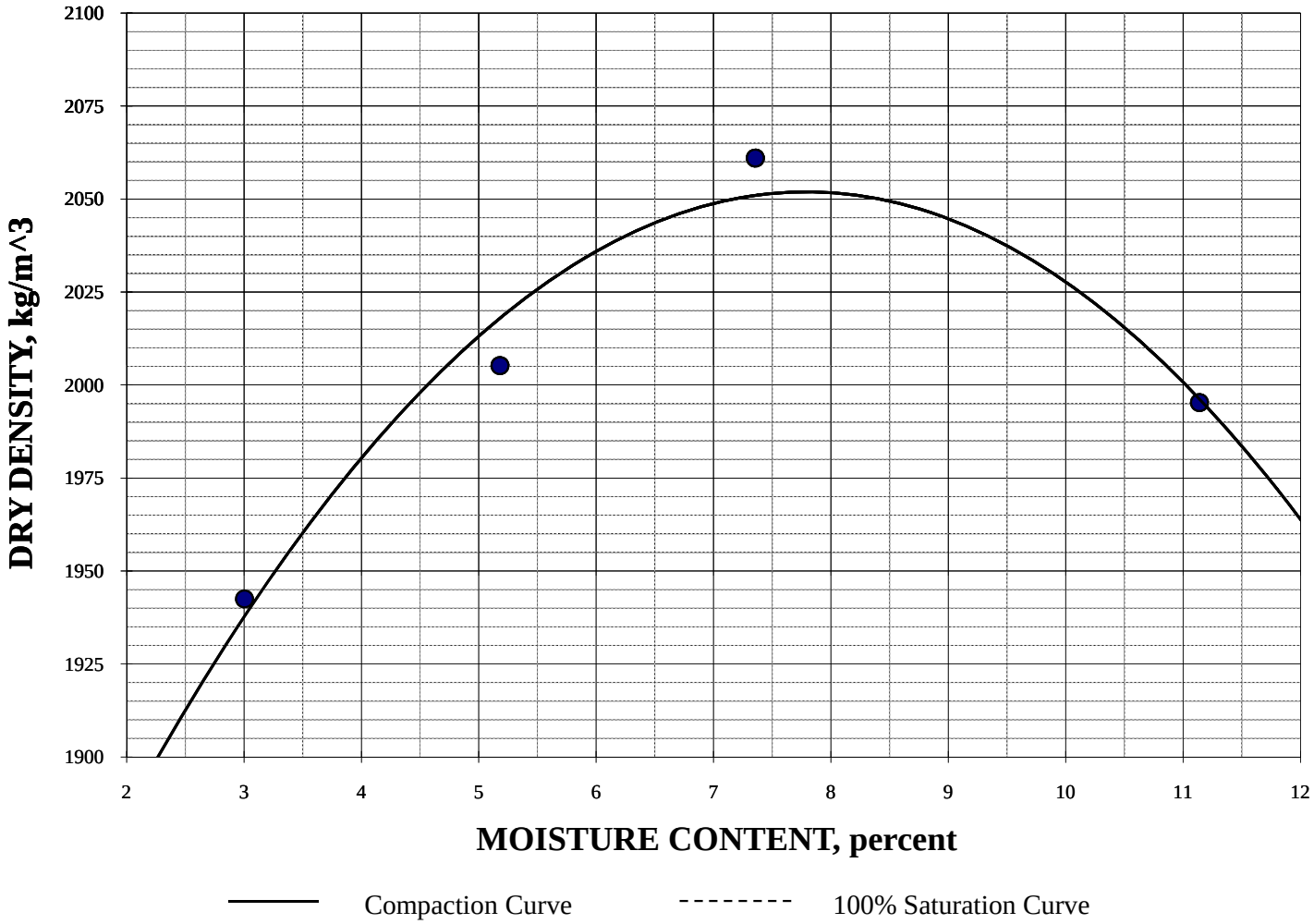


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99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client: Public Works and Governmer **Job No:** 60149115
Project: CAM-D Dew Line Cleanup **Sample:** S10-04
Lab No. S10-04 **Source:** Borrow #3 - Type 2
Date Tested: January 5, 2011

TRIAL NUMBER	1	2	3	4	5
Wet Unit Weight (kg/cu.m.)	2001	2109	2213	2218	
Dry Unit Weight (kg/cu.m.)	1942	2005	2061	1995	
Moisture Content (%)	3.0	5.2	7.4	11.1	



Description / Remarks:
Sample from Borrow Area #2 Stockpile
Oversize (+19mm Sieve) = 26.7%

OVERSIZE PARTICLE CORRECTION (ASTM D 4718)

CORRECTED MAX:	2,150 Kg/m^3
CORRECTED OPTIMUM:	5.7 %
MAXIMUM DRY DENSITY:	2,052 Kg/m^3
OPTIMUM MOISTURE:	7.8 %

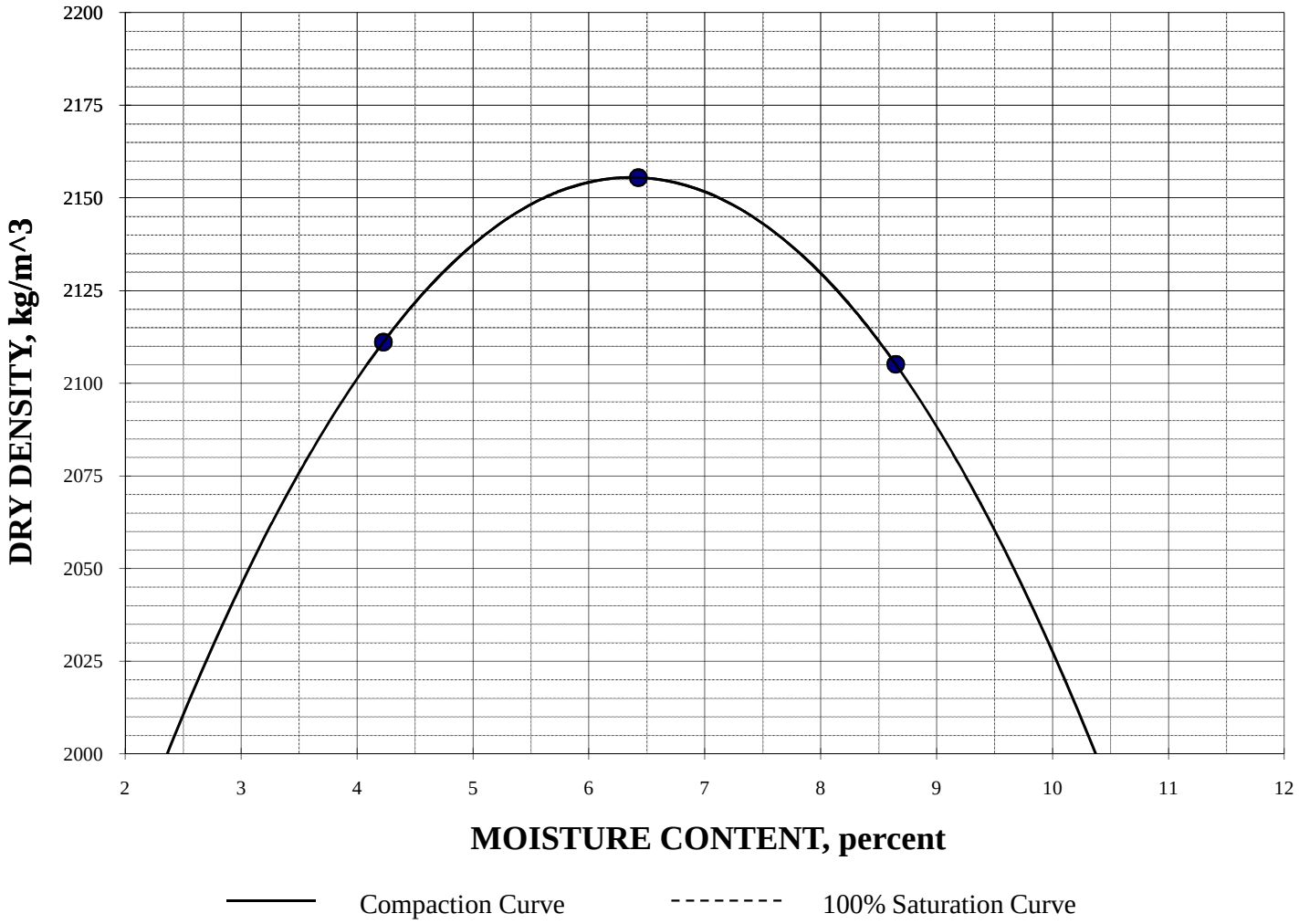
PROCTOR NO: 1

Proctor Compaction
ASTM D 698-00

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client: Public Works and Governmer **Job No:** 60149115
Project: CAM-D Dew Line Cleanup **Sample:** S10-06
Lab No. S10-06 **Source:** Borrow #2 - Type 2
Date Tested: January 5, 2011

TRIAL NUMBER	1	2	3	4	5
Wet Unit Weight (kg/cu.m.)	2200	2294	2287	#VALUE!	
Dry Unit Weight (kg/cu.m.)	2111	2155	2105		
Moisture Content (%)	4.2	6.4	8.6		



Description / Remarks:
Sample from Borrow Area #2 Stockpile
Oversize (+19mm Sieve) = 26.7%

OVERSIZE PARTICLE CORRECTION (ASTM D 4718)

CORRECTED MAX:	2,262 Kg/m^3
CORRECTED OPTIMUM:	4.1 %
MAXIMUM DRY DENSITY:	2,156 Kg/m^3
OPTIMUM MOISTURE:	6.4 %

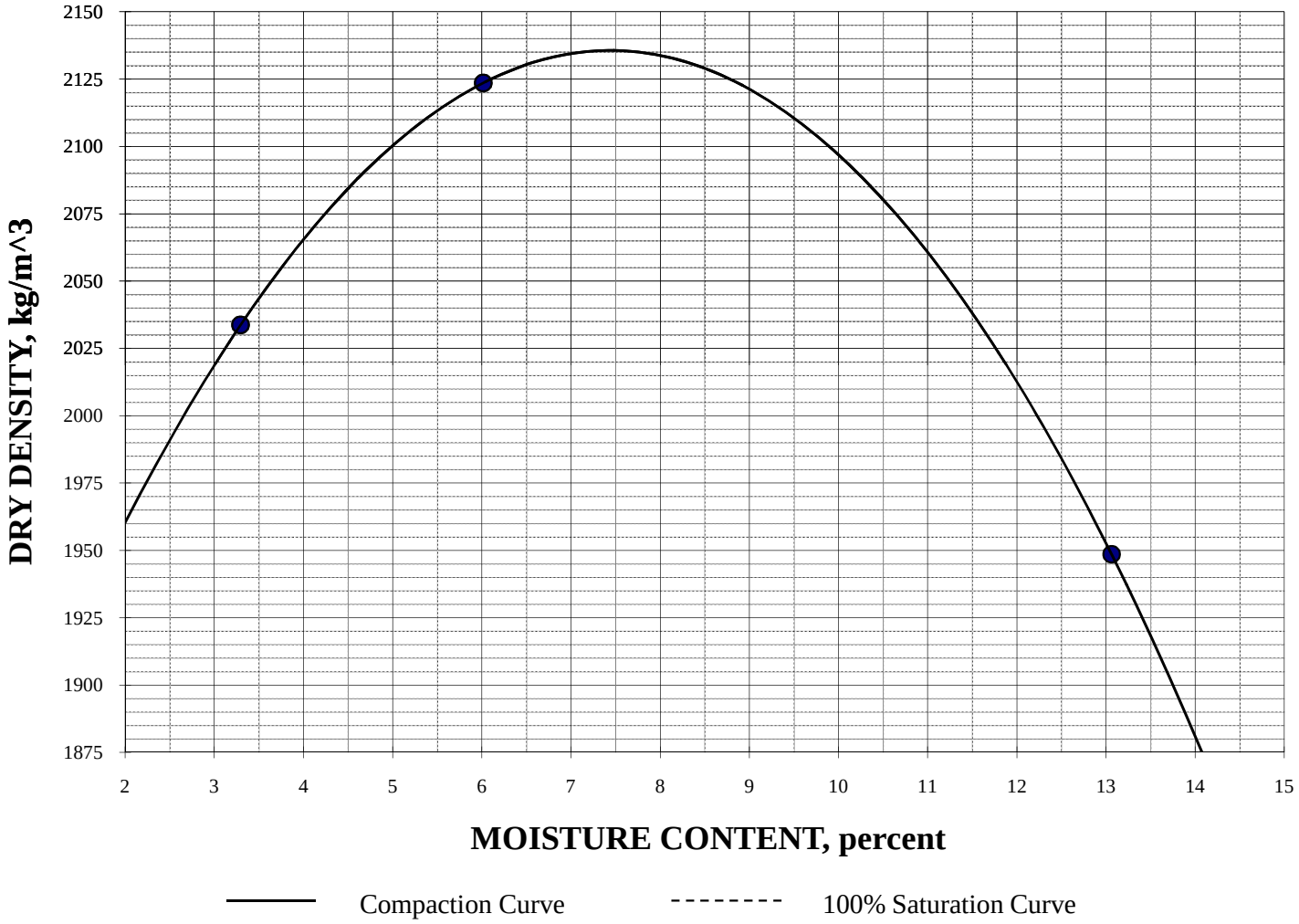
PROCTOR NO: **1**

Proctor Compaction
ASTM D 698-00

MATERIALS LABORATORY
AECOM
99 Commerce Dr., Winnipeg, MB R3P 0Y7 Canada
tel (204) 477-5381 **fax** (204) 284-2040

Client: Public Works and Governmer **Job No:** 60149115
Project: CAM-D Dew Line Cleanup **Sample:** S10-012
Lab No. S10-012 **Source:** Borrow #2 - Type 2
Date Tested: January 5, 2011

TRIAL NUMBER	1	2	3	4	5
Wet Unit Weight (kg/cu.m.)	2101	2251	2203	#VALUE!	
Dry Unit Weight (kg/cu.m.)	2034	2124	1949		
Moisture Content (%)	3.3	6.0	13.1		



Description / Remarks:
Sample from Borrow Area #2 Stockpile
Oversize (+19mm Sieve) = 26.7%

OVERSIZE PARTICLE CORRECTION (ASTM D 4718)

CORRECTED MAX:	2,203 Kg/m^3
CORRECTED OPTIMUM:	5.7 %
MAXIMUM DRY DENSITY:	2,136 Kg/m^3
OPTIMUM MOISTURE:	7.4 %

PROCTOR NO: 1

SUMMARY OF FIELD DENSITY TESTS

AECOM

CLIENT : PWGSC
PROJECT : CAM-D Dewline Cleanup Project
JOB No. : 0171-146-08-0100
DATE TESTED : As Noted
TECHNICIAN : ML/BB
CONTRACTOR : Kudlik Construction Ltd.
DISTRIBUTION : DCC
CONSTRUCTION OF : NHWLF

DENSITY TESTS

Test #	Location Station	Depth m	Description of Material	Proctor Density	Optimum Moisture %	Dry Unit Weight	Moisture Content %	Proctor Density %
			July 25, 2010 1st Lift					
1	North East Corner	0.25	Type 2	2150	5.7	2265	3.6	105%
2	North West Corner	0.10	Type 2	2150	5.7	2216	4.1	103%
3	South East Corner	0.15	Type 2	2150	5.7	2251	3.7	105%
4	South West Corner	0.15	Type 2	2150	5.7	2267	5.2	105%
			July 27, 2010 2nd Lift					
5	North East Corner	0.15	Type 2	2150	5.7	2222	2.7	103%
6	North West Corner	0.15	Type 2	2150	5.7	2304	2.8	107%
7	South East Corner	0.15	Type 2	2150	5.7	2275	1.9	106%
8	South West Corner	0.15	Type 2	2150	5.7	2186	4.2	102%
			July 30, 2010 3rd Lift					
9	North East Corner	0.20	Type 2	2262	4.1	2209	3.6	98%
10	North West Corner	0.20	Type 2	2262	4.1	2268	3.3	100%
11	South East Corner	0.20	Type 2	2262	4.1	2302	2.7	102%
12	South West Corner	0.20	Type 2	2262	4.1	2263	3.7	100%
			August 1, 2010 4th Lift					
13	South West Corner	0.20	Type 2	2150	5.7	2131	6	99%
			August 3, 2010 4th Lift					
14	South East Corner	0.20	Type 2	2262	4.1	2242	5.0	99%
15	North East Corner	0.20	Type 2	2262	4.1	2297	3.0	102%
16	North West Corner	0.20	Type 2	2262	4.1	2212	4.3	98%

GENERAL INFORMATION

PROCTOR TYPE: Method C

Control	
Standard (D698)	X
Modified (D1557)	

REMARKS :

Specified Density: Minimum of 95%

Type 2 Proctor S08-07 (Borrow #3 Landfarm Berm Material).

Type 5 control strip - see above

ENGINEERING INTERPRETATION OR EVALUATION OF THESE TEST RESULTS IS PROVIDED ONLY ON WRITTEN REQUEST.

REPORTING OF THESE TEST RESULTS CONSTITUTES A TESTING SERVICE ONLY.

Signed: _____

SUMMARY OF FIELD DENSITY TESTS

AECOM

CLIENT : PWGSC
PROJECT : CAM-D Dewline Cleanup Project
JOB No. : 0171-146-08-0100 DATE TESTED : As Noted
TECHNICIAN : ML/BB CONTRACTOR : Kudlik Construction Ltd.
DISTRIBUTION : DCC CONSTRUCTION OF : NHWLF

DENSITY TESTS

Test #	Location Station	Depth m	Description of Material	Proctor Density	Optimum Moisture %	Dry Unit Weight	Moisture Content %	Proctor Density %
August 5, 2010 5th Lift								
17	South West Corner	0.20	Type 2	2262	4.1	2271	4.5	100%
18	South East Corner	0.20	Type 2	2262	4.1	2227	4.0	98%
August 6, 2010 5th Lift								
19	North East Corner	0.20	Type 2	2262	4.1	2285	3.6	101%
20	North West Corner	0.20	Type 2	2262	4.1	2249	5.5	99%
								0%
								0%
								0%
								0%
								0%
								0%
								0%
								0%
								0%
								0%
								0%
								0%

GENERAL INFORMATION

PROCTOR TYPE: Method C
Control
Standard (D698) X
Modified (D1557)

REMARKS :
Specified Density: Minimum of 95%
Type 2 Proctor S08-07 (Borrow #3 Landfarm Berm Material).
Type 5 control strip - see above

ENGINEERING INTERPRETATION OR EVALUATION OF THESE TEST RESULTS IS PROVIDED ONLY ON WRITTEN REQUEST.

REPORTING OF THESE TEST RESULTS CONSTITUTES A TESTING SERVICE ONLY.

Signed: _____

SUMMARY OF FIELD DENSITY TESTS

AECOM

CLIENT : PWGSC
PROJECT : CAM-D Dewline Cleanup Project
JOB No. : 60149115 - 04 DATE TESTED : As Noted
TECHNICIAN : BB CONTRACTOR : Kudlik Construction Ltd.
DISTRIBUTION : DCC CONSTRUCTION OF : 2011_NHWLF Final Lifts

DENSITY TESTS

Test #	Location	Depth m	Description of Material	Proctor Density	Optimum Moisture %	Dry Unit Weight	Moisture Content %	Proctor Density %
			August 30, 2011					
1	Test No. 1 Lift No. 1	0.15	Type 2	2262	4.1	2186	7.0	97%
2	Test No. 2 Lift No. 1	0.15	Type 2	2262	4.1	2227	2.9	98%
3	Test No. 3 Lift No. 1	0.15	Type 2	2262	4.1	2120	4.5	94%
4	Test No. 3 Lift No. 1 Retest No. 1	0.15	Type 2	2262	4.1	2138	4.0	95%
5	Test No 3 Lift No. 1 Retest No. 2	0.15	Type 2	2262	4.1	2161	3.8	96%
			August 31, 2011					
6	Test No. 1 Lift No. 2	0.00	Type 2	2262	4.1	2131	3.9	94%
7	Test No. 1 Lift No. 2 Retest No. 1	0.20	Type 2	2262	4.1	2183	5.5	97%
8	Test No. 2 Lift No. 2	0.20	Type 2	2262	4.1	2221	3.7	98%
9	Test No. 3 Lift No. 2	0.20	Type 2	2262	4.1	2242	6.6	99%
10	Test No. 1 Lift No. 3	0.20	Type 2	2262	4.1	2056	4.8	91%
11	Test No. 4 Lift No. 1	0.20	Type 2	2262	4.1	2200	5.0	97%
12	Test No. 2 Lift No. 3	0.20	Type 2	2262	4.1	2236	4.9	99%
			Septmeber 1, 2011					
13	Test No. 1 Lift No. 3 Retest No. 1	0.20	Type 2	2262	4.1	2127	3.8	94%

GENERAL INFORMATION

PROCTOR TYPE: Method C

Control	
Standard (D698)	X
Modified (D1557)	

REMARKS :
Specified Density: Minimum of 95%
Type 2 Proctor S10-06
Type 5 control strip - see above

ENGINEERING INTERPRETATION OR EVALUATION OF THESE TEST RESULTS IS PROVIDED ONLY ON WRITTEN REQUEST.

REPORTING OF THESE TEST RESULTS CONSTITUTES A TESTING SERVICE ONLY.

Signed: _____

SUMMARY OF FIELD DENSITY TESTS

AECOM

CLIENT : Defence Construction Canada
PROJECT : CAM-D Dewline Cleanup Project
JOB No. : 60149115 - 04 DATE TESTED : As Noted
TECHNICIAN : BB/GW CONTRACTOR : Kudlik Construction Ltd.
DISTRIBUTION : DCC CONSTRUCTION OF : 2011_NHWLF Final Lifts

DENSITY TESTS

Test #	Location	Depth m	Description of Material	Proctor Density	Optimum Moisture %	Dry Unit Weight	Moisture Content %	Proctor Density %
			September 1, 2011					
14	Test No. 1 Lift No. 3 Retest No. 2	0.20	Type 2	2262	4.1	2148	3.1	95%
15	Test No. 3 Lift No. 3	0.20	Type 2	2262	4.1	2175	4.5	96%
16	Test No. 1 Lift No. 3 Retest No. 3	0.20	Type 2	2262	4.1	2272	2.8	100%
17	Test No. 4 Lift No. 2	0.30	Type 2	2262	4.1	2206	4.2	98%
			September 2, 2011					
16	Test No. 1 Final Grade	0.15	Type 2	2262	4.1	2235	2.9	99%
17	Test No. 2 Final Grade	0.15	Type 2	2262	4.1	2152	5.5	95%
18	Test No. 3 Final Grade	0.15	Type 2	2262	4.1	2227	5.1	98%
19	Test No. 4 Final Grade	0.15	Type 2	2262	4.1	2132	4.0	94%
			September 3, 2011					
20	Test No. 4 Final Grade Retest No. 1	0.20	Type 2	2262	4.1	2188	3.7	97%
			September 14, 2011					
21	Test No. 5 Final Grade, NE	0.15	Type 2	2262	4.1	2221	3.2	98%
22	Test No. 5 Final Grade, SE	0.15	Type 2	2262	4.1	2265	2.9	100%
23	Test No. 5 Final Grade, Centre	0.15	Type 2	2262	4.1	2117	4.1	94%
24	Test No. 5 Final Grade, NW	0.15	Type 2	2262	4.1	2237	3.1	99%

GENERAL INFORMATION

PROCTOR TYPE: Method C
Control
Standard (D698) X
Modified (D1557)

REMARKS :
Specified Density: Minimum of 95%
Type 2 Proctor S10-06
Type 5 control strip - see above

ENGINEERING INTERPRETATION OR EVALUATION OF THESE TEST RESULTS IS PROVIDED ONLY ON WRITTEN REQUEST.
REPORTING OF THESE TEST RESULTS CONSTITUTES A TESTING SERVICE ONLY.

Signed: _____

SUMMARY OF FIELD DENSITY TESTS

AECOM

CLIENT : Defence Construction Canada
PROJECT : CAM-D Dewline Cleanup Project
JOB No. : 60149115 - 04 DATE TESTED : As Noted
TECHNICIAN : BB/GW CONTRACTOR : Kudlik Construction Ltd.
DISTRIBUTION : DCC CONSTRUCTION OF : 2011_NHWLF Final Lifts

DENSITY TESTS

Test #	Location	Depth m	Description of Material	Proctor Density	Optimum Moisture %	Dry Unit Weight	Moisture Content %	Proctor Density %
September 14, 2011								
25	Test No. 5 Final Grade SW	0.15	Type 2	2262	4.1	2142	4.5	95%
26	Test No. 5 Final Grade Centre Retest	0.15	Type 2	2262	4.1	2191	4.2	97%
27	Test No. 5 Final Grade Centre Retest No. 2	0.15	Type 2	2262	4.1	2152	4.6	95%
28	Test No. 5 Final Grade SW Retest	0.15	Type 2	2262	4.1	2224	3.6	98%
Construction of the NHWL is Complete								

GENERAL INFORMATION

PROCTOR TYPE: Method C

Control	
Standard (D698)	X
Modified (D1557)	

REMARKS :
Specified Density: Minimum of 95%
Type 2 Proctor S10-06
Type 5 control strip - see above

ENGINEERING INTERPRETATION OR EVALUATION OF THESE TEST RESULTS IS PROVIDED ONLY ON WRITTEN REQUEST.

REPORTING OF THESE TEST RESULTS CONSTITUTES A TESTING SERVICE ONLY.

Signed: _____

SUMMARY OF FIELD DENSITY TESTS

AECOM

CLIENT : PWGSC
PROJECT : CAM-D Dewline Cleanup Project
JOB No. : 60149115 - 04 DATE TESTED : As Noted
TECHNICIAN : BB/GW CONTRACTOR : Kudlik Construction Ltd.
DISTRIBUTION : DCC CONSTRUCTION OF : 2011_Main Dump Lobes

DENSITY TESTS

Test #	Location	Depth m	Description of Material	Proctor Density	Optimum Moisture %	Dry Unit Weight	Moisture Content %	Proctor Density %
			July 7, 2011					
1	Lobe No. 2	0.20	Type 2	2262	4.1	2229	2.9	99%
2	Lobe No. 3	0.20	Type 2	2262	4.1	2225	3.3	98%
3	Lobe No. 4	0.20	Type 2	2262	4.1	2110	3.0	93%
4	Lobe No. 4 - Retest	0.20	Type 2	2262	4.1	2088	3.7	92%
			July 8, 2011					
5	Lobe No. 4 - Final	0.20	Type 2	2262	4.1	2172	4.0	96%
			August 24, 2011					
6	Lobe No. 1 east perimete	0.15	Type 2	2262	4.1	2106	4.3	93%
7	Lobe No. 1 centre east	0.15	Type 2	2262	4.1	2271	3.5	100%
8	Lobe No. 1 centre north	0.15	Type 2	2262	4.1	2185	4.8	97%
9	Lobe No. 1 centre south	0.15	Type 2	2262	4.1	2224	3.6	98%
10	Lobe No. 1 east perimete	0.15	Type 2	2262	4.1	2226	2.9	98%
11	Lobe No. 1 west perimet	0.15	Type 2	2262	4.1	2201	4.6	97%
12	Lobe No. 1 centre north	0.15	Type 2	2262	4.1	2103	5.7	93%
13	Lobe No. 1 centre south	0.15	Type 2	2262	4.1	2011	5.2	89%
14	Lobe No. 1 centre north/south - retest	0.15	Type 2	2262	4.1	2229	4.1	99%

GENERAL INFORMATION

PROCTOR TYPE: Method C
Control
Standard (D698) X
Modified (D1557)

REMARKS :
Specified Density: Minimum of 95%
Type 2 Proctor S10-06
Type 5 control strip - see above

ENGINEERING INTERPRETATION OR EVALUATION OF THESE TEST RESULTS IS PROVIDED ONLY ON WRITTEN REQUEST.

REPORTING OF THESE TEST RESULTS CONSTITUTES A TESTING SERVICE ONLY.

Signed: _____

Appendix E

Permit Reporting Information

Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

Date: AUG 5/2010

Baba Pedersen
Inspector.

ENVIRONMENTAL INSPECTION REPORT

Permittee: *(complete name and address)* DIAND - CONTAMINATED SITES
Box 2200, IQALUIT, NU X0A 0H0

		Permit Expiry Date	Last Previous Inspection
Land Use Permit No.	N2008X0004	APRIL 13, 2011	
Quarrying Permit No.			
Contractor:		Subcontractor:	

Location(s) Inspected: SIMPSON LAKE REMEDIATION CAMP
N 68° 34' 16.0" W 92° 02' 42.8"

Current Stage of Operation: ACTIVE CAMP 25 PEOPLE IN CAMP
55% COMPLETE FOR THIS SEASON, 1 MORE YEAR

Program Modifications Approved:

Condition of Operation "A" - Acceptable "U" - Unacceptable "N/A" - Not Applicable

	Operating Condition	Aspect Inspected				
		CAMP		QUARRY		
A	Location as Permitted	A		A		
B	Timing as Permitted	A		A		
	Equipment as Approved	A				
D	Methods & Techniques	A				
E	Facilities	A				
F	Erosion	A				
G	Chemicals, Waste	A				
H	Wildlife & Fisheries Habitat	A				
I	Ecological Resource	A				
K	Fuel Storage	U				RECOMMEND COVERED SECONDARY CONTAINMENT
L	Brush Disposal	—				
M	Matters Not Inconsistent	A				
N	Water Engineering	A				
O	Water Supply	A				
P	Restoration	A				
Q	Quarrying Methods			A		
R	Sections 12 to 19 T.L.U.R.					
S						
T						

Surveillance Network Program

Explanatory Remarks *(attach page 2, if required)* NICE ORGANIZED CAMP. I

P.O. Box 360
Kugluktuk, NU X0B 0E0
Telephone: (867) 982-3310
Fax: (867) 982-3311
www.kitia.ca

Cambridge Bay
Ikaluktutiak
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Kugluktuk
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Bathurst Inlet
Kingaok
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Bay Chimo
Umingmaktok
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Gjoa Haven
Okhoktok
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Taloyoak
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Kugaaruk
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March 1, 2011

Dale Morakinyo, P.Eng.
Project Manager, Contaminated Sites Program
Indian & Northern Affairs Canada (INAC)
Government of Canada
25 Eddy Street, 10th Floor
Gatineau, Que.
K1A 0H4

Re: Inuit Owned Land License KTX09F001-Amended

As per your Indian & Northern Affairs Canada's application to access Inuit Owned Lands (IOL) dated December 14, 2007, attached is Exemption Certificate of IOL License KTX09F001-Amended for another year.

Thank you. If you have any question or would like any clarifications in terms of the issuance of IOL License KTX09F001-Amended, I can be contacted at 867-982-3310 or my e-mail
sanablak@qiniq.com

Respectfully,
Kitikmeot Inuit Association

Stanley Anablak
Sr. Lands Officer

Enclosures

P.O. Box 360
Kugluktuk, NU X0B 0E0
Telephone: (867) 982-3310
Fax: (867) 982-3311
www.kitia.ca

Cambridge Bay
Ikaluktutiak
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Kugluktuk
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Bathurst Inlet
Kingaok
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Bay Chimo
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Gjoa Haven
Okhoktok
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Taloyoak
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Kugaaruk
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CERTIFICATE OF EXEMPTION

CERTIFICATE NO. KTX09F001-Amended

THIS IS TO CERTIFY THAT, SUBJECT TO THE ATTACHED TERMS AND CONDITION,

INDIAN AND NORTHERN AFFAIRS CANADA

Name of Certificate Holder

Does not require the further consent of the Kitikmeot Inuit Association for access to carry out the land use operation described in the attached application dated: Feb. 16/11

March 1, 2011

Date

Dated at Kugluktuk, Nu Land & Environment STANDARD

This 1st Day of March 20 11

Commencement Date : March 15, 2011 Expiry Date : March 14, 2012

Kitikmeot Inuit Association
Kitikmeot Inuit Katuyikatigit
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P.O. Box 360, Kugluktuk
Nunavut X0B 0E0
Tel. (867) 982-3310
Fax (867) 982-3311

Kugluktuk
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Bathurst Inlet
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Okhoktok
ᐅᖏᓵᖅᑐᖅ

Taloyoak
ᑕᓗᔦᐊᖅ

Kugaaruk
ᑰᒍᓐᒃ

April 12, 2010

Dele Morakinyo
Project Manager, Contaminated Sites Program (NRO);
Indian & Northern Affairs Canada
Government of Canada
25 Eddy Street, 10th Floor
Gatineau, Que.
K1A 0H4

Re: Inuit Owned Land License KTX09F001-Amended

As per your Indian & Northern Affairs Canada's application to access Inuit Owned Lands (IOL) dated April 8, 2010, attached is Exemption Certificate of IOL License KTX09F001-Amended.

Thank you. If you have any question or would like any clarifications in terms of the issuance of IOL License KTX09F001, I can be contacted at 867-982-3310 or my e-mail sanablak@qiniq.com

Respectfully,
Kitikmeot Inuit Association

Stanley Anablak
A/Sr. Lands Officer

Enclosures

Kitikmeot Inuit Association
Kitikmeot Inuit Katuyikatigit
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P.O. Box 360, Kugluktuk
Nunavut X0B 0E0
Tel. (867) 982-3310
Fax (867) 982-3311

Kugluktuk
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Bathurst Inlet
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Bay Chimo
Omingmaktok
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Cambridge Bay
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Gjoa Haven
Okhoktok
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Taloyoak
ᑕᓗᔪᒃ

Kugaaruk
ᑰᒪᓗᒃ

CERTIFICATE OF EXEMPTION

CERTIFICATE NO. KTX09F001

THIS IS TO CERTIFY THAT, SUBJECT TO THE ATTACHED TERMS AND CONDITION,

INDIAN AND NORTHERN AFFAIRS CANADA

Name of Certificate Holder

Does not require the further consent of the Kitikmeot Inuit Association for access to carry out the land use operation described in the attached application dated:

December 14, 2007

Date

Dated at Kugluktuk Land & Environment SAMBLAK

This 12th Day of APRIL 2010

Commencement Date : March 15, 2010 Expiry Date : March 14, 2011

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

Land Administration
P.O. Box 100
IQALUIT, NU X0A 0H0
Phone: 867-975-4275
FAX: 867-975-4286

Your file Votre référence

Our file Notre référence

April 14, 2008

Natalie Plato
DIAND
Contaminated Sites
P.O. Box 2200
Iqaluit, NU
X0A 0H0

Dear Ms. Plato:

Re: Land Use Permit #N2008X0004
Type of Operation: Site Remediation
Location: CAM - D Simpson Lake, Kitikmeot, NU NTS 057A

Enclosed is your copy of Land Use permit number N2008X0004 authorizing your project as described in your application dated December 14, 2007, received by this office February 5, 2008.

Your application has received a wide distribution to other Federal departments, Government of the Nunavut departments, communities in the area of your operation and concerned Inuit groups. In distributing your application the Nunavut Impact Review Board (NIRB) sought comments from these various agencies based on their area of expertise that will help ensure minimum negative impact on the environment. The issuance of this permit indicates that as a result of the NIRB environmental screening process it was decided that the potentially adverse environmental effects that may be caused by your proposal are mitigable with known technology and are not significant. The terms and conditions in the permit will, in our opinion, provide the necessary protection to the environment.

The Nunavut Impact Review Board has also recommended the following:

1. The Proponent shall ensure that all field operations staff are aware of the Proponent's commitments.

2. The Proponent shall forward copies of all permits obtained and required for this project to the Nunavut Impact Review Board (NIRB), prior to the commencement of the project.

3. The NIRB shall be notified of any changes in operating plans or conditions associated with this project prior to any such change.

4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

5. The Proponent shall operate in accordance with all commitments stated in all documentation provided to the NIRB, namely:

   a. NIRB Part 1 Summary Application Form
   b. INAC Application for Land Use Permit
   c. Kitikmeot Inuit Association Application for Access to Inuit Owned Land
   d. Nunavut Water Board Water Licence Application
   e. Non technical Project Proposal summary
   f. Remedial Action Plan
   g. Environmental Screening of the Remediation Program
   h. Preliminary Spill Contingency Plan
   i. Phase III Environmental Site Assessment, Materials Audit and Geotechnical Investigation
   j. Human Health and Ecological Risk Assessment
   k. Archaeological Impact Assessment

6. The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless approved by the Nunavut Water Board.

7. Harassment of wildlife is contrary to the *Wildlife Act*. This includes persistently worrying or chasing animals, or disturbing large groups of animals.

8. The Proponent shall follow procedures outlined in the "Safety in Bear Country Manual", and should contact the Regional Biologist or the Wildlife manager for information and advice on measures which should be taken to minimize the possibility of conflicts/interactions with bears. Consideration should be given to setting up an electric fence around the camp.

9. The Proponent shall document any wildlife observations (i.e. bear, caribou, fox, wolf and raptor) in the general vicinity of their operation, noting locations and frequencies, and modify activities accordingly to avoid wildlife when possible. Special note should be taken of any designated *Species at Risk* (see Appendix B) observed in the project area. These wildlife observations shall be reported annually at the end of each operational season to the following Department of Environment contacts:

   a. Shane Sather, Acting Regional Manager, Wildlife (867-983-4167), ssather@gov.nu.ca
   b. Joe Ashevak, Taloyoak Wildlife Officer (867-561-6231), taloyoakwildlife@qiniq.com
   c. Mathieu Dumond, Regional Biologist 9867-982-7444), mdumond@gov.nu.ca

10. The Proponent is required to ensure the site for stockpiling and processing of quarried material is contaminant free prior to project activities taking place.

11. The Proponent shall install and operate an incineration device capable of meeting the emission limits established under the *Canada-Wide Standards (CWS) for Dioxins and Furans* and the *CWS for Mercury Emissions*.

12. The Proponent shall develop an incineration management plan in consultation with Environment Canada (EC). This would include the submission of an annual incineration management report to EC that provides the following:

    a. Recycling/segregation waste program
    b. Incineration technology selected
    c. Waste inventory/audit that outlines the nature, extent and eventual fate of all waste materials brought to and existing at the site
    d. Operational and maintenance records
    e. Operator training
    f. Incineration ash disposal
    g. Compliance with the *Canada-Wide Standards (CWS) for Dioxins and Furans* and for *Mercury Emissions*.

13. The Proponent shall ensure adequate testing for polychlorinated biphenyls (PCB's) in all suspect areas, and ensure appropriate steps are taken to remove and dispose of the contaminated materials.

14. The Proponent shall provide the NIRB, Government of Nunavut – Department of Environment (GN-DOE) and EC with updated *Preliminary Contingency Plans* prior to the commencement of project activities. It is recommended that the Proponent refer to GN-DOE regulations and guidelines to ensure the spill plan is developed adequately. The Plan should also include but is not limited to:

    a. Map of the campsite indicating the location of fuel storage areas and spill kits.
    b. Contact information for individuals on site who should be notified if a spill occurs.
    c. Contact information for relevant government agencies that should be notified, including Environment Canada 24 hour Emergency Pager (867-766-3737)
    d. Copy of the NWT/NU Spill Reporting Form and contact number for the 24 hour Spill Line (867-920-8130).

15. The Proponent should, to the extent possible, hire local people and consult with local residents regarding their activities in the region.

16. Any amendment requests to the above mentioned project may be deemed by NIRB to be outside the original scope of the project and may be considered a new project requiring Screening.

In addition to the project-specific terms and conditions, the Board is recommending the following:

1. The Proponent apply for their Quarrying Permit with Indian and Northern Affairs Canada (INAC), Land Administration for their construction of new quarry to access aggregate material (borrow source development) in a timely manner. This application *may* be eligible for exemption from a NIRB Screening through 12.4.3 in the NLCA.

2. The Proponent will be advised that all releases of harmful substances are immediately reportable where the release:

   a. Is near or into a water body;
   b. Is near or into a designated sensitive environment or sensitive wildlife habitat;
   c. Poses an imminent threat to human health or safety; or
   d. Poses an imminent threat to a listed species at risk or its critical habitat.

The Proponent is also advised that the following legislation may apply to the project:

1. The Proponent shall ensure compliance with the *Fisheries Act* (http://laws.justice.gc.ca/en/showtdm/cs/F-14///en). Section 35(1) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat. Section 36(3) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall deposit or permit the deposit of a deleterious substance in any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.

2. The Proponent shall ensure compliance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* which states that "no person shall use, or permit the use of, waters in Nunavut except in accordance with the conditions of a licence," and "no person shall deposit or permit the deposit of waste (a) in waters in Nunavut; or (b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut" (http://www.canlii.org/ca/sta/n-28.8/whole.html).

3. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* which state that no person disturb or destroy the nests or eggs of migratory birds, and that no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds (http://laws.justice.gc.ca/en/showtdm/cs/M-7.01).

4. *The Species at Risk Act* (http://laws.justice.gc.ca/en/showtdm/cs/S-15.3). Attached in **Appendix B** is a list of Species at Risk in Nunavut. The Proponent should consult the Species at Risk Public Registry (http://www.sararegistry.gc.ca/) to identify any Species at Risk within the project location. Further, the Proponent shall develop monitoring plans

for each relevant Species at Risk in accordance with any applicable status reports, recovery strategies, action plans, and management plans posted on the Species at Risk Public Registry and in consultation with the Government Organization with Primary Management Responsibility. Monitoring plans should record the locations and frequency of observing species of special concern and note any actions taken to avoid contact or cause disturbance to the species, its residence, or its critical habitat.

5. The *Nunavut Act* (http://laws.justice.gc.ca/en/showtdm/cs/N-28.6) which requires that no person alter or disturb any archaeological or palaeontological sites in Nunavut unless permission is first granted through the permitting process. If any archaeological or palaeontological sites are found they should remain undisturbed and their location should be reported to the Government of Nunavut Department of Culture, Language, Elders and Youth. The Proponent must comply with the proposed terms and conditions listed in the attached **Appendix C.**

6. The *Transportation of Dangerous Goods Regulations*, *Transportation of Dangerous Goods Act* (http://www.tc.gc.ca/tdg/menu.htm), and the *Environmental Protection Act* (http://laws.justice.gc.ca/en/C-15.31/text.html) which present the requirements for the handling, storing, managing and transportation of dangerous goods, including hazardous wastes, fuel and contaminated material. The Proponent must ensure that proper shipping documents accompany all movements of dangerous goods. The Proponent must register with GN-DOE by contacting Robert Eno at 867-975-7748 or reno@gov.nu.ca..

Please ensure that you adhere to the operating conditions, along with the Archaeological Palaeontological terms and conditions, annexed to your permit. Should you have any questions regarding any conditions of this permit, please contact Jeff Holwell at (867) 975-4283 or by email at holwellj@inac.gc.ca.

Yours truly,

Jeff Holwell
Land Administrator Specialist
Land Administration

cc: Manager, Field Operations
RMO - Kitikmeot
NPC
NIRB

Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

LAND USE PERMIT
NORTHERN AFFAIRS PROGRAM

PERMIS D'UTILISATION DES TERRES
PROGRAMME DES AFFAIRES DU NORD

Permit Class - Permis Categorie	Permit No - N° de permis
A	N2007X0004

Subject to the Territorial Land Use Regulations and the terms and conditions in this permit, authority is hereby granted to:

Sous réserve du Règlement sur l'utilisation des terres territoriales et des conditions de ce permis:

DIAND Contaminated Sites
Permittee - Détenteur de permis

To proceed with the land use operation described in the application of:

Est autorisé à entreprendre les travaux d'exploitation des terres décrits dans la demande de permis du:

Signature	Date
Natalie Plato	April 14, 2008

Type of Land Use Operation - Genre de travaux d'exploitation des terres

Site Remediation

Location - Emplacement

CAM - D Simpson Lake, Kitikmeot, Nunavut, NTS 057A

This permit may be assigned, extended, discontinued, suspended or cancelled pursuant to the Territorial Land Use Regulations.

Ce permis peut faire l'objet d'une cession, d'une prolongation d'une cessation d'une suspension ou d'une annulation, en vertu du Règlement sur l'utilisation des terres territoriales.

Dated at / Date a Iqaluit

Engineer / Ingénieur

This / Ce 14th Day of / jour de April, 2008.

Commencement Date / Date du déut des travaux April 14th 2008

Expiry Date / Date d'achèvement April 13th, 2010

NOTE

IT IS A CONDITION OF THIS PERMIT THAT THE PERMITTEE COMPLY WITH ANY OTHER APPLICABLE ACT, REGULATION, ORDINANCE BY - LAW OR ORDER DEFAULT HEREOF MAY RESULT IN SUSPENSION OR CANCELLATION OF THIS PERMIT.

REMARQUE

LE DÉTENTEUR DU PRÉSENT PERMIS DOIT SE CONFORMER À TOUT AUTRE RÈGLEMENT, LOI, DÉCRET RÈGLEMENT MUNICIPAL OU ARRETÉ APPLICABLE. LE MANQUEMENT À CETTE OBLIGATION POURRAIT DONNER LIEU À LA SUSPENSION OU À L'ANNULATION DU PERMIS.

Canada

CONDITIONS ANNEXED TO AND FORMING PART OF LAND USE PERMIT NUMBER N2008X0004

31(1)(a) - Location and Area

1.	The Permittee shall not conduct this land use operation on any lands not designated in the accepted application, unless otherwise authorized in writing by the Engineer.	PLANS
2.	The Permittee shall remove from Territorial Lands, all scrap metal, discarded machinery and parts, barrels and kegs, building and building material.	REMOVE WASTE MATERIAL

31(1)(b) - Time

3.	The Permittee's Field Supervisor shall contact or meet with a Land Use Inspector at the Kugluktuk office of the Department of Indian Affairs and Northern Development, phone number (867) 982-4306, at least 48 hours prior to the commencement of this land use operation.	CONTACT INSPECTOR
4.	The Permittee shall advise a Land Use Inspector at least 10 days prior to the completion of the land use operation of; a) his plans for removal or storage of equipment and materials, and b) when final clean-up and restoration of the lands used will be completed	REPORTS BEFORE REMOVAL
5.	The Permittee shall complete all clean-up and restoration of the lands used prior to the expiry date of this permit.	CLEAN-UP
6.	The Engineer reserves the right to impose closure of any area to the Permittee in periods when dangers to natural resources are severe.	CLOSURE

31(1)(c) - Equipment

7.	The Permittee shall not use any equipment except of the type, size and number that is listed in the accepted application, unless otherwise authorized in writing by the Land Use Inspector.	ONLY APPROVED EQUIPMENT
8.	The Permittee shall use a forced-air fuel-fired incinerator to incinerate all combustible garbage and debris.	INCINERATORS
9.	The Permittee shall burn all combustible garbage and debris in a container acceptable to a Land Use Inspector.	INCINERATION
10.	The Permittee shall keep all garbage and debris in a covered metal container until disposed of.	GARBAGE CONTAINERS

31(1)(d) - Methods and Techniques

11.	The Permittee shall plug all bore holes as the land use operation progresses.	PLUG HOLES
12.	The Permittee shall remove all wire from the land as the land use operation progresses.	REMOVE WIRE
13.	The Permittee shall not erect camps or store material on the surface ice of streams.	STORAGE ON ICE
14.	It is recommended that an undisturbed buffer zone of at least 31 metres be maintained between the proposed quarry operation and the normal high water mark of any water body.	

31(1)(e) - Type, Location, Capacity and Operation of Facilities

15.	The Permittee shall not locate any sump within 31 metres of the normal high water mark of any stream.	SUMPS FROM WATER

16.	The Permittee shall maintain all drill wastes at least 1.2 metres below the lowest elevation of contiguous surrounding ground surface at all times.	SUMPS FREEBOARD
17.	The Permittee shall backfill and restore all sumps prior to the expiry date of this permit.	BACKFILL SUMPS
18.	The Permittee shall ensure that the land use area is kept clean and tidy at all times.	CLEAN WORK AREA

31(1)(f) - Control or Prevention of Flooding, Erosion and Subsidence of Land

19.	A)	The Permittee shall, where flowing water from bore holes is encountered, plug the bore hole in such a manner as to permanently prevent any further outflow of water.	PLUG ARTESIAN WELLS
	B)	The artesian occurrence shall be reported to the Engineer within forty-eight (48) hours	
20.		The Permittee shall install erosion control structures as the land use operation progresses unless otherwise authorized by a Land Use Inspector.	EROSION CONTROL WHEN
21.		The Permittee shall prepare the site in such a manner as to prevent rutting of the ground surface.	PREVENTION OF RUTTING
22.		The Permittee shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging.	VEHICLE MOVEMENT FREEZE-UP
23.		The Permittee shall suspend overland travel of equipment or vehicles if rutting occurs.	SUSPEND OVERLAND TRAVEL

31(1)(g) - Use, Storage, Handling and Disposal of Chemical or Toxic Material

24.	The Permittee shall not use chemicals in connection with the land use operation without the prior approval of the Engineer.	APPROVAL OF CHEMICALS
25.	The Permittee shall burn all garbage and debris at least daily.	GARBAGE DISPOSAL
26.	The Permittee shall remove all non-combustible garbage and debris from the land use area to a disposal site approved in writing by a Land Use Inspector.	REMOVE GARBAGE
27.	The Permittee shall dispose of all combustible waste petroleum products by incineration or removal.	WASTE PETROLEUM DISPOSAL
28.	The Permittee shall report all spills immediately in accordance with instructions contained in "Spill Report" form NWT 1752(05/93). Twenty four (24) hour spill report line (867)920-8130.	REPORT CHEMICAL AND PETROLEUM SPILLS
29.	The Permittee prior to the discharge of fluids from any sump, shall carry out an analysis of the fluids in a manner prescribed by the Engineer and obtain his written approval to discharge.	SUMP DISCHARGE
30.	The Proponent shall not burn or incinerate hazardous wastes.	

31(1)(h) - Wildlife and Fisheries Habitat

31.	The Permittee shall not unnecessarily damage wildlife habitat in conducting this land use operation.	HABITAT DAMAGE

32. The Permittee shall not detonate explosives within fifteen (15) metres of any body of water which is not completely frozen to the bottom. EXPLOSIVES WATER

33. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.

34. The Proponent shall ensure that minimum flying altitudes of 610 m above ground level fornesting migratory birds, and 1100 m where birds are known to concentrate (moulting/brooding areas) and identified caribou calving and post-calving areas are implemented. In addition, a minimum horizontal distance of 1500 m from any observed concentrations of birds shall be maintained.

35. The Proponent shall avoid raptor nesting sites and concentrations of nesting or moultingwaterfowl by aircraft at all times and ensure that there is minimal disturbance to any nesting birds, migratory birds and wildlife in the area.

36. If nests containing eggs or young are encountered, the Proponent should avoid these areas until nesting is complete and the young have left the nest.

37. The Proponent shall cease activities that may interfere with migration or calving of caribou, until the caribou have passed or left the area.

31(1)(l) - Objects and Places of Recreational, Scenic and Ecological Value

38. The Permittee shall not feed wildlife. NO FEEDING WILDLIFE

31(1)(k) - Petroleum Fuel Storage

39. The Permittee shall report in writing to a Land Use Inspector the location and quantity of all petroleum fuel caches within ten (10) days after the establishment. REPORT FUEL LOCATION

40.	The Permittee shall not place any petroleum fuel storage containers within thirty one (31) metres of the normal high water mark of any stream.	FUEL BY STREAM
41.	The Permittee shall not allow petroleum products to spread to surrounding lands or into water bodies.	FUEL CONTAINMENT
42.	The Permittee shall have one extra fuel storage container on site equal to, or greater than, the size of the largest fuel container.	FUEL EXTRA CONTAINER
43.	The Permittee shall not use bladders for storing petroleum products.	BLADDERS PROHIBITED
44.	The Permittee shall not use bladders for transporting petroleum products.	BLADDERS PROHIBITED
45.	The Permittee shall construct a dyke around each stationary fuel container or group of stationary fuel containers where any one container has a capacity exceeding 4,000 litres.	DYKE FUEL CONTAINERS
46.	The Permittee shall line the dyke and area enclosed by the dyke with a type of plastic film liner approved by the Engineer.	LINE DYKE
47.	The volume of the dyked area shall be 10% greater than the capacity of the largest fuel container placed therein.	CAPACITY
48.	The Permittee shall: a) examine all fuel storage containers for leaks a minimum of once every day. b) repair all leaks immediately	CHECK FOR LEAKS
49.	The Permittee shall mark all fuel containers with the Permittee's name.	MARK CONTAINERS
50.	The Permittee shall seal all container outlets except the outlet currently in use.	SEAL OUTLET

31(1)(m) - Matters Not Inconsistent with the Regulations

51.	The Permittee shall not remove any material from below the ordinary high water mark of any stream without first obtaining written permission from a Land Use Inspector.	APPROVAL NEEDED
52.	The Permittee shall display a copy of this permit in a conspicuous place in each campsite established to carry out this land use operation.	DISPLAY PERMIT
53.	The Permittee shall keep on hand, at all times during this land use operation, a copy of the Land Use Permit.	COPY OF PERMIT
54.	The Permittee shall abide by and comply with all applicable lawful rules, acts, regulations, and by-laws of Canada, Nunavut, any Municipal or regulatory body or authority having jurisdiction, the Nunavut Land Claim Agreement, and all other agreements, permits, licenses, and other instruments whatsoever related to the project.	ADHERENCE TO LAWFUL RULES, ACTS, REGS & BYLAWS
55.	The Proponent shall ensure that workers follow established protocols for working with hazardous material and contaminated soil.	

ARCHAEOLOGICAL AND PALAEONTOLOGICAL RESOURCES TERMS AND CONDITIONS FOR LAND USE PERMIT HOLDERS

BACKGROUND

Archaeology

As stated in Article 33 of the Nunavut Land Claims Agreement:

The archaeological record of the Inuit of Nunavut is a record of Inuit use and occupancy of lands and resources through time. The evidence associated with their use and occupancy represents a cultural, historical and ethnographic heritage of Inuit society and, as such, Government recognizes that Inuit have a special relationship with such evidence, which shall be expressed in terms of special rights and responsibilities. [33.2.1]

The archaeological record of Nunavut is of spiritual, cultural, religious and educational importance to Inuit. Accordingly, the identification, protection and conservation of archaeological sites and specimens and the interpretation of the archaeological record is of primary importance to Inuit and their involvement is both desirable and necessary. [33.2.2]

In recognition of the cultural, spiritual and religious importance of certain areas in Nunavut to Inuit, Inuit have special rights and interests in these areas as defined by Article 33 of the Nunavut Land Claims Agreement. [33.2.5]

Palaeontology

Under the Nunavut Act[1], the federal government can make regulations for the protection, care and preservation of palaeontological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*[2], it is illegal to alter or disturb any palaeontological site in Nunavut unless permission is first granted through the permitting process.

Definitions

As defined in the *Nunavut Archaeological and Palaeontological Sites Regulations*, the following definitions apply:

"archaeological site" means a place where an archaeological artifact is found.

[1] s. 51(1)
[2] P.C. 2001-1111 14 June, 2001

"archaeological artifact" means any tangible evidence of human activity that is more than 50 years old and in respect of which an unbroken chain of possession or regular pattern of usage cannot be demonstrated, and includes a Denesuline archaeological specimen referred to in section 40.4.9 of the Nunavut Land Claims Agreement.

"palaeontological site" means a site where a fossil is found.

"fossil" includes:

(a) natural casts
(b) preserved tracks, coprolites and plant remains; and
(c) the preserved shells and exoskeletons of invertebrates and the eggs, teeth and bones of vertebrates.

Terms and Conditions

1) The permittee shall not operate any vehicle over a known or suspected archaeological or palaeontological site.

2) The permittee shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.

3) The permittee shall immediately contact the Department of Culture, Language, Elders and Youth (867) 934-2046 or (867) 975-5500 or 1 (866) 934-2035 should an archaeological site or specimen, or a palaeontological site or fossil be encountered or disturbed by any land use activity.

4) The permittee shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation, until permitted to proceed with the authorization of the Department of Culture, Language, Elders and Youth, Government of Nunavut.

5) The permittee shall follow the direction of the Department of Culture, Language, Elders and Youth and DIAND in restoring disturbed archaeological or palaeontological sites to an acceptable condition.

6) The permittee shall provide all information requested by the Department of Culture, Language, Elders and Youth concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.

7) The permittee shall make best efforts to ensure that all persons working under authority of the permit are aware of these conditions concerning archaeological sites and artifacts, and palaeontological sites and fossils.

8) The permittee shall avoid the known archaeological and/or palaeontological sites listed in Attachment 1.

9) The permittee shall have an archaeologist or palaeontologist perform the following functions, as required by the Department of Culture, Language, Elders and Youth:

   a) survey
   b) inventory and documentation of the archaeological or palaeontological resources of the land use area
   c) assessment of potential for damage to archaeological or palaeontological sites
   d) mitigation
   e) marking boundaries of archaeological or palaeontological sites
   f) site restoration

The Department of Culture, Language, Elders and Youth shall authorize by way of a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit, all procedures subsumed under the above operations.

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

www.inac.gc.ca
www.ainc.gc.ca

Land Administration
P.O. Box 100
IQALUIT, NU X0A 0H0
Phone: 867-975-4275
FAX: 867-975-4286

Your file - Votre référence

Our file - Notre référence

February 1, 2010

Natalie Plato
c/o DIAND-Iqaluit
P.O. Box 2200
Iqaluit, NU
X0A 0H0

Dear Ms. Plato:

Re: Land Use Permit #N2008X0004
Type of Operation: Dew Line Site Remediation
Location: Simpson Lake, Kitikmeot, NU, 57A

Further to our letter dated January 26, 2010, this will confirm that Nunavut Impact Review Board has completed its screening on your amendment. The above mentioned land use permit is hereby amended to include the work outlined in your request.

All conditions annexed to land use permit N2008X0004 will apply to this amendment. As well as the following:

1. The Proponent shall ensure that all camps are located on gravel, sand or other durable land.

2. The Proponent shall not erect camps or store material on the surface of ice in lakes or streams.

3. An archaeological inventory, as specified in CLEYs "Guidelines for Developers" should be conducted by a professional archaeologist holding a valid Nunavut archaeological permit for the lands associated with the winter transportation routes, both those proposed and the one cited as used in 2008, the Kudlik Mobilization Plan.

4. All flagging of archaeological sites must be conducted by a professional archaeologist holding a valid Nunavut archaeological permit.

5. If an archaeological site is encountered or disturbed in the course of the land use activity methods of site protection and restoration must be followed by the permittee.

6. Applicable manuals should be updated to reflect current information, including but not limited to: Dustin Fredland, the Regional Manager of Wildlife for the Kitikmeot region; (867)-982-7441; dfredland@gov.nu.ca.

7. The Spill Contingency Plan should be updated to include GN-DOE as a key contact. DOE's Manager of Pollution Control Ian Rumbolt can be contacted at (867) 975-7748 or irumbolt@gov.nu.ca.

The Proponent is advised that the following legislation may apply to the project:

1. The Proponent shall ensure compliance with the *Fisheries Act* (http://laws.justice.gc.ca/en/showtdm/cs/F-14///en). Section 35(1) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat. Section 36(1) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall deposit or permit the deposit of a deleterious substance in any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.

2. The Proponent shall ensure compliance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* which states that "no person shall use, or permit the use of, waters in Nunavut except in accordance with the conditions of a licence," and "no person shall deposit or permit the deposit of waste (a) in waters in Nunavut; or (b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut" (http://www.canlii.org/ca/sta/n-28.8/whole.html).

3. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* which state that no person disturb or destroy the nests or eggs of migratory birds, and that no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds (http://laws.justice.gc.ca/en/showtdm/cs/M-7.01).

4. *The Species at Risk Act* (http://laws.justice.gc.ca/en/showtdm/cs/S-15.3). Attached in **Appendix B** is a list of Species at Risk in Nunavut. The Proponent should consult the Species at Risk Public Registry (http://www.sararegistry.gc.ca/) to identify any Species at Risk within the project location. Further, the Proponent shall develop monitoring plans for each relevant Species at Risk in accordance with any applicable status reports, recovery strategies, action plans, and management plans posted on the Species at Risk Public Registry and in consultation with the Government Organization with Primary Management Responsibility. Monitoring plans should record the locations and frequency of observing species of special concern and note any actions taken to avoid contact or cause disturbance to the species, its residence, or its critical habitat.

5. The *Nunavut Act* (http://laws.justice.gc.ca/en/showtdm/cs/N-28.6) which requires that no person alter or disturb any archaeological or palaeontological sites in Nunavut unless permission is first granted through the permitting process. If any archaeological or palaeontological sites are found they should remain undisturbed and their location should be reported to the Government of Nunavut Department of Culture, Language, Elders and Youth. The Proponent must comply with the proposed terms and conditions listed in the attached **Appendix C.**

6. The *Transportation of Dangerous Goods Regulations*, *Transportation of Dangerous Goods Act* (http://www.tc.gc.ca/tdg/menu.htm), and the *Environmental Protection Act* (http://laws.justice.gc.ca/en/C-15.31/text.html) which present the requirements for the handling, storing, managing and transportation of dangerous goods, including hazardous wastes, fuel and contaminated material. The Proponent must ensure that proper shipping documents accompany all movements of dangerous goods. The Proponent must register with GN-DOE by contacting Robert Eno at 867-975-7748 or reno@gov.nu.ca.

Also, further to our letter dated January 26, 2010 this will confirm that the above Land Use Permit is hereby extended from April 13, 2010 to April 13, 2011.

Sincerely,

Jeff Mercer
Land Administrator Specialist
Land Administration

cc: Manager, Field Operations
RMO - Kitikmeot RMO
NIRB
NPC

Indian and Northern Affairs Canada
www.inac.gc.ca

Affaires indiennes et du Nord Canada
www.ainc.gc.ca

Land Administration
P.O. Box 100
Iqaluit, NU X0A 0H0
Phone: 867-975-4275
Fax: 867-975-4286

Your file - Votre référence

Our file - Notre référence

March 1, 2011

Natalie Plato
c/o DIAND-Iqaluit
P.O. Box 2200
Iqaluit, NU
X0A 0H0

Dear Ms. Plato:

Re: Land Use Permit #N2008X0004
Type of Operation: Site Remediation
Location: CAM-D Simpson Lake, Kitikmeot, NU, NTS 057A

Further to our letter dated February 18, 2011, this will confirm that the above land use permit is hereby extended from April 13, 2011 to April 13, 2012.

All conditions annexed to land use permit N2008X0004 will apply to this extension.

Sincerely,

Tracey McCaie
Land Administrator Specialist
Land Administration

cc: Manager, Field Operations
RMO - Kitikmeot RMO
NIRB
[redacted]

CIDM#450534

Canada

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Aboriginal Affairs and Northern Development Canada
Affaires autochtones et Développement du Nord Canada

Land Administration
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IQALUIT, NU X0A 0H0
Phone: 867-975-4275
FAX: 867-975-4286

Your file - Votre référence

Our file - Notre référence

April 27th, 2012

DIAND – Contaminated Sites
P.O. Box 2200
Iqaluit, NU
X0A 0H0

Dear Natalie Plato:

Re: Land Use Permit #N2008X0004
Type of Operation: Site Remediation
Location: Simpson Lake, Kitikmeot, NU, NTS 57A

Further to our letter dated April 16th, 2012, this will confirm that the above land use permit is hereby extended from April 13th, 2012, to April 13th, 2013.

All conditions annexed to land use permit N2008X0004 will apply to this extension.

Sincerely,

Tracey McCaie
Land Administrator Specialist

cc: Manager, Field Operations
RMO - Kitikmeot
NIRB
CIDM#525016

Canada

P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: **1BR-SIM0813**

December 2, 2008

Natalie Plato, Director
Contaminated Sites Program
Indian and Northern Affairs Canada
PO Box 2200
Iqaluit, NU X0A 0H0

Email: platon@inac.ainc.gc.ca

RE: NWB LICENCE No. 1BR-SIM0813

Dear Ms. Plato:

Please find attached Licence No. **1BR-SIM0813** issued to Indian and Northern Affairs Canada (INAC) – Contaminated Sites by the Nunavut Water Board **Motion #: 2008-06-L15** pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then water use and waste disposal must cease, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment, however a minimum of sixty (60) days is required from time of acceptance by the NWB. It is the

responsibility of the Licensee to ensure that all application materials have been received and acknowledged by the Manager of Licensing.

NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. The NWB notes that, among others, there is a NIRB Decision[1] requirement to install and operate an incineration device capable of meeting emission limits established under the *Canada-wide Standards (CWS) for Dioxins and Furans* and the *CWS for Mercury Emissions*. The NIRB Decision also contains a recommendation for a One Hundred (100) meter buffer zone between quarrying operations and any water bodies. This information is attached for your consideration

Sincerely,

Thomas Kabloona
Nunavut Water Board, Chair

TK/dc

Enclosure: Licence No. **1BR-SIM0813**
Comments: INAC and NIRB

Cc: Kitikmeot Distribution List

[1] NIRB Screening Decision Report, NIRB File No.: 08DN011, March 28, 2008, Item 18

P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

DECISION

LICENCE NUMBER: 1BR-SIM0813

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new Licence dated December 14, 2007, received by the NWB on February 7, 2008 and made by:

INDIAN AND NORTHERN AFFAIRS CANADA (INAC) – CONTAMINATED SITES

to allow for the use of water and disposal of waste during camp operations and site remediation activities at the former CAM-D (Simpson Lake) Intermediate Distant Early Warning (DEW) Line site, which is located approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak within the Kitikmeot Region, Nunavut, at general latitude 68°35'N and general longitude 91°57'W.

DECISION

After having been satisfied that the application was for a location within an area in which there is no valid Land Use Plan and subject to a 12.4.4(a) screening decision by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 of the *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Article 13 of the NLCA, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the NLCA and of the NWNSRTA, decided to waive the requirement to hold a public hearing and determined that:

Licence Number 1BR-SIM0813 be issued subject to the terms and conditions contained therein. (Motion #: 2008-06-L15)

SIGNED this 25th day of November 2008 at Gjoa Haven, NU.

Thomas Kabloona
Nunavut Water Board, Chair

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I. INTRODUCTION

The former CAM-D (Simpson Lake) Intermediate DEW Line Site is centrally located on the Boothia Peninsula, approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak, within the Kitikmeot Region, Nunavut, at the general latitude of 68°35'N and general longitude 91°57'W.

The CAM-D (Simpson Lake) Intermediate DEW Line (CAM-D) Site was operated from 1957 until 1963, when the site was vacated and abandoned. In 1985 INAC, Department of National Defence (DND) and Environment Canada (EC) conducted a partial clean up of the CAM-D Site and future environmental hazards were identified. A Short Range Radar facility was constructed between 1992 and 1995, 1 km east of the CAM-D site. This site will not be remediated during the CAM-D site project. A 1994 scientific investigation of the site was conducted by the Environmental Sciences Group of Royal Roads Military College where sampling took place where Tier I and Tier II contaminated soils were identified. As has been the practice at similar DEW line facilities, a detailed site investigation was undertaken prior to the commencement of remediation activities. Based on this assessment, a comprehensive site remediation work plan and reference document, *CAM-D DEW Line Site, Simpson Lake, Nunavut, Remedial Action Plan, dated December 2007* (RAP) has been developed whereby remediation options for each waste stream identified at the site have been proposed, and critically evaluated, to discuss potential risks, advantages and disadvantages of each remediation option. The Remedial Action Plan (RAP) has been designed to meet cleanup objectives, in accordance with the *INAC Abandoned Military Site Remediation Protocol, March 2005 as* follows:

- Restore the site to an environmentally safe condition;
- Prevent the migration of contaminants into the Arctic ecosystem;
- Remove physical hazards for the protection of human health and safety; and
- Implement a cost effective remediation solution.

The CAM-D site remediation is scheduled to occur between 2008 and 2011, and will include the following activities:

- Mobilization of equipment, materials and personnel to site by winter cat train;
- Airstrip improvement (if required);
- Road improvement (if required);
- Camp set-up and operation;
- Quarrying of gravel and overburden materials;
- Landfill construction and closure;
- Sewage Lagoons construction, operation and decommissioning;
- Hazardous material removal, handling and transportation;
- Temporary storage on site for hazardous materials, equipment and fuels;
- Building and infrastructure demolition;
- Debris consolidation and disposal;
- Excavation of petroleum hydrocarbon (PHC) contaminated soils and disposal off site;

- Excavation and removal of metals and PCB contaminated paint from site;
- Site grading;
- Demobilization of equipment, materials/wastes and personnel and;
- Site monitoring with long-term monitoring requirements to be assessed after the first five years.

A temporary camp will be set up at the site to facilitate the remediation activities. Upon completion of site remediation, all camp facilities, including equipment and excess fuel, will be removed from the site. Annual site monitoring activities are planned for the first five years after remediation. If remediation objectives are met and confirmed to be effective by annual monitoring, long term intermittent monitoring will be conducted on year 7, 10, 15 and 25.

II. PROCEDURAL HISTORY

On February 7, 2008, an application for a new water licence was filed with the Nunavut Water Board by Indian and Northern Affairs Canada ("INAC"), for water use and waste disposal activities associated with camp operations and site remediation activities at the CAM-D (Simpson Lake) Intermediate DEW Line Site, located approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak, within the Kitikmeot Region, Nunavut, at the general latitude of 68°35'N and general longitude 91°57'W.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S.55.1 and S.55.4, notice was posted of the application in Gjoa Haven, Kugaaruk and Taloyoak and distributed to interested parties on April 14, 2008 with a comment period deadline of May 14, 2008. Comments were received from Indian and Northern Affairs Canada.

III. GENERAL CONSIDERATIONS

A. Term of the Licence

In accordance with the *Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The NWB believes that a term of approximately five (5) years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence and will ensure that sufficient time is given to permit the Licensee to develop, submit and implement the plans required under the licence to the satisfaction of the NWB.

The Board, having considered the submission of the Applicant and the comments received from INAC, requires as a condition in Part J Item 1 of the Licence that the Licensee implement the preferred options identified in the Remediation Plan entitled "*CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*"

B. Water Use

The camp, which will support remediation activities at the Simpson Lake CAM-D site, will utilize water from Freshwater Land and/or Simpson Lakes. Water requirements for camp operations during the period of the licence are expected to be a maximum of twenty (20) m^3 *per* day.

Based upon the projected requirements of the Licensee, the Board has set the terms and conditions in the water licence, which govern water usage. The maximum permitted usage of water by the Licensee, over the term of the water licence and for all purposes, has been set at twenty (20) m^3 *per* day.

C. Deposit of Waste

Sewage

The Licensee has indicated that camp sewage and greywater will be discharged into two independent single cell lagoons located a minimum of 450 metres from any body of water or any drainage course, each having a total capacity of forty-five days, or other alternative treatment that will meet the required effluent criteria.

The Board, having duly considered these issues and the submission of the Applicant, has set the terms and conditions in the Water Licence, which govern the disposal of sewage during the proposed undertaking.

Solid Waste

The Licensee has indicated that camp solid waste will be incinerated and that any non-combustible residual waste will be buried in an on-site landfill. Additionally, pre-existing landfills on the CAM-D Site will be remediated in accordance with protocols described in the "*CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*". Non-hazardous waste will be placed in an appropriately designed and engineered landfill. Hydrocarbon contaminated soils and soils designated as hazardous under the *Canadian Environmental Protection Act* (CEPA; 1999), as well as materials coated with PCB amended paint, will be disposed of in approved off-site facilities.

The Licensee is required, under Part E, Item 2, to submit detailed information including the design and construction drawings of the proposed Solid Waste Disposal Facility and Sewage Disposal Facility prior to construction.

The Board, having duly considered these issues and the submission of the Applicant, has set the terms and conditions in the water licence, which govern the disposal of solid waste during the proposed undertaking accordingly.

D. Annual Report

The requirements for an Annual Report imposed on the Licensee in this Licence are for the purpose of ensuring that the NWB has an accurate annual update of water use and depositions of waste during a calendar year. This information is maintained on the Public Register and is available to any interested persons upon request. The requirements of this Annual Report can be found in Part B, Item 1.

E. Spill Contingency Planning

The Board generally requires that all Licensees prepare a comprehensive Spill Contingency Plan to establish a state of readiness to ensure a prompt and effective response to possible spills or system failure events. The site-specific Spill Contingency Plan will assist the Licensee in responding to emergencies, such that the impacts to water in particular and the environment and public health in general, are minimized. The applicant has submitted a document entitled "*Preliminary Contingency Plans, CAM-D (Simpson Lake) Intermediate DEW Line Site Remediation Project (April, 2007)"* on February 7, 2008 and will be required to submit a site specific Plan. The requirement for this Plan is detailed under Part I.

F. Abandonment and Restoration (A&R)

To ensure that all facilities are reclaimed in an appropriate manner upon abandonment, the NWB requires Licensees to prepare and submit an Abandonment and Restoration Plan. The activities proposed under this Licence are for the remediation of the site. The "*CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*" submitted February 7, 2008 by the Licensee, and the recommended preferred options have been approved by the Board. Additional conditions for restoration have been included under Part J of this Water Licence.

G. Monitoring

A Post-Closure Long Term Monitoring Plan shall be submitted for Board approval six months prior to the expiry of the Licence.

A Monitoring Plan is to be submitted for approval within ninety days of issuance of the Licence. The requirements for these Plans are detailed under Part H.

LICENCE NO. 1BR-SIM0813

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

INDIAN AND NORTHERN AFFAIRS CANADA – CONTAMINATED SITES

(Licensee)

Of

PO BOX 2200, IQALUIT NUNAVUT, X0A 0H0

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water for a period subject to restrictions and conditions contained within this licence:

Licence Number **1BR-SIM0813**

Water Management Area **NUNAVUT 07**

Location **CAM-D (SIMPSON LAKE) INTERMEDIATE DEW LINE SITE KITIKMEOT REGION, NUNAVUT**

Purpose **WATER USE AND WASTE DISPOSAL**

Classification of Undertaking **INDUSTRIAL – TYPE "B"**

Quantity of Water Not to Exceed **TWENTY (20) CUBIC METRES *PER* DAY**

Date of Licence **NOVEMBER 25, 2008**

Expiry Date of Licence **NOVEMBER 30, 2013**

Dated this 25th day of November 2008 at Gjoa Haven, NU.

Thomas Kabloona
Nunavut Water Board, Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. **Scope**

This Licence allows for the use of water and the disposal of waste for an undertaking classified as Industrial at the CAM-D Simpson Lake site, located approximately 80 km west of Kugaaruk and 120 km southeast of Taloyoak, within the Kitikmeot Region, Nunavut, at the general latitude of 68°35'N and general longitude 91°57'W:

a. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Nunavut Waters and Nunavut Surface Rights Tribunal Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and;

b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. **Definitions**

In this Licence: 1BR-SIM0813

"Act" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*

"**Addendum**" means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report.

"**Amendment**" means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

"Analyst" means an Analyst designated by the Minister under Section 85 (1) of the *Act*;

''Appurtenant undertaking'' means an undertaking in relation to which a use of waters or a deposit of waste is permitted by a licence issued by the Board;

"Board" means the Nunavut Water Board established under the *Nunavut Land Claims Agreement*;

"Demolition Rinse Wastewater" means water and associated waste generated by the operation of decontamination and decommissioning activities;

"Effluent" means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond or following a treatment process

"Engineer" means a professional engineer registered to practice in Nunavut in accordance with the Engineering, Geological and Geophysical Act (Nunavut) S.N.W.T. 1998, c.38, s.5;

"Final Discharge Point" means the point at which the Licensee no longer exerts care and/or control over the quality and/or quantity of the effluent from a treatment process;

"Greywater" means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

"Inspector" means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

"Licensee" means the individual or organization to which Licence 1BR- SIM0811 Type "B" is issued or assigned;

"Modification" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

"Hazardous waste" means waste classified as "hazardous" by Nunavut Territorial or Federal Legislation, or as "dangerous goods" under the *Transportation of Dangerous Goods Act* at the time of clean-up;

"Monitoring Program" means a program established to collect data on surface water and groundwater quality to assess impacts to the environment of an appurtenant undertaking.

"Nunavut Land Claims Agreement" (NLCA) means the "*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*," including its preamble and schedules, and any amendments to that agreement made pursuant to it;

"Regulations" means the *Northwest Territories Water Regulations sor/93-303 8th June, 1993,* omitting Section 5, Water Use or Waste Deposit without a Licence;

"Sewage" means all toilet wastes and greywater;

"Sewage Disposal Facility" comprises the area and engineered structures designed to contain and treat sewage as described in the Water Licence Application filed by the Applicant on February 7, 2008;

"Solid Waste" means non-hazardous waste and Type A soil;

"Non-Hazardous Waste Disposal Facility" comprises the Non-Hazardous Waste Landfill as described in the "*CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*" submitted February 7, 2008

"Spill Contingency Plan" means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

"Sump" means an excavation in impermeable soil for the purpose of catching or storing water or waste;

"**Tier I Soil**" means soil containing contaminant concentrations within the types and ranges defined as Dew Line Cleanup Criteria (DCC) Tier I in Appendix B of the *INAC Abandoned Military Site Remediation Protocol, March 2005* (see Table 1);

"**Tier II Soil**" means soil containing contaminant concentrations within the types and ranges defined as Dew Line Cleanup Criteria (DCC) Tier II in Appendix B of the *INAC Abandoned Military Site Remediation Protocol, March 2005* (see Table 1);

"Toilet Wastes" means all human excreta and associated products, but does not include greywater;

"**Type A Soil**" means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of lubricating oil and grease;

"**Type B Soil**" means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of fuel oil and/or diesel fuel and /or gasoline;

"Waste" means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has

been treated or changed, by heat or other means.

"Water Supply Facilities" comprises the lake (either Simpson or Freshwater Lake) utilized as a water source and associated infrastructure designed to collect and supply water;

"Waste Disposal Facilities" means all facilities designated for the disposal of waste, and includes the Sewage Disposal Facilities and Solid Waste Disposal Facilities, as described in the Application for Water Licence filed by the Applicant on February 7, 2008.

3. **Enforcement**

a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;

b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and

c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported which shall contain the following information:

a. The monthly and annual quantities (in cubic metres) of fresh water obtained from all sources;
b. The monthly and annual quantities (in cubic meters) of sewage generated;
c. The monthly and annual quantities (in cubic metres) of material deposited in Solid Waste Disposal Facilities;
d. A summary of all waste backhauled for disposal at approved facilities under Part D, Items 4 and 5;
e. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out on the Solid Waste Disposal Facilities and Sewage Disposal Facility, including all associated structures;
f. Tabular summaries for all data and information generated under the "Monitoring Program";
g. An analysis of data collected during the "Monitoring Program" and a brief description of any future studies planned by the Licensee;
h. A summary of all contaminated soil and hazardous wastes backhauled

i. A summary of remediation work undertaken during the year and an outline of work anticipated for the following year;
j. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
k. A list of unauthorized discharges and summary of follow-up actions taken;
l. Any revisions to the approved "*CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*";
m. Any revisions to the site specific Spill Contingency Plan, submitted under Part I, Item 3;
n. If applicable, a description of any trenches and sumps excavated, including but not limited to the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
o. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
p. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
q. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
r. Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.

2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.

3. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required by the Monitoring Program under Part K.

4. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.

5. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.

6. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

7. The Licensee shall, within Thirty (30) days of arrival on site, post signs in the appropriate areas identifying the locations of the Water Supply Facilities, Solid Waste Disposal Facilities, and the "Monitoring Program Stations". All postings shall be in the Official Languages of Nunavut.

8. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(a) **Manager of Licensing:**
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunavutwaterboard.org

(b) **Inspector Contact:**
Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4298
Fax: (867) 979-6445

(c) **Analyst Contact**
Taiga Laboratories
Department of Indian and Northern Affairs
4601 – 52 Avenue, P.O. Box 1500
Yellowknife, NT X1A 2R3
Telephone: (867) 669-2781
Fax: (867) 669-2718

9. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.

10. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.

11. This Licence is not assignable except as provided in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain water for all purposes from Freshwater and Simpson Lakes, up to a maximum of twenty (20) cubic meters per day.

2. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that there is no entrainment of fish and shall withdraw water at a rate such that fish do not become impinged on the screen.

3. The Licensee shall not remove any material from below the ordinary high water mark of any water body.

4. The Licensee shall not do anything that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.

5. The Licensee shall implement sediment and erosion control measures to prevent the deposition of dust and/or sediment into Simpson Lake, Freshwater Lake, the lake at the Plumbers Dump Area and tributaries emptying into Murchison River, arising from contractor activities or on-site vehicular travel.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty (30) metres from the ordinary high water mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.

2. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.

3. The Licensee shall provide to the Board, documented authorization from any community in Nunavut receiving backhauled wastes for storage or disposal.

4. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation in an approved waste disposal site.

5. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste and include this information within the Annual Report, Part B, Item 1. These records shall be made available to an Inspector upon request.

6. The Licensee shall direct all sewage to the Sewage Disposal Facility as described in *CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*", or as otherwise approved by the Board in writing.

7. For any camp with a design population over 300 and less than 2,000 person days per year, and less than 5,000 person days for the life of the camp, the Licensee may dispose of all toilet wastes through incineration, chemical or composting toilets. Any remaining residue generated through the course of the operation shall be backhauled and disposed of in an approved waste disposal site.

8. For any camp with a design population over 300 and less than 2,000 person days per year, and less than 5,000 person days for the life of the camp, the Licensee may contain all greywater in a sump located at a distance of at least thirty (30) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing

9. The Licensee shall provide notice to an Inspector at least ten (10) days prior to initiating any decant or discharge from the Sewage Disposal Facilities, Solid Waste Disposal Facility or Land Farm Facility.

10. All waste discharged from the Final Discharge Point of the Sewage Disposal Facility at Monitoring Program Stations SIM-2a and SIM-2b shall not exceed the following effluent quality limits:

PARAMETER	**MAXIMUM AVERAGE CONCENTRATION**
BOD	120 mg/L
Total Suspended Solids	180 mg/L
Fecal Coliforms	100,000 CFU/100mL
pH	6.0 to 9.0
Oil and Grease	no visible sheen

11. The Licensee shall collect and temporarily store, in preparation for future disposal, all Demolition Rinse Wastewater from decontamination procedures.

12. All Demolition Rinse Wastewater, water from dewatering contaminated soil areas, contact water within the Waste Handling Facility and seepage from the Non-Hazardous Waste Disposal Facility at Monitoring Program Stations SIM-3 and SIM-4, shall meet the following wastewater discharge limits prior to being released onto land to a location at least thirty (30) metres distance from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created:

Parameter	Maximum Allowable Concentration (µg/L)
pH	6 to 9 (pH units)
Oil and Grease	5000
Arsenic (total)	100
Cadmium (dissolved)	10
Chromium (dissolved)	100
Cobalt (dissolved)	50
Copper (dissolved)	200
Lead (dissolved)	50
Mercury (total)	0.6
Nickel (dissolved)	200
PCB (total)	1000
Phenols	20
Zinc (total)	500

13. If the effluent referred to in Part D, Item 10 and Item 12 does not meet the wastewater discharge limits, it shall be considered hazardous waste and require disposal off-site at an approved facility.

14. The discharge location for all treated effluents described in Part D, Items 10 and 12, shall be located at a minimum of thirty (30) metres from the ordinary high water mark of any water body and where direct flow into a water body is not possible and no additional impacts are created.

15. All pump out water from excavation and borrow pits shall be pumped to an area as described in Part D, Item 12, or as otherwise approved by the Board in writing.

16. The Licensee shall provide, proper storage, treatment and disposal at an approved facility for any hazardous waste materials, including waste oil generated through the demolition and remediation activities, unless otherwise approved by the Board in writing.

17. The Licensee shall utilize the Solid Waste Disposal Facility for the disposal of all non-hazardous waste and waste generated during site demolition and remediation activities, including Type A soil and contaminated soils that exceed Tier I criteria and are less than Tier II criteria.

18. The Licensee shall dispose of all soils containing substances in excess of Tier II criteria, as indicated in Table No.1, by collection, containment and shipment off-site to a licensed disposal facility.

19. The Licensee shall not mix or blend soils that exceed the maximum levels of Tier II criteria for the expressed purpose of attaining the specific limits of Table No.1.

20. The Licensee shall dispose of any material coated with Polychlorinated Biphenyl (PCB) - amended paints, hazardous materials and soils containing contaminants in excess of Canadian Environmental Protection Act (CEPA) Guidelines, with the exception of asbestos, off site at an approved treatment facility, in accordance with the application submitted to the Board by the Applicant on February 7, 2008.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee shall ensure that all borrow material used in construction is obtained from a source approved by an Inspector and shall be clean and free of contaminants.

2. The Licensee shall submit to the Board for approval, within ninety (90) days of the issuance of this Licence, an Operation and Maintenance Manual including for construction engineering drawings signed and stamped by an engineer to encompass facilities being operated at the site including the Sewage Disposal Facility and Solid Waste Disposal Facility and Waste Handling Facility prepared in accordance with the *"Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996"*.

3. The Operations and Maintenance Manual referred to in Part E, Item 2 shall address the following items with respect to the Non-Hazardous Land Fill component:

    a. Operation and maintenance procedures for the facility;
    b. Runoff diversion and management;

4. The Operations and Maintenance Manual referred to in Part E, Item 2 shall provide closure alternatives for the management of sludge from the Sewage Disposal Facility.

5. The Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an Addendum to be included with the Annual Report.

6. The Licensee shall, upon the failure of any constructed facilities, repair such facilities immediately to the appropriate standards as recommended by an Engineer.

7. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials during clean-up activities.

8. The Licensee shall minimize disturbance to terrain, permafrost and drainage during extraction of granular material, development and closure of landfills, movement of contractor's equipment and personnel around the site and removal of site debris.

9. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.

10. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.

11. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of waste into water.

12. The Licensee shall ensure that existing creek channels are maintained at their normal width and depth to the extent possible, during and after site remediation.

13. Granular materials and rock rip-rap used for any temporary stream crossings, approaches or as may be required for bank stabilization must be obtained from a source approved by an Inspector, and be clean and free of contaminants. Such material must not be removed or gathered from below the ordinary high water mark of a creek, stream or from any water body.

14. All sites affected by remediation activities shall be stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.

15. The Licensee shall restore and stabilize all areas affected by the undertaking upon completion of the work.

16. The Licensee shall not deposit any waste in any body of water, or on the banks thereof, which may impair the quality, quantity, or flow of water.

17. Areas designated for waste disposal shall be located at a minimum of thirty (30) metres from the ordinary high water mark of any body of water, unless otherwise authorized.

18. The Licensee shall dispose of all scrap metal, discarded machinery and parts, and other bulky material in a manner that conforms to the Plans submitted to the Board.

PART F: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.

2. All activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.

3. Winter lake and stream crossings, including ice bridges, shall be constructed entirely of water, ice or snow, and shall be removed prior to spring break-up.

4. With respect to access road, pad construction, demolition or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of above the ordinary high water mark in such a fashion that they do not enter the water.

PART G: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee is authorized to drill and install monitoring wells.

2. The Licensee shall not conduct any land based drilling within thirty (30) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board in writing

3. The Licensee shall ensure that all drill waste, including water, chips, muds and salts (CaCl2) in any quantity or concentration, from land-based drilling, shall be disposed of in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty (30) metres from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created

PART H: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS

1. The Licensee shall provide to the Board for review, prior to construction, a detailed design for the Sewage Disposal Facility, Waste Sorting Facility and Solid Waste Disposal Facility referred to in this Licence, complete with drawings for construction, signed and stamped by an Engineer. These designs shall consider, siting, operation, monitoring, sampling and analytical methods, decommissioning and closure options and plans for the proposed Facilities.

2. The Licensee shall provide to the Board, within ninety (90) days of completion of construction, as-built plans and drawings of the facilities referred to in this Licence. These plans and drawings shall be stamped by an Engineer. For the solid waste storage facilities that are to remain on site following completion of remediation activities, final As-Built drawings, stamped and signed by an Engineer, shall be submitted to the Board within ninety (90) days of completion.

3. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
c. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
d. the Board has not rejected the proposed Modifications.

4. Modifications for which all of the conditions referred to in Part H, Item 3 have not been met can be carried out only with written approval from the Board.

5. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped and signed by an Engineer.

PART I: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Board has approved the Plan entitled "*Preliminary Contingency Plans, CAM-D (Simpson Lake) Intermediate DEW Line Site Remediation Project (April, 2007)"* that was submitted with the Application.

2. The Licensee shall submit for Board approval, within ninety (90) days of issuance of this Licence, a site specific Spill Contingency Plan prepared in accordance with the *Spill Contingency Planning and Reporting Regulations* developed under Section 34 of the *Environmental Protection Act*, Nunavut. The Licensee shall include contingency measures with respect to a failure or spill from the Sewage Disposal Facility and shall take into consideration the comments received by INAC during the review of the application and the NIRB Screening Decision Report, NIRB File No.: 08DN011.

3. The Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an addendum to be included with the Annual Report, unless directed otherwise by the Board.

4. The Licensee shall ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres above the ordinary high water mark of any adjacent water body and inspected on a regular basis. The Licensee is encouraged to use some form of secondary containment on fuel and chemical storage facilities associated with this undertaking.

5. The Licensee shall ensure that any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip

pans) to manage fluids, waste and contain potential spills.

6. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:

   a. Employ the Approved Spill Contingency Plan;

   b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the INAC Water Resources Inspector at (867) 975-4295; and

   c. Submit to the INAC Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

PART J: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall undertake the abandonment and restoration of the Simpson Lake CAM-D site, in accordance with the recommendations as set out in the "*CAM-D DEW Line Site Simpson Lake, Nunavut, Remedial Action Plan (December, 2007)*", submitted with the Application filed with the Board on February 7, 2008.

2. The Licensee shall complete all restoration work for the temporary camp facilities and waste disposal activities not included under Part J, Item 1 of this Licence, prior to the expiry of this Licence.

3. The Licensee shall backfill and restore, all temporary containment sumps, to the pre-existing natural contours of the land.

4. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre-disturbed state.

PART K: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall maintain Monitoring Program Stations at the following locations:

Monitoring Program Station Number	Description	Status
SIM-1	Raw water supply intake at Simpson Lake or Freshwater Lake	Active (Volume)
SIM-2a	Final Discharge Point from the Sewage Disposal Facilities, Lagoon 1	Active (Volume and Water Quality)
SIM-2b	Final Discharge Point from the Sewage Disposal Facilities, Lagoon 2	Active (Volume and Water Quality)
SIM-3	Final Point of Discharge from the Waste Handling Facility.	Active (Water Quality)
SIM-4	Final Point of Discharge from the Non-Hazardous Waste Disposal Facility.	Active (Water Quality)

2. The Licensee shall measure and record in cubic metres, the daily quantities of water utilized for camp operations, for all purposes at the intake of the Water Supply Facility, Monitoring Program Station SIM-1.

3. The Licensee shall measure and record in cubic metres, the daily quantities of effluent discharged from the Sewage Disposal Facilities at monitoring stations SIM-2a and SIM-2b.

4. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.

5. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations are deposited.

6. The Licensee shall monitor compliance with respect to Part D Item 10, by collecting a representative composite sample once at the beginning of discharge upon initial release and prior to the end of discharge, from the Final Discharge Point of the Sewage Treatment Facility, Monitoring Program Station SIM-2a and SIM-2b:

7. The Licensee shall monitor compliance with respect to Part D Item 12, by collecting a representative composite sample from a minimum of 5% of the total volume to be released from the Final Discharge Point of the Waste Handling Facility, Monitoring Program Station SIM-3 and the Final Discharge Point of the Solid Waste Disposal Facility, Monitoring Program Station SIM-4.

8. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board.

9. The Licensee shall submit to an Analyst for approval, ninety (90) days prior to release of any effluent, a Quality Assurance/Quality Control Plan that conforms to the guidance document *"Quality Assurance (QA) and Quality Control (QC) Guidelines For Use by Class "B" Licensees in Collecting Representative Water Samples in the Field and for Submission of a QAQC Plan"* INAC (1996).

10. The Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an addendum to be included with the Annual Report, unless directed otherwise by the Board.

11. The Licensee shall submit to the Board for approval six (6) months prior to the expiry of the Licence, a Post-Closure Monitoring Plan for the site.

12. The Licensee shall submit to the Board for approval within ninety (90) days of issuance of this licence a Monitoring Plan. This Monitoring Plan in addition to the monitoring program shall contain a section discussing whether monitoring wells should be installed upstream and downstream of the Non-Hazardous Waste Disposal Facility.

Table No.1
(From INAC Abandoned Military Site Remediation Protocol)
DEW Line Clean-up Criteria (DCC)[a]

Substance	DCC Tier I[bc] (mg/L)	DCC Tier II[d] (mg/L)
Arsenic	-	30
Cadmium	-	5.0
Chromium	-	250
Cobalt	-	50
Copper		100
Lead	200	500
Mercury	-	2.0
Nickel	-	100
Zinc	-	500
PCB's	1.0	5.0

a. These criteria were adopted specifically for the cleanup of Arctic DEW Line Sites from the 1991 versions of the Quebec Soil Contamination Indicators and the Canadian Council of Ministers of the Environment Interim Canadian Environmental Criteria for Contaminated Sites.
b. Soil criteria are given in parts per million, ppm.
c. Soils containing lead and/or PCBs at concentrations in excess of DCC I, but less than DCC II, may be landfilled,
d. Soils containing one or more substrates in excess of DCC II must be containerized - i.e. removed in a manner which precludes contact with the Arctic ecosystem.

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: 1BR-SIM0813 Amendment No.1

June 17, 2010

Natalie Plato
Director, Contaminated Sites
Indian and Northern Affairs Canada
P.O. Box 2200
Iqaluit, NU X0A 0H0
Email: natalie.plato@inac-ainc.gc.ca

RE: 1BR-SIM0813 Type "B" – Amendment No.1

Dear Ms. Plato:

Please find attached, Amendment No.1 to Licence No. 1BR-SIM0813 Type "B" issued to Indian and Northern Affairs Canada, Contaminated Sites by the Nunavut Water Board (NWB) (**Motion 2010-11-L01**) pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. The terms and conditions of the original Licence related to water use and waste disposal remain an integral part of this approval.

The NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. This information is attached for your consideration.[1]

Sincerely,

Thomas Kabloona
Nunavut Water Board Chair

TK/dc/ip

Enclosure: Licence No. **1BR-SIM0813 - Amendment No.1**
NIRB/Comments

Cc: Kitikmeot Distribution List

1 Indian and Northern Affairs Canada – Water Resources, February 15, 2010; Environment Canada, February 5. 2010 and Government of Nunavut – Department of Culture, Language, Elders and Youth, January 14, 2010.

LICENCE AMENDMENT No. 1

Licensee:	**Indian and Northern Affairs Canada – Contaminated Sites**
Licence No:	**1BR-SIM0813 Type "B"**
Licence Issued:	**November 25, 2008**
Amendment Effective Date:	**June 17, 2010**

Pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act,* with respect to the application for amendment dated November 16, 2009, made by Indian and Northern Affairs Canada – Contaminated Sites (INAC – Contaminated Sites), the Nunavut Water Board hereby grants the following Licence amendment.

The Licence issued November 25, 2008 with an expiry date of November 30, 2013 shall be amended to include the following terms and conditions, with respect to use of water and deposit of waste during camp operations and the implementation of a remedial action plan, to allow INAC – Contaminated Sites, to change the location of the CAM-D Simpson Lake remediation camp, water source and monitoring stations. The Licensee is also upgrading the sewage treatment process at the CAM-D location to a mechanical system. In addition, the Licensee has identified the need to use a second small temporary Mobilization Camp near the CAM-3 Shepherd Bay site, for the purpose of marshalling materials and supplies during mobilization and demobilization activities. The CAM-D Simpson Lake Intermediate Distant Early Warning Line site is located within the Kitikmeot Region, approximately at latitude 68°35'N and longitude 91°57'W.

Camp Location

The camp location has changed from near Freshwater Lake to north of the unnamed tributary to the Murchison River near Borrow Area #2. The site description is detailed in Figures 1 and 2 of the modification requested later dated October 14, 2009 that was included in the amendment application.

Water Use

The Licensee has applied for a change in water source location, from the Freshwater Lake, Water Supply Lake located near the previous camp location and Simpson Lake, to an unnamed tributary to the Murchison River for the new camp location near Borrow Area #2 as identified in the application information. Freshwater Lake will remain as a water source backup for the possibility of the unnamed tributary being unable to support the camp needs.

Water supply for the temporary Mobilization Camp and winter Cat Train activity, located near the CAM-3 site, will be the Water Supply Lake associated with the Department of National Defence, Defence Construction Canada at CAM-3 as indicated on the map "CAM-3 Shepherd Bay Final" included with the amendment application. The Board has been satisfied the

Sewage Treatment and Disposal
The Amendment includes changes to the on-site sewage treatment. Twin Sewage Lagoons will no longer be used and at the new campsite a KODIAK BIONEST treatment unit will be used. The mechanical treatment unit is designed to treat sewage to standards that will meet the NWB discharge limits. NWB discharge limits are based on sewage eventually being received by the Murchison River and with a design flow of 150 - 600 litres per capita per day from the Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories, 1992.

Operations and Maintenance
The Licensee submitted, along with the application information, an Operators Manual for the KODIAK BIONEST treatment. This is not considered a submission as required under Part F, Item 2, 3 and 4 of the Licence. As the NWB requires a comprehensive O&M Manual under this part, the Licensee is still required to submit the Manual that is inclusive of the Sewage Disposal Facility as part of this Amendment.

Quality Assurance/Quality Control (QA/QC)
The NWB has noted that a Quality Control and Quality Assurance Plan (QA/QC Plan) is required under Part K, Item 9. Under Part K, Item 10, the Board requires an addendum to the QA/QC Plan taking into account changes in operation/technology, and submit for review of the Board as required with the Annual Report.

PART A: SCOPE, DEFINITIONS AND ENFORCMENT

2. Definitions

"Sewage Disposal Facility" comprises the KODIAK BIONEST treatment unit designed to treat sewage as described in the amendment application filed by the Licensee and dated November 16, 2009;

"Water Supply Facilities" means the unnamed tributary to the Murchison River near the main camp located near Borrow Area #2 for the CAM-D project, Freshwater Lake and the Water Supply Lake associated with the CAM-3 project, to be used as a camp water source for the Mobilization Camp located adjacent to the CAM-3 project, along Shepherds Bay, and associated infrastructure designed to collect and supply water;

PART C: CONDITIONS APPLYING TO WATER USE

Amend Item 1

1. The Licensee shall obtain water for the main CAM-D camp and barrel rinsing from the unnamed tributary to the Murchison River, proximal to Borrow Area #2 or Freshwater Lake, up to a maximum of eighteen (18) cubic metres per day. The Licensee shall obtain

water for the Shepherd Bay Mobilization Camp for the CAM-3 Water Supply Lake up to a maximum of two (2) cubic metres per day.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

Amend Items 6, 7, 8 and 10

6. The Licensee shall direct all sewage from the CAM-D Camp to the Sewage Disposal Facility for treatment prior to discharge to the environment at Monitoring Station SIM-2.

7. The Licensee shall dispose all toilet wastes from the CAM-3 Camp by incineration, chemical or composting toilets. Any remaining residue generated through the course of the operation shall be backhauled and disposed of in an approved waste disposal site.

8. The Licensee may dispose all grey water from the CAM-3 Camp by depositing into a properly constructed sump located at a distance of at least thirty (30) metres from the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.

10. All waste discharged from the Final Discharge Point of the Sewage Disposal Facility at Monitoring Program Stations SIM-2 shall not exceed the following effluent quality limits:

PARAMETER	MAXIMUM CONCENTRATION OF ANY GRAB SAMPLE
BOD_5	120 mg/L
Total Suspended Solids (TSS)	180 mg/L
Fecal Coliforms	100,000 CFU/100mL
pH	6.0 to 9.0
Oil and Grease	no visible sheen

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

Amend Items 1 and 2

1. The Board has approved the Plan entitled "Spill Contingency Plan, CAM-D DEW Line Environmental Remediation, Simpson Lake, Nunavut" dated September 2009 that was submitted as additional information with the amendment application.

2. The Licensee shall, within thirty (30) days following issuance of the amendment, submit to the Board for review, an addendum to the approved Plan under Part H, Item 1 that addresses the following:

a. Include an effective period for the Plan;
b. Include site maps of appropriate scale that details the CAM-3 Camp and the CAM-D Camp, along with structures, fuel storage facilities, spill kits, waste discharge locations and local topography in relation to nearby water bodies;
c. Section 5.4.1 includes procedures to leave contaminated tundra in place with peat moss. This is not an acceptable treatment method as contaminants may leech into groundwater or nearby water bodies. This section shall be updated with the appropriate treatment and disposal information for contaminated tundra;
d. In the event of a Spill, notify INAC Manager of Field Operations at 867-975-4295 following notification to the 24 hour Spill Report Line;
e. MSDS's should be current within 3 years; and
f. Update Appendix 2 to the NT/NU Spill Report Form (available on ftp site).

PART K: CONDITIONS APPLYING TO THE MONITORING PROGRAM

Amend Item 1

1. The Licensee shall maintain Monitoring Program Stations at the following locations:

Monitoring Program Station Number	Description	Status
SIM-1	Raw water supply intakes of the Water Supply Facilities	Active (Volume)
SIM-2	Final Discharge Point from the Sewage Disposal Facility	Active (Volume and Water Quality)
SIM-3	Final Point of Discharge from the Waste Handling Facility.	Active (Water Quality)
SIM-4	Final Point of Discharge from the Non-Hazardous Waste Disposal Facility.	Active (Water Quality)

Amend Item 2

2. The Licensee shall measure and record in cubic metres, the daily quantities of water utilized for camp operations, for all purposes at the intake of each source for the Water Supply Facilities, Monitoring Program Station SIM-1.

Amend Item 6

6. The Licensee shall monitor compliance with respect to Part D, Item 10, by collecting a representative composite sample once monthly during periods of discharge, from the Final Discharge Point of the Sewage Treatment Facility, Monitoring Program Station SIM-2.

All remaining terms and conditions of the Type "B" Licence 1BR-SIM0813 dated November 25, 2008 still apply.

This Licence Amendment issued and recorded at Gjoa Haven, NU on June 17, 2010.

Approved by,

Thomas Kabloona
Nunavut Water Board Chair

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: **1BR-SIM0813/TR/D2**

October 12, 2010

Mr. Greg Wright
Department Representative
CAM-D Environmental Project
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Natalie.Plato@inac-ainc.gc.ca
Dele.Morakinyo@inac-ainc.gc.ca

Subject: ***Licence No. 1BR-SIM0813, "CAM-D (Simpson Lake) Intermediate Dew Line Site" Kitikmeot Region, Nunavut" – Indian and Northern Affairs Canada – Contaminated Sites; Request to Carry out Open Burning of Acceptable Materials***

Dear Mr. Wright:

The Nunavut Water Board ("NWB") received on September 10, 2010, a request from AECOM Canada Ltd. to burn, without the use of an incinerator, acceptable materials in accordance with established policy and guidelines[1, 2, 3, 4] which apply to open burning in Nunavut. On September 27, 2010, the NWB acknowledged receipt and distributed the request to interested persons and parties for a ten day review period.
Comments were received from Environment Canada (EC) and Indian and Northern Affairs Canada (INAC). EC stated that conditionally suitable for open burning solid wastes are paper products, paperboard packaging and untreated wood. EC recommended that all non-combustible associated structure waste be thoroughly removed prior to burning, and that all residual waste from the burning be thoroughly collected, removed from site and disposed of at a suitable facility.

1 Guidelines for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the NWT, Ferguson Simek Clark Engineers & Architects, FSC
2 http://www.ccme.ca/assets/pdf/d_and_f_standard_e.pdf
3 http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1
4 http://www.gov.nu.ca/env/Open%20burning.pdf

INAC stated that if approved, any open burning of untreated and unpainted wood waste should be consistent with similar proposals previously approved by the Board. INAC recommends also that leachate metals analysis (monitoring program) to be conducted to determine disposal requirements of the ash.

Upon review of the request, supporting documentation, terms and conditions in Licence 1BR-SIM0813, and submissions from interested persons and/or parties, the NWB is satisfied that the activity, as proposed by the Licensee, would not directly or indirectly impact surface waters, which is a requirement under Section 12.1(a), (b) of *the Nunavut Waters and Nunavut Surface Rights Tribunal Act*, and maintain its obligations to adhere to the terms and conditions in licence. In addition to the Government of Nunavut Department of Environments established policy on open burning, the NWB has included as Appendix A, a summary of the guideline and additional practices for carrying out the activity. The NWB has, therefore, approved the request under Board Motion No. 2010-17-L05, dated October 12, 2010.

The Licensee is advised of its obligations to comply with all of the terms and conditions in its licence as well as all applicable regulations.

Should you have any questions on the above and attached, please feel free to contact the undersigned at 867-360-6338 ext. 30 or by email at k.kharatyan@nunavutwaterboard.org, at your earliest convenience.

Yours truly,

Karén Kharatyan
Technical Advisor

cc: Distribution List – Kitikmeot

APPENDIX A – PRACTICES FOR OPEN BURNING

Permission for open burning of untreated and unpainted wood materials was requested for the CAM-D (Simpson Lake) DEW Line Environmental Remediation Project, Nunavut. The following key operational conditions are to be undertaken by Licensee

a. Carrying out of controlled solid waste burn of suitable wastes, in accordance with established Government of Nunavut Policy 4,5;
b. The request was for the approval of controlled burning of untreated and unpainted wood products at the CAM-D (Simpson Lake) DEW Line Environmental Remediation Project;
c. No treated wood, plywood, or contaminated or waste petroleum-based materials, including wood materials contaminated with contaminated or waste petroleum or petroleum derivatives, will be burned or used as accelerants;
d. All unpainted and untreated wood will be burned within an ash collection system, inside a water-tight metal tray with sides at least 300 mm high. The container will provide a means to protect the ash from wind and water;
e. Burning will only be undertaken during favorable weather conditions (i.e will not be undertaken during periods of extreme wind or during wet rain conditions);
f. The size of the burn pile will be minimized, and a “hot burn” maintained to create an efficient burn using consistent/constant feed rates to avoid over-feeding and damping the fire;
g. Fires will be completely extinguished to ensure that any smoldering of material does not persist; and
h. Leachate extraction test (leachate metals) will be conducted to determine disposal requirements of the ash. Ash meeting disposal criteria will be disposed in the Non-Hazardous Waste Landfill on site. All other ash will be containerized and shipped off site for disposal.

P.O. BOX 119
GJOA HAVEN, NU X0B 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: **1BR-SIM0813/TR/H2**

October 14, 2010

Greg Wright
Departmental Representative
CAM-D Environmental Site Remediation Project
Indian and Northern Affairs Canada
P.O. Box 2200
Iqaluit, NU X0A 0H0

greg.wright@aecom.com

Subject: **Licence No. 1BR-SIM0813, "CAM-D (Simpson Lake) Intermediate Dew Line Site" Kitikmeot Region, Nunavut" – Indian and Northern Affairs Canada – Contaminated Sites; Submission of the Addendum to the Spill Contingency Plan**

Dear Mr. Wright:

The Nunavut Water Board ("NWB") has completed a technical review of the "Spill Contingency Plan CAM-D Dew Line Environmental Remediation Simpson Lake, Nunavut" for the above-mentioned project which was submitted on September 9, 2010

The revised Spill Contingency Plan was found to be complete and meeting the reporting requirements of licence 1BR-SIM0813.

Should you have any questions, please feel free to contact the undersigned at (867) 360-6338 Ext. 30, at your earliest convenience.

Yours truly,

Karén Kharatyan
Technical Advisor

cc: Distribution List – Kitikmeot

P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: **1BR-SIM0813/TR/E2**

November 29, 2010

Natalie Plato
Director Contaminated Sites
P.O Box 2200
Iqaluit Nu, X0A-0H0

Email: Natalie.Plato@inac-ainc.gc.ca
Dele.Morakinyo@inac-ainc.gc.ca
Greg.Wright@aecom.com
Mike.Zimmel@aecom.com

Subject: **Licence No. 1BR-SIM0813, "CAM-D (Simpson Lake) Intermediate Dew Line Site" Kitikmeot Region, Nunavut" – Indian and Northern Affairs Canada – Contaminated Sites; Submission of the Operation and Maintenance Manual**

Dear Ms. Plato:

The Nunavut Water Board ("NWB") has completed a technical review of the revised "Operation and Maintenance Manual Sewage, Solid Waste Disposal & Waste Handling Facilities CAM-D DEW Line Environmental Remediation Simpson Lake, Nunavut" (Manual), which was submitted on November 16, 2010.

The revised Manual was found to be meeting the reporting requirements of licence 1BR-SIM0813. The NWB has, therefore, approved the Manual under Board Motion No. 2010-22-09, dated November 25, 2010.

The Licensee is advised of its obligations to comply with all of the terms and conditions in its licence as well as all applicable regulations.

Should you have any questions, please feel free to contact the undersigned at 867-360-6338 ext. 30 or k.kharatyan@nunavutwaterboard.org, at your earliest convenience.

Yours truly,

Karén Kharatyan
Technical Advisor

cc: Distribution List – Kitikmeot

Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

TERRITORIAL QUARRYING REGULATIONS

QUARRYING PERMIT NO. 2010QP0053

Permit Fee.....Free Permit under Section 12(2)(b)
of Territorial Quarrying Regulations.

DIAND-Contaminated Sites

of **DIAND-Contaminated Sites, P.O. Box 2200, Iqaluit, NU, X0A 0H0**, is hereby authorized to take **35,000 cubic meters of Sand/Gravel** from the lands described as follows: **From one (1) Borrow area, Borrow Area 2, Simpson Lake, Kitikmeot, Nunavut.**

SUBJECT TO THE FOLLOWING CONDITIONS:

1. This permit expires twelve months from the date of issue or when the authorized quantity of material has been quarried or removed, whichever is the sooner.

2. This permit does not grant to the Permittee any exclusive right or leasehold interest in the land described herein.

3. This permit shall not be assigned.

4. All quarrying under this permit shall be carried out in accordance with the Nunavut Mining Safety Ordinance.

5. This permit is subject to the provisions of the Territorial Quarrying Regulations and the conditions set out herein. Failure to comply with the provisions of the Regulations and the conditions prescribed in this permit may result in cancellation of the permit in accordance with Section 12(5) of the Territorial Quarrying Regulations without prior notice to the Permittee.

6. The Permittee will identify the work area to the satisfaction of the Land Use Inspector prior to the removal of any material and any change in location will require prior approval of the Land Use Inspector.

7. The Permittee will not work any area worked by any other Permittee except as co-ordinated by the Land Use Inspector.

8. No material is to be removed from any land protected by a registered mineral claim, without the Permittee obtaining prior permission of the registered owner(s).

9. Prior to the tenth day of each month, the Permittee shall submit a report to the Land Use Inspector at **Kugluktuk** indicating the quantity of material quarried and the quantity of material removed from the site.

10. Upon expiration of this Permit, as prescribed in Condition One, the Permittee shall level the excavation and restore the lands to the satisfaction of the Land Use Inspector within 30 days of said expiration date or as may be authorized by the Land Use Inspector.

11. Land Use Permit **N2008X0004** and its operating conditions will apply.

Issued at Iqaluit, this **3rd** day of **March, 2010**.

Appendix F

Offsite Disposal Documentation

Solva Rec Environnement
795 Lucien-Beaudin, Saint-Jean-sur-Richelieu, Québec J2X 5M3
Tél : 450.347.3008 - Fax : 450.347.1270
www.solva-rec.com

St-Jean-sur-Richelieu, le 20 décembre 2012

François Aucoin
Stablex Canada
760 Boul. Industriel
Blainville, Qc
J7C 3V4

Objet : Avis de disposition final projet Indian and Northern Affairs /
Subject: Destruction certificate of Indian and Northern Affairs project

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La présente confirme que les matières résiduelles apparaissant sur le document joint : CAM-D DEW Line Environmental Remediation, List of material received at Solva-Rec Facilities, les 5 barils de boue huileuse (1011Kg), les 2 GRV de 1000L de boue huileue (1896Kg), les 42 barils d'eau contaminé non-traitable (8190Kg), les 4 barils d'huile usée -10% d'eau (687Kg) et les 43 barils de diesel (7559Kg)g) des matières résiduelles du projet Indian and Northern Affairs avec le # bon de travail BC-13499, ainsi que les 21 barils de boue huileuse (4324,5Kg), le baril de graisse usé (202Kg), le GRV de 1000L de boue huileuse (815Kg), le baril de goudron (265Kg), les 32 barils d'huile usée -10% (5584Kg) et les 9 barils d'huile usée contaminé 3-50ppm de BPC (1938,5Kg) des matières résiduelles du projet Indian and Northern Affairs avec le # bon de travail BC-13526 ont été disposées dans un site final pour matières résiduelles soit Covanta Niagara, division de Covanta Energy à Niagara Falls, NY. Tous les huiles usée ont quant-à-elle été disposées pour des fins énergétiques. (Voir document annexé)

This document certifies the final destruction of the residual waste appearing on the attach document : CAM-D DEW Line Environmental Remediation, List of material received at Solva-Rec Facilities, 5 drums of oily sludge (1011Kg), 2 1000L totes tank of oily sludge (1896Kg), 42 drums of contaminated water (8190Kg), 4 drums of used oil -10% water (687Kg) and 43 drums of diesel (7559Kg) of the residual waste of Indian and Northern Affairs with the work bill number BC-13499, as the 21 drums of oily sludge (4324.5Kg), 1 drum of used grease (202Kg), 1 1000L tote tanks of oily sludge (815Kg), 1 drum of tar (265Kg), 32 drums of used oil -10% water (5584Kg) and the 9 drums of used oil contaminated with PCB's 3-50ppm (1938.5Kg) of the residual waste of Indian and Northern Affairs with the work bill number BC-13526 has been destroyed at the Coventa Energy's final site at Niagara Falls, NY. All the used oil has been disposed for energy. (See list attached)

Éric Benoit, Chimiste 20/12/12

Solva-Rec Environnement Inc.

CAM-D DEW Line Environmental Remediation
List of material received and disposed at Solva-Rec / Covanta facilities

Owner of Final Disposal/Treatment Facilities: Solva-Rec Environnement / Covanta Niagara

Name of Final Disposal/Treatment Facilities: Solva-Rec Environnement / Covanta Energy

Address of Final Disposal/Treatment Facilities: 7795, Lucien Beaudin, St-Jean-sur-Richeleiu (QC) Canada, J2x 5M3
100 Energy Blvd. at 56th Street, Niagara Falls (NY) USA, 14304

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
BR-027 + BR-001 + BR-033 + BR-189	diesel / organic / water	--	Diesel, 43 drums
BR-135 (5/7)	diesel / organic	--	
BR-135 (6/7)	diesel / organic	--	
BR-174 +BR-166 +BR-154+BR-155	diesel / organic	--	
BR-189	diesel / organic	--	
BR-189 (1/6)	diesel / organic	--	
BR-189 (2/6)	diesel / organic	--	
BR-189 (5/6)	diesel / organic	--	
BR-189+BR-046	diesel / organic	--	
BR-195 (1/2)	diesel / organic	--	
BR-195 (2/2)	diesel / organic	--	
BR-196	diesel / organic	--	
BR-196 (2/3)	diesel / organic	--	
BR-196 (3/3)	diesel / organic	--	
BR-197 (1/5)	diesel / organic	--	
BR-197 (2/5)	diesel / organic	--	
BR-197 (3/5)	diesel / organic	--	
BR-197 (4/5)	diesel / organic	--	
BR-197 (5/5)	diesel / organic	--	
BR-198 (1/8)	diesel / organic	--	
BR-198 (2/8)	diesel / organic	--	
BR-198 (5/8)	diesel / organic	--	
BR-198 (6/8)	diesel / organic	--	
BR-198 (7/8)	diesel / organic	--	
BR-198 (8/8)	diesel / organic	--	
BR-202 (1/7)	diesel / organic	--	
BR-202 (2/7)	diesel / organic	--	
BR-202 (3/7)	diesel / organic	--	

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
BR-202 (4/7)	diesel / organic	--	
BR-202 (5/7)	diesel / organic	--	
BR-202 (6/7)	diesel / organic	--	
BR-202 (7/7)	diesel / organic	--	
BR-203 (1/3)	diesel / organic	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
BR-182	POL tank 05	--	
Jet fuel	Jet fuel sealed drum	--	
BPF-1	Barrel processing fuel	--	**diesel & water, 42 drums**
BPF-2	Barrel processing fuel	--	
BPF-3	Barrel processing fuel	--	
BPF-4	Barrel processing fuel	--	
BPF-5	Barrel processing fuel	--	
BPF-6	Barrel processing fuel	--	
BPF-7	Barrel processing fuel	--	
BPF-8	Barrel processing fuel	--	
BPF-9	Barrel processing fuel	--	
BPF-10	Barrel processing fuel	--	
BPF-11	Barrel processing fuel	--	
BPF-12	Barrel processing fuel	--	
BPF-13	Barrel processing fuel	--	
BPF-14	Barrel processing fuel	--	
BPF-15	Barrel processing fuel	--	
BPF-16	Barrel processing fuel	--	
BPF-17	Barrel processing fuel	--	
BPF-18	Barrel processing fuel	--	
BPF-19	Barrel processing fuel	--	
BPF-20	Barrel processing fuel	--	
BPF-21	Barrel processing fuel	--	
BPF-22	Barrel processing fuel	--	

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
BPF-23	Barrel processing fuel	--	
BPF-24	Barrel processing fuel	--	
BPF-25	Barrel processing fuel	--	
BPF-26	Barrel processing fuel	--	
BPF-27	Barrel processing fuel	--	
BPF-28	Barrel processing fuel	--	
BPF-29	Barrel processing fuel	--	
BPF-30	Barrel processing fuel	--	
BPF-31	Barrel processing fuel	--	
BPF-32	Barrel processing fuel	--	
BPF-33	Barrel processing fuel	--	
BPF-34	Barrel processing fuel	--	
BPF-35	Barrel processing fuel	--	
BPF-36	Barrel processing fuel	--	
BPF-37	Barrel processing fuel	--	
BPF-38	Barrel processing fuel	--	
BPF-39	Barrel processing fuel	--	
BPF-40	Barrel processing fuel	--	
BPF-41	Barrel processing fuel	--	
BPF-42	Barrel processing fuel	--	
BR-011	black oil/organic	chlorine 2,420 ppm	**36 drums, lube oil**
BR-115	black oil/organic	cadmium 3.4 ppm; chlorine 14,268 ppm; lead 2,600 ppm	
BR-119 + BR-120	Oil / water / organic	--	
BR-120	Oil / water / organic	--	
BR-121 + ?	Oil / water / organic	--	
BR-121	Oil / water / organic	--	
BR-122	black oil/organic	chlorine 17,776 ppm	
BR-126	black oil/organic	chlorine 13,236 ppm	
BR-137 + BR-143 + BR-131 + BR-121 + BR-119	black oil / diesel and water	--	
BR-142	oil/organic	chlorine 17,549 ppm	
BR-150 + BR-170	oil/organic	--	
BR-153 + BR-154	oil/water/organic	--	
BR-154 + BR-166 + BR-165 + BR-175 + BR-174 + ?	mixture (oil, black oil, water and organic)	--	
BR-155	black oil/organic	--	
BR-156	black oil/organic	chlorine 11,227 ppm, lead 9,200 ppm	
BR-157 + BR-150	oil/organic	--	

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
BR-158	black oil/water/organic	--	
BR-160	black oil/organic	--	
BR-161 + BR-177	black oil/organic	--	
BR-172	oil/organic	--	
BR-173	black oil/organic	chlorine 20,419 ppm	
BR-176 + BR-170	oil/organic	--	
lube oil from platfrom	lube oil	--	
Lube oil from BP	lube oil	--	
BPOW	Barrel processing with oily water	--	
BPOW	Barrel processing with oily water	--	
BR-186 + BR-187	black oil / organic	chlorine 37,100 ppm	
BR-188 + BR-127 + BR-124 + ?	mixture of black oil, red diiesel and water	lead 5,200 ppm, flash point 16	
BR-192 +BR-023 + BR114	Oil / water / organic	--	
BR-192 +BR-195	Oil / water / organic	--	
BR-194 + BR-159	black oil / organic	chlorine 6,848 ppm, lead 2,700 ppm	
BR-204	lube oil	--	
BR-205	lube oil	--	
BR-206	lube oil	--	
BR-207	lube oil	--	
BR-208	lube oil	--	
BPS-1	barrel processing sludge	--	**Processing sludge, 26 drums**
BPS-2	barrel processing sludge	--	
BPS-3	barrel processing sludge	--	
BPS-4	barrel processing sludge	--	
BPS-5	barrel processing sludge	--	
BPS-6	barrel processing sludge	--	
BPS-7	barrel processing sludge	--	
BPS-8	barrel processing sludge	--	
BPS-9	barrel processing sludge	--	
BPS-10	barrel processing sludge	--	
BPS-11	barrel processing sludge	--	
BPS-12	barrel processing sludge	--	
BPS-13	barrel processing sludge	--	
BPS-14	barrel processing sludge	--	
BPS-15	barrel processing sludge	--	
BPS-16	barrel processing sludge	--	
BPS-17	barrel processing sludge	--	

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
BPS-18	barrel processing sludge	--	
BPS-19	barrel processing sludge	--	
BPS-20	barrel processing sludge	--	
BPS-21	barrel processing sludge	--	
BPS-22	barrel processing sludge	--	
BPS-23	barrel processing sludge	--	
BPS-24	barrel processing sludge	--	
BPS-25	barrel processing sludge	--	
BPS-26	barrel processing sludge	--	
TT-1	Tote tank filled with barrel processing sludge	--	**Processing sludge, 3 tote tanks**
TT-2	Tote tank filled with barrel processing sludge	--	
TT-3	Tote tank filled with barrel processing sludge	--	
BR-119 + BR-143 + ? + BR-147	oil/organic	PCB 3 ppm	**Lube oiland PCB, 9 drums**
BR-125 + BR-166 + BR-169	oil/organic	chlorine 9,812 ppm; chromium 28 ppm; PCB 7.5 ppm	
BR-138	oil/organic	PCB 3 ppm	
BR-139	oil/organic	PCB 13 ppm	
BR-147 + BR-148 + BR-120	oil/organic	PCB 16 ppm	
BR-148	oil/organic	PCB 16 ppm	
BR-163	black oil / organic	lead 560 ppm; PCB 17 ppm	
BR-167 + BR-171	black oil / organic	PCB 6.7 ppm	
BR-168	BR-168	PCB 3.1 ppm	
BR-145	grease/soil	--	**Used grease, 1 drum**
BR-210	paint/pitch/caulking	--	**Tar, 1 drum**

STABLEX
a USEcology company

760, boul. Industriel
Blainville QC Canada J7C 3V4
T 450 430-9230 F 450 430-4642
www.stablex.com

DISPOSAL CERTIFICATE

KUDLIK CONSTRUCTION LTD
1519, Federal Road
P.O. Box 727
Iqaluit, Nunavut X0A 0H0

Mr. François Bourassa,

We hereby acknowledge that, as of December 18, 2012, the wastes and/or contaminated soils from INDIAN AND NORTHERN AFFAIRS (CAM-D) and listed hereafter have been received, analyzed and accepted for treatment and will be disposed by Stablex within one year of receipt, in accordance with provincial regulations, the Certificate of Authorization and the Operating Permit granted to Stablex Canada Inc., Blainville, Québec, by the Québec Ministry of Environment, in force at this date.

Pierre Légo
Manager, Prevention and Compliance

CAM-D DEW Line Environmental Remediation
List of material received and disposed at Stablex Facilities

Owner of Final Disposal/Treatment Facility: Stablex

Name of Final Disposal/Treatment Facility: Stablex

Address of Final Disposal/Treatment Facility: 760, boul. Industriel, Blainville (QC) Canada, J7C 3V5

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-001	POL - Contaminated (3-PHC-1)	benzene 0.17 ppm; toluene 4.77 ppm; ethylbenzene 4.29 ppm; total xylenes 39.4 ppm; F1 PHC 1,300 ppm; F2 PHC 16,700 ppm; F3 PHC 1,250 ppm	classified as hydrocarbon contaminated soil
SB-002	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-003	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-004	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-005	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-006	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-007	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-008	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-009	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-010	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-011	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-012	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-013	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-014	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-015	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-016	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-017	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-018	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-019	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-020	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-021	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-022	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-023	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-024	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-025	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-026	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-027	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-028	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-029	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-030	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-031	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-032	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-033	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-034	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-035	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-036	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-037	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-038	Pallet Line - Contaminated (2-PHC-1)	F2 PHC 3,340 ppm; F3 PHC 28,300 ppm; F4 PHC 7,590 ppm	classified as hydrocarbon contaminated soil
SB-039	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-040	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-041	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-042	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-043	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-044	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-045	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-046	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-047	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-048	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-049	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-050	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-051	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-052	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-053	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-054	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-055	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-056	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-057	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-058	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-059	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-060	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-061	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-062	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-063	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-064	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-065	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-066	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-067	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-068	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-069	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-070	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-071	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-072	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-073	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-074	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-075	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-076	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-077	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-078	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-079	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-080	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-081	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-082	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-083	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-084	Pallet Line - Contaminated (2-PHC-1)	F2 PHC 3,340 ppm; F3 PHC 28,300 ppm; F4 PHC 7,590 ppm	classified as hydrocarbon contaminated soil
SB-085	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-086	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-087	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-088	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-089	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-090	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-091	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-092	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-093	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-094	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-095	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-096	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-097	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-098	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-099	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-100	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-101	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-102	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-103	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-104	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-105	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-106	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-107	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-108	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-109	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-110	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-111	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-112	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-113	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-114	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-115	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-116	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-117	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-118	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-119	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-120	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-121	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-122	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-123	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-124	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-125	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-126	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-127	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-128	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-129	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-130	Pallet Line - Contaminated (2-PHC-1)	F2 PHC 3,340 ppm; F3 PHC 28,300 ppm; F4 PHC 7,590 ppm	classified as hydrocarbon contaminated soil
SB-131	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-132	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-133	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-134	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-135	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-136	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-137	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-138	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-139	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-140	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-141	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-142	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-143	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-144	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-145	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-146	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-147	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-148	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-149	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-150	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-151	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-152	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-153	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-154	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-155	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-156	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-157	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-158	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-159	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-160	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-161	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-162	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-163	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-164	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-165	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-166	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-167	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-168	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-169	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-170	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-171	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-172	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-173	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-174	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-175	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-176	Pallet Line - Contaminated (2-PHC-1)	F2 PHC 3,340 ppm; F3 PHC 28,300 ppm; F4 PHC 7,590 ppm	classified as hydrocarbon contaminated soil
SB-177	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-178	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-179	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-180	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-181	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-182	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-183	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-184	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-185	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-186	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-187	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-188	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-189	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-190	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-191	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-192	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-193	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-194	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-195	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-196	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-197	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-198	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-199	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-200	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-201	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-202	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-203	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-204	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-205	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-206	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-207	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-208	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-209	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-210	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-211	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-212	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-213	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-214	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-215	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-216	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-217	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-218	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-219	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-220	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-221	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-222	Pallet Line - Contaminated (2-PHC-1)	F2 PHC 3,340 ppm; F3 PHC 28,300 ppm; F4 PHC 7,580 ppm	classified as hydrocarbon contaminated soil
SB-223	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-224	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-225	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-226	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-227	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-228	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-229	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-230	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-231	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-232	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-233	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-234	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-235	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-236	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-237	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-238	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-239	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-240	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-241	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-242	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-243	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-244	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-245	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-246	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-247	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-248	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-249	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-250	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-251	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-252	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-253	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-254	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-255	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-256	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-257	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-258	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-259	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-260	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-261	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-262	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-263	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-264	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-265	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-266	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-267	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-268	Pallet Line - Contaminated (2-PHC-1)	F2 PHC 3,340 ppm; F3 PHC 28,300 ppm; F4 PHC 7,590 ppm	classified as hydrocarbon contaminated soil
SB-269	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-270	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-271	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-272	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-273	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-274	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-275	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-276	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-277	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-278	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-279	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-280	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-281	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-282	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-283	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-284	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-285	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-286	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SB-287	Airstrip - Contaminated (4-METPHC-1)	F2 PHC 830 ppm; F3 PHC 25,500 ppm; F4 PHC 6,780 ppm; copper 107 ppm; zinc 1,570 ppm	classified as Tier II contaminated soil
SB-288	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SB-289	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SB-290	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SB-291	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SB-292	Burn Pit - Impacted (3-PHC-I-2)	F2 PHC 8,700 ppm	classified as hydrocarbon contaminated soil
SB-293	Burn Pit - Impacted (3-PHC-I-2)		classified as hydrocarbon contaminated soil
SB-294	Burn Pit - Impacted (3-PHC-I-2)		classified as hydrocarbon contaminated soil
SB-295	Airstrip (Battery Site)	lead 1,000 ppm	classified as Tier II contaminated soil
SB-296	POL - Contaminated (3-PHC-1)	benzene 0.17 ppm; toluene 4.77 ppm; ethylbenzene 4.29 ppm; total xylenes 39.4 ppm; F1 PHC 1,300 ppm; F2 PHC 16,700 ppm; F3 PHC 1,250 ppm	classified as hydrocarbon contaminated soil
SB-297	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-298	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-299	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-300	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-301	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-302	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-303	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-304	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-305	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-306	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-307	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-308	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SB-309	ashes from incineration of domestic waste	cadmium 6.6 ppm; copper 3,700 ppm; zinc 1,200 ppm	classified as Tier II contaminated soil
SB-310	ashes from incineration of domestic waste		classified as Tier II contaminated soil
SB-311	ashes from burning of unpainted/untreated wood	zinc 770 ppm	classified as Tier II contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-312	soil excavated from battery/capacitor locations at Main Dump AND Simpson Lake	PCBs 5.6 ppm; cadmium 120 ppm; copper 220 ppm; lead 12,000 ppm	classified as Tier II contaminated soil
SB-313	soil excavated from battery/capacitor locations at Main Dump	PCBs 5.6 ppm; cadmium 120 ppm; copper 220 ppm; lead 12,000 ppm	classified as Tier II contaminated soil
SB-314	soil excavated from battery/capacitor locations at Main Dump		classified as Tier II contaminated soil
SB-315	Main Dump-Lobe 1 Buried Debris Stockpiles	PCBs 8.6 ppm; copper 379 ppm; lead 30,472 ppm	classified as Tier II contaminated soil
SB-316	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-317	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-318	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-319	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-320	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-321	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-322	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-323	Main Dump-Lobe 1 Buried Debris Stockpiles	PCBs 8.6 ppm; copper 379 ppm; lead 30,472 ppm	classified as Tier II contaminated soil
SB-324	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-325	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-326	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-327	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-328	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-329	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-330	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-331	Main Dump-Lobe 1 Buried Debris Stockpiles	PCBs 8.6 ppm; copper 379 ppm; lead 30,472 ppm	classified as Tier II contaminated soil
SB-332	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-333	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-334	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-335	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-336	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-337	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-338	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-339	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-340	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-341	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-342	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-343	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-344	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-345	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-346	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-347	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-348	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-349	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-350	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-351	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-352	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-353	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-354	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-355	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-356	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-357	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-358	Main Dump-Lobe 1 Buried Debris Stockpiles	PCBs 8.6 ppm; copper 379 ppm; lead 30,472 ppm	classified as Tier II contaminated soil
SB-359	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-360	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-361	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-362	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-363	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-364	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-365	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-366	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-367	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-368	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-369	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-370	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-371	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-372	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-373	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-374	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-375	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-376	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-377	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-378	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-379	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-380	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-381	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-382	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-383	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-384	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-385	Main Dump-Lobe 1 Buried Debris Stockpiles	PCBs 8.6 ppm; copper 379 ppm; lead 30,472 ppm	classified as Tier II contaminated soil
SB-386	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-387	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-388	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-389	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-390	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-391	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-392	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-393	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-394	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-395	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-396	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-397	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-398	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-399	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-400	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-401	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-402	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-403	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-404	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SB-405	Main Dump-Lobe 1 Buried Debris Stockpiles	PCBs 8.6 ppm; copper 379 ppm; lead 30,472 ppm	classified as Tier II contaminated soil
SB-406	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-407	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-408	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-409	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-410	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-411	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-412	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-413	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-414	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-415	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-416	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-417	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-418	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-419	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-420	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-421	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-422	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-423	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-424	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-425	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-426	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-427	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-428	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-429	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-430	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-431	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-432	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-433	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-434	Main Dump-Lobe 1 Buried Debris Stockpiles		classified as Tier II contaminated soil
SB-435	used absorbents	N/A	contain absorbents from barrel processing as well as from spills at the upper site
SB-436	used absorbents	N/A	contain absorbents from barrel processing as well as from spills at the upper site
SB-437	used absorbents	N/A	contain absorbents from barrel processing as well as from spills at the upper site
SB-438	used absorbents	N/A	contain absorbents from barrel processing as well as from spills at the upper site
SB-439	used absorbents	N/A	contain absorbents from barrel processing as well as from spills at the upper site
SB-440	used absorbents	N/A	contain absorbents from barrel processing as well as from spills at the upper site
SB-441	barrel processing platform spill	N/A	sample was not collected to confirm soil quality
SB-442	barrels containing tar, refer to barrel list		
SB-443	inflatable swimming pools	N/A	pools contain sediment and absorbents from water treatment
SB-444	inflatable swimming pools	N/A	pools contain sediment and absorbents from water treatment
SB-445	inflatable swimming pools	N/A	pools contain sediment and absorbents from water treatment
SB-446	inflatable swimming pools	N/A	pools contain sediment and absorbents from water treatment
SB-447	refueling pump leak	N/A	sample was not collected to confirm soil quality

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SC-002	Airstrip - Contaminated (4-METPHC-1)	F2 PHC 830 ppm; F3 PHC 25,500 ppm; F4 PHC 6,780 ppm; copper 107 ppm; zinc 1,570 ppm	classified as Tier II contaminated soil
SC-003	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SC-004	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SC-005	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SC-006	Airstrip - Contaminated (4-METPHC-1)		classified as Tier II contaminated soil
SC-007	Outfall - Contaminated (3-METPCB-1)	arsenic 60 ppm; copper 131 ppm; zinc 1,370 ppm; PCBs 1.5 ppm	classified as Tier II contaminated soil
SC-008	Outfall - Contaminated (3-METPCB-1)		classified as Tier II contaminated soil
SC-009	Electrical Cabinets - Contaminated (3-MET-1)	cadmium 9.3 ppm	classified as Tier II contaminated soil
SC-010	Electrical Cabinets - Contaminated (3-MET-1)		classified as Tier II contaminated soil
SC-011	Electrical Cabinets - Contaminated (3-MET-1)		classified as Tier II contaminated soil
SC-012	Electrical Cabinets - Contaminated (3-MET-1)		classified as Tier II contaminated soil
SC-013	Electrical Cabinets - Contaminated (3-MET-1)		classified as Tier II contaminated soil
SC-014	Electrical Cabinets - Contaminated (3-MET-1)		classified as Tier II contaminated soil
SC-015	Electrical Cabinets - Contaminated (3-MET-1)		classified as Tier II contaminated soil
SC-016	Electrical Cabinets - Contaminated (3-MET-1)		classified as Tier II contaminated soil
SC-017	POL - Contaminated (3-PHC-1)	benzene 0.17 ppm; toluene 4.77 ppm; ethylbenzene 4.29 ppm; total xylenes 39.4 ppm; F1 PHC 1,300 ppm; F2 PHC 16,700 ppm; F3 PHC 1,250 ppm	classified as hydrocarbon contaminated soil
SC-018	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-019	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-020	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-021	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-022	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-023	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-024	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-025	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-026	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-027	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-028	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-029	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-030	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-031	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-032	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-033	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-034	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-035	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-036	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-037	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-038	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-039	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-040	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SC-041	POL - Contaminated (3-PHC-1)	benzene 0.17 ppm; toluene 4.77 ppm; ethylbenzene 4.29 ppm; total xylenes 39.4 ppm; F1 PHC 1,300 ppm; F2 PHC 16,700 ppm; F3 PHC 1,250 ppm	classified as hydrocarbon contaminated soil
SC-042	Pallet Line - Contaminated (2-PHC-1)	F2 PHC 3,340 ppm; F3 PHC 28,300 ppm; F4 PHC 7,590 ppm	classified as hydrocarbon contaminated soil
SC-043	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SC-044	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SC-045	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SC-046	Pallet Line - Contaminated (2-PHC-1)		classified as hydrocarbon contaminated soil
SC-047	POL - Contaminated (3-PHC-1)	benzene 0.17 ppm; toluene 4.77 ppm; ethylbenzene 4.29 ppm; total xylenes 39.4 ppm; F1 PHC 1,300 ppm; F2 PHC 16,700 ppm; F3	classified as hydrocarbon contaminated soil
SC-048	POL - Contaminated (3-PHC-1)		classified as hydrocarbon contaminated soil
SC-050	POL - Contaminated (3-PHC-1)	benzene 0.096 ppm; toluene 3.7 ppm; ethylbenzene 2.4 ppm; xylenes 37 ppm; F1 PHC 1,600 ppm; F2 PHC 12,000 ppm	classified as hydrocarbon contaminated soil
SC-051	East Station Buried Debris Stockpile No. 7	copper 273 ppm	classified as Tier II contaminated soil
SC-052	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-053	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-054	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-055	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-056	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-057	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-058	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-059	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-060	East Station Buried Debris Stockpile No. 7		classified as Tier II contaminated soil
SC-061	Main Dump-Lobe 1 Buried Debris	PCBs 1.2 ppm; chromium 350 ppm; copper 470 ppm; zinc 930 ppm	classified as Tier II contaminated soil
SC-062	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-063	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-064	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-065	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-066	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-067	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-068	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-069	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-070	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-071	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-072	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-073	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-074	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
SC-075	Main Dump-Lobe 1 Buried Debris	PCBs 1.2 ppm; chromium 350 ppm; copper 470 ppm; zinc 930 ppm	classified as Tier II contaminated soil
SC-076	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-077	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-078	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-079	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-080	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-081	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-082	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-083	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-084	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-085	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-086	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-087	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-088	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-089	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-090	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-091	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-092	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
SC-093	Main Dump-Lobe 1 Buried Debris		classified as Tier II contaminated soil
Crate	Fluorescent lamps containing mercury	Mercury	Hazardous waste
crate	Dry batteries	lead and lead sulfate	Hazardous waste
MC-007	POL Tank No.5	lead contaminated paint	steel

aevitas

December 20, 2012

Sanexen Environmental Services Inc.
1471 Lionel-Boulet Boulevard Suite 2
Varennes Qc

Subject: Reception material from CAM – D received Oct 24, 2011 and CAM-D Kudlik received November 22, 2012

Dear Mr. Leathead

To confirm, our Aevitas Cornwall Facility received the items listed attached. The final disposal site is the Cornwall facility at 2424 Industrial Park Drive, Cornwall ON as indicated on the summary report.

Aevitas takes responsibility and ownership of the material as the final disposal facility and Aevitas will be issuing all the certificates of disposal in regards to the material noted.

The destruction certificates are expected to be issued within 1 to 2 years after reception.

Regards,

Chantal Murphy
Sales and Logistics, Aevitas Inc.

CON TECH PCB Containment Technology

A.F. WHITE TRANSFORMER OIL SERVICES

FLR FLUORESCENT LAMP RECYCLERS

www.aevitas.ca

Aevitas Inc.

Recycling Services
- Fluorescent Lamps
- Batteries
- Electronic Waste
- Electrical Equipment
- Transformer Oil
- Mercury Treatment

Disposal Services
- Hazardous Waste
- Mercury Disposal
- PCB Waste
- Industrial Waste

Services
- Site Remediation
- Transformer Field Services
- Laboratory
- Emergency Response
- Transportation

Products
- Transformer Oil
- Silicone Transformer Fluid
- UN approved Reusable Pails

AYR
75 Wanless Court
Ayr, ON N0B 1E0
Phone: 519-740-1333
Fax: 519-740-2320

BRANTFORD
36 Adams Blvd.
Brantford, ON N3S 7V2
Phone : 519-752-7646
Fax: 519-752-5235

MONTREAL
725 Meloche Avenue
Dorval, QC H9P 2S4
Phone: 514-637-3111
Fax: 514-637-3222

	CAM-D Containers Received October 24, 2011						
052-958	NO.	Date received	Manifest #	Container #	Description	Disposal Facility	% Complete
A	1	24-Oct-11	HY20301-4	374666-7	Debris	Cornwall	99
B	2	24-Oct-11	HY20301-4	260968-5	Debris	Cornwall	100
C	3	24-Oct-11	HY20311-3	372197-2	Debris	Cornwall	99
D	4	24-Oct-11	HY20311-3	245141-9	Debris	Cornwall	87
E	5	24-Oct-11	HY20300-6	220915-7	Debris	Cornwall	99

Kudlik Container - CAM D Received November 22,							
NO.	Cornwall Rec'd Date	053-368	Manifest #	Container #	Description of Contents	Disposal Facility	% if completion
1	22/11/2012 10:00	A	JP46469-5	257768-5	Metal, wood & seacan.	Cornwall	9.10%

SENA WASTE SERVICES
Swan Hills Treatment Centre
Bag 1500
Swan Hills, Alberta T0G 2C0
Canada
TEL 780-333-4197
FAX 780-333-4196

CERTIFICATE OF DESTRUCTION

Generator:
SANEXEN ENVIRONMENTAL SERVICES LTD.
1471, BOUL. LIONEL-BOULET, SUITE32
VARENNES, QC J3X 1P7

Bill To:
SANEXEN ENVIRONMENTAL SERVICES LTD.
1471, BOUL. LIONEL-BOULET, SUITE32
VARENNES, QC J3X 1P7

Shipment Number	Manifest Number	WPS Number	Date Received	Qty Destroyed		Last Destruction	Waste Description
D10001	JP464703	17115	08-NOV-12	1	OP	20-NOV-12	PCB BALLASTS

Verified By: _____
Date: Nov 28/12

Authorized By: _____
Date: Nov 28, 2012

CAM-D DEW Line Environmental Remediation
List of material received and diposed at Swan Hills Treatment Center

Owner of Final Disposal/Treatment Facility: Sena Waste Services

Name of Final Disposal/Treatment Facility: Swan Hills Treatment Center

Address of Final Disposal/Treatment Facility: Bag 1500, Swan Hills, AB, T0G 2C0

ID	Description of Contents	Contaminants Exceeding Applicable Guidelines	Comments
BR-225	PCB Ballast	PCB's	205L overpack

KWIK ANTIFREEZE

SUCCURSALE 7009 CSG 2 Eric Gingras 10-24-12 08:48 PAGI

NUMÉRO DE RÉFÉRENCE
5929

NO. DE CLIENT/GÉNÉRATEUR : 920551 GELY CONSTRUCTION
1781,ROUTE DE L AEROPORT
STE-FOY QC G2E 3M3 DATE DE SERVICE: 10-
NO. DE TÉLÉPHONE 418-871-3368

A. NO. PROV. DE GÉNÉRATEUR:
NO. DE MANIFESTE: BON: DP NO.DE SUIVI SK: 208622840

ET. MD PH	NOM RÉGLEMENTAIRE	CONTENANT NO.	TYPE	TOTAL UNIT REÇU:	P/V	SKDOT#	NO.IDEN PROV.
L		2	01	410	L	19409D01/0.0L	
X	RECYCLABLE, ANTIGEL (non reg. par TMD) (D01/0.0/L) (ON212L)						

CONTENANT: 121022175326 QTÉ: 205 TYPE: DM PROFIL 0150798
CONTENANT: 121022175372 QTÉ: 205 TYPE: DM PROFIL 0150798

B. NO. ID PROV TRANSP: 1144094969

NOM PERSONNE AUTOR. : Eric Gingras

C. NO. ID PROV DEST.: 53896965
NOM DE LA COMPAGNIE:SAFETY-KLEEN CANADA INC.
ADRESSE:85 DE HAMBOURG
ST AUGUSTIN QC G3A 1S6

Certaines matières peuvent être identifiées par des indications de danger requises par 49 CFR (RTMD article 1.9).

Le Client certifie: (i) que les matériaux ci-hauts mentionnés sont classifiés, emballés, marqués et étiquetés de façon adéquate, et qu'ils sont dans une condition convenable pour le transport conformément aux règlements applicables des Ministères de Transport et de l'Environnement, de Transport Canada et d' Environnement Canada; et (ii) qu'aucun changement important n'a été apporté ni dans les caractéristiques des déchets ni dans les procédés qui produisent les déchets. Le Client s'engage à payer les frais encourus et à être lié par les modalités et les conditions (1) prévues (a) aux conditions générales fournies au Client sous pli séparé ou (b) à toute entente signée par le Client et SK, et (2) qui est intégrée aux présentes par renvoi. À moins d'indication contraire dans la section portant sur les paiements reçus, SK est autorisée à porter cette transaction au débit du compte du Client. Le Client atteste que la personne signant cette reconnaissance de Service est dûment autorisée à la signer et à lier le Client. La disposition suivante est applicable aux services de pièces nettoyeur et de fusil de nettoyeur à peinture de Safety-Kleen: le client accepte et atteste qu'il n'introduira aucune substance dans le solvant ou dans la solution nettoyante aqueuse, y compris sans limitation des déchets dangereux ou des constituants de déchets dangereux, sauf dans la mesure où cette introduction est incidente à l'utilisation régulière de la machine. Le client accepte qu'il ne nettoiera pas les pièces du fusil à peinture qui ont été contaminées par ou contenant des biphényles polychlorés (BPC), des herbicides, des pesticides, des dioxines répertoriés dans la liste des déchets de matières dangereuses dans la solution aqueuse de nettoyage ou de solvant de nettoyage. Safety-Kleen possède la capacité et il lui est permis d'accepter, d'emmagasiner et/ou de récupérer le solvant usé des machines lave-pièces; les diluants à peinture, les solvants et les peintures générées par le client; ou les cartouches de filtre de nettoyage à sec, poudre, et les résidus de distillation contenant du perchloroéthylène, du naphte de pétrole, ou des solvents de nettoyage à sec contenant du trifluorotrichloroéthane. EN CAS D'URGENCE APPELEZ SAFETY-KLEEN Numéro 24 heures D'URGENCE # 1-800-468-1760 (Safety-Kleen Contract # 94138)

X _____

CLIENT/GÉNÉRATEUR :Francois Bourassa

X _____

TRANSPORTEUR:Eric Gingras

LAST PAGE

SUCCURSALE 7009 CSG 11 Martin Brissette 10-24-12 09:41 PAGE

NUMÉRO DE RÉFÉRENCE 5930

NO. DE CLIENT/GÉNÉRATEUR : 920551 GELY CONSTRUCTION
1781,ROUTE DE L AEROPORT
STE-FOY QC G2E 3M3
NO. DE TÉLÉPHONE 418-871-3368

DATE DE SERVICE: 10-

A. NO. PROV. DE GÉNÉRATEUR:
NO. DE MANIFESTE: BON: DP NO.DE SUIVI SK: 208632410

MD	ET. PH L	NOM RÉGLEMENTAIRE	CONTENANT NO.	TYPE	TOTAL UNIT REÇU:	P/V	SKDOT#	NO.IDEN PROV.
			1	02	6010	L	19400A01/0.0L	
X		RECYCLABLE, HUILES USEES (non reg. par TMD) (A01/0.0/L) (ON 252L)						

CONTENANT: 121024198122 QTÉ: 6010 TYPE: TI PROFIL 0150789

USED OIL
+
OLD FUEL
KUDLIK

B. NO. ID PROV TRANSP: 1144094969

NOM PERSONNE AUTOR. : Martin Brissette

C. NO. ID PROV DEST.: 53896965
NOM DE LA COMPAGNIE:SAFETY-KLEEN CANADA INC.
ADRESSE:85 DE HAMBOURG
ST AUGUSTIN QC G3A 1S6

L'huile usée dans les barils pour les générateurs commerciaux/industriels classifiés comme étant à risque élevé. Le formulaire de certification d'huile useé est requis pour tous les clients (lors de l'inscription initiale et lorsqu'il y a un changement de type).

Certaines matières peuvent être identifiées par des indications de danger requises par 49 CFR (RTMD article 1.9).

Le Client certifie: (i) que les matériaux ci-hauts mentionnés sont classifiés, emballés, marqués et étiquetés de façon adéquate, et qu'ils sont dans une condition convenable pour le transport conformément aux règlements applicables des Ministères de Transport et de l'Environnement, de Transport Canada et d' Environnement Canada; et (ii) qu'aucun changement important n'a été apporté ni dans les caractéristiques des déchets ni dans les procédés qui produisent les déchets. Le Client s'engage à payer les frais encourus et à être lié par les modalités et les conditions (1) prévues (a) aux conditions générales fournies au Client sous pli séparé ou (b) à toute entente signée par le Client et SK, et (2) qui est intégrée aux présentes par renvoi. À moins d'indication contraire dans la section portant sur les paiements reçus, SK est autorisée à porter cette transaction au débit du compte du Client. Le Client atteste que la personne signant cette reconnaissance de Service est dûment autorisée à la signer et à lier le Client. La disposition suivante est applicable aux services de pièces nettoyeur et de fusil de nettoyeur à peinture de Safety-Kleen: le client accepte et atteste qu'il n'introduira aucune substance dans le solvant ou dans la solution nettoyante aqueuse, y compris sans limitation des déchets dangereux ou des constituants de déchets dangereux, sauf dans la mesure où cette introduction est incidente à l'utilisation régulière de la machine. Le client accepte qu'il ne nettoiera pas les pièces du fusil à peinture qui ont été contaminées par ou contenant des biphényles polychlorés (BPC), des herbicides, des pesticides, des dioxines répertoriés dans la liste des déchets de matières dangereuses dans la solution aqueuse de nettoyage ou de solvant de nettoyage. Safety-Kleen possède la capacité et il lui est permis d'accepter, d'emmagasiner et/ou de récupérer le solvant usé des machines lave-pièces; les diluants à peinture, les solvants et les peintures générées par le client, ou les cartouches de filtre de nettoyage à sec, poudre, et les résidus de distillation contenant du perchloroéthylène, du naphte de pétrole, ou des solvents de nettoyage à sec contenant du trifluorotrichloroéthane. EN CAS D'URGENCE APPELEZ SAFETY-KLEEN Numéro 24 heures D'URGENCE # 1-800-468-1760 (Safety-Kleen Contract # 94138)

X

CLIENT/GÉNÉRATEUR :francois

X

TRANSPORTEUR:Martin Brissette

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Appendix G

Supplemental Data Provided on DVD