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THE COLLECTION OF LANDFILL MONITORING DATA AT THE FORMER PIN-2 DISTANT EARLY WARNING LINE SITE

Cape Young, Nunavut

Final report 2015
(O/Ref.: CD3654)
(Y/Ref.: DLC MON (KITIK 13))

DEFENCE CONSTRUCTION CANADA

March 2016

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DEFENCE CONSTRUCTION CANADA

March 2016

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1 OUTLINE

1.1 OBJECTIVE AND SCOPE OF WORK

The objective of the Defence Construction Canada (DCC) Landfill Monitoring Program is to collect sufficient information to assess the performance of landfills at former Distant Early Warning (DEW) Line Sites that have been remediated, from a geotechnical and environmental perspective. DCC has specified the requirements for the Landfill Monitoring Program in the document entitled *"Terms of Reference – Contracting Services for the Collection of Landfill Monitoring Data – PIN-2 Cape Young, PIN-4 Byron Bay, CAM-1 Jenny Lind Island - DEW LINE SITES, NUNAVUT, KITIKMEOT REGION, DCC PROJECT #: DLC MON (KITIK13)*, April 18, 2013*"*. This report contains a summary of the findings from the 2015 inspection of the PIN-2 Cape Young site.

During the 2015 monitoring program, a visual inspection was completed at all site landfills identified on the overall site plan (Figure PIN-2.1). Soil sampling, groundwater sampling, and thermal monitoring were also completed at the Tier II Disposal Facility. Table I summarizes the monitoring requirements of the 2015 season. No deviations from the TOR were experienced while completing the 2015 monitoring.

Table I: 2015 Monitoring Requirements for PIN-2 Landfills

Landfill	Visual Inspection	Soil Sampling	Groundwater Sampling	Thermal Monitoring
Airstrip Landfill	✓			
USAF Landfill	✓			
Station West Landfill	✓			
Tier II Disposal Facility	✓	✓	✓	✓
Airstrip South Landfill	✓			
Pallet Line West Landfill	✓			
Non-Hazardous Waste Landfill	✓			
South Landfill - East	✓			
South Borrow Landfill	✓			

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1.2 FIELD PROGRAM STAFF AND TIMING

The 2015 on-site field program at PIN-2 Cape Young took place on August 15, 2015. Englobe Corp. (Englobe) subcontracted Sila Remediation Inc. (Sila), from Igloolik, Nunavut to perform the fieldwork. The Sila field program was executed by Mr. Andrew Passalis with the assistance of three local representatives, whose names and responsibilities are detailed below:

- Mr. Andrew Passalis, Project Engineer (Sila)
- John Henry Etegak, Field Technician (Sila)
- Brand Etegak, Field Technician (Sila)
- Joe Koaha, Wildlife Monitor (Sila)

1.3 2015 WEATHER CONDITIONS

Seasonally warm weather conditions were observed during the PIN-2 Cape Young monitoring event with daytime temperatures ranging between 8-10ºC. Skies were overcast throughout the day with winds generally ranging between 30-50 km/h from the northwest.

1.4 REPORT FORMAT

This report describes the work carried out in August 2015, at the nine landfill sites at PIN-2 Cape Young. Results from soil and groundwater sampling, thermal monitoring, and visual inspection of the site are also presented in the formats described in the TOR (Reference A). An electronic version of the report and its associated tables, figures, and data files are included in an Addendum DVD-ROM.

The report is organized with a separate section for each of the landfill areas. Each section contains all relevant information for that landfill area for the 2015 Landfill Monitoring Program. The following information is provided in each landfill section:

- Visual inspection checklist
- Visual inspection drawing mark-up

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- A selection of visual inspection photos
- Thermal monitoring inspection reports (where applicable)
- Summary of 2015 soil analytical data (where applicable)
- Summary of 2015 groundwater analytical data (where applicable)
- Monitoring well development/sampling reports (where applicable)

An overall site plan (Figure PIN-2.1) presents an overview of the former PIN-2 site with the localization of each landfill areas. For the photographic record, a photographic index has been completed as per the TOR for each of the landfill areas. The full resolution photos are included in electronic format in the Addendum DVD-ROM. Certificates of Analyses, Quality Assurance/Quality Control (QA/QC) analytical results and field notes are attached in the Annexes.

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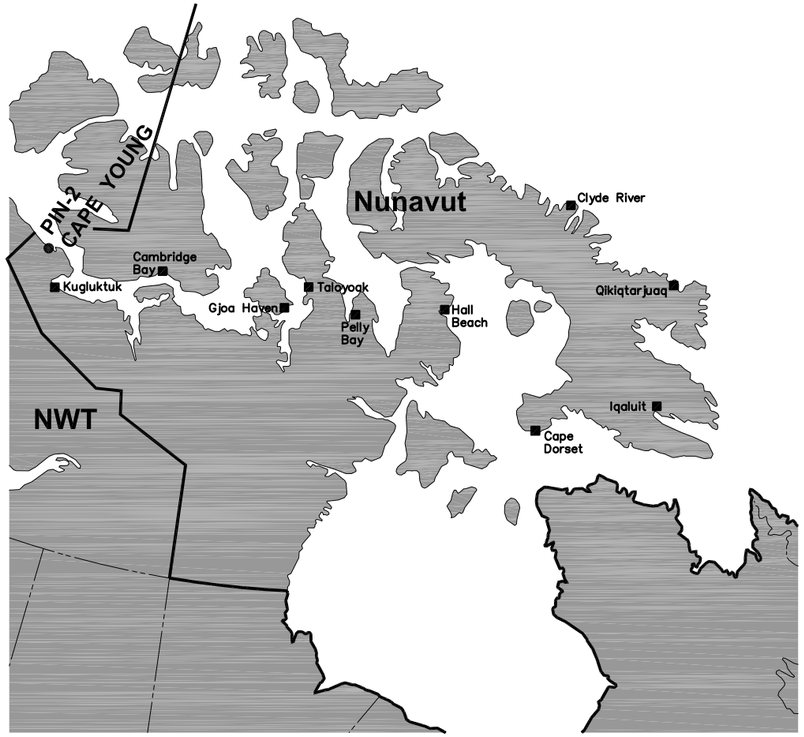
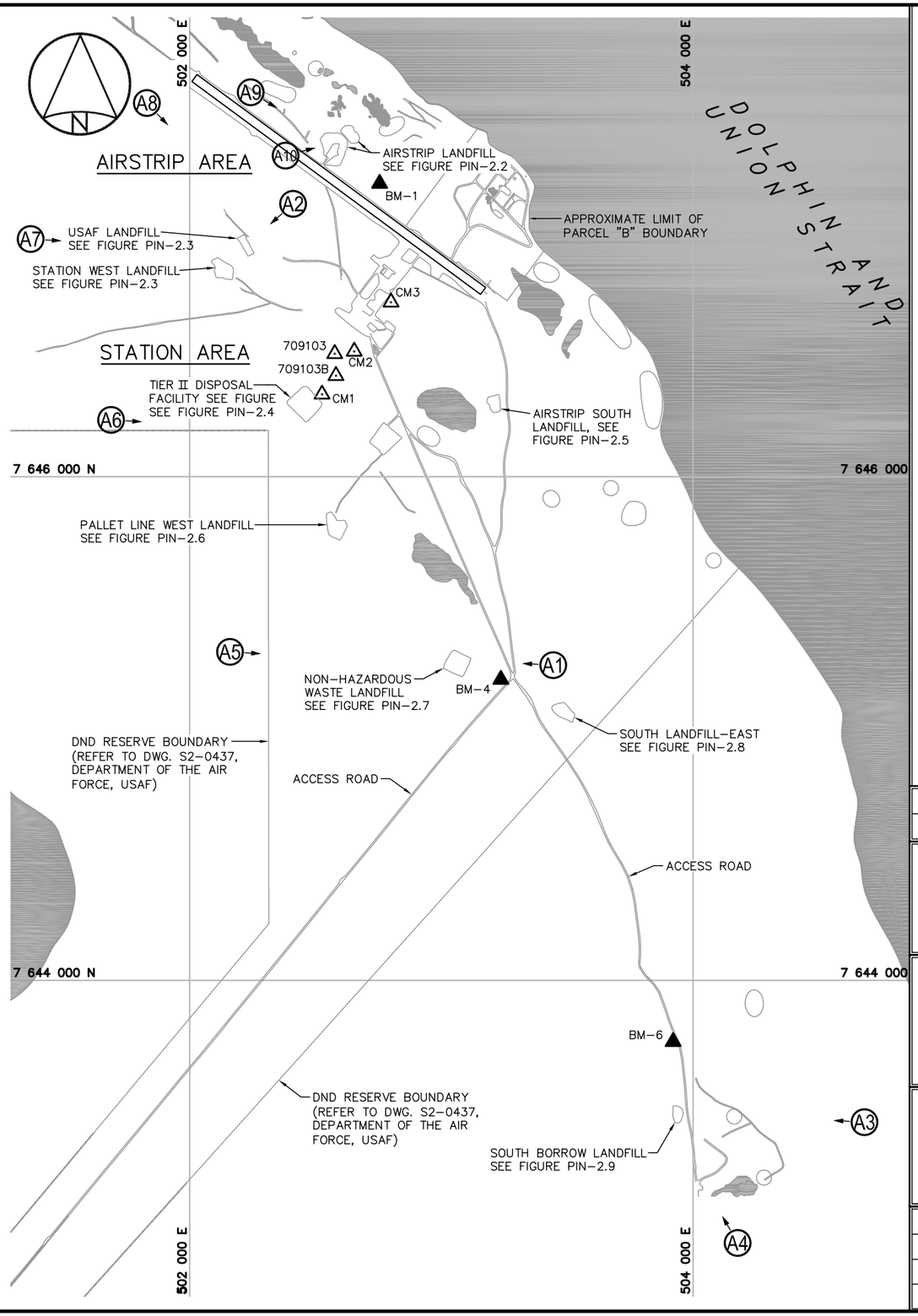


LOCATION OF CAPE YOUNG WITHIN NUNAVUT TERRITORY

SCALE: NTS



LEGEND

- CM1 — SURVEY CONTROL MONUMENT (5)
- BM-1 — PERMANENT BENCHMARK LOCATION (3)
- ARCHAEOLOGICAL FEATURES
- APPROXIMATE LOCATION OF PROPERTY BOUNDARY
- BODY OF WATER
- A5 → AERIAL PHOTOGRAPH

0m 200m 400m 600m 800m 1000m

SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
CM1	7 646 327.029	502 525.754	13.804	PIN-2 BASELINE STA. 0+00
CM2	7 646 497.473	502 653.662	13.993	PIN-2 BASELINE STA. 7+00
CM3	7 646 692.507	502 799.974	14.534	PIN-2 BASELINE STA. 15+00
709103	7 646 487.974	502 576.191	13.790	GEODETIC BENCHMARK
709103B	7 646 400.920	502 581.212	13.954	GEODETIC BENCHMARK

NOTE: BASELINE STATIONS SHOWN ARE IN IMPERIAL UNITS.

PERMANENT BENCHMARK (AS-BUILT)				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
BM-1	7 647 164.203	502 754.676	14.398	25mm DIA. STEEL PIPE
BM-4	7 645 194.471	503 236.108	17.189	25mm DIA. STEEL PIPE
BM-6	7 643 756.513	503 920.587	13.296	25mm DIA. STEEL PIPE

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	16-03-11	P.L.	A.P.	M.F.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

LOCATION PLAN

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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 20,000	MARCH 2016
DRAWN BY:	VERIFIED BY:	APPROVED BY:
P. LÉGARÉ	A. PASSALIS P. ENG	M. FLEURY P. ENG
PROJECT NO:	DRAWING NO:	PAGE
CD3654_400_403	CD3654_400_403-PIN-2A-PL	PL

FIGURE PIN-2.1

G:\CD3654\PIN-2\FINAL\2015\CD3654_400_403-PIN-2A-PL.dwg, PL, 2016-03-21 9:13:46 AM

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2 METHODOLOGY

2.1 VISUAL INSPECTION

Data and information collected during the visual inspection of the PIN-2 landfills are included in the visual inspection data sheets. These data sheets include inspection data such as the location of settlement, erosion, frost action, sloughing and cracking, animal burrows, vegetation cover and stress, staining, seepage points, exposed debris, and any other features of note.

Each feature was identified with an alphabetical or numerical tag to be used consistently each year in an effort to track changes in conditions for each specific feature.

Digital photos were taken to illustrate the current state of the landfills as well as features of interest. Annotated sketches/diagrams are included in the report for each landfill.

The photos were taken with a Sony DSC-TX5 10.2 megapixel (MP) digital camera. Full resolution digital jpg copies are available on the DVD-ROM. The photo log, including the local coordinates from where the photo was taken, orientation (relative to map north), features of note, and picture numbers are included with each landfill report.

2.2 SOIL SAMPLING

The soil sampling methodology conformed to guidance provided in the following Canadian Council of Ministers of the Environment (CCME) documents:

- CCME Guidance Document on the *Management of Contaminated Sites in Canada*, April 1997, CCME PN 1279. (CCME catalogue - http://www.ccme.ca/pdfs/cat_eng.pdf).
- CCME EPC-NCS62E Guidance Manual on *Sampling, Analysis, and Data Management for Contaminated Sites* - Volume I: Main Report, Dec 1993 (CCME catalogue - http://www.ccme.ca/pdfs/cat_eng.pdf).
- CCME EPC-NCS66E Guidance Manual on *Sampling, Analysis, and Data Management for Contaminated Sites* - Volume II: Analytical Method Summaries, Dec. 1993 (CCME catalogue - http://www.ccme.ca/pdfs/cat_eng.pdf).

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- Reference method for the *Determination of Petroleum Hydrocarbons in Soil - Tier I Method*, 2001.
- CCME *Subsurface Assessment Handbook for Contaminated Sites*, March 1994, EPC-NCSRP-48E (CCME catalogue - http://www.ccme.ca/pdfs/cat_eng.pdf).

Specific methodologies used for the collection of soil samples during the August 2015 landfill monitoring program are summarized in Englobe's Draft Standard Operating Procedures (SOPs), developed in August 17, 2015. These included:

- Soil sample locations were identified through the use of GPS and field observation of existing monitoring wells and/or sample tags left from previous monitoring events. For soil sampling near monitoring wells, samples were collected from undisturbed ground located between 2 to 4 m from the monitoring well. At each monitoring location, discrete soil samples were collected from two depths, 0.00 to 0.15 m, and 0.40 to 0.50 m. If the specified depth was not reached, the sample was collected near the zone of refusal.Testpits were dug using a hand shovel down to the prescribed sample depth or refusal, where encountered.
- Soil samples were collected as grab samples from the specified intervals and placed directly into clean laboratory supplied 125 mL glass containers with minimum headspace. Disposable nitrile gloves were used during the sample handling and were changed between each sample collection. Jars/bottles were cleaned prior to placement into the cooler. For the 2015 monitoring event, 4 soil sampling stations were visited. Bedrock, frozen ground or frost was not encountered at any of the soil stations during the August 2015 sampling.
- Non-disposable sampling utensils and tools utilized during soil sample collection were cleaned between each sampling episode and rinsed with commercially available isopropyl alcohol and laboratory supplied distilled water.
- The location of soil samples were recorded using a surveyor's chain (from the center of the monitoring well) or using a GPS and photographed. Once sampling is completed, all the test pits were backfilled using the soil previously excavated.
- Quality assurance and quality control samples were collected for a minimum of 10% of the sample population. This included: one blind field duplicate; one field inter-laboratory duplicate; and one field duplicate to be sent to the owner's representative (ESG OPS CENTRE) in Kingston for archiving as specified by DCC. Duplicate samples were collected from a single sample location depth interval. Samples were prepared by homogenizing (thoroughly mixing) approximately 2.5 kg of soil in a clean stainless steel bowl followed by placement into the appropriate respective sample containers.

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The soil samples were analyzed for requested parameters (TPH [F1-F4], total metals and PCBs) as specified by DCC. Table II below summarizes the soil sampling at PIN-2 during the August 2015 field program:

Table II: Summary of Soil Sampling at PIN-2 - August 2015

Landfill Site	Soil Sample Locations			
Tier II Disposal Facility	MW-1	MW-2	MW-3	MW-4

2.3 GROUNDWATER SAMPLING

The groundwater sampling methodology conformed to guidance provided in the following CCME documents:

- CCME EPC-NCS62E Guidance Manual on *Sampling, Analysis and Data Management for Contaminated Sites* - Volume I: Main Report, Dec 1993 (CCME catalogue - http://www.ccme.ca/pdfs/cat_eng.pdf).
- CCME EPC-NCS66E Guidance Manual on *Sampling, Analysis and Data Management for Contaminated Sites* - Volume II: Analytical Method Summaries, Dec. 1993 (CCME catalogue - http://www.ccme.ca/pdfs/cat_eng.pdf).

Specific methodologies used for the measurement of water level and free product, and for the collection of groundwater samples during the August 2015 landfill monitoring program are summarized in Englobe's Draft SOP), developed for the Kitik12 (DLCMON 50503) and Kitik13 (DLCMON 53649) contracts, dated August 17, 2015. These included:

- Free product and water level monitoring were completed using a Heron Model H.01L Interface Probe. Depths were recorded from the calibrated wire attached to the probe, using the top of the well casing as the reference datum. The end of the probe was lowered into the well, and programmed to emit a continuous audible signal when in contact with LNAPL, and an intermittent one when in contact with water. Depth and height of water column was measured and recorded in a field book, and when LNAPL was detected, thickness was also measured and recorded in a field book. The probe was then removed from the well and decontaminated between each well to reduce cross contamination. Decontamination included rinsing with Alconox soap and water, followed by an isopropyl alcohol rinse and finally rinsed with de-ionized organic free water (supplied by the laboratory).
- In addition to using an interface probe, any visual and/or olfactory evidence of free product was noted during monitoring and well purging activities (if present). Results of the free product monitoring and well purging observations are included in the Monitoring Well Sampling Logs.

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- Monitoring during well purging was completed using a Spectra Field Pro peristaltic pump, equipped with a muliti-parameter meter, flow cell, silicon head tubing and LDPE intake and outflow tubing. All tubing materials were replaced after use at each monitoring well. The multi-parameter meter was calibrated prior to the field program and checked daily with parameter specific calibration standards. There was no deviation in standard readings during 2015 field program.
- Purging at each monitoring well location was completed using the following procedures:
    - Install new silicon head tubing on the peristaltic pump;
    - Connect decontaminated field parameter monitoring equipment to the decontaminated flow cell;
    - Using new nitrile gloves and new LDPE tubing, install the intake tubing to the approximate midpoint of the last known water level (if available) and the bottom of the well;
    - Purge the groundwater at a low flow rate of approximately 100 millilitres per minute (mL/min);
    - Continue purging until the field parameters stabilized for three consecutive readings spaced at three to five minute intervals and/or purging of a minimum of one well volume (stabilization was determined by temperature and conductivity readings within +/- 3% and pH readings within +/- 0.1 pH units).
- Groundwater sampling was undertaken at the completion of the purging and consisted of the following:
    - After stabilization of the field parameters, the intake tubing to the flow cell was disconnected;
    - A new pair of nitrile gloves were adorned and water samples collected for each COC in the appropriate laboratory supplied containers, filling the inorganic containers first, followed by PCBs and lastly PHCs, and ensuring that the tubing did not come into contact with any of the sample containers;
    - Collection of all sample containers in a single sampling event. The samples were not acidified nor filtered.
- All full sample containers were placed in a cooler, with ice packs, for transportation to the receiving lab.
- A field blank was prepared using laboratory supplied travel blank water and pumping this water with the peristaltic pump using the same procedures established for groundwater sampling.

The 2015 field program included sampling four monitoring wells at the Tier II Disposal Facility. A summary of the groundwater sampling undertaken at PIN-2 is summarized in Table III.

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In all monitored wells, no evidence of free-phase hydrocarbon product was detected. Results of the free product monitoring and well purging observations are included in Monitoring Well Development and Sampling Record forms, which are are included in appropriate sections of this report.

Table III: Summary of Groundwater Sampling at PIN-2 - August 2015

Landfill Site	Groundwater Sample Locations			
Tier II Disposal Facility	MW-1	MW-2	MW-3	MW-4

2.4 THERMAL MONITORING

The 2015 thermal monitoring program at PIN-2 consisted of an inspection of four thermistors and data loggers, the downloading of datasets and the manual reading of thermistors at all datalogger locations. Monitoring data readings were not obtained from the datalogger at VT-1 as the datalogger at this location was re-installed in 2015 following off-site repair during the 2014 monitoring period. Specific detailed information regarding temperature data is contained in the Tier II Disposal Facility section of this report.

2.5 FIELD NOTES

Field notes from the 2015 Landfill Monitoring program, including soil and water sampling, are included in Annex 3 for reference. Notes were written in field books, previously prepared logs or entered directly into a field computer. The notes were scanned to an Adobe PDF document for future reference and backup. Locations of all observations and features for the visual inspection were recorded using a Garmin Oregon 400 hand held GPS, which included a combination of continuous tracks and discrete way points. Data sets collected from the individual vertical thermistors were downloaded directly to a field lab top computer.

2.6 QUALITY CONTROL

Samples were submitted to Exova and Maxxam laboratories using laboratory specific bottles and jars.

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Sila implemented standard sample collection techniques to decrease the likelihood of compromising collected samples. The methods used for sample collection are summarized in Sections 2.2 and 2.3 of this report. The following measures were taken to minimize sample cross-contamination:

- All samples were placed directly into the appropriate laboratory-supplied containers (for the particular analysis).
- Soil samples were collected with the use of decontaminated sampling equipment and/or nitrile gloves that were used only once.
- Water samples were collected through the use of a peristaltic pump and dedicated tubing.

Chain-of-Custody (COC) forms were prepared prior to mobilisation to the site and completed by the Project Engineer after sample collection. The samples were refrigerated prior to off-site shipment, in chilled coolers, by commercial cargo carriers (First Air Cargo, Canadian North Cargo and Air Canada) directly to Maxxam (via Yellowknife) and Exova in Edmonton and ESG, via Ottawa to Kingston, Ontario (via Edmonton), where they were checked in by laboratory representatives. All analyses were completed as specified on COC forms.

It should be noted that First Air Cargo misplaced the Maxxam cooler in Yellowknife for an extended period, which resulted in the extraction of PHC F1-F3 parameters past the method-specific hold time. Annex 1 provides a sample integrity report from Exova. This report indicates that all samples received were acceptable for analysis.

2.7 QA/QC PROCEDURES

Sila used standard QA/QC procedures as specified in the TOR and CCME Guidance Documents for this project. The following is a summary of the analytical QA/QC samples collected:

- 10% field Blind Duplicate Samples of soil and water were sent to Exova. Results can be found in Annex 1.
- 10% Inter-laboratory Duplicate Samples were sent to Maxxam (to determine if variation in procedures may cause significant difference in analytical results).
- 10% Archival Samples of soil were sent to ESG.

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Exova has QA/QC measures for sample analysis. Exova QC samples will typically be introduced into the analytical stream on a batch basis, normally comprising 20% – 30% of the total sample throughput. A batch size of 15 – 20 typically includes one of each control standard, reference standard, surrogate spike, duplicate sample, and method blank. A control sample is a blank matrix fortified with analyte of interest and carried through all analytical steps to monitor lab performance (recovery & basis) on clean matrix. A reference sample is a sample with predetermined certified characteristics that undergoes the same processing as samples used to evaluate accuracy of procedure. A surrogate spike is an organic compound with similar chemical composition and behaviour in the analytical process used to monitor recovery in each sample. A duplicate sample occurs when client samples are analyzed in duplicate to monitor reproducibility in analysis and preparation. Finally, a method blank is a blank sample matrix carried through the same procedure as the samples, and is used to monitor for process contamination.

Maxxam follows similar in-house QA/QC procedures. Exova and Maxxam QA/QC reports can be found within the certificates of analysis in Annex 1.

2.8 PROJECT REFERENCES

The following references are specifically relevant to the 2015 Landfill Monitoring activities:

A. Invitation to Tender - *Contractor Services for the Collection of Landfill Monitoring Data: PIN-2 Cape Young, PIN-4 Byron Bay, CAM-1 Jenny Lind Island - DEW LINE SITES, NUNAVUT, KITIKMEOT REGION, DCC PROJECT #: DLC MON(KITIK13)*,

B. Terms of Reference – *Contracting Services for the Collection of Landfill Monitoring Data – PIN-2 Cape Young, PIN-2 Cape Young, CAM-1 Jenny Lind Island - DEW LINE SITES, NUNAVUT, KITIKMEOT REGION, DCC PROJECT #: DLC MON (KITIK13)*, April 18, 2013.

C. Technical Proposal – *The Collection of Landfill Monitoring Data for the DEW Line Sites*: *PIN-2 Cape Young, PIN-2 Cape Young, CAM-1 Jenny Lind Island - DEW LINE SITES, NUNAVUT, KITIKMEOT REGION, DCC PROJECT #: DLC MON (KITIK13)*, April 18, 2013. *Project Ref 6121-150,* May 2013.

D. *Meeting Minutes* - June 16, 2015

E. *Post-Field Progress Report, PIN-2 Landfill Monitoring 2015*, September 2015.

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3 AIRSTRIP LANDFILL

3.1 SUMMARY

On August 15, 2015 a visual inspection was completed at the Airstrip Landfill. Neither soil nor groundwater sampling was performed.

As of 2015, no erosion features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the Airstrip Landfill. Indications of minor settlement were noted at two locations, including linear depressions on the northeast side slope of Lobe A (Feature B) and south side slope of Lobes E & F (Feature C). Feature B was previously observed during the 2014 assessment with no significant change noted. Feature C was not noted during the previous 2014 assessment. Evidence of exposed debris was not noted at the landfill, however five small pieces of miscellaneous metal debris were noted in proximity to the landfill, including four existing pieces (Feature A) located southwest and northwest of Lobes E & F and one newly observed piece (Feature D) located north of Lobes E & F.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table IV of this report and has been completed as per the TOR. Please refer to Figure PIN-2.2 for a sketch of the Airstrip Landfill detailing the location of photographs, settlement and surface debris features.

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Table IV: Visual Inspection Checklist / Report – Airstrip Landfill

DEW Line Cleanup: Post-construction - Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: Airstrip Landfill (Existing Regrade Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 16, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT NUMBER: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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TABLE IV: PIN-2, CAPE YOUNG - AIRSTRIP LANDFILL (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE B See Figure PIN-2.2 (Lobe A, NE side slope)	1.5 m	0.2 - 0.3 m	0.1 - 0.15 m	< 1%	Linear depression	ALF-10, 11	Acceptable	Slope appear stable. No significant change since first observation in 2014.
		FEATURE C See Figure PIN-2.2 (Lobes E & F S side slope - New Obs.)	3.0 m	0.1 - 0.15 m	0.05 - 0.07 m	< 1%	Linear depression	ALF-27-28	Acceptable	Slope appears stable. New Observation.
Erosion	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	Yes	FEATURE A See Figure PIN-2.2 (Between Lobes A, E & F)	0.3 m	0.03 m	Surface	Isolated	Miscellaneous metal debris - surface	ALF-21-23, 35	Acceptable	Four small pieces of metal surface debris located between lobes. No change.
		FEATURE D See Figure PIN-2.2 (North of Lobes E & F - New Obs.)	0.15 m	0.1 m	Surface	Isolated	Miscellaneous metal debris - surface	ALF-36	Acceptable	One small piece of metal. New Observation.
Additional Photos	Yes	See Figure PIN-2.2 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

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3.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for Airstrip Landfill has been completed as per the TOR and is included as Table V below.

Table V: Preliminary Stability Assessment – Airstrip Landfill

Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Not observed	None
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Acceptable	Isolated (outside regrade area)
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

3.3 LOCATION PLAN

The Location Plan for the Airstrip Landfill has been completed as per the TOR and is presented in Figure PIN-2.2.

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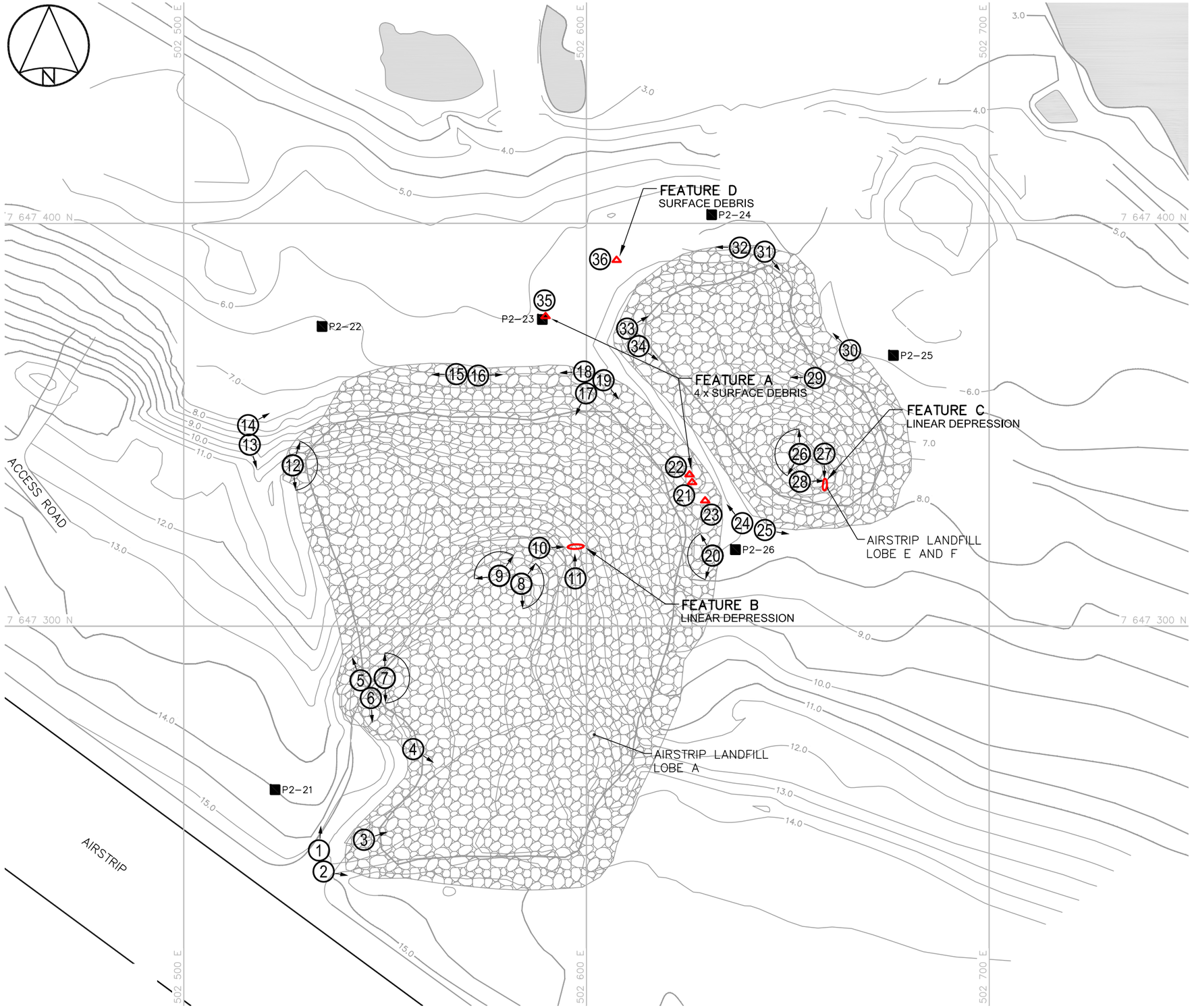

LEGEND

- MONITORING SOIL SAMPLE LOCATION (6)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- BODY OF WATER
- DEBRIS (NTS)
- SETTLEMENT (NTS)

0m 10m 20m 30m 40m 50m

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	16-03-11	P.L.	A.P.	M.F.

Construction de Défense Canada
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COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

AIRSTRIP LANDFILL

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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	MARCH 2016
DRAWN BY:	VERIFIED BY:	APPROVED BY:
P. LÉGARÉ	A. PASSALIS P. ENG	M. FLEURY P. ENG
PROJECT NO:	DRAWING NO:	PAGE
CD3654_400_403	CD3654_400_403-PIN-2B-PL	PL

FIGURE PIN-2.2

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3.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the Airstrip Landfill has been completed as per the TOR and is included as Table VI hereafter. Full-sized photographs are contained in the Addendum DVD- ROM.

Table VI: Airstrip Landfill Photolog (page 1 of 2)

Photo (ALF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
Lobe A						
1	P215_7484	4,256	15/08/15	502535	7647243	View looking north along west side of Airstrip Landfill - Lobe A
2	P215_7485	4,246	15/08/15	502535	7647240	View looking east along south side of Airstrip Landfill - Lobe A
3	P215_7486	4,270	15/08/15	502543	7647246	View looking northeast at southwest corner of Airstrip Landfill - Lobe A
4	P215_7487	4,426	15/08/15	502556	7647270	View looking southeast across south cover of Airstrip Landfill - Lobe A
5	P215_7488	4,291	15/08/15	502545	7647285	View north-northwest along northwest crest of Airstrip Landfill - Lobe A
6	P215_7489	4,352	15/08/15	502546	7647284	View looking south along west side of Airstrip Landfill - Lobe A
7	P215_7490	1,326	15/08/15	502549	7647286	Panoramic view looking north to south across Airstrip Landfill - Lobe A
8	P215_7491	1,089	15/08/15	502584	7647312	Panoramic view looking north to south across east cover of Airstrip Landfill - Lobe A
9	P215_7492	1,310	15/08/15	502580	7647313	Panoramic view looking west to northeast across west cover of Airstrip Landfill - Lobe A
10	P215_7493	4,379	15/08/15	502592	7647320	View looking east at linear depression on northeast side slope - FEATURE B
11	P215_7494	4,318	15/08/15	502598	7647315	View looking north at linear depression on northeast side slope - FEATURE B
12	P215_7495	1,273	15/08/15	502527	7647340	Panoramic view looking north to south across north cover of Airstrip Landfill - Lobe A
13	P215_7496	4,362	15/08/15	502517	7647347	View looking south-southeast along west toe of Airstrip Landfill - Lobe A
14	P215_7497	4,434	15/08/15	502516	7647349	View looking east-northeast along northwest toe of Airstrip Landfill - Lobe A
15	P215_7498	4,409	15/08/15	502569	7647363	View looking west along north side slope of Airstrip Landfill - Lobe A
16	P215_7499	4,382	15/08/15	502572	7647363	View looking east along north side slope of Airstrip Landfill - Lobe A
17	P215_7500	4,076	15/08/15	502601	7647359	View looking southwest upslope of Airstrip Landfill - Lobe A
18	P215_7501	4,317	15/08/15	502600	7647362	View looking west along north toe of Airstrip Landfill - Lobe A
19	P215_7502	4,414	15/08/15	502604	7647360	View looking southeast between Lobes A and E&F of Airstrip Landfill
20	P215_7503	1,164	15/08/15	502630	7647317	Panoramic view looking south-southwest to north-northwest at east side of Airstrip Landfill - Lobe A

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Table VI: Airstrip Landfill Photolog (page 2 of 2)

Photo (ALF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
Lobes E & F						
21	P215_7504	4,268	15/08/15	502626	7647334	Miscellaneous metal debris on surface between Lobe A and Lobes E & F - FEATURE A
22	P215_7505	4,395	15/08/15	502623	7647338	Miscellaneous metal debris on surface between Lobe A and Lobes E & F - FEATURE A
23	P215_7506	4,299	15/08/15	502630	7647330	Miscellaneous metal debris on surface between Lobe A and Lobes E & F - FEATURE A
24	P215_7507	4,270	15/08/15	502639	7647326	View looking northwest along west side slope of Airstrip Landfill - Lobes E & F
25	P215_7508	4,390	15/08/15	502644	7647324	View looking east along south toe of Airstrip Landfill - Lobes E & F
26	P215_7509	1,521	15/08/15	502653	7647342	Panoramic view looking southwest to north across cover of Airstrip Landfill - Lobes E & F
27	P215_7510	4,377	15/08/15	502654	7647336	View looking south at linear depression on side slope of Airstrip Landfill - Lobes E & F - FEATURE C (new)
28	P215_7511	4,431	15/08/15	502660	7647341	View looking east at linear depression on side slope of Airstrip Landfill - Lobes E & F - FEATURE C (new)
29	P215_7512	4,206	15/08/15	502655	7647362	View looking west across Airstrip Landfill - Lobes E & F
30	P215_7513	4,177	15/08/15	502664	7647369	View looking northwest along east side of Airstrip Landfill - Lobes E & F
31	P215_7514	4,264	15/08/15	502643	7647394	View looking southeast along east side of Airstrip Landfill - Lobes E & F
32	P215_7515	4,298	15/08/15	502640	7647394	View looking west-southwest along north side of Airstrip Landfill - Lobes E & F
33	P215_7516	4,293	15/08/15	502610	7647373	View looking east-northeast along north crest of Airstrip Landfill - Lobes E & F
34	P215_7517	4,315	15/08/15	502612	7647371	View looking southeast across cover of Airstrip Landfill - Lobes E & F
35	P215_7518	4,410	15/08/15	502591	7647381	Miscellaneous metal debris on surface between Lobes A, E & F - FEATURE A
36	P215_7519	4,393	15/08/15	502604	7647391	Miscellaneous metal debris on surface north of Lobes E & F - FEATURE D (new)

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4 USAF LANDFILL

4.1 SUMMARY

On August 15, a visual inspection was completed at the USAF Landfill. Neither soil nor groundwater sampling was performed.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. Minor settlement was noted at one location on the west side slope of the landfill (Feature A) that was first observed during the previous 2014 inspection period. There were no significant changes noted in 2015.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table VII of this report and has been completed as per the TOR. Please refer to Figure PIN-2.3 for a sketch of the USAF Landfill detailing the location of photographs and settlement feature.

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Table VII: Visual Inspection Checklist / Report – USAF Landfill

DEW Line Cleanup: Post-construction - Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: USAF Landfill (Existing Regrade Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 16, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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TABLE VII: PIN-2, CAPE YOUNG - USAF LANDFILL (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE A See Figure PIN-2.3 (W side slope)	0.4 m	0.3 m	0.15 m	< 1%	Minor depression	USAF-6, 7	Acceptable	Pothole-type depression. No significant change since observed in 2014.
Erosion	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Additional Photos	Yes	See Figure PIN-2.3 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

4.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for the USAF Landfill has been completed as per the TOR and is included as Table VIII hereafter.

Table VIII: Preliminary Stability Assessment – USAF Landfill

Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Not observed	None
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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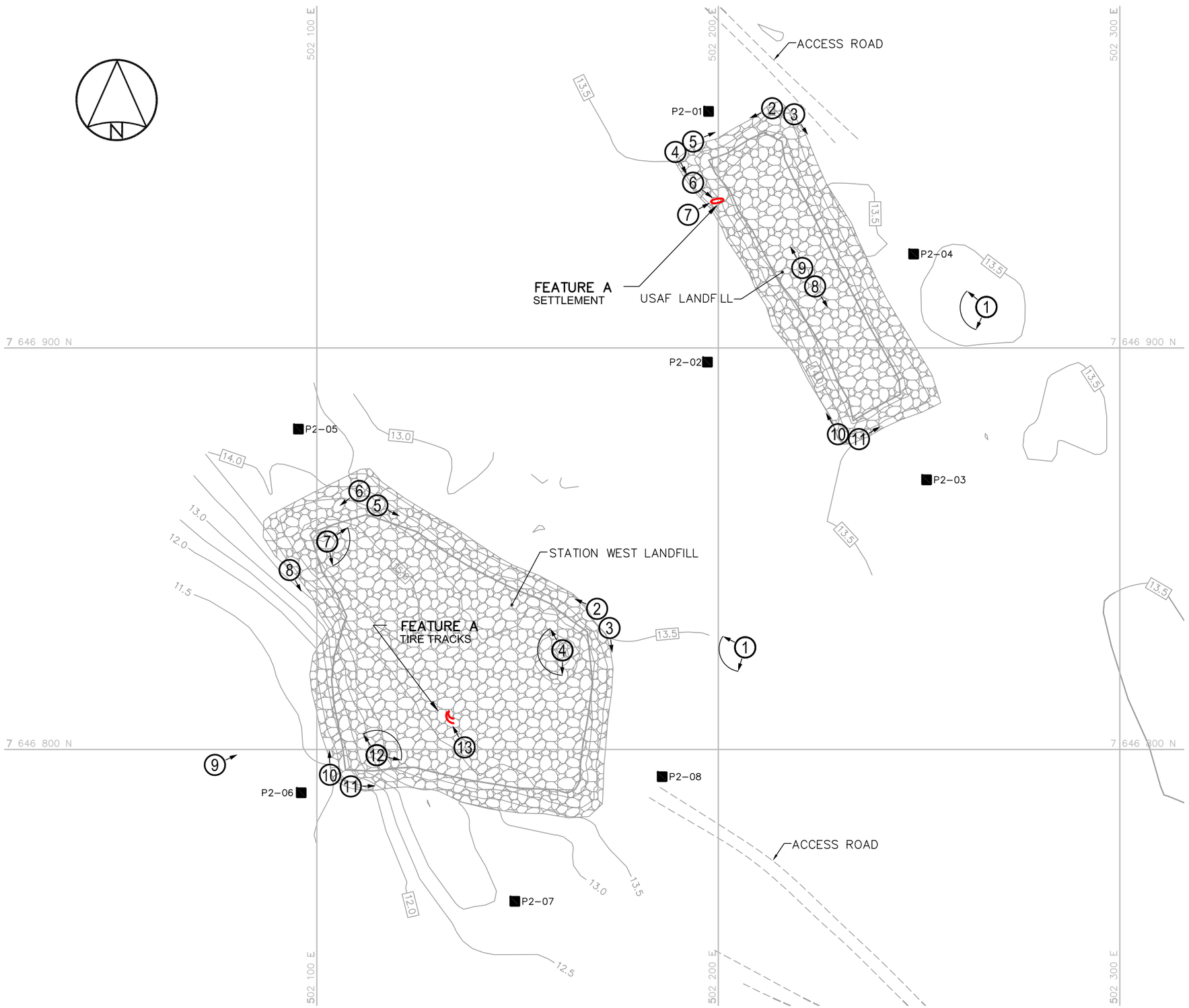
Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

4.3 LOCATION PLAN

The Location Plan for the USAF Landfill has been completed as per the TOR and is presented in Figure PIN-2.3.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.



LEGEND

- MONITORING SOIL SAMPLE LOCATION (8)
- (1) APPROX. PHOTOGRAPHIC VIEWPOINT
- TIRE TRACKS NTS
- SETTLEMENT (NTS)

0m 10m 20m 30m 40m 50m

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	16-03-11	P.L.	A.P.	M.F.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

USAF LANDFILL AND STATION WEST LANDFILL

Englobe
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Suite 200
Quebec (Quebec) Canada, G1P 2J7
Phone : 418.653.4422
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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	MARCH 2016
DRAWN BY: P. LÉGARÉ	VERIFIED BY: A. PASSALIS P. ENG	APPROVED BY: M. FLEURY P. ENG
PROJECT NO: CD3654_400_403	DRAWING NO: CD3654_400_403-PIN-2C-PL	PAGE PL

FIGURE PIN-2.3

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4.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the USAF Landfill has been completed as per the TOR and is included in the following page as Table IX. Full-sized photographs are contained in the Addendum DVD-ROM.

Table IX: Landfill Visual Inspection Photo Log – USAF Landfill

(USAF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P215_7435	1,009	15/08/15	502265	7646910	Panoramic view southwest-northwest at east side of USAF Landfill
2	P215_7436	4,331	15/08/15	502216	7646960	View looking southwest along north side of USAF Landfill
3	P215_7437	4,286	15/08/15	502217	7646959	View looking south-southeast along east side of USAF Landfill
4	P215_7438	4,327	15/08/15	502191	7646949	View looking south-southeast along west side of USAF Landfill
5	P215_7439	4,376	15/08/15	502193	7646952	View looking northeast along north side of USAF Landfill
6	P215_7440	4,413	15/08/15	502194	7646941	View looking southeast at pothole on west side slope - FEATURE A
7	P215_7441	4,411	15/08/15	502196	7646936	View looking northeast at pothole on west side slope - FEATURE A
8	P215_7442	4,435	15/08/15	502223	7646917	View looking southeast across south cover of USAF Landfill
9	P215_7443	4,267	15/08/15	502222	7646919	View looking northwest across north cover of USAF Landfill
10	P215_7444	4,361	15/08/15	502231	7646879	View looking north-northwest along west side of USAF Landfill
11	P215_7445	4,458	15/08/15	502234	7646878	View looking northeast along south side of USAF Landfill

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5 STATION WEST LANDFILL

5.1 SUMMARY

On August 15, 2015 a visual inspection was completed at the Station West Landfill. Neither soil nor groundwater sampling was performed.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. One set of vehicle tracks (shallow ruts) was noted on the south central cover of the landfill (Feature A) and were consistent with observations noted during the previous 2013 and 2014 inspection periods. There were no other features of note at the landfill.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table X of this report and has been completed as per the TOR. Please refer to Figure PIN-2.3 for a sketch of the Station West Landfill detailing the location of photographs.

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Table X: Visual Inspection Checklist / Report – Station West Landfill

DEW Line Cleanup: Post-construction - Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: Station West Landfill (Existing Regraded Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 16, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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TABLE X: PIN-2, CAPE YOUNG - STATION WEST LANDFILL (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Erosion	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	Yes	FEATURE A See Figure PIN-2.3 (S central crest)	4 - 8 m	0.3 m	0.05 m	Isolated	Vehicle tracks	SWLF-13	Acceptable	Consistent with 2013 and 2014 assessments.
Additional Photos	Yes	See Figure PIN-2.3 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

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5.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for Station West Landfill has been completed as per the TOR and is included as Table XI below.

Table XI: Preliminary Stability Assessment – Station West Landfill

Feature	Severity Rating	Extent
Settlement	Not observed	None
Erosion	Not observed	None
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

5.3 LOCATION PLAN

The Location Plan for the Station West Landfill has been completed as per the TOR and is presented in Figure PIN-2.3.

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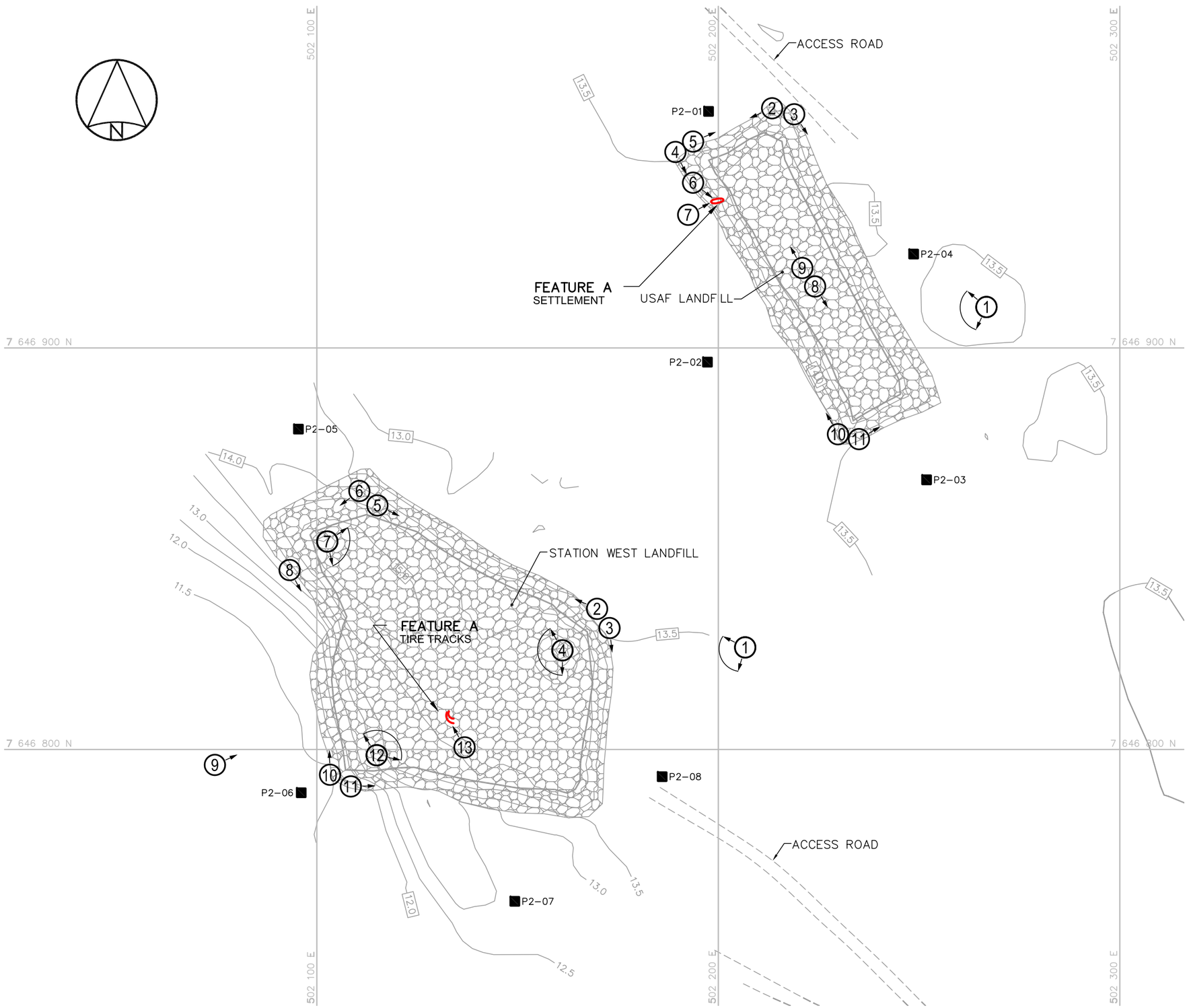

LEGEND

- MONITORING SOIL SAMPLE LOCATION (8)
- (1) APPROX. PHOTOGRAPHIC VIEWPOINT
- TIRE TRACKS NTS
- SETTLEMENT (NTS)

0m 10m 20m 30m 40m 50m

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	16-03-11	P.L.	A.P.	M.F.

Construction de Défense Canada
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COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

USAF LANDFILL AND STATION WEST LANDFILL

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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	MARCH 2016
DRAWN BY: P. LÉGARÉ	VERIFIED BY: A. PASSALIS P. ENG	APPROVED BY: M. FLEURY P. ENG
PROJECT NO: CD3654_400_403	DRAWING NO: CD3654_400_403-PIN-2C-PL	PAGE PL

FIGURE PIN-2.3

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5.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the Station West Landfill has been completed as per the TOR and is included as Table XII hereafter. Full sized photographs are contained in the Addendum DVD-ROM.

Table XII: Landfill Visual Inspection Photo Log – Station West Landfill

Photo (SWLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P215_7446	778	15-08-15	502206	7646824	Panoramic view looking south to west at northeast side of Station West Landfill
2	P215_7447	4 382	15-08-15	502171	7646834	View looking northwest along northeast side of Station West Landfill
3	P215_7448	4 259	15-08-15	502173	7646832	View looking south along east side of Station West Landfill
4	P215_7449	1302	15-08-15	502163	7646826	Panoramic view looking south to north-northwest across cover of Station West Landfill
5	P215_7450	4 288	15-08-15	502115	7646861	View looking southeast along northeast side of Station West Landfill
6	P215_7451	4 318	15-08-15	502111	7646865	View looking southwest along north side of Station West Landfill
7	P215_7452	1215	15-08-15	502101	7646852	Panoramic view looking northeast to south across cover from northwest corner of Station West Landfill
8	P215_7453	4 463	15-08-15	502094	7646844	View looking southeast along northwest toe of Station West Landfill
9	P215_7454	4 234	15-08-15	502077	7646797	View looking east-northeast at west side of Station West Landfill
10	P215_7455	4 354	15-08-15	502105	7646794	View looking north along west side of Station West Landfill
11	P215_7456	4 399	15-08-15	502107	7646793	View looking east along south side of Station West Landfill
12	P215_7458	1260	15-08-15	502114	7646798	Panoramic view looking northwest to east across south cover of Station West Landfill
13	P215_7459	4 401	15-08-15	502135	7646801	View looking northwest at vehicle tracks on south cover area of Station West Landfill - FEATURE A

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6 TIER II SOIL DISPOSAL FACILITY

6.1 SUMMARY

The 2015 monitoring of the Tier II Disposal Facility conducted on August 15, 2015 consisted of a visual inspection as per the TOR, the collection of soil and groundwater samples, as well as thermal monitoring.

No PCB or high metal concentrations were detected in any of the soil samples collected. A detectable concentration of TPH (PHC F3 Fraction) was noted in the surface sample collected at down gradient location MW-1 (77 mg/kg).

No PCB, TPH or high metal concentrations were detected at any of the wells sampled.

All thermistors at the Tier II Soil Disposal Facility were inspected and found to be in good condition with no significant concerns identified. Data from all thermistors was successfully retrieved with the exception of VT-1, which was re-installed following off-site repair during the 2014-2015 monitoring period.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. Indications of minor settlement were noted at four locations on the Tier II Disposal Facility (Feature A), including: one linear depression below VT-1 and three localized oval-shaped depressions along the southwest crest. All depressions appear consistent with findings from the previous 2014 assessment, with the exception of the depression below VT-1, which notably increased in length from 0.6 to 3.0 m between the 2014 and 2015 inspection periods. Feature D, a single localized depression previously observed on the northeast crest, was not noted during the 2015 inspection.

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Evidence of minor surface erosion was noted at eight locations on the Tier II Disposal Facility, including: a single location on the southeast side slope below VT-1 (Feature B); three locations on the southeast side slope (Feature C); two locations on the northwest side slope (Feature E); a newly observed single location on the northwest side slope (Feature G); and a newly observed single location on the NE side slope (Feature H). All locations consisted of shallow surface erosion of fines that extended from the crest down slope. The facility side slopes appear stable and self armouring at all erosion locations, with only minor washing of fines noted. With the exception of new Features G and H, all other erosional features appear consistent with findings from the 2014 assessment. Several northeast-southwest orientated linear striations were noted on the north cover of the facility (Feature F). The striations appear consistent with findings from the previous 2014 assessment. No exposed debris were noted.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table XIII of this report and has been completed as per the TOR. Please refer to Figure PIN-2.4 for a sketch of the Tier II Disposal Facility detailing the location of photographs, settlement and erosional features.

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Table XIII: Visual Inspection Checklist - Tier II Disposal Facility

DEW Line Cleanup: Post-construction - Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: Tier II Disposal Facility (New Landfill)
DATE OF INSPECTION: August 25, 2015
DATE OF PREVIOUS INSPECTION: August 13, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT NUMBER: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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TABLE XIII: PIN-2, CAPE YOUNG - TIER II DISPOSAL FACILITY (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE A See Figure PIN-2.4 (SW crest)	0.4 -3.0 m	0.3 - 0.6 m	0.1 - 0.15 m	Occasional (< 2%)	4 Minor depressions	Tier II-14-19, 22-24	Acceptable	Linear and oval shaped depressions. Increase in length of feature southwest of VT-1. No other changes from 2014 assessment.
		FEATURE D See Figure PIN-2.4 (NE crest)	0.7 m	0.3 m	0.15 m	Isolated	Minor depression	-	Not Observable	Feature not observed during 2015 inspection.
Erosion	Yes	FEATURE B See Figure PIN-2.4 (SW side slope near VT-1)	7 m	0.1-0.15 m	0.02 m	Isolated (< 1%)	Minor erosion	Tier II-20, 21	Acceptable	Single location. Washing of fines, self armouring. Slope appears stable. Associated with settlement feature below VT-1 (Feature A). No significant change from 2014 assessment.
		FEATURE C See Figure PIN-2.4 (SE side slope)	5 - 12 m	0.1 - 0.3 m	0.05 m	Occasional (< 2%)	Minor erosion	Tier II-52-57	Acceptable	3 locations. Washing of fines, self armouring. Slope appears stable. No significant change from 2014 assessment.
		FEATURE E See Figure PIN-2.4 (NW side slope)	7 - 15 m	0.3 - 0.4 m	0.05 m	Occasional (< 2%)	Minor erosion	Tier II-36-39	Acceptable	2 locations. Washing of fines, self armouring. Slope appears stable. Marginal increase in width of features from 2014 assessment.
		FEATURE G See Figure PIN-2.4 (NW side slope - New Obs.)	16 m	0.15 - 0.25 m	0.05 m	Isolated (< 1%)	Minor erosion	Tier II-34-35	Acceptable	Single location. Washing of fines, self armouring. Slope appears stable. New observation.
		FEATURE H See Figure PIN-2.4 (NE side slope below crest - New Obs.)	1.5 m	0.15 m	0.05 m	Isolated (< 1%)	Minor erosion	Tier II-47-48	Acceptable	Single location. Washing of fines, self armouring. Slope appears stable. New Observation.
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	Yes	See Figure PIN-2.4	N/A	N/A	N/A	N/A	VT-1, 2, 3, 4MW-1, 2, 3, 4	Tier II - 3, 5, 2, 11W, 2W, 3W, 4W	Acceptable	N/A
Other Features of Note:	Yes	FEATURE F See Figure PIN-2.4 (N cover)	4 - 9 m	0.15 m	0.02 - 0.05 m	< 2%	Shallow Striations	Tier II-43-46	Acceptable	Parallel striations resulting from heavy equipment during final grading of cover. Consistent with previous observations.
Additional Photos	Yes	See Figure PIN-2.4 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

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6.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for the Tier II Soil Disposal Facility has been completed as per the TOR and is included as Table XIV hereafter.

Table XIV: Preliminary Stability Assessment – Tier II Soil Disposal Facility

Feature	Severity Rating	Extent
Settlement	Acceptable	Occasional/Isolated
Erosion	Acceptable	Occasional/Isolated
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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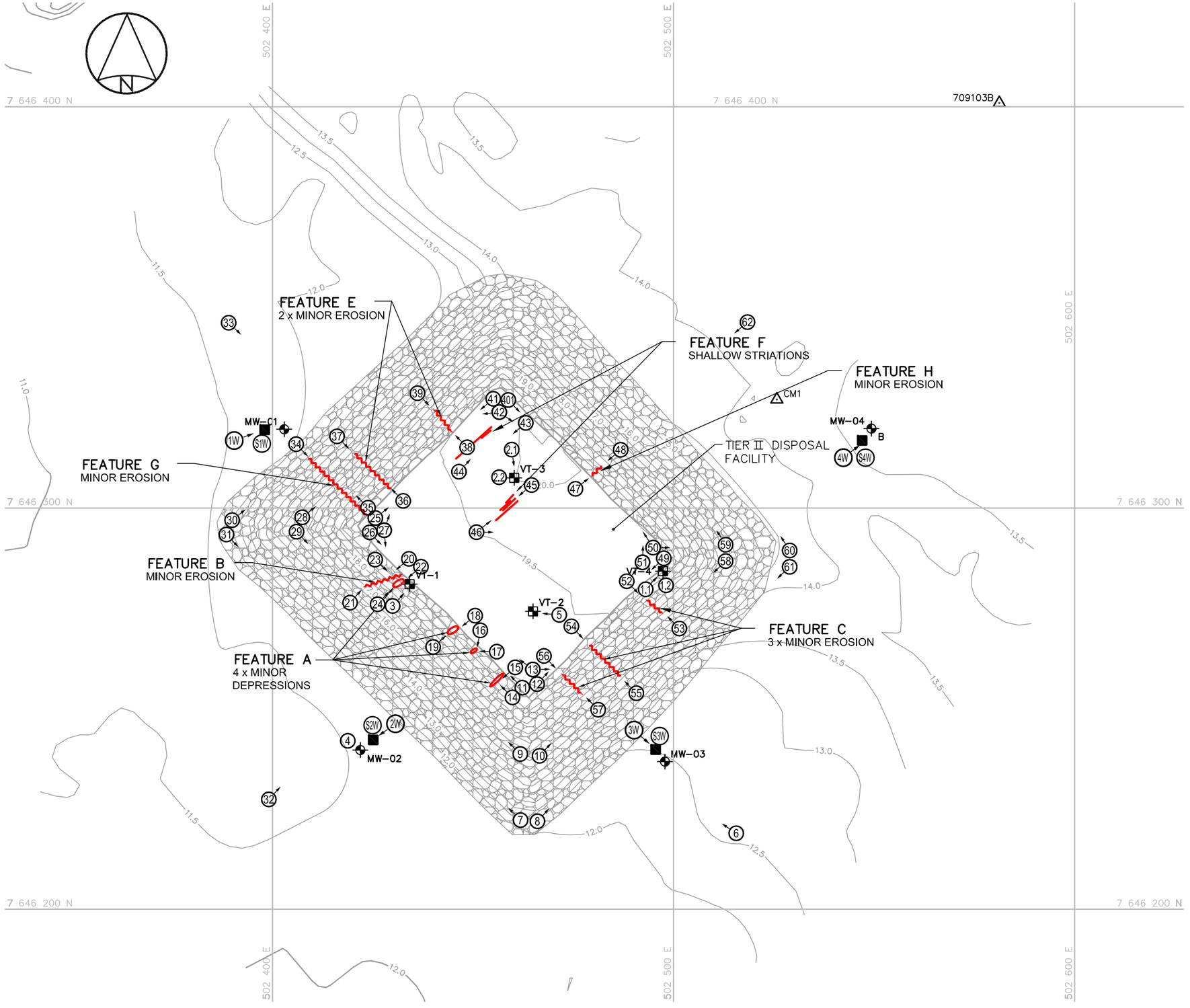
Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

6.3 LOCATION PLAN

The Location Plan for the Tier II Soil Disposal Facility has been completed as per the TOR and is included in the following page as Figure PIN-2.4.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.



LEGEND

- MONITORING WELL LOCATION (3)
- BACKGROUND MONITORING WELL LOCATION (1)
- GROUND TEMPERATURE CABLE LOCATION (4)
- MONITORING SOIL SAMPLE LOCATION (4)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- MINOR EROSION (NTS)
- SHALLOW STRIATIONS (NTS)

0m 10m 20m 30m 40m 50m

NO.	VERSION	DATE	P.L. PAR	A.P. VERIF.	M.F. APPR.
1	FINAL	16-03-21			

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COLLECTION OF
LANDFILL MONITORING DATA
PIN-2, CAPE YOUNG, NUNAVUT

TIER II DISPOSAL FACILITY

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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	MARCH 2016
DRAWN BY: P. LÉGARÉ	VERIFIED BY: A. PASSALIS P. ENG	APPROVED BY: M. FLEURY P. ENG
PROJECT NO: CD3654_400_403	DRAWING NO: CD3654_400_403-PIN-2D-PL	PAGE PL

FIGURE PIN-2.4

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6.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the Tier II Disposal Facility has been completed as per the TOR and is included in the following page as Table XV. Full-sized photographs are contained in the Addendum DVD-ROM.

Table XV: Landfill Visual Inspection Photo Log – Tier II Soil Disposal Facility (page 1 of 3)

Photo (Tier II-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1.1	P215_7241	4,369	15/08/15	502495.5	7646282.4	View looking northeast at VT-4, MW-4 in background
1.2	P215_7244	4,433	15/08/15	502495.5	7646282.4	View south at datalogger at VT-4
2.1	P215_7245	4,381	15/08/15	502460.1	7646312.1	View looking south at VT-3, VT-2 in background
2.2	P215_7246	4,317	15/08/15	502460.1	7646312.1	View of datalogger at VT-3
3	P215_7249	4,376	15/08/15	502431.5	7646277.2	View looking northeast at VT-1 VT-3 in background
4	P215_7252	4,312	15/08/15	502420.2	7646241.2	Water sampling at MW-2
5	P215_7253	4,428	15/08/15	502469.9	7646273.6	View looking west at VT-2, VT-1in background
6	P215_7256	4,305	15/08/15	502515.4	7646219.1	View looking northwest at southeast side of Tier II DF
7	P215_7257	4,260	15/08/15	502463	7646222	View looking northwest along southwest toe of Tier II DF
8	P215_7258	4,430	15/08/15	502465	7646222	View looking northeast along southeast toe of Tier II DF
9	P215_7259	4,445	15/08/15	502463	7646238	View looking northwest along southwest side slope of Tier II DF
10	P215_7260	4,305	15/08/15	502465	7646238	View looking northeast along southeast side slope of Tier II DF
11	P215_7261	4,316	15/08/15	502463	7646255	View looking northwest along southwest crest of Tier II DF
12	P215_7262	4,380	15/08/15	502464	7646255	View looking northeast along southeast crest of Tier II DF
13	P215_7263	1,280	15/08/15	502464	7646258	Panoramic view looking northwest to east from south corner of Tier II DF
14	P215_7264	4,334	15/08/15	502460	7646254	View looking northwest at linear depresson on southwest crest - FEATURE A
15	P215_7265	4,397	15/08/15	502460	7646260	View looking southwest at linear depresson on southwest crest - FEATURE A
16	P215_7266	4,370	15/08/15	502451	7646268	View looking south at pothole on southwest crest of Tier II DF - FEATURE A
17	P215_7267	4,347	15/08/15	502454	7646264	View looking west at pothole on southwest crest of Tier II DF - FEATURE A
18	P215_7268	4,310	15/08/15	502449	7646272	View looking southwest at minor depression on slope below VT-1- FEATURE A
19	P215_7269	4,387	15/08/15	502441	7646266	View looking northeast at minor depression on slope below VT-1- FEATURE A

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Table XV: Landfill Inspection Photo Log - Tier II Disposal Facility (page 2 of 3)

Photo (Tier II-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
20	P215_7270	4,273	15/08/15	502432	7646285	View looking southwest at minor erosion on southwest side slope - FEATURE B
21	P215_7271	4,405	15/08/15	502421	7646278	View looking northeast at minor erosion on southwest side slope - FEATURE B
22	P215_7272	4,318	15/08/15	502435	7646284	View looking southwest at minor depression on slope below VT-1- FEATURE A
23	P215_7273	4,344	15/08/15	502426	7646286	View looking southeast at minor depression on slope below VT-1- FEATURE A
24	P215_7274	4,328	15/08/15	502427	7646278	View looking northeast at minor erosion on southwest side slope - FEATURE B
25	P215_7275	4,395	15/08/15	502425	7646297	View looking northeast along northwest crest of Tier II DF
26	P215_7276	4,384	15/08/15	502424	7646295	View looking southeast along southwest crest of Tier II DF
27	P215_7277	1,285	15/08/15	502426	7646295	Panoramic view looking northeast to south from west corner of Tier II DF
28	P215_7278	4,354	15/08/15	502407	7646297	View looking northeast along northwest side slope of Tier II DF
29	P215_7279	4,345	15/08/15	502406	7646295	View looking southeast along southwest side slope of Tier II DF
30	P215_7280	4,320	15/08/15	502390	7646296	View looking northeast along northwest toe of Tier II DF
31	P215_7281	4,276	15/08/15	502389	7646294	View looking southeast along southwest toe ot Tier II DF
32	P215_7282	4,463	15/08/15	502399.4	7646228.1	View looking northeast at southwest side of Tier II DF
33	P215_7283	4,384	15/08/15	502388.9	7646345.4	View looking southeast at northwest side of Tier II DF
34	P215_7284	4,342	15/08/15	502406.3	7646314.5	View looking southeast at minor erosion on northwest side of Tier II DF - FEATURE G (new)
35	P215_7285	4,385	15/08/15	502424.1	7646300.3	View looking northwest at minor erosion on northwest side of Tier II DF - FEATURE G (new)
36	P215_7286	4,365	15/08/15	502430.8	7646303.4	View looking northwest at minor erosion on northwest side of Tier II DF - FEATURE E
37	P215_7287	4,350	15/08/15	502416.8	7646315.9	View looking southeast at minor erosion on northwest side of Tier II DF - FEATURE E
38	P215_7288	4,382	15/08/15	502447.5	7646317.2	View looking northwest at minor erosion on northwest side of Tier II DF- FEATURE E
39	P215_7289	4,375	15/08/15	502437.7	7646327	View looking southeast at minor erosion on northwest side of Tier II DF - FEATURE E
40	P215_7290	4,408	15/08/15	502457	7646327	View looking southeast along northeast crest of Tier II DF
41	P215_7291	4,348	15/08/15	502456	7646327	View looking southwest along northwest crest of Tier II DF
42	P215_7292	1,374	15/08/15	502457	7646325	Panoramic view looking southeast to west from north corner of Tier II DF
43	P215_7293	4,339	15/08/15	502462	76463215	View looking southwest at striations on north cover of Tier II DF from final grading - FEATURE F
44	P215_7294	4,304	15/08/15	502447.3	7646310.1	View looking northeast at striations on north cover of Tier II DF from final grading - FEATURE F
45	P215_7295	4,422	15/08/15	502463	7646305	View looking southwest at striations on cover of Tier II DF from final grading - FEATURE F
46	P215_7296	4,377	15/08/15	502452.4	7646294.5	View looking northeast at striations on cover of Tier II DF from final grading - FEATURE F
47	P215_7297	4,352	15/08/15	502476.7	7646306	View looking northeast at minor erosion on northeast crest of Tier II DF - FEATURE H (new)
48	P215_7298	4,419	15/08/15	502484.8	7646313	View looking southwest at minor erosion on northeast crest of Tier II DF - FEATURE H (new)
49	P215_7299	4,337	15/08/15	502497	7646288	View looking southwest along southeast crest of Tier II DF

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Table XV: Landfill Inspection Photo Log - Tier II Disposal Facility (page 3 of 3)

Photo (Tier II-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
50	P215_7300	4,336	15/08/15	502496	7646289	View looking northwest along northeast crest of Tier II DF
51	P215_7301	1,234	15/08/15	502494	7646287	Panoramic view looking southwest to north from east corner of Tier II DF
52	P215_7302	4,357	15/08/15	502490	7646280	View looking southeast at minor erosion on southeast side slope - FEATURE C
53	P215_7303	4,279	15/08/15	502500	7646270	View looking northwest at minor erosion on southeast side slope - FEATURE C
54	P215_7304	4,261	15/08/15	502477	7646268	View looking southeast at minor erosion on southeast side slope - FEATURE C
55	P215_7305	4,359	15/08/15	502488	7646256	View looking northwest at minor erosion on southeast side slope - FEATURE C
56	P215_7306	4,339	15/08/15	502470	7646261	View looking southeast at minor erosion on southeast side slope - FEATURE C
57	P215_7307	4,403	15/08/15	502481	7646251	View looking northwest at minor erosion on southeast side slope - FEATURE C
58	P215_7308	4,415	15/08/15	502512	7646288	View looking southwest along southeast side slope of Tier II DF
59	P215_7309	4,410	15/08/15	502512	7646289	View looking northwest along northeast side slope of Tier II DF
60	P215_7310	4,456	15/08/15	502530	7646288	View looking northwest along northeast toe of Tier II DF
61	P215_7311	4,466	15/08/15	502529	7646286	View looking southwest along southeast toe of Tier II DF
62	P215_7312	4,267	15/08/15	502517.7	7646346.4	View looking southwest at northeast side of Tier II DF
Soil Sampling						
S1W	P215_7247	4,444	15/08/15	502403	7646320	Sampling location P213-1W located downgradient of Tier II DF
1W	P215_7248	4,339	15/08/15	502392	7646317	View looking northeast at MW-01located downgradient of Tier II DF
S2W	P215_7250	4,397	15/08/15	502422	7646239	Sampling location P213-2W located downgradient of Tier II DF
2W	P215_7251	4,451	15/08/15	502427	7646243	View looking southwest at MW-02 located downgradient of Tier II DF
S3W	P215_7254	4,396	15/08/15	502498	7646237	Sampling location P213-3W located downgradient of Tier II DF
3W	P215_7255	4,292	15/08/15	502496	7646240	View looking southeast at MW-03 located downgradient of Tier II DF
S4W	P215_7242	4,276	15/08/15	502548	7646320	Sampling location P213-4W located upgradient of Tier II DF
4W	P215_7243	4,299	15/08/15	502545	7646315	View looking southwest at MW-04 located upgradient of Tier II DF

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6.5 THERMAL MONITORING DATA

Data from all thermistors was successfully retrieved during the August 2015 inspection. The datalogger at VT-1 was re-installed following off-site repair during the 2014-2015 monitoring period. Communication with the datalogger and thermistor string was verified at VT-1 following re-installation.

Manual reading of the analogues/thermocouples at VT-1 identified several anomalous readings, including beads 4, 6, 7, 8, 11 and 15. Review of the real-time thermal data monitored after datalogger re-installation also noted anomalous readings at analogues/thermocouples 2, 4, 6, 7, 8, 11, and 15, suggesting the presence of a problem with the thermistor string installation and not the newly installed datalogger. Analogues/thermocouples at the remaining thermistor locations were observed to be functioning properly at the time of the inspection, with the exception of beads #1 and #9 at VT-4. Further review of the downloaded VT-4 data identified periodic errors in temperature readings for these beads throughout the 2014 - 2015 monitoring period.

Internal memories were reset and clocks were synchronized using the Prolog Software. Manual resistive readings were collected from the thermistor strings as per the TOR. Manual readings and inspection results for each thermistor are presented on the Thermistor Annual Maintenance Reports (VT-1 to VT-4) included in this section of the report.

The cover at VT-2 was found to be cracked at the time of inspection, and was subsequently patched with duct tape. A replacement cover should be installed during the next monitoring event scheduled in 2016. Other than the latter, no maintenance is anticipated for the 2016 monitoring period with the exception of the scheduled replacement of datalogger batteries.

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Thermistor Annual Maintenance Report

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**15/08/2015**
Prepared By:	**A.Passalis**		

Thermistor Information

Site Name:	**PIN-2**	Thermistor Location		**Tier II Disposal Facility**			
Thermistor Number:	**VT-1**	Inclination		**Vertical**			
Install Date:		First Date Event		**2009-08-01**	Last Date Event		**15/08/2014**
Coordinates and Elevation	N	**7646281.0**	E	**502434.2**	Elev		**19.1**
Length of Cable (m)		Cable Lead Above Ground (m)	**3.25**	Nodal Points			**16**
Datalogger Serial #	**7040010**			Cable Serial Number			**VT-1**

Thermistor Inspection

	Good: Yes	Good: No	Problem/Maintenance
Casing	X		
Cover	X		
Data Logger		X	Re-installed
Cable	X		
Beads		X	error reading in Beads 2, 4, 6, 7, 8, 11 and 15.

Battery Installation Date: **15/08/2015**

Battery Levels: Main **11.34** Aux **13.50**

Manual Ground Temperature Readings

Bead	ohms	Degrees C	Bead	ohms	Degrees C
1	9.786	10.4004	9	15.278	2.5339
2	10.826	42.8785	10	19.579	-3.7264
3	12.265	5.7703	11	822.4	71.3717
4	2.271	43.8235	12	21.49	-5.7890
5	16.065	0.5250	13	21.64	-5.6789
6	466.40	88.3153	14	21.85	-6.3489
7	2.202	45.2354	15	241.7	110.1349
8	4.028	29.7791	16	22.81	-6.8249

Observations and Proposed Maintenance

Datalogger re-installed. Communication verified following installation.

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Thermistor Annual Maintenance Report

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**15/08/2015**
Prepared By:	**A.Passalis**		

Thermistor Information

Site Name:	**PIN-2**	Thermistor Location		**Tier II Disposal Facility**			
Thermistor Number:	**VT-2**	Inclination		**Vertical**			
Install Date:		First Date Event		**2009-08-01**	Last Date Event		**15/08/2014**
Coordinates and Elevation	N	**7646274.2**	E	**502465.0**	Elev		**19.2**
Length of Cable (m)		Cable Lead Above Ground (m)	**3.25**	Nodal Points			**13**
Datalogger Serial #	**7050024**			Cable Serial Number			**VT-2**

Thermistor Inspection

	Good			
	Yes		No	Problem/Maintenance
Casing	X			
Cover			X	Cracked cover temporarily patched with tape
Data Logger	X			
Cable	X			
Beads	X			
Battery Installation Date		**17/08/2013**		
Battery Levels	Main	**11.34**	Aux	**14.23**

Manual Ground Temperature Readings

Bead	ohms	Degrees C	Bead	ohms	Degrees C
1	9.198	11.7771	9	18.800	-2.6845
2	9.521	10.4054	10	19.774	-3.6871
3	10.701	8.5286	11	20.62	-4.6323
4	12.449	5.4883	12	21.52	-5.4976
5	14.134	2.9543	13	22.14	-5.9281
6	16.302	0.1777		-	-
7	17.019	-0.7382		-	-
8	17.723	-1.5098		-	-

Observations and Proposed Maintenance

Download file: Site_024_PIN-2 VT-2_Aug_15_2015

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Thermistor Annual Maintenance Report

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**15/08/2015**
Prepared By:	**A.Passalis**		

Thermistor Information

Site Name:	**PIN-2**	Thermistor Location		**Tier II Disposal Facility**			
Thermistor Number:	**VT-3**	Inclination		**Vertical**			
Install Date:		First Date Event		**2009-08-01**	Last Date Event		**15/08/2014**
Coordinates and Elevation	N	**7646307.5**	E	**502460.3**	Elev		**20.0**
Length of Cable (m)		Cable Lead Above Ground (m)	**2.15**	Nodal Points			**12**
Datalogger Serial #	**7050029**			Cable Serial Number			**VT-3**

Thermistor Inspection

	Good			
	Yes		No	Problem/Maintenance
Casing	**X**			
Cover	**X**			
Data Logger	**X**			
Cable	**X**			
Beads	**X**			
Battery Installation Date		**17/08/2013**		
Battery Levels	Main	**11.34**	Aux	**13.14**

Manual Ground Temperature Readings

Bead	ohms	Degrees C	Bead	ohms	Degrees C
1	10.491	8.7474	9	21.23	-5.1396
2	11.769	6.4294	10	21.65	-5.8681
3	13.581	3.7740	11	22.78	-6.5389
4	15.844	0.6664	12	23.05	-6.8004
5	16.947	-0.6185		-	-
6	17.528	-1.4483		-	-
7	18.541	-2.4101		-	-
8	19.910	-3.8260		-	-

Observations and Proposed Maintenance

Download file: Site_029_PIN-2 VT-3_Aug_15_2015

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Thermistor Annual Maintenance Report

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**15/08/2015**
Prepared By:	**A.Passalis**		

Thermistor Information

Site Name:	**PIN-2**	Thermistor Location		**Tier II Disposal Facility**			
Thermistor Number:	**VT-4**	Inclination		**Vertical**			
Install Date:		First Date Event		**2009-08-01**	Last Date Event		**15/08/2014**
Coordinates and Elevation	N	**7646284.2**	E	**502497.4**	Elev		**19.9**
Length of Cable (m)		Cable Lead Above Ground (m)	**2.50**	Nodal Points			**16**
Datalogger Serial #	**7010044**			Cable Serial Number			**VT-4**

Thermistor Inspection

	Good: Yes	Good: No	Problem/Maintenance
Casing	X		
Cover	X		
Data Logger	X		
Cable	X		
Beads		X	Intermittent bad readings from Beads 1 and 9

Battery Installation Date: **17/08/2013**

Battery Levels: Main **11.34** Aux **13.75**

Manual Ground Temperature Readings

Bead	ohms	Degrees C	Bead	ohms	Degrees C
1	10.969	-68.4569	9	20.680	-81.0680
2	11.901	6.4094	10	21.31	-5.1770
3	13.421	3.9787	11	21.56	-5.4976
4	15.564	1.0825	12	22.07	-5.8977
5	16.598	-0.2878	13	22.29	-6.2135
6	17.639	-1.3510	14	22.53	-6.4140
7	18.473	-2.2735	15	22.73	-6.6286
8	19.977	-3.8077	16	22.96	-6.8249

Observations and Proposed Maintenance

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6.6 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results for the 2015 Tier II Disposal Facility samples are presented in Table XVI hereafter. Certificates of analyses and results of field duplicates collected as part of the QA/QC program are presented in Annexes 1 and 2 at the end of this report.

Table XVI: Tier II Summary Table for Soil Analytical Data

Sample #	Location	Depth (cm)	Parameters												
			As [mg/kg]	Cd [mg/kg]	Cr [mg/kg]	Co [mg/kg]	Cu [mg/kg]	Pb [mg/kg]	Ni [mg/kg]	Zn [mg/kg]	Hg mg/kg]	PCBs [mg/kg]	F1 C_6-C_{10} [mg/kg]	F2 C_{10}-C_{16} [mg/kg]	F3 C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	0.1	0.5	1	0.01	0.05	10	40	40
Upgradient Soil Samples															
P215-4WA	MW-4	0-15	1.9	0.12	3.8	1.1	2.1	2.3	2.4	9	<0.01	<0.05	<10	<40	<40
P215-4WB		40-50	4.8	0.07	6.3	2.2	4.1	3.2	5.0	11	<0.01	<0.05	<10	<40	<40
Downgradient Soil Samples															
P215-1WA	MW-1	0-15	4.5	0.33	5.1	2.1	7.7	3.0	6.3	17	0.05	<0.05	<10	<40	77
P215-1WB		40-50	3.4	0.18	3.5	1.1	4.5	2.4	3.3	11	0.02	<0.05	<10	<40	<40
P215-2WA	MW-2	0-15	2.8	0.09	5.2	1.7	3.3	2.4	3.8	12	<0.01	<0.05	<10	<40	<40
P215-BD1 (Intra-Lab Blind Duplicate)		0-15	3.0	0.10	5.9	1.9	3.4	2.3	4.2	12	<0.01	<0.05	<10	<40	<40
P215-2WA (Inter-Lab Blind Duplicate)		0-15	2.7	0.09	4.9	1.8	5.6	2.4	4.4	14	<0.050	<0.01	<12	<10	<40
Average Value for P215-2WA Sample		0-15	2.83 ± 0.15	0.09 ± 0.01	5.33 ± 0.51	1.80 ± 0.10	4.10 ± 1.30	2.37 ± 0.06	4.13 ± 0.31	12.67 ± 1.15	--	--	--	--	--
P215-2WB		40-50	5.8	0.11	6.1	3.1	3.3	2.5	5.0	12	<0.01	<0.05	<10	<40	<40
P215-3WA	MW-3	0-15	2.8	0.20	6.3	2.3	4.5	3.2	4.2	17	0.02	<0.05	<10	<40	<40
P215-3WB		40-50	2.8	0.11	5.9	2.0	4.1	3.1	5.3	14	<0.01	<0.05	<10	<40	<40

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6.7 GROUNDWATER SAMPLE ANALYTICAL DATA

The groundwater chemical analysis results and evaluation for the analytical data for the 2015 Tier II Disposal Facility samples are presented in Table XVII hereafter. Certificates of analyses and results for groundwater samples collected as part of the QA/QC program are presented in Annexes 1 and 2, at the end of this report.

Table XVII: Tier II Summary Table for Groundwater Analytical Data

Sample #	Location	Parameters												
		As [mg/L]	Cd [mg/L]	Cr [mg/L]	Co [mg/L]	Cu [mg/L]	Pb [mg/L]	Ni [mg/L]	Zn [mg/L]	Hg [mg/L]	PCBs [mg/L]	F1 C_6-C_{10} [mg/L]	F2 C_{10}-C_{16} [mg/L]	F3 C_{10}-C_{34} [mg/L]
Detection Limit		0.00020	0.00001	0.0005	0.0001	0.001	0.0001	0.0005	0.001	0.000005	0.00005	0.1	0.1	0.1
Upgradient Groundwater Sample														
P215-4W	MW-4	0.00100	0.00004	0.0074	0.0007	0.003	0.0013	0.0086	0.052	<0.000005	<0.00005	<0.1	<0.1	<0.1
Downgradient Groundwater Samples														
P215-1W	MW-1	0.00090	0.00003	0.0014	<0.0001	0.010	<0.0001	0.0053	0.049	<0.000005	<0.00005	<0.1	<0.1	<0.1
P215-2W	MW-2	0.0007	0.00015	0.0060	<0.0001	0.001	0.0002	0.0035	0.010	<0.000005	<0.00005	<0.1	<0.1	<0.1
P215-BDW1 (Intra-Lab Blind Duplicate)		0.0007	0.00015	0.0077	<0.0001	0.001	0.0003	0.0041	0.010	<0.000005	<0.00005	<0.1	<0.1	<0.1
P215-2W (Inter-Lab Blind Duplicate)		0.00086	0.00018	0.0090	<0.0003	0.002	0.0002	0.0051	0.009	<0.0020	<0.00005	<0.1	<0.1	<0.2
Average Value for P215-2WA Sample		0.00075 ± 0.00009	0.00016 ± 0.00002	0.0076 ± 0.0015	--	0.0012 ± 0.0003	0.00025 ± 0.00005	0.0043 ± 0.0008	0.0097 ± 0.0004	--	--	--	--	--
P215-3W	MW-3	0.00040	0.00022	0.0022	<0.0001	0.002	0.0002	0.0047	0.018	<0.000005	<0.00005	<0.1	<0.1	<0.1

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6.8 MONITORING WELL SAMPLING / INSPECTION LOGS

The monitoring well sampling logs for MW-1 to MW-4 are presented in this section.

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Monitoring Well Sampling Log

Site Name: PIN-2 Landfill Name: Tier II Disposal Facility

Monitoring Well ID: MW-1

Sample Number(s) include dups.: P215-1W

Bottles filled (by parameter type): 200 mL/40 mL (Met), 1 L amber (PCBs), 1 L amber/3 x 40 mL (PHCs)

Date of Sampling Event: 15-Aug-15 Time: 11:00

Weather: 10C, Overcast, 30-50 km/h SE

Names of Samplers: A.Passalis

Description of Well Condition and Surrounding ground conditions (note ponding of water):

Good condition. no ponding

Lock (condition, presence, model, manufacturer): Good, KA1

Pre-Measured Data (From Water Well Record Log)

*Depth of well installation (cm)=	340	Diameter of well (cm)=	4
*Depth to top of screen (cm)=	40	Length screened section (cm)=	300

*note: *depths are from ground surface*

Field Measurements

Measurement method (interface probe, tape, etc): Interface

Well pipe height above ground (cm) (to top of pipe)= 55

Static water level (cm) from top of pipe = 192

Static water level (cm) (below ground surface) calculated = 137

Measured well refusal depth (cm) (measure after sampling)= 255

Thickness of water column (cm)=	63	Static volume of water in well (mL)=	791
Free product thickness (mm)=	0	Evidence of sludge or siltation:	No

Purging Information Summary*

Purging/sampling equipment, sampling technique and equipment calibration information: Peristaltic pump with dedicated 1/4" LDPE tubing, multimeter, turbidimeter with daily calibration check

Well purged (Y/N): Y Recharge Rate: >200 mL/min

Volume Purged (L) (note multiple purging events if applicable): 2.0

Parameter	Initial	Stabilized	Final	*Notes (if not stabilized)*
pH	8.4	8.2	8.2	
Conductivity (uS/cm)	898	971	968	
Turbidity (NTU)	38.1	23.6	22.4	
Temperature (degC)	3.0	3.2	3.3	

Visual/olfactory observations (incl. colour, odour, presence of free product/sheen/globules, siltation…): Clear, colourless, odourless

Decontamination of sampling equipment

Type of decontamination fluid (s): None required,dedicated tubing

Number washes: N/A Number rinses: N/A

Other Relevant Comments:

* Complete field notes including full suite of water quality indicator parameters VS time as per EPA low flow sampling procedures should be apended to this summary.

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Monitoring Well Sampling Log

Site Name: PIN-2 Landfill Name: Tier II Disposal Facility

Monitoring Well ID: MW-2

Sample Number(s) include dups.: P215-2W, P215-BDW1, P215-2W (Maxxam)

Bottles filled (by parameter type): 3x200 mL/40 mL (Met), 3x1 L amber (PCBs), 3x1 L amber/9 x 40 mL (PHCs)

Date of Sampling Event: 15-Aug-15 Time: 11:30

Weather: 10C, Overcast, 30-50 km/h SE

Names of Samplers: A.Passalis

Description of Well Condition and Surrounding ground conditions (note ponding of water):

Good condition. no ponding

Lock (condition, presence, model, manufacturer): Good, KA1

Pre-Measured Data (From Water Well Record Log)

*Depth of well installation (cm)= 340 Diameter of well (cm)= 4

*Depth to top of screen (cm)= 40 Length screened section (cm)= 300

*note: *depths are from ground surface*

Field Measurements

Measurement method (interface probe, tape, etc): Interface

Well pipe height above ground (cm) (to top of pipe)= 52

Static water level (cm) from top of pipe = 119

Static water level (cm) (below ground surface) calculated = 67

Measured well refusal depth (cm) (measure after sampling)= 316

Thickness of water column (cm)= 197 Static volume of water in well (mL)= 2474

Free product thickness (mm)= 0 Evidence of sludge or siltation: No

Purging Information Summary*

Purging/sampling equipment, sampling technique and equipment calibration information: Peristaltic pump with dedicated 1/4" LDPE tubing, multimeter, turbidimeter with daily calibration check

Well purged (Y/N): Y Recharge Rate: >200 mL/min

Volume Purged (L) (note multiple purging events if applicable): 5.2

Parameter	Initial	Stabilized	Final	*Notes (if not stabilized)*
pH	8.3	8.0	7.9	
Conductivity (uS/cm)	669	678	662	
Turbidity (NTU)	10.9	10.8	3.29	
Temperature (degC)	4.1	3.1	3.2	

Visual/olfactory observations (incl. colour, odour, presence of free product/sheen/globules, siltation…): Clear, colourless, odourless

Decontamination of sampling equipment

Type of decontamination fluid (s): None required,dedicated tubing

Number washes: N/A Number rinses: N/A

Other Relevant Comments:

* Complete field notes including full suite of water quality indicator parameters VS time as per EPA low flow sampling procedures should be apended to this summary.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

Monitoring Well Sampling Log

Site Name: PIN-2 Landfill Name: Tier II Disposal Facility

Monitoring Well ID: MW-3

Sample Number(s) include dups.: P215-3W

Bottles filled (by parameter type): 200 mL/40 mL (Met), 1 L amber (PCBs), 1 L amber/3 x 40 mL (PHCs)

Date of Sampling Event: 15-Aug-15 Time: 12:10

Weather: 10C, Overcast, 30-50 km/h SE

Names of Samplers: A.Passalis

Description of Well Condition and Surrounding ground conditions (note ponding of water):

Good condition. no ponding

Lock (condition, presence, model, manufacturer): Good, KA1

Pre-Measured Data (From Water Well Record Log)

*Depth of well installation (cm)= 340 Diameter of well (cm)= 4

*Depth to top of screen (cm)= 40 Length screened section (cm)= 300

*note: *depths are from ground surface*

Field Measurements

Measurement method (interface probe, tape, etc): Interface

Well pipe height above ground (cm) (to top of pipe)= 20

Static water level (cm) from top of pipe = 61

Static water level (cm) (below ground surface) calculated = 41

Measured well refusal depth (cm) (measure after sampling)= 147

Thickness of water column (cm)= 86 Static volume of water in well (mL)= 1080

Free product thickness (mm)= 0 Evidence of sludge or siltation: No

Purging Information Summary*

Purging/sampling equipment, sampling technique and equipment calibration information: Peristaltic pump with dedicated 1/4" LDPE tubing, multimeter, turbidimeter with daily calibration check

Well purged (Y/N): Y Recharge Rate: ~150 mL/min

Volume Purged (L) (note multiple purging events if applicable): 2.3

Parameter	Initial	Stabilized	Final	*Notes (if not stabilized)*
pH	8.2	8.0	8.0	
Conductivity (uS/cm)	770	715	712	
Turbidity (NTU)	56.7	8.04	7.91	
Temperature (degC)	2.7	2.4	2.4	

Visual/olfactory observations (incl. colour, odour, presence of free product/sheen/globules, siltation…): Clear, colourless, odourless

Decontamination of sampling equipment

Type of decontamination fluid (s): None required,dedicated tubing

Number washes: N/A Number rinses: N/A

Other Relevant Comments:

* Complete field notes including full suite of water quality indicator parameters VS time as per EPA low flow sampling procedures should be apended to this summary.

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Monitoring Well Sampling Log

Site Name: PIN-2 Landfill Name: Tier II Disposal Facility

Monitoring Well ID: MW-4

Sample Number(s) include dups.: P215-4W

Bottles filled (by parameter type): 200 mL/40 mL (Met), 1 L amber (PCBs), 1 L amber/3 x 40 mL (PHCs)

Date of Sampling Event: 15-Aug-15 Time: 10:30

Weather: 10C, Overcast, 30-50 km/h SE

Names of Samplers: A.Passalis

Description of Well Condition and Surrounding ground conditions (note ponding of water):

Good condition. no ponding

Lock (condition, presence, model, manufacturer): Good, KA1

Pre-Measured Data (From Water Well Record Log)

*Depth of well installation (cm)= 340 Diameter of well (cm)= 4

*Depth to top of screen (cm)= 40 Length screened section (cm)= 300

*note: *depths are from ground surface*

Field Measurements

Measurement method (interface probe, tape, etc): Interface

Well pipe height above ground (cm) (to top of pipe)= 55

Static water level (cm) from top of pipe = 162

Static water level (cm) (below ground surface) calculated = 107

Measured well refusal depth (cm) (measure after sampling)= 323

Thickness of water column (cm)= 161 Static volume of water in well (mL)= 2022

Free product thickness (mm)= 0 Evidence of sludge or siltation: No

Purging Information Summary*

Purging/sampling equipment, sampling technique and equipment calibration information: Peristaltic pump with dedicated 1/4" LDPE tubing, multimeter, turbidimeter with daily calibration check

Well purged (Y/N): Y Recharge Rate: >200 mL/min

Volume Purged (L) (note multiple purging events if applicable): 4.1

Parameter	Initial	Stabilized	Final	*Notes (if not stabilized)*
pH	7.9	7.7	7.7	
Conductivity (uS/cm)	715	698	692	
Turbidity (NTU)	88.1	48.3	47.1	
Temperature (degC)	3.8	3.3	3.2	

Visual/olfactory observations (incl. colour, odour, presence of free product/sheen/globules, siltation…): Clear, colourless, odourless

Decontamination of sampling equipment

Type of decontamination fluid (s): None required,dedicated tubing

Number washes: N/A Number rinses: N/A

Other Relevant Comments:

* Complete field notes including full suite of water quality indicator parameters VS time as per EPA low flow sampling procedures should be apended to this summary.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

7 AIRSTRIP SOUTH LANDFILL

7.1 SUMMARY

On August 15, 2015 a visual inspection was completed at the Airstrip South Landfill. Neither soil nor groundwater sampling was performed.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. A single area of minor settlement (Feature A) was noted on the west side slope of the Airstrip South Landfil and was consistent with the previous 2014 observation.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table XVIII of this report and has been completed as per the TOR. Please refer to Figure PIN-2.5 for a sketch of the Airstrip South Landfill detailing the location of photographs and settlement feature.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

Table XVIII: Visual Inspection Checklist / Report – Airstrip South Landfill

DEW Line Cleanup: Post-construction - Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: Airstrip South Landfill (Existing Regrade Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 15, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT NUMBER: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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TABLE XVIII: PIN-2, CAPE YOUNG - AIRSTRIP SOUTH LANDFILL (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE A See Figure PIN-2.5 (W side slope)	6 m	0.3 m	0.1 m	Isolated < 1%	Linear depression	ASLF-9, 10	Acceptable	Shallow depression. Slope appears stable. No noteable change since initial observation in 2014.
Erosion	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Additional Photos	Yes	See Figure PIN-2.5 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

7.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for the Airstrip South Landfill has been completed as per the TOR and is included as Table XIX hereafter.

Table XIX: Preliminary Stability Assessment – Airstrip South Landfill

Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Not observed	None
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

7.3 LOCATION PLAN

The Location Plan for the Airstrip South Landfill has been completed as per the TOR and is presented in Figure PIN-2.5.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- (1) APPROX. PHOTOGRAPHIC VIEWPOINT
- BODY OF WATER
- LINEAR DEPRESSION (NTS)

0m 7.5m 15.0m 22.5m 30.0m 37.5m

NO.	VERSION	DATE	P.L.	A.P.	M.F.
1	FINAL	16–03–11	PAR	VERIF.	APPR.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

AIRSTRIP SOUTH LANDFILL

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MEASUREMENT UNIT	SCALE:	DATE (month–year):
Metre	1 : 750	MARCH 2016
DRAWN BY:	VERIFIED BY:	APPROVED BY:
P. LÉGARÉ	A. PASSALIS P. ENG	M. FLEURY P. ENG
PROJECT NO:	DRAWING NO:	PAGE
CD3654_400_403	CD3654_400_403-PIN-2E-PL	PL

FIGURE PIN-2.5

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7.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the Airstrip South Landfill has been completed as per the TOR and is included as Table XX hereafter. Full-sized photographs are contained in the Addendum DVD-ROM.

Table XX: Landfill Visual Inspection Photo Log – Airstrip South Landfill

Photo (ASLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P215_7421	4,257	15/08/15	503233	7646264	View looking north along east toe of Airstrip South Landfill
2	P215_7422	4,268	15/08/15	503228	7646262	View looking west along south toe of Airstrip South Landfill. Note area of seasonal ponding adjacent to southeast toe.
3	P215_7424	1,316	15/08/15	503224	7646266	Panoramic view looking southwest to north from southeast corner of Airstrip South Landfill
4	P215_7425	4,283	15/08/15	503230	7646324	View looking south along east side of Airstrip South Landfill
5	P215_7426	4,267	15/08/15	503226	7646325	View looking west-southwest along north side of Airstrip South Landfill
6	P215_7427	4,304	15/08/15	503185	7646311	View looking east-northeast along north side of Airstrip South Landfill
7	P215_7428	4,320	15/08/15	503183	7646308	View looking south along west side of Airstrip South Landfill
8	P215_7429	1,074	15/08/15	503190	7646306	Panoramic view looking northeast to south from northwest corner of Airstrip South Landfill
9	P215_7430	4,404	15/08/15	503191	7646299	View looking west at linear depression on west side slope of Airstrip South Landfill - FEATURE A
10	P215_7431	4,298	15/08/15	503179	7646298	View looking east at linear depression on west side slope of Airstrip South Landfill - FEATURE A
11	P215_7433	4,394	15/08/15	503201	7646260	View looking north-northwest along west side of Airstrip South Landfill
12	P215_7434	4,303	15/08/15	503204	7646259	View looking east along south side of Airstrip South Landfill

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8 PALLET LINE WEST LANDFILL

8.1 SUMMARY

On August 15, 2015 a visual inspection was completed at the Pallet Line West Landfill. Neither soil nor groundwater sampling was performed.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. Indications of minor settlement were noted at three locations, including linear depressions on the south crest (Feature A) and northwest crest (Feature B), and three small localized depressions on the northeast crest (Feature C). Feature A was previously observed during the 2014 assessment with no significant change noted. Features B and C were not noted during the previous 2014 assessment.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table XXI of this report and has been completed as per the TOR. Please refer to Figure PIN-2.6 for a sketch of the Pallet Line West Landfill detailing the location of photographs and settlement features

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Table XXI: Visual Inspection Checklist / Report – Pallet Line West Landfill

Dew Line Cleanup Post Construction – Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: Pallet Line West Landfill (Existing Regrade Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 15, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT NUMBER: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

TABLE XXI: PIN-2, CAPE YOUNG - PALLET LINE WEST LANDFILL (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE A See Figure PIN-2.6 (S crest)	1 m	0.2 m	0.05 m	Isolated	Linear depression	PLW-15, 16	Acceptable	No significant change since first observation in 2014.
		FEATURE B See Figure PIN-2.6 (NW crest - New Obs.)	1.5 m	0.1 m	0.02 - 0.03 m	Isolated	Linear depression	PLW-5, 6	Acceptable	New observation.
		FEATURE C See Figure PIN-2.6 (NE crest - New Obs.)	0.5 - 0.8 m	0.4 - 0.7 m	0.03 - 0.05 m	Isolated	3 localized depressions	PLW-21 - 24	Acceptable	New observation.
Erosion	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Additional Photos	Yes	See Figure PIN-2.6 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

8.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for Pallet Line West Landfill has been completed as per the TOR and is included as Table XXII below.

Table XXII: Preliminary Stability Assessment – Pallet Line West Landfill

Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Not observed	None
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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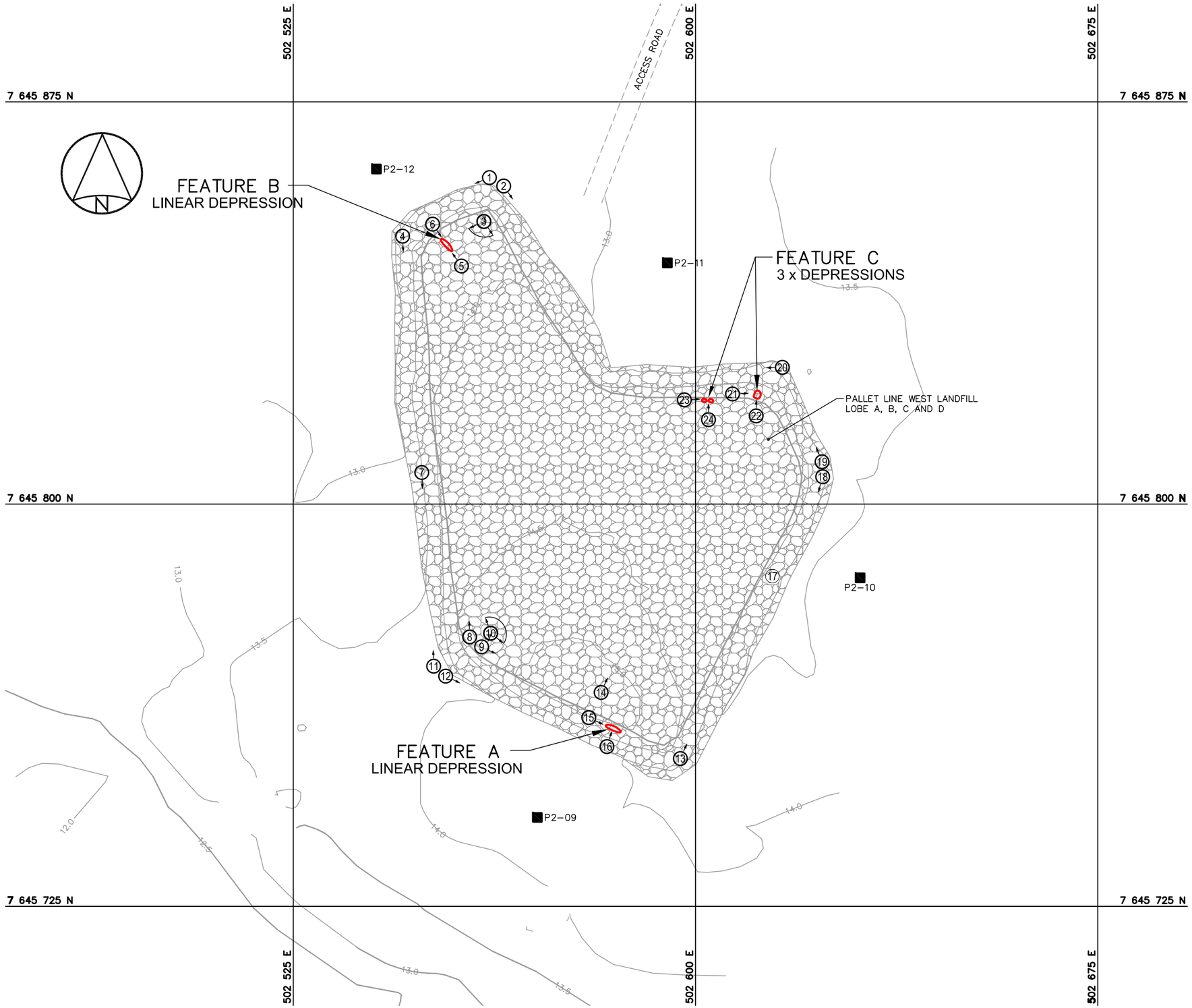
Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

8.3 LOCATION PLAN

The Location Plan for the Pallet Line West Landfill has been completed as per the TOR and is presented in Figure PIN-2.6.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.



LEGEND

- MONITORING SOIL SAMPLE LOCATION (6)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)

0m 7.5m 15.0m 22.5m 30.0m 37.5m

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	16-03-11	P.L.	A.P.	M.F.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

PALLET LINE WEST LANDFILL

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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 750	MARCH 2016
DRAWN BY: P. LÉGARÉ	VERIFIED BY: A. PASSALIS P. ENG	APPROVED BY: M. FLEURY P. ENG
PROJECT NO: CD3654_400_403	DRAWING NO: CD3654_400_403-PIN-2F-PL	PAGE PL

FIGURE PIN-2.6

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8.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the Pallet Line West Landfill has been completed as per the TOR and is included as Table XXIII hereafter. Full sized photographs are contained in the Addendum DVD-ROM.

Table XXIII: Landfill Visual Inspection Photo Log – Pallet Line West Landfill

Photo (PLW-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P215_7460	4,387	15/08/15	502562	7645860	View looking southwest along north side of Pallet Line West Landfill
2	P215_7461	4,455	15/08/15	502564	7645860	View looking southeast along northeast side of Pallet Line West Landfill
3	P215_7462	1,258	15/08/15	502561	7645853	Panoramic view looking southeast to west across north cover of Pallet Line West Landfill
4	P215_7463	4,342	15/08/15	502546	7645850	View looking south along west side of Pallet Line West Landfill
5	P215_7464	4,338	15/08/15	502556	7645845	View looking northwest at linear depression on northwest side of Pallet Line West Landfill - FEATURE B (new)
6	P215_7465	4,397	15/08/15	502551	7645851	View looking southeast at linear depression on northwest side of Pallet Line West Landfill - FEATURE B (new)
7	P215_7466	4,322	15/08/15	502548	7645806	View looking south along west crest of Pallet Line West Landfill
8	P215_7467	4,387	15/08/15	502559	7645774	View looking north along west crest of Pallet Line West Landfill
9	P215_7468	4,441	15/08/15	502559	7645773	View looking southeast along southwest crest of Pallet Line West Landfill
10	P215_7469	1,429	15/08/15	502561	7645775	Panoramic view looking north to southeast across cover from southwest corner of Pallet Line West Landfill
11	P215_7470	4,352	15/08/15	502552	7645770	View looking north along west toe of Pallet Line West Landfill
12	P215_7471	4,377	15/08/15	502553	7645768	View looking southeast along southwest toe of Pallet Line West Landfill
13	P215_7472	4,373	15/08/15	502598	7645753	View looking north-northeast along east toe of Pallet Line West Landfill
14	P215_7473	4,311	15/08/15	502583	7645765	View looking north-northeast across south cover of Pallet Line West Landfill
15	P215_7474	4,298	15/08/15	502581	7645760	View looking north at linear depression below south crest - FEATURE A
16	P215_7475	4,312	15/08/15	502584	7645756	View looking southeast at linear depression below south crest - FEATURE A
17	P215_7476	4,453	15/08/15	502615	7645787	View of typical sparse vegetation on east side slope of Pallet Line West Landfill
18	P215_7477	4,317	15/08/15	502624	7645806	View looking south-southwest along east side of Pallet Line West Landfill
19	P215_7478	4,405	15/08/15	502624	7645807	View looking north-northwest along northeast side of Pallet Line West Landfill
20	P215_7479	4,415	15/08/15	502616	7645825	View looking west along north side of Pallet Line West Landfill
21	P215_7480	4,432	15/08/15	502609	7645820	View looking east at depression below crest on northeast side of Pallet Line West Landfill - FEATURE C (new)
22	P215_7481	4,343	15/08/15	502611	7645817	View looking north at depression below crest on northeast side of Pallet Line West Landfill - FEATURE C (new)
23	P215_7482	4,305	15/08/15	502599	7645820	View looking east at two small depressions at crest on northeast side of Pallet Line West Landfill - FEATURE C (new)
24	P215_7483	4,280	15/08/15	502602	7645817	View looking north at two small depressions at crest on northeast side of Pallet Line West Landfill - FEATURE C (new)

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9 NON-HAZARDOUS WASTE LANDFILL

9.1 SUMMARY

On August 15, a visual inspection was completed at the Non-Hazardous Waste Landfill. Neither soil nor groundwater sampling was performed.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. Indications of minor settlement were noted at four locations on the NHWLF, including: one linear and one pothole-type depression on the southwest crest (Feature A); one linear depression on the southeast crest (Feature C); two pothole depression on the north crest (Feature D); and a single pothole depression on the southwest side slope (Feature G). All existing depressions appear consistent with the exception of Feature C, which was noted to have increased from 0.8 m to 4 m in length and from 0.4 m to 0.5 m in width from the previous 2014 assessment findings. Feature G was not noted during the 2014 inspection. Parallel depressions resembling tire tracks were also noted on the east cover of the landfill (Feature F). The depressions appear consistent with findings from the previous 2014 assessment. No exposed debris were noted.

Evidence of minor surface erosion was noted at nine locations on the NHWLF, including five areas on the southeast side slope (Feature B); three areas on the north side slope (Feature E); and a single area on the southeast side slope (Feature H). The majority of locations consisted of shallow surface erosion of fines that extended from the crest down slope. The landfill side slopes appear stable and self armouring at all erosion locations, with only minor washing of fines noted. With the exception of new Feature H, all existing erosional features appear consistent with findings from the 2014 assessment.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table XXIV of this report and has been completed as per the TOR. Please refer to Figure PIN-2.7 for a sketch of the NHWLF detailing the location of photographs, settlement and erosional features.

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Table XXIV: Visual Inspection Checklist / Report – NHWLF

Dew Line Cleanup Post Construction – Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: Non-Hazardous Waste Landfill (New Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 15, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT NUMBER: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE A See Figure PIN-2.7 (SW crest)	0.4 - 2 m	0.3 - 0.4 m	0.05 - 0.1 m	Occasional (<2%)	Minor depressions	NHWLF-29-32	Acceptable	Linear depression orientated parallel to crest and pothole type depression 3 m below crest. No significant change from 2014 assessment.
		FEATURE C See Figure PIN-2.7 (SE crest)	4 m	0.1-0.5 m	0.05 - 0.1 m		Minor depression	NHWLF-39, 40	Acceptable	Linear depression orientated along crest. Noteable increase in length and minor increase in width from 2014 assessment. Slope appears stable.
		FEATURE D See Figure PIN-2.7 (N crest)	0.3 - 0.4 m	0.5 m	0.05 m		Minor depressions	NHWLF-11-13	Acceptable	Two pothole type depressions 1 m below north crest. Slight decrease in size from 2014 assessment. Slope appears stable.
		FEATURE G See Figure PIN-2.7 (SW side slope - New obs.)	0.3 m	0.3 m	0.1 m		Minor depression	NHWLF-28	Acceptable	Single pothole type depression below southwest crest. New observation.
Erosion	Yes	FEATURE B See Figure PIN-2.7 (SE side slope)	7 - 17 m	0.1 m	0.02 - 0.05 m	Occasional (<2%)	Minor erosion	NHWLF-34, 35, 42, 43, 46-49	Acceptable	5 areas of minor erosoin, washing of fines, self armouring. Slope appears stable. No significant change from 2014 assessment.
		FEATURE E See Figure PIN-2.7 (N side slope)	9 - 12 m	0.1 - 0.2 m	0.02 - 0.05 m		Minor erosion	NHWLF-14-17, 20, 21	Acceptable	3 Areas - washing of fines, self armouring. Slope appears stable. No significant change from 2014 assessment.
		FEATURE H See Figure PIN-2.7 (SE side slope- New Obs.)	3 m	0.15 m	0.05 m		Minor erosion	NHWLF-41	Acceptable	Washing of fines, self armouring. Slope appears stable. New observation.
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	Yes	FEATURE F See Figure PIN-2.7 (E cover)	10 m	0.2 m	0.05 m	Isolated	Minor depressions	NHWLF-10, 50	Acceptable	Appears to be vehicle tracks extending parallel to east crest. No noteable change from 2014 assessment.
Additional Photos	Yes	See Figure PIN-2.7 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

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9.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for NHWLF has been completed as per the TOR and is included as Table XXV hereafter.

Table XXV: Preliminary Stability Assessment – NHWLF

Feature	Severity Rating	Extent
Settlement	Acceptable	Occasional
Erosion	Acceptable	Occasional
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

9.3 LOCATION PLAN

The Location Plan for the NHWLF has been completed as per the TOR and is presented in Figure PIN-2.7.

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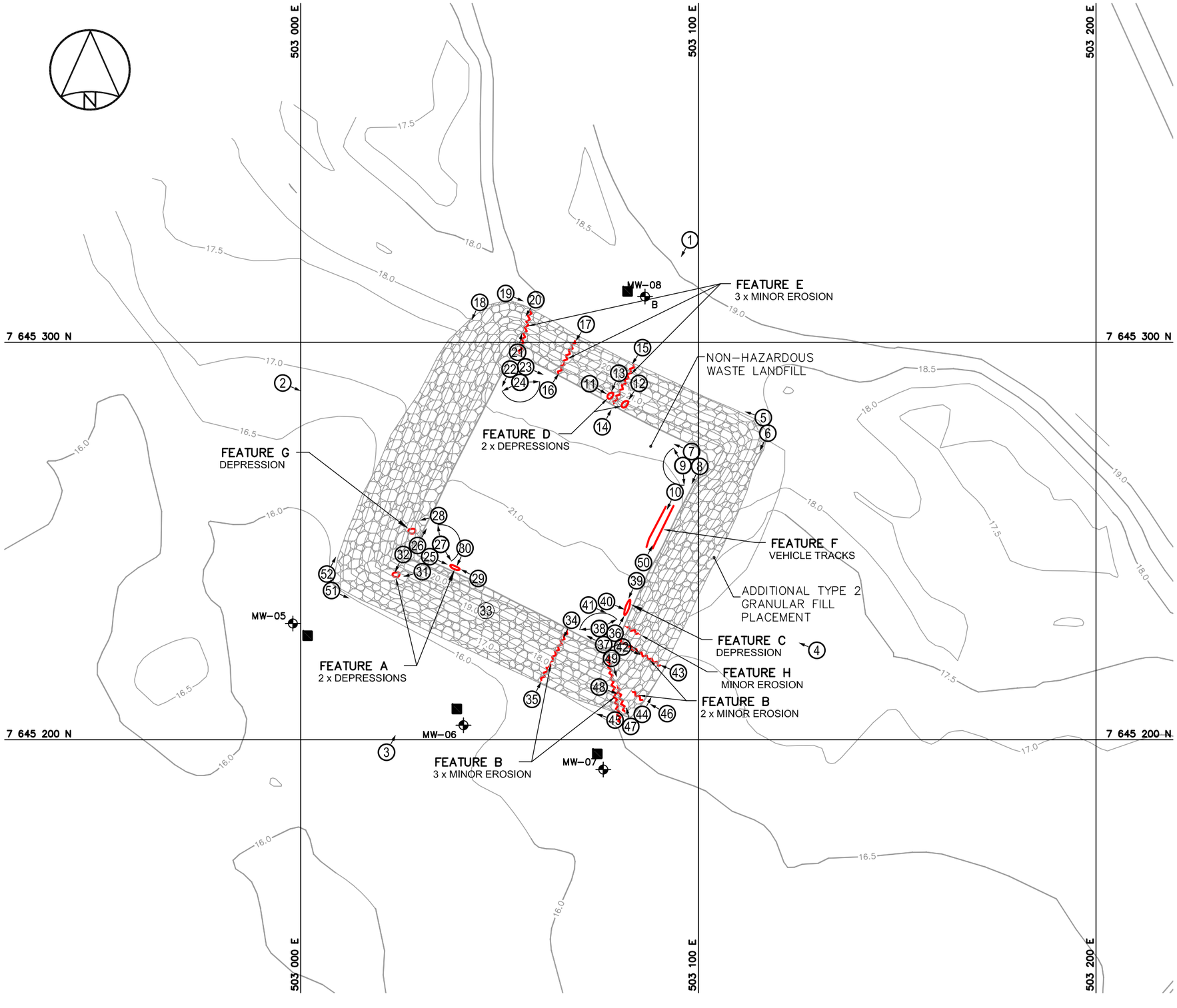

LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- MONITORING WELL LOCATION (3)
- BACKGROUND MONITORING WELL LOCATION (1)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- MINOR EROSION (NTS)
- VEHICLE TRACKS (NTS)

0m 10m 20m 30m 40m 50m

NO.	VERSION	DATE	P.L.	A.P.	M.F.
1	FINAL	16-03-11	PAR	VERIF.	APPR.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

NON-HAZARDOUS WASTE LANDFILL

Englobe
4495, Wilfrid-Hamel boulevard
Suite 200
Quebec (Quebec) Canada, G1P 2J7
Phone : 418.653.4422
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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	MARCH 2016
DRAWN BY:	VERIFIED BY:	APPROVED BY:
P. LÉGARÉ	A. PASSALIS P. ENG	M. FLEURY P. ENG
PROJECT NO:	DRAWING NO:	PAGE
CD3654_400_403	CD3654_400_403-PIN-2G-PL	PL

FIGURE PIN-2.7

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9.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the Non-Hazardous Waste Landfill has been completed as per the TOR and is included as Table XXVI hereafter. Full sized photographs are contained in the Addendum DVD-ROM.

Table XXVI: Landfill Visual Inspection Photo Log – NHWLF (page 1 of 3)

Photo (NHWLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P215_7368	4,275 KB	15/08/15	503098	7645325	View looking south-southwest at north side of NHWLF
2	P215_7369	4,348 KB	15/08/15	502995	7645290	View looking east-southeast at west side of NHWLF
3	P215_7370	4,328	15/08/15	503021	7645198	View looking northeast at south side of NHWLF
4	P215_7371	4,271	15/08/15	503130	7645222	View looking northwest at east side of NHWLF
5	P215_7372	4,396	15/08/15	503117	7645280	View looking west-northwest along north toe of NHWLF
6	P215_7373	4,405	15/08/15	503118	7645277	View looking south along east toe of NHWLF
7	P215_7374	4,417	15/08/15	503099	7645272	View looking west-northwest along north crest of NHWLF
8	P215_7375	4,396	15/08/15	503100	7645270	View looking south along east crest of NHWLF
9	P215_7376	1,232	15/08/15	503096	7645269	Panoramic view looking south to northwest across cover from northeast corner of NHWLF
10	P215_7377	4,322	15/08/15	503095	7645263	View looking southwest at vehicle ruts along east crest of NHWLF - FEATURE F
11	P215_7378	4,277	15/08/15	503074	7645289	View looking northeast at two depressions 1m below crest on north side of NHWLF - FEATURE D
12	P215_7379	4,455	15/08/15	503084	7645289	View looking south-southeast at minor depression 1m below crest on north side of NHWLF - FEATURE D
13	P215_7380	4,295	15/08/15	503080	7645292	View looking south-southeast at minor depression 1m below crest on north side of NHWLF - FEATURE D
14	P215_7381	4,346	15/08/15	503077	7645281	View looking north-northeast at minor erosion on north side slope of NHWLF - FEATURE E
15	P215_7382	4,330	15/08/15	503084	7645297	View looking south-southwest at minor erosion on north side slope of NHWLF - FEATURE E
16	P215_7383	4,343	15/08/15	503064	7645290	View looking north-northeast at minor erosion on north side slope of NHWLF - FEATURE E
17	P215_7384	4,319	15/08/15	503071	7645302	View looking south-southwest at minor erosion on north side slope of NHWLF - FEATURE E
18	P215_7385	4,277	15/08/15	503046	7645311	View looking south-southwest along west toe of NHWLF
19	P215_7386	4,265	15/08/15	503051	7645311	View looking east along north toe of NHWLF
20	P215_7387	4,352	15/08/15	503058	7645309	View looking north-northeast at minor erosion on north side slope of NHWLF - FEATURE E

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Table XXVI: Landfill Visual Inspection Photo Log – NHWLF (page 2 of 3)

Photo (NHWLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
21	P215_7389	4,345	15/08/15	503055	7645299	View looking south-southwest at minor erosion on north side slope of NHWLF - FEATURE E
22	P215_7390	4,402	15/08/15	503052	7645294	View looking south along west crest of NHWLF
23	P215_7391	4,369	15/08/15	503056	7645294	View looking east along north crest of NHWLF
24	P215_7392	1,218	15/08/15	503055	7645291	Panoramic view looking east to southwest across cover from northwest corner of NHWLF
25	P215_7393	4,410	15/08/15	503032	7645245	View looking east-southeast along south crest of NHWLF
26	P215_7394	4,405	15/08/15	503030	7645247	View looking north along west crest of NHWLF
27	P215_7395	1,182	15/08/15	503034	7645248	Panoramic view looking north to southeast across cover from southwest corner of NHWLF
28	P215_7396	4,387	15/08/15	503032	7645256	View looking southwest at pothole depression 1m below southwest crest of NHWLF - FEATURE G (new)
29	P215_7397	4,320	15/08/15	503043	7645241	View looking northwest at linear depression on crest of NHWLF - FEATURE A
30	P215_7398	4,320	15/08/15	503040	7645246	View looking southeast at linear depression on crest of NHWLF - FEATURE A
31	P215_7399	4,276	15/08/15	503029	7645242	View looking southwest at pothole depression 3 m below southwest crest of NHWLF - FEATURE A
32	P215_7400	4,279	15/08/15	503026	7645245	View looking south at pothole depression 3 m below southwest crest of NHWLF - FEATURE A
33	P215_7401	4,308	15/08/15	503046	7645233	Typical sparse vegetation noted on south side slope of NHWLF
34	P215_7402	4,389	15/08/15	503068	7645227	View looking southwest at minor erosion on southeast corner of NHWLF - FEATURE B
35	P215_7403	4,296	15/08/15	503059	7645213	View looking northeast at minor erosion on southeast corner of NHWLF - FEATURE B
36	P215_7404	4,358	15/08/15	503080	7645227	View looking north-northeast along east crest of NHWLF
37	P215_7405	4,320	15/08/15	503077	7645224	View looking northwest along south crest of NHWLF
38	P215_7406	1,342	15/08/15	503076	7645227	Panoramic view looking west to northeast across crest from southeast corner of NHWLF
39	P215_7407	4,429	15/08/15	503083	7645237	View looking southwest at linear depression along crest on southeast corner of NHWLF - FEATURE C
40	P215_7408	4,393	15/08/15	503079	7645234	View looking southeast at linear depression along crest on southeast corner of NHWLF - FEATURE C

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Table XXVI: Landfill Visual Inspection Photo Log – NHWLF (page 3 of 3)

Photo (NHWLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
41	P215_7409	4,337	15/08/15	503080	7645230	View looking southeast at minor erosion on southeast corner of NHWLF - FEATURE H (new)
42	P215_7410	4,364	15/08/15	503081	7645223	View looking southeast at minor erosion on southeast corner of NHWLF - FEATURE B
43	P215_7411	4,288	15/08/15	503092	7645218	View looking west-northwest at minor erosion on southeast corner of NHWLF - FEATURE B
44	P215_7412	4,335	15/08/15	503085	7645206	View looking north along east toe of NHWLF
45	P215_7413	4,359	15/08/15	503082	7645205	View looking northwest along south toe of NHWLF
46	P215_7414	4,423	15/08/15	503090	7645208	View looking northwest at minor erosion on southeast corner of NHWLF - FEATURE B
47	P215_7415	4,439	15/08/15	503083	7645205	View looking northwest at minor erosion on southeast corner of NHWLF - FEATURE B
48	P215_7416	4,384	15/08/15	503076	7645212	View looking east-southeast at minor erosion on southeast corner of NHWLF - FEATURE B
49	P215_7417	4,379	15/08/15	503078	7645219	View looking southeast at minor erosion on southeast corner of NHWLF - FEATURE B
50	P215_7418	4,297	15/08/15	503087	7645244	View looking northeast at vehicle ruts along east crest of NHWLF - FEATURE F
51	P215_7419	4,285	15/08/15	503009	7645237	View looking east-southeast along south toe of NHWLF
52	P215_7420	4,345	15/08/15	503007	7645241	View looking north along west toe of NHWLF

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10 SOUTH LANDFILL - EAST

10.1 SUMMARY

On August 15, a visual inspection was completed at the South Landfill - East. Neither soil nor groundwater sampling was performed.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. Indications of minor settlement were noted at two locations on the South Landfill - East, including: one linear depression on the northeast corner (Feature A); and one pothole-type depression on the north side slope (Feature C). Feature A appears to have marginally increased in size from the 2014 assessment, whereas Feature C was a new observation. No exposed debris were noted.

Evidence of minor surface erosion was noted at one existing location across the central cover of the South Landfill – East (Feature B). The erosion appears consistent with findings from the 2014 assessment.

At this time, the overall performance of the landfill is rated as acceptable.

The Visual Inspection Checklist is included in Table XXVII of this report and has been completed as per the TOR. Please refer to Figure PIN-2.8 for a sketch of the Station Landfill – East. detailing the location of photographs, settlement and erosional features.

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Table XXVII: Visual Inspection Checklist / Report – South Landfill - East

Dew Line Cleanup Post Construction – Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: South Landfill – East (Existing Regrade Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 15, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT NUMBER: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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TABLE XXVII: PIN-2, CAPE YOUNG - SOUTH LANDFILL - EAST (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE A See Figure PIN-2.8 (NE corner)	6 m	0.2-0.3 m	0.1 m	Isolated	Minor depression	SLE-8- 10	Acceptable	Linear depression. Marginal increase in length from 2014 observation.
		FEATURE C See Figure PIN-2.8 (N side slope - New obs.)	0.3 m	0.15 m	0.07 m	Isolated	Minor depression	SLE-11, 12	Acceptable	Pothole type depression. New observation.
Erosion	Yes	FEATURE B See Figure PIN-2.8 (Central cover)	6 m	0.1 - 0.15 m	0.05 m	Isolated	Minor erosion	SLE-23, 24	Acceptable	Self armouring. Consistent with 2013 and 2014 assesment
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Additional Photos	Yes	See Figure PIN-2.8 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

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10.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for South Landfill - East has been completed as per the TOR and is included as Table XXVIII below.

Table XXVIII: Preliminary Stability Assessment – South Landfill - East

Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Acceptable	Isolated
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

10.3 LOCATION PLAN

The Location Plan for the South Landfill - East has been completed as per the TOR and is presented in Figure PIN-2.8.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.

LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- (1) APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- MINOR EROSION (NTS)

0m 7.5m 15.0m 22.5m 30.0m 37.5m

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	16–03–11	P.L.	A.P.	M.F.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

SOUTH LANDFILL - EAST

Englobe
4495, Wilfrid-Hamel boulevard
Suite 200
Quebec (Quebec) Canada, G1P 2J7
Phone : 418.653.4422
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MEASUREMENT UNIT	SCALE:	DATE (month–year):
Metre	1 : 750	MARCH 2016
DRAWN BY:	VERIFIED BY:	APPROVED BY:
P. LÉGARÉ	A. PASSALIS P. ENG	M. FLEURY P. ENG
PROJECT NO:	DRAWING NO:	PAGE
CD3654_400_403	CD3654_400_403-PIN-2H-PL	PL

FIGURE PIN-2.8

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10.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the South Landfill - East has been completed as per the TOR and is included as Table XXIX hereafter. Full sized photographs are contained in the Addendum DVD-ROM.

Table XXIX: Landfill Visual Inspection Photo Log – South Landfill - East

Photo (SLE-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P215_7343	662 KB	15/08/15	503463	7645020	Panoramic view looking northwest to east at south side of South Landfill - East
2	P215_7344	4,323 KB	15/08/15	503518	7645029	View looking north-northeast along southeast side of South Landfill - East
3	P215_7345	4,300 KB	15/08/15	503516	7645029	View looking northwest along south side of South Landfill - East
4	P215_7347	1,337 KB	15/08/15	503512	7645034	Panoramic view looking west to northeast across cover from southeast corner of South Landfill - East
5	P215_7348	4,451KB	15/08/15	503520	7645054	View looking northwest along northeast side of South Landfill - East
6	P215_7349	4,451KB	15/08/15	503529	7645057	View looking south along east side of South Landfill - East
7	P215_7350	1,471KB	15/08/15	503530	7645056	Panoramic view looking south to northwest across cover from northeast corner of South Landfill - East
8	P215_7351	4,337 KB	15/08/15	503523	7645054	View looking east at linear depression on northeast corner of South Landfill - East - FEATURE A
9	P215_7352	4,308 KB	15/08/15	503525	7645051	View looking northeast at linear depression on northeast corner of South Landfill - East - FEATURE A
10	P215_7353	4,328 KB	15/08/15	503529	7645051	View looking northwest at linear depression on northeast corner of South Landfill - East - FEATURE A
11	P215_7354	4,355 KB	15/08/15	503494	7645091	View looking southeast at pothole depression on northeast side slope of South Landfill - East - FEATURE C (new)
12	P215_7355	4,328 KB	15/08/15	503494	7645087	View looking northeast at pothole depression on northeast side slope of South Landfill - East - FEATURE C (new)
13	P215_7357	4,374 KB	15/08/15	503483	7645102	View looking southwest along north side of South Landfill - East
14	P215_7358	4,407 KB	15/08/15	503486	7645102	View looking southeast along northeast side of South Landfill - East
15	P215_7359	4,426 KB	15/08/15	503478	7645087	View looking southwest along north crest of South Landfill - East
16	P215_7360	4,401KB	15/08/15	503480	7645086	View looking southeast along northeast crest of South Landfill - East
17	P215_7363	1,079 KB	15/08/15	503478	7645092	View of sparse vegetation on north side slope of South Landfill - East
18	P215_7361	4,347 KB	15/08/15	503440	7645083	View looking southeast along southwest side of South Landfill - East
19	P215_7361	4,347 KB	15/08/15	503442	7645085	View looking east northeast along north side of South Landfill - East
20	P215_7362	4,243 KB	15/08/15	503455	7645077	Panoramic view looking northeast to south across cover from northwest corner of South Landfill - East
21	P215_7364	4,325 KB	15/08/15	503484	7645064	View looking northwest across north cover of South Landfill - East
22	P215_7365	4,289 KB	15/08/15	503486	7645063	View looking southeast across south cover of South Landfill - East
23	P215_7366	4,425 KB	15/08/15	503488	7645064	View looking northwest at minor erosion on central cover area of South Landfill - East - FEATURE B
24	P215_7367	4,279 KB	15/08/15	503499	7645057	View looking southeast at minor erosion on central cover area of South Landfill - East - FEATURE B

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11 SOUTH BORROW LANDFILL

11.1 SUMMARY

On August 15, a visual inspection was completed at the South Borrow Landfill. Neither soil nor groundwater sampling was performed.

As of the 2015 monitoring event, no features were identified with “significant” or “unacceptable” severity ratings. Indications of minor settlement were noted at five locations on the South Borrow Landfill, including: two small pothole depressions on the north side slope (Feature A); two small pothole depressions on the southeast cover and east side slope (Feature D); and one pothole depression on the south side slope (Feature F). Depressions at Feature A and Feature D appear to have increased marginally in size from the 2014 assessment, whereas Feature F was a new observation.

Evidence of minor surface erosion was noted at one existing location on the southeast side slope (Feature C). The erosion appears consistent with findings from the 2014 assessment.

Areas of ponded water were observed along the northwest and southwest corners of the landfill (Feature E). The ponding on the southwest corner appears to have increased marginally from the 2014 assessment, bordering approximately 15 m of the landfill toe, whereas the ponding northwest appears consistant with previous observations, bordering approximately 2.5 m of the landfill toe. The ponding along the northwest and southwest corners of the landfill was not noted with a feature label during the 2014 assessment. Evidence of minor rust coloured staining was noted within a wetted area along the southwest toe of the landfill (Feature B). The area of staining appeared smaller than previously observed during the 2012 - 2014 inspections. A non-hydrocarbon sheen was also observed on the water. The ponded and stained areas are not impacting the performance of the landfill cover. No exposed debris were noted.

At this time, the overall performance of the landfill is rated as acceptable.

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The Visual Inspection Checklist is included in Table XXX of this report and has been completed as per the TOR. Please refer to Figure PIN-2.9 for a sketch of the South Borrow Landfill detailing the location of photographs, settlement, erosional and staining features.

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Table XXX: Visual Inspection Checklist / Report – South Borrow Landfill

Dew Line Cleanup Post Construction – Landfill Monitoring
Visual Inspection Checklist

Inspection Report – Page 1 of 2

SITE NAME: PIN-2 Cape Young
LANDFILL DESIGNATION: ;South Borrow Landfill (Existing Regrade Landfill)
DATE OF INSPECTION: August 15, 2015
DATE OF PREVIOUS INSPECTION: August 15, 2014
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
MONITORING EVENT NUMBER: 4
The inspector/reporter represents to the best of his/her knowledge that the following statements and observations are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

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TABLE XXX: PIN-2, CAPE YOUNG - SOUTH BORROW LANDFILL (Page 2 of 2)

Checklist Item	Present (Yes/No)	Location	Length	Width	Depth	Extent	Description	Photographic Record	Severity Rating	Additional Comments
Settlement	Yes	FEATURE A See Figure PIN-2.9 (N side slope)	0.5 - 0.6 m	0.2 - 0.5 m	0.1 m	Isolated	Minor depressions	SBLF-3, 4, 12	Acceptable	2 locations. Pothole type. Minor increase in size from 2014 observation.
		FEATURE D See Figure PIN-2.9 (SE cover and E side)	0.6 - 0.8 m	0.45 - 0.6 m	0.1 - 0.15 m	Isolated	Minor depressions	SBLF-24, 25, 28, 29	Acceptable	2 locations. Pothole type. Minor increase in size from 2014 observation.
		FEATURE F See Figure PIN-2.9 (S side - New Obs.)	0.3 m	0.3 m	0.07 m	Isolated	Minor depression	SBLF-20, 21	Acceptable	Pothole type. New observation
Erosion	Yes	FEATURE C See Figure PIN-2.9 (SE side slope)	2 m	0.2 m	0.1 m	Isolated	Minor erosion	SBLF-26, 27	Acceptable	Washing of fines. Slope appears stable
Frost Action	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Animal Burrows	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Vegetation	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Staining	Yes	FEATURE B See Figure PIN-2.9 (SW toe)	5 m	0.8 m	Unknown	Isolated	Rust coloured staining in ponded area along toe	SBLF-15, 30	Acceptable	Non-hydrocarbon sheen noted on water. Area of staining reduced from 2014 observations.
Vegetation Stress	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Seepage Points	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Debris Exposed	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Presence/Condition of Monitoring Instruments	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Observable	N/A
Other Features of Note:	Yes	FEATURE E See Figure PIN-2.9 (NW and SW toe)	7 - 20 m	5 m	Unknown	N/A	Ponded areas northwest and southwest of landfill toe	SBLF-1, 5, 6, 14, 15	Acceptable	Naturally ponded areas northwest and southwest of landfill toe. In contact with approximately 2.5 m on northwest and 15 m around southwest toe. Side slopes appear stable. Ponded area northwest appears consistent, whereas ponded area southwest appears slightly larger than previously noted in 2014 assessment.
Additional Photos	Yes	See Figure PIN-2.9 and Photographic Record	N/A	N/A	N/A	N/A	General Photographic Record	N/A	Not Observable	General photos for documentation, no additional features of note.

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11.2 PRELIMINARY STABILITY ASSESSMENT

The Preliminary Stability Assessment for South Borrow Landfill has been completed as per the TOR and is included as Table XXXI hereafter.

Table XXXI: Preliminary Stability Assessment – South Borrow Landfill

Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Not observed	None
Frost Action	Not observed	None
Staining	Acceptable	Isolated
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Acceptable	Isolated
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

Performance/ Severity Rating	Description
Acceptable	Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement.
Marginal	Physical/environmental performance appears to be deteriorating with time. Observations may include an increase in size or number of features of note, such as differential settlement, erosion or cracking. No significant impact on landfill stability to date, but potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting landfill stability, such as significant changes in slope geometry, significant erosion or differential settlement; scarp development. The potential for failure is assessed as imminent.
Unacceptable	Stability of landfill is compromised to the extent that ability to contain waste materials is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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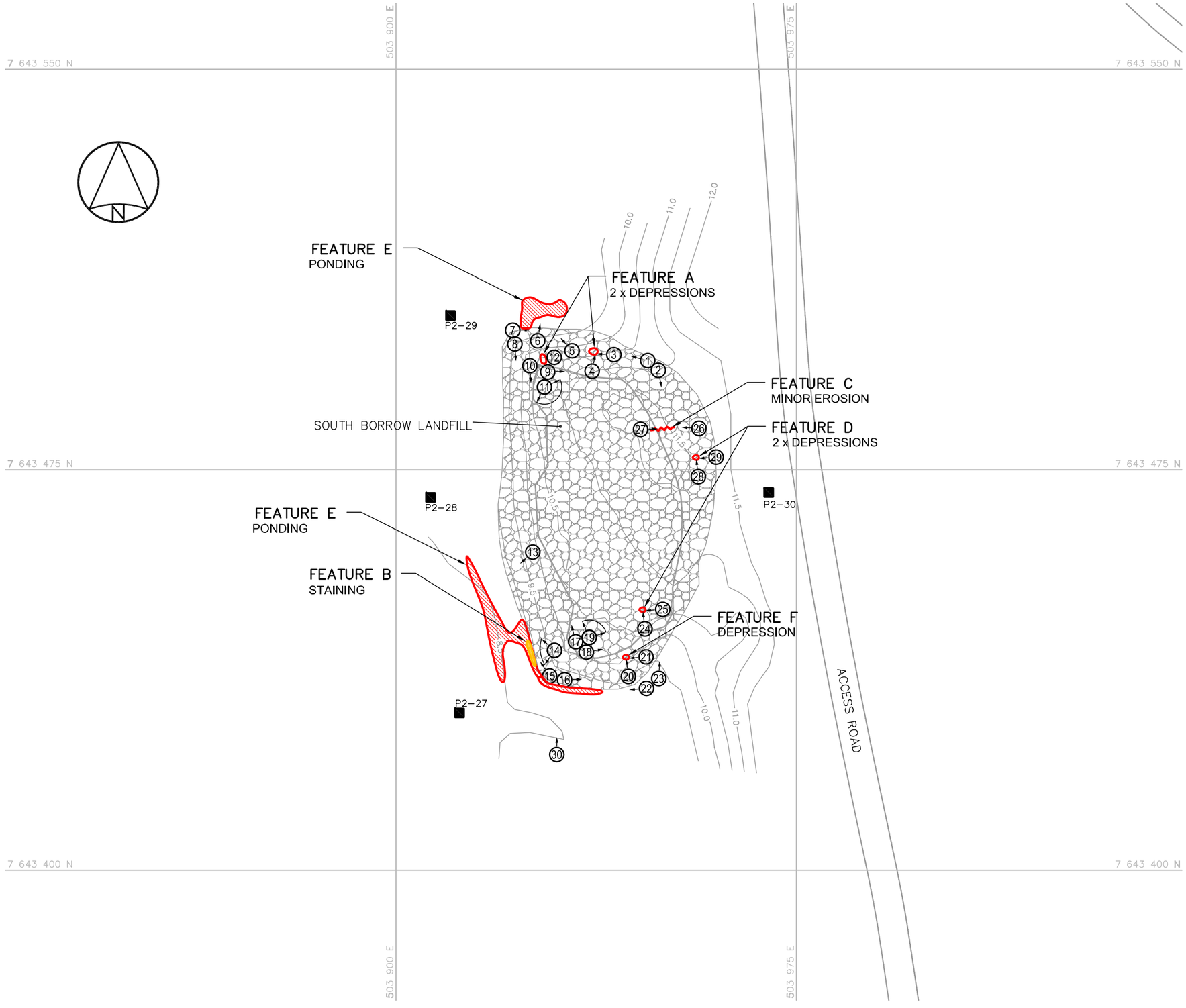
Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacted less than 50% of the surface area of the landfill
Extensive	Impacting greater than 50% of the surface area of the landfill

11.3 LOCATION PLAN

The Location Plan for the South Borrow Landfill has been completed as per the TOR and is presented in Figure PIN-2.9.

This electronic version, when signed by a duly authorized representative, may be used for the purposes for which it was intended. The original is kept in Englobe's archives. If there is a difference or an inconsistency between the electronic version and the original, the latter must have primacy.



LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- STAINING (NTS)
- PONDING (NTS)
- MINOR EROSION (NTS)

0m 7.5m 15.0m 22.5m 30.0m 37.5m

NO.	VERSION	DATE	DRAWN BY	VERIFIED BY	APPROVED BY
1	FINAL	16-03-21	P.L.	A.P.	M.F.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

SOUTH BORROW LANDFILL

Englobe
4495, Wilfrid-Hamel boulevard
Suite 200
Quebec (Quebec) Canada, G1P 2J7
Phone : 418.653.4422
www.englobecorp.com

MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 750	MARCH 2016
DRAWN BY: P. LÉGARÉ	VERIFIED BY: A. PASSALIS P. ENG	APPROVED BY: M. FLEURY P. ENG
PROJECT NO: CD3654_400_403	DRAWING NO: CD3654_400_403-PIN-2I-PL	PAGE PL

FIGURE PIN-2.9

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11.4 PHOTOGRAPHIC RECORDS

The Photographic Record for the South Borrow Landfill has been completed as per the TOR and is included as Table XXXII hereafter. Full-sized photographs are contained in the Addendum DVD-ROM.

Table XXXII: Landfill Visual Inspection Photo Log – South Borrow Landfill (page 1 of 2)

Photo (SBLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P215_7313	4,428	15/08/15	503948	7643495	View looking west-northwest along north side of South Borrow Landfill
2	P215_7314	4,323	15/08/15	503949	7643494	View looking south along east side of South Borrow Landfill
3	P215_7315	4,326	15/08/15	503940	7643497	View looking west at minor depression on north side slope of South Borrow Landfill - FEATURE A
4	P215_7316	4,440	15/08/15	503937	7643494	View looking north at minor depression on north side slope of South Borrow Landfill - FEATURE A
5	P215_7317	4,203	15/08/15	503932	7643498	View looking northwest at ponded water on northwest corner of South Borrow Landfill - FEATURE E
6	P215_7318	4,356	15/08/15	503927	7643500	View looking north at ponded water at northwest toe of South Borrow Landfill - FEATURE E
7	P215_7319	4,271	15/08/15	503922	7643501	View looking east along north toe of South Borrow Landfill
8	P215_7320	4,291	15/08/15	503922	7643499	View looking south along west toe of South Borrow Landfill
9	P215_7321	4,379	15/08/15	503928	7643493	View looking east along north crest of South Borrow Landfill
10	P215_7322	4,338	15/08/15	503926	7643493	View looking south along west crest of South Borrow Landfill
11	P215_7323	1,306	15/08/15	503927	7643491	Panormamic view looking east to south across cover from northwest corner of South Borrow Landfill
12	P215_7324	4,368	15/08/15	503929	7643496	View southeast at minor settlement on northwest corner of South Borrow Landfill - FEATURE A
13	P215_7325	4,309	15/08/15	503926	7643460	View looking southwest at single caribou grazing near landfill
14	P215_7326	1,415	15/08/15	503930	7643441	Panoramic view looking northwest to southwest at ponded area on southwest toe of South Borrow Landfill - FEATURE E
15	P215_7327	4,307	15/08/15	503930	7643436	View looking north at iron coloured staining in ponded area on southwest corner of South Borrow Landfill - FEATURE B
16	P215_7328	4,365	15/08/15	503931	7643436	View looking east along south toe of South Borrow Landfill
17	P215_7329	4,380	15/08/15	503934	7643443	View looking north along west crest of South Borrow Landfill
18	P215_7330	4,400	15/08/15	503935	7643441	View looking east along south crest of South Borrow Landfill
19	P215_7331	1,425	15/08/15	503936	7643443	Panormamic view looking north to east across cover from southwest corner of South Borrow Landfill
20	P215_7332	4,291	15/08/15	503944	7643437	View looking north at pothole type depression on southeast cover of South Borrow Landfill - FEATURE F (new)

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Table XXXII: Landfill Visual Inspection Photo Log – South Borrow Landfill (page 2 of 2)

Photo (SBLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
21	P215_7333	4,431	15/08/15	503946	7643440	View looking west at pothole type depression on southeast cover of South Borrow Landfill - FEATURE F (new)
22	P215_7334	4,329	15/08/15	503947	7643434	View looking west along south side of South Borrow Landfill
23	P215_7335	4,276	15/08/15	503949	7643436	View looking north along east side of South Borrow Landfill
24	P215_7336	4,273	15/08/15	503946	7643446	View looking north at localized pothole on east crest of South Borrow Landfill (0.6m L, 0.45m W, 0.15m D) - FEATURE D
25	P215_7337	4,299	15/08/15	503949	7643449	View looking west at localized pothole on east crest of South Borrow Landfill (0.6m L, 0.45m W, 0.15m D) - FEATURE D
26	P215_7338	4,410	15/08/15	503955.5	7643483	View looking west at minor erosion on east cover of South Borrow Landfill (2.0m L, 0.20m W, 0.10m D) - FEATURE C
27	P215_7339	4,297	15/08/15	503947	7643482	View looking east at minor erosion on east cover of South Borrow Landfill (2.0m L, 0.2m W, 0.1m D) - FEATURE C
28	P215_7340	4,297	15/08/15	503956.2	7643475	View looking north at deptression on east crest of South Borrow Landfill (0.8m L, 0.6m W, 0.1m D) - FEATURE D
29	P215_7341	4,382	15/08/15	503958.7	7643477	View looking west at deptression on east crest of South Borrow Landfill (0.8m L, 0.6m W, 0.1m D) - FEATURE D
30	P215_7342	4,065	15/08/15	503930	7643422	View looking north at ponded water and rust coloured staining at southwest toe of South Borrow Landfill - FEATURES B & E

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ANNEX 1

Laboratory Results

Your Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY
Your C.O.C. #: G102365

Attention: ANDREW PASSALIS
EnGlobe Corp
QUEBEC
1260, boul. Lebourgneuf Blvd
bureau/suite 250
Québec, QC
CANADA G2K 2G2

Report Date: 2015/10/15
Report #: R2058309
Version: 2R

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B577696
Received: 2015/09/04, 18:55

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS/FID (MeOH extract)	7	2015/09/06	2015/09/12	AB SOP-00039	CCME CWS/EPA 8260c m
BTEX/F1 by HS GC/MS/FID (MeOH extract)	1	2015/09/09	2015/09/12	AB SOP-00039	CCME CWS/EPA 8260c m
CCME Hydrocarbons (F2-F4 in soil) (1)	7	2015/09/08	2015/09/10	AB SOP-00036 / AB SOP-00040	CCME PHC-CWS
CCME Hydrocarbons (F2-F4 in soil) (1)	1	2015/09/09	2015/09/10	AB SOP-00036 / AB SOP-00040	CCME PHC-CWS
Elements by ICPMS - Soils	7	2015/09/10	2015/09/11	AB SOP-00001 / AB SOP-00043	EPA 200.8 R5.4 m
Elements by ICPMS - Soils	1	2015/09/11	2015/09/11	AB SOP-00001 / AB SOP-00043	EPA 200.8 R5.4 m
Moisture	7	N/A	2015/09/09	AB SOP-00002	CCME PHC-CWS
Moisture	1	N/A	2015/09/10	AB SOP-00002	CCME PHC-CWS

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS/FID	1	N/A	2015/09/08	AB SOP-00039	CCME CWS/EPA 8260c m
CCME Hydrocarbons (F2-F4 in water)	2	2015/09/12	2015/09/13	AB SOP-00037 / AB SOP-00040	CCME PHC-CWS m
Mercury - Low Level (Total)	1	2015/09/09	2015/09/09	CAL SOP-00007	EPA 1631 RE 20460 m
Mercury - Low Level (Total)	1	2015/09/09	2015/09/10	CAL SOP-00007	EPA 1631 RE 20460 m
Elements by ICPMS - Total	2	2015/09/10	2015/09/11	AB SOP-00014 / AB SOP-00043	EPA 200.8 R5.4 m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated

and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Alina Kenstavicius, Project Manager
Email: AKenstavicius@maxxam.ca
Phone# (403) 219-3669

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B577696
Report Date: 2015/10/15

EnGlobe Corp
Client Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		NB7352	NB7355	NB7356	NB7357	NB7358	NB7359		
Sampling Date		2015/08/15	2015/08/17	2015/08/17	2015/08/17	2015/08/18	2015/08/17		
COC Number		G102365	G102365	G102365	G102365	G102365	G102365		
	UNITS	**P215-2WA**	**P415-8WA**	**P415-4A**	**P415-21A**	**P415-15A**	**P415-12A**	**RDL**	**QC Batch**
Physical Properties									
Moisture	%	19	9.4	9.4	10	13	26	0.30	8031378
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	<10	<10	<10	10	8030910
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	<50	<50	<50	<50	<50	50	8030910
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	<50	<50	<50	50	8030910
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes		8030910
Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8033544
Toluene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8033544
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8033544
Xylenes (Total)	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	8033544
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	8033544
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8033544
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	<12	<12	12	8033544
F1 (C6-C10)	mg/kg	<12	<12	<12	<12	<12	<12	12	8033544
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	104	100	95	97	108	93		8033544
4-Bromofluorobenzene (sur.)	%	103	102	94	106	100	98		8033544
D10-ETHYLBENZENE (sur.)	%	117	127	114	124	123	108		8033544
D4-1,2-Dichloroethane (sur.)	%	109	111	105	17 (1)	119	11 (1)		8033544
O-TERPHENYL (sur.)	%	102	99	102	98	99	96		8030910

RDL = Reportable Detection Limit
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Job #: B577696
Report Date: 2015/10/15

EnGlobe Corp
Client Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

Maxxam ID		NB7360		NB7362		
Sampling Date		2015/08/17		2015/08/17		
COC Number		G102365		G102365		
	UNITS	**P415-23B**	**QC Batch**	**P415-3WB**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	24	8031378	11	0.30	8032649
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	8030910	<10	10	8032413
F3 (C16-C34 Hydrocarbons)	mg/kg	66	8030910	<50	50	8032413
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	8030910	<50	50	8032413
Reached Baseline at C50	mg/kg	Yes	8030910	Yes		8032413
Volatiles						
Benzene	mg/kg	<0.0050	8033544	<0.0050	0.0050	8033544
Toluene	mg/kg	<0.020	8033544	<0.020	0.020	8033544
Ethylbenzene	mg/kg	<0.010	8033544	<0.010	0.010	8033544
Xylenes (Total)	mg/kg	<0.040	8033544	<0.040	0.040	8033544
m & p-Xylene	mg/kg	<0.040	8033544	<0.040	0.040	8033544
o-Xylene	mg/kg	<0.020	8033544	<0.020	0.020	8033544
F1 (C6-C10) - BTEX	mg/kg	<12	8033544	<12	12	8033544
F1 (C6-C10)	mg/kg	<12	8033544	<12	12	8033544
Surrogate Recovery (%)						
1,4-Difluorobenzene (sur.)	%	104	8033544	93		8033544
4-Bromofluorobenzene (sur.)	%	100	8033544	97		8033544
D10-ETHYLBENZENE (sur.)	%	119	8033544	111		8033544
D4-1,2-Dichloroethane (sur.)	%	106	8033544	105		8033544
O-TERPHENYL (sur.)	%	96	8030910	108		8032413

RDL = Reportable Detection Limit

Maxxam Job #: B577696
Report Date: 2015/10/15

EnGlobe Corp
Client Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY

AT1 BTEX AND F1-F4 IN WATER (WATER)

Maxxam ID		NB7353		
Sampling Date		2015/08/15		
COC Number		G102365		
	UNITS	**P215-2W**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	8031163
F3 (C16-C34 Hydrocarbons)	mg/L	<0.20	0.20	8031163
F4 (C34-C50 Hydrocarbons)	mg/L	<0.20	0.20	8031163
Volatiles				
Benzene	ug/L	<0.40	0.40	8030280
Toluene	ug/L	<0.40	0.40	8030280
Ethylbenzene	ug/L	<0.40	0.40	8030280
m & p-Xylene	ug/L	<0.80	0.80	8030280
o-Xylene	ug/L	<0.40	0.40	8030280
Xylenes (Total)	ug/L	<0.80	0.80	8030280
F1 (C6-C10) - BTEX	ug/L	<100	100	8030280
F1 (C6-C10)	ug/L	<100	100	8030280
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	105		8030280
4-Bromofluorobenzene (sur.)	%	87		8030280
D4-1,2-Dichloroethane (sur.)	%	100		8030280
O-TERPHENYL (sur.)	%	90		8031163

RDL = Reportable Detection Limit

Maxxam Job #: B577696
Report Date: 2015/10/15

EnGlobe Corp
Client Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY

AT1 F2-F4 WATER (WATER)

Maxxam ID		NB7361		
Sampling Date		2015/08/18		
COC Number		G102365		
	UNITS	**P415-3W**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	8031163
F3 (C16-C34 Hydrocarbons)	mg/L	<0.20	0.20	8031163
F4 (C34-C50 Hydrocarbons)	mg/L	<0.20	0.20	8031163
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	89		8031163

RDL = Reportable Detection Limit

Maxxam Job #: B577696
Report Date: 2015/10/15

EnGlobe Corp
Client Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		NB7352	NB7355	NB7356	NB7357	NB7358		NB7359		
Sampling Date		2015/08/15	2015/08/17	2015/08/17	2015/08/17	2015/08/18		2015/08/17		
COC Number		G102365	G102365	G102365	G102365	G102365		G102365		
	UNITS	**P215-2WA**	**P415-8WA**	**P415-4A**	**P415-21A**	**P415-15A**	**RDL**	**P415-12A**	**RDL**	**QC Batch**
Elements										
Total Arsenic (As)	mg/kg	2.7	3.6	3.0	3.1	3.2	1.0	2.5	2.0	8033634
Total Cadmium (Cd)	mg/kg	0.087	0.071	<0.050	<0.050	<0.050	0.050	0.11	0.10	8033634
Total Chromium (Cr)	mg/kg	4.9	14	16	12	13	1.0	5.5	2.0	8033634
Total Cobalt (Co)	mg/kg	1.8	4.8	3.3	4.9	4.9	0.50	2.4	1.0	8033634
Total Copper (Cu)	mg/kg	5.6	14	10	11	18	1.0	9.8	2.0	8033634
Total Lead (Pb)	mg/kg	2.4	17	15	8.3	11	0.50	6.2	1.0	8033634
Total Mercury (Hg)	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	<0.10	0.10	8033634
Total Nickel (Ni)	mg/kg	4.4	12	9.9	13	10	1.0	5.5	2.0	8033634
Total Zinc (Zn)	mg/kg	14	17	<10	<10	<10	10	<20	20	8033634

RDL = Reportable Detection Limit

Maxxam ID		NB7360		NB7362		
Sampling Date		2015/08/17		2015/08/17		
COC Number		G102365		G102365		
	UNITS	**P415-23B**	**QC Batch**	**P415-3WB**	**RDL**	**QC Batch**
Elements						
Total Arsenic (As)	mg/kg	<1.0	8033634	1.2	1.0	8034327
Total Cadmium (Cd)	mg/kg	0.051	8033634	<0.050	0.050	8034327
Total Chromium (Cr)	mg/kg	12	8033634	24	1.0	8034327
Total Cobalt (Co)	mg/kg	4.5	8033634	5.7	0.50	8034327
Total Copper (Cu)	mg/kg	26	8033634	26	1.0	8034327
Total Lead (Pb)	mg/kg	3.5	8033634	3.2	0.50	8034327
Total Mercury (Hg)	mg/kg	<0.050	8033634	<0.050	0.050	8034327
Total Nickel (Ni)	mg/kg	11	8033634	15	1.0	8034327
Total Zinc (Zn)	mg/kg	15	8033634	17	10	8034327

RDL = Reportable Detection Limit

Maxxam Job #: B577696
Report Date: 2015/10/15

EnGlobe Corp
Client Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		NB7353	NB7361		
Sampling Date		2015/08/15	2015/08/18		
COC Number		G102365	G102365		
	UNITS	**P215-2W**	**P415-3W**	**RDL**	**QC Batch**
Elements					
Total Arsenic (As)	mg/L	0.00086	0.00028	0.00020	8032674
Total Cadmium (Cd)	mg/L	0.00018	0.000058	0.000020	8032674
Total Chromium (Cr)	mg/L	0.0090	0.015	0.0010	8032674
Total Cobalt (Co)	mg/L	<0.00030	0.0076	0.00030	8032674
Total Copper (Cu)	mg/L	0.0015	0.0095	0.00020	8032674
Total Lead (Pb)	mg/L	0.00024	<0.00020	0.00020	8032674
Total Nickel (Ni)	mg/L	0.0051	0.050	0.00050	8032674
Total Zinc (Zn)	mg/L	0.0093	0.054	0.0030	8032674
Low Level Elements					
Total Mercury (Hg)	ug/L	<0.0020	0.0073	0.0020	8031761

RDL = Reportable Detection Limit

Maxxam Job #: B577696
Report Date: 2015/10/15

EnGlobe Corp
Client Project #: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY

Package 1	4.7°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

PCB results are attached to this report file. The reference number from Maxxam Mississauga for these results is B5I1712.

All soil samples were extracted for BTEXF1-F4 past method-specified hold time at client request.

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL) Comments

Sample NB7359-01 Elements by ICPMS - Soils: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly

Results relate only to the items tested.

EnGlobe Corp
Attention: ANDREW PASSALIS
Client Project #: PIN-2/PIN-4
P.O. #:
Site Location: CAPE YOUNG/ BYRON BAY

Quality Assurance Report

Maxxam Job Number: EYKB577696

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
8030280	WZ0	Matrix Spike	1,4-Difluorobenzene (sur.)	2015/09/08		106	%	70 - 130
			4-Bromofluorobenzene (sur.)	2015/09/08		84	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2015/09/08		100	%	70 - 130
			Benzene	2015/09/08		101	%	70 - 130
			Toluene	2015/09/08		100	%	70 - 130
			Ethylbenzene	2015/09/08		104	%	70 - 130
			m & p-Xylene	2015/09/08		102	%	70 - 130
			o-Xylene	2015/09/08		107	%	70 - 130
			F1 (C6-C10)	2015/09/08		77	%	70 - 130
		Spiked Blank	1,4-Difluorobenzene (sur.)	2015/09/08		101	%	70 - 130
			4-Bromofluorobenzene (sur.)	2015/09/08		86	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2015/09/08		100	%	70 - 130
			Benzene	2015/09/08		97	%	70 - 130
			Toluene	2015/09/08		96	%	70 - 130
			Ethylbenzene	2015/09/08		102	%	70 - 130
			m & p-Xylene	2015/09/08		100	%	70 - 130
			o-Xylene	2015/09/08		104	%	70 - 130
			F1 (C6-C10)	2015/09/08		94	%	70 - 130
		Method Blank	1,4-Difluorobenzene (sur.)	2015/09/08		109	%	70 - 130
			4-Bromofluorobenzene (sur.)	2015/09/08		83	%	70 - 130
			D4-1,2-Dichloroethane (sur.)	2015/09/08		103	%	70 - 130
			Benzene	2015/09/08	<0.40		ug/L	
			Toluene	2015/09/08	<0.40		ug/L	
			Ethylbenzene	2015/09/08	<0.40		ug/L	
			m & p-Xylene	2015/09/08	<0.80		ug/L	
			o-Xylene	2015/09/08	<0.40		ug/L	
			Xylenes (Total)	2015/09/08	<0.80		ug/L	
			F1 (C6-C10) - BTEX	2015/09/08	<100		ug/L	
			F1 (C6-C10)	2015/09/08	<100		ug/L	
		RPD	Benzene	2015/09/08	NC		%	40
			Toluene	2015/09/08	NC		%	40
			Ethylbenzene	2015/09/08	NC		%	40
			m & p-Xylene	2015/09/08	NC		%	40
			o-Xylene	2015/09/08	NC		%	40
			Xylenes (Total)	2015/09/08	NC		%	40
			F1 (C6-C10) - BTEX	2015/09/08	NC		%	40
			F1 (C6-C10)	2015/09/08	NC		%	40
8030910	MWB	Matrix Spike	O-TERPHENYL (sur.)	2015/09/09		102	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/09		102	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2015/09/09		111	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2015/09/09		107	%	50 - 130
		Spiked Blank	O-TERPHENYL (sur.)	2015/09/09		100	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/09		100	%	70 - 130
			F3 (C16-C34 Hydrocarbons)	2015/09/09		108	%	70 - 130
			F4 (C34-C50 Hydrocarbons)	2015/09/09		103	%	70 - 130
		Method Blank	O-TERPHENYL (sur.)	2015/09/09		102	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/09	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2015/09/09	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2015/09/09	<50		mg/kg	
8031163	LSH	Matrix Spike [NB7353-02]	O-TERPHENYL (sur.)	2015/09/13		90	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/13		104	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2015/09/13		103	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2015/09/13		93	%	50 - 130
		Spiked Blank	O-TERPHENYL (sur.)	2015/09/13		89	%	50 - 130

EnGlobe Corp
Attention: ANDREW PASSALIS
Client Project #: PIN-2/PIN-4
P.O. #:
Site Location: CAPE YOUNG/ BYRON BAY

Quality Assurance Report (Continued)

Maxxam Job Number: EYKB577696

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
8031163	LSH	Spiked Blank	F2 (C10-C16 Hydrocarbons)	2015/09/13		103	%	70 - 130
			F3 (C16-C34 Hydrocarbons)	2015/09/13		102	%	70 - 130
			F4 (C34-C50 Hydrocarbons)	2015/09/13		92	%	70 - 130
		Method Blank	O-TERPHENYL (sur.)	2015/09/13		90	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/13	<0.10		mg/L	
			F3 (C16-C34 Hydrocarbons)	2015/09/13	<0.20		mg/L	
			F4 (C34-C50 Hydrocarbons)	2015/09/13	<0.20		mg/L	
		RPD [NB7361-02]	F2 (C10-C16 Hydrocarbons)	2015/09/13	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2015/09/13	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2015/09/13	NC		%	40
8031378	AN0	Method Blank	Moisture	2015/09/09	<0.30		%	
		RPD	Moisture	2015/09/09	1.7		%	20
8031761	RK3	Matrix Spike	Total Mercury (Hg)	2015/09/09		107	%	80 - 120
		Spiked Blank	Total Mercury (Hg)	2015/09/09		99	%	80 - 120
		Method Blank	Total Mercury (Hg)	2015/09/09	0.0039, RDL=0.0020		ug/L	
		RPD	Total Mercury (Hg)	2015/09/09	NC		%	20
8032413	MWB	Matrix Spike	O-TERPHENYL (sur.)	2015/09/10		87	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/10		94	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2015/09/10		93	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2015/09/10		88	%	50 - 130
		Spiked Blank	O-TERPHENYL (sur.)	2015/09/10		97	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/10		98	%	70 - 130
			F3 (C16-C34 Hydrocarbons)	2015/09/10		97	%	70 - 130
			F4 (C34-C50 Hydrocarbons)	2015/09/10		95	%	70 - 130
		Method Blank	O-TERPHENYL (sur.)	2015/09/10		112	%	50 - 130
			F2 (C10-C16 Hydrocarbons)	2015/09/10	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2015/09/10	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2015/09/10	<50		mg/kg	
		RPD	F2 (C10-C16 Hydrocarbons)	2015/09/10	NC		%	50
			F3 (C16-C34 Hydrocarbons)	2015/09/10	NC		%	50
			F4 (C34-C50 Hydrocarbons)	2015/09/10	NC		%	50
8032649	AN0	Method Blank	Moisture	2015/09/10	<0.30		%	
		RPD	Moisture	2015/09/10	2.3		%	20
8032674	PC5	Matrix Spike	Total Arsenic (As)	2015/09/11		103	%	80 - 120
			Total Cadmium (Cd)	2015/09/11		105	%	80 - 120
			Total Chromium (Cr)	2015/09/11		104	%	80 - 120
			Total Cobalt (Co)	2015/09/11		109	%	80 - 120
			Total Copper (Cu)	2015/09/11		104	%	80 - 120
			Total Lead (Pb)	2015/09/11		103	%	80 - 120
			Total Nickel (Ni)	2015/09/11		103	%	80 - 120
			Total Zinc (Zn)	2015/09/11		105	%	80 - 120
		Spiked Blank	Total Arsenic (As)	2015/09/11		104	%	80 - 120
			Total Cadmium (Cd)	2015/09/11		103	%	80 - 120
			Total Chromium (Cr)	2015/09/11		108	%	80 - 120
			Total Cobalt (Co)	2015/09/11		109	%	80 - 120
			Total Copper (Cu)	2015/09/11		107	%	80 - 120
			Total Lead (Pb)	2015/09/11		108	%	80 - 120
			Total Nickel (Ni)	2015/09/11		105	%	80 - 120
			Total Zinc (Zn)	2015/09/11		99	%	80 - 120
		Method Blank	Total Arsenic (As)	2015/09/11	<0.00020		mg/L	
			Total Cadmium (Cd)	2015/09/11	<0.000020		mg/L	
			Total Chromium (Cr)	2015/09/11	<0.0010		mg/L	
			Total Cobalt (Co)	2015/09/11	<0.00030		mg/L	
			Total Copper (Cu)	2015/09/11	<0.00020		mg/L	
			Total Lead (Pb)	2015/09/11	<0.00020		mg/L	

EnGlobe Corp
Attention: ANDREW PASSALIS
Client Project #: PIN-2/PIN-4
P.O. #:
Site Location: CAPE YOUNG/ BYRON BAY

Quality Assurance Report (Continued)

Maxxam Job Number: EYKB577696

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
8032674 PC5	Method Blank	Total Nickel (Ni)	2015/09/11	<0.00050		mg/L	
		Total Zinc (Zn)	2015/09/11	<0.0030		mg/L	
	RPD	Total Arsenic (As)	2015/09/11	14		%	20
		Total Chromium (Cr)	2015/09/11	NC		%	20
		Total Cobalt (Co)	2015/09/11	NC		%	20
		Total Copper (Cu)	2015/09/11	NC		%	20
		Total Lead (Pb)	2015/09/11	NC		%	20
		Total Nickel (Ni)	2015/09/11	NC		%	20
		Total Zinc (Zn)	2015/09/11	NC		%	20
8033544 WZ0	Matrix Spike	1,4-Difluorobenzene (sur.)	2015/09/12		94	%	60 - 140
		4-Bromofluorobenzene (sur.)	2015/09/12		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2015/09/12		101	%	60 - 130
		D4-1,2-Dichloroethane (sur.)	2015/09/12		103	%	60 - 140
		Benzene	2015/09/12		119	%	60 - 140
		Toluene	2015/09/12		117	%	60 - 140
		Ethylbenzene	2015/09/12		121	%	60 - 140
		m & p-Xylene	2015/09/12		120	%	60 - 140
		o-Xylene	2015/09/12		121	%	60 - 140
		F1 (C6-C10)	2015/09/12		88	%	60 - 140
	Spiked Blank	1,4-Difluorobenzene (sur.)	2015/09/12		83	%	60 - 140
		4-Bromofluorobenzene (sur.)	2015/09/12		94	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2015/09/12		106	%	60 - 130
		D4-1,2-Dichloroethane (sur.)	2015/09/12		62	%	60 - 140
		Benzene	2015/09/12		111	%	60 - 140
		Toluene	2015/09/12		109	%	60 - 140
		Ethylbenzene	2015/09/12		113	%	60 - 140
		m & p-Xylene	2015/09/12		115	%	60 - 140
		o-Xylene	2015/09/12		117	%	60 - 140
		F1 (C6-C10)	2015/09/12		106	%	60 - 140
	Method Blank	1,4-Difluorobenzene (sur.)	2015/09/12		94	%	60 - 140
		4-Bromofluorobenzene (sur.)	2015/09/12		94	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2015/09/12		109	%	60 - 130
		D4-1,2-Dichloroethane (sur.)	2015/09/12		102	%	60 - 140
		Benzene	2015/09/12	<0.0050		mg/kg	
		Toluene	2015/09/12	<0.020		mg/kg	
		Ethylbenzene	2015/09/12	<0.010		mg/kg	
		Xylenes (Total)	2015/09/12	<0.040		mg/kg	
		m & p-Xylene	2015/09/12	<0.040		mg/kg	
		o-Xylene	2015/09/12	<0.020		mg/kg	
		F1 (C6-C10) - BTEX	2015/09/12	<12		mg/kg	
		F1 (C6-C10)	2015/09/12	<12		mg/kg	
	RPD	Benzene	2015/09/12	NC		%	50
		Toluene	2015/09/12	NC		%	50
		Ethylbenzene	2015/09/12	NC		%	50
		Xylenes (Total)	2015/09/12	NC		%	50
		m & p-Xylene	2015/09/12	NC		%	50
		o-Xylene	2015/09/12	NC		%	50
		F1 (C6-C10) - BTEX	2015/09/12	NC		%	50
		F1 (C6-C10)	2015/09/12	NC		%	50
8033634 PC5	Matrix Spike	Total Arsenic (As)	2015/09/11		110	%	75 - 125
		Total Cadmium (Cd)	2015/09/11		107	%	75 - 125
		Total Chromium (Cr)	2015/09/11		114	%	75 - 125
		Total Cobalt (Co)	2015/09/11		103	%	75 - 125
		Total Copper (Cu)	2015/09/11		98	%	75 - 125
		Total Lead (Pb)	2015/09/11		105	%	75 - 125

EnGlobe Corp
Attention: ANDREW PASSALIS
Client Project #: PIN-2/PIN-4
P.O. #:
Site Location: CAPE YOUNG/ BYRON BAY

Quality Assurance Report (Continued)

Maxxam Job Number: EYKB577696

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
8033634 PC5	Matrix Spike	Total Mercury (Hg)	2015/09/11		117	%	75 - 125
		Total Nickel (Ni)	2015/09/11		103	%	75 - 125
		Total Zinc (Zn)	2015/09/11		NC	%	75 - 125
	QC Standard	Total Arsenic (As)	2015/09/11		130	%	50 - 150
		Total Chromium (Cr)	2015/09/11		117	%	41 - 159
		Total Cobalt (Co)	2015/09/11		119	%	75 - 125
		Total Copper (Cu)	2015/09/11		118	%	73 - 127
		Total Lead (Pb)	2015/09/11		110	%	54 - 146
		Total Nickel (Ni)	2015/09/11		126	%	61 - 139
		Total Zinc (Zn)	2015/09/11		121	%	72 - 128
	Spiked Blank	Total Arsenic (As)	2015/09/11		99	%	75 - 125
		Total Cadmium (Cd)	2015/09/11		95	%	75 - 125
		Total Chromium (Cr)	2015/09/11		97	%	75 - 125
		Total Cobalt (Co)	2015/09/11		95	%	75 - 125
		Total Copper (Cu)	2015/09/11		95	%	75 - 125
		Total Lead (Pb)	2015/09/11		94	%	75 - 125
		Total Mercury (Hg)	2015/09/11		105	%	75 - 125
		Total Nickel (Ni)	2015/09/11		95	%	75 - 125
		Total Zinc (Zn)	2015/09/11		95	%	75 - 125
	Method Blank	Total Arsenic (As)	2015/09/11	<1.0		mg/kg	
		Total Cadmium (Cd)	2015/09/11	<0.050		mg/kg	
		Total Chromium (Cr)	2015/09/11	<1.0		mg/kg	
		Total Cobalt (Co)	2015/09/11	<0.50		mg/kg	
		Total Copper (Cu)	2015/09/11	<1.0		mg/kg	
		Total Lead (Pb)	2015/09/11	<0.50		mg/kg	
		Total Mercury (Hg)	2015/09/11	<0.050		mg/kg	
		Total Nickel (Ni)	2015/09/11	<1.0		mg/kg	
		Total Zinc (Zn)	2015/09/11	<10		mg/kg	
	RPD	Total Arsenic (As)	2015/09/11	11		%	35
		Total Cadmium (Cd)	2015/09/11	NC		%	35
		Total Chromium (Cr)	2015/09/11	28		%	35
		Total Cobalt (Co)	2015/09/11	13		%	35
		Total Copper (Cu)	2015/09/11	9.3		%	35
		Total Lead (Pb)	2015/09/11	13		%	35
		Total Mercury (Hg)	2015/09/11	NC		%	35
		Total Nickel (Ni)	2015/09/11	10		%	35
		Total Zinc (Zn)	2015/09/11	NC		%	35
8034327 PC5	Matrix Spike	Total Arsenic (As)	2015/09/11		93	%	75 - 125
		Total Cadmium (Cd)	2015/09/11		89	%	75 - 125
		Total Chromium (Cr)	2015/09/11		93	%	75 - 125
		Total Cobalt (Co)	2015/09/11		84	%	75 - 125
		Total Copper (Cu)	2015/09/11		89	%	75 - 125
		Total Lead (Pb)	2015/09/11		88	%	75 - 125
		Total Mercury (Hg)	2015/09/11		93	%	75 - 125
		Total Nickel (Ni)	2015/09/11		95	%	75 - 125
		Total Zinc (Zn)	2015/09/11		93	%	75 - 125
	QC Standard	Total Arsenic (As)	2015/09/11		111	%	50 - 150
		Total Chromium (Cr)	2015/09/11		93	%	41 - 159
		Total Cobalt (Co)	2015/09/11		88	%	75 - 125
		Total Copper (Cu)	2015/09/11		93	%	73 - 127
		Total Lead (Pb)	2015/09/11		93	%	54 - 146
		Total Nickel (Ni)	2015/09/11		103	%	61 - 139
		Total Zinc (Zn)	2015/09/11		96	%	72 - 128
	Spiked Blank	Total Arsenic (As)	2015/09/11		98	%	75 - 125
		Total Cadmium (Cd)	2015/09/11		94	%	75 - 125

EnGlobe Corp
Attention: ANDREW PASSALIS
Client Project #: PIN-2/PIN-4
P.O. #:
Site Location: CAPE YOUNG/ BYRON BAY

Quality Assurance Report (Continued)

Maxxam Job Number: EYKB577696

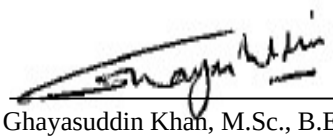
QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
8034327 PC5	Spiked Blank	Total Chromium (Cr)	2015/09/11		94	%	75 - 125
		Total Cobalt (Co)	2015/09/11		87	%	75 - 125
		Total Copper (Cu)	2015/09/11		95	%	75 - 125
		Total Lead (Pb)	2015/09/11		94	%	75 - 125
		Total Mercury (Hg)	2015/09/11		99	%	75 - 125
		Total Nickel (Ni)	2015/09/11		95	%	75 - 125
		Total Zinc (Zn)	2015/09/11		95	%	75 - 125
	Method Blank	Total Arsenic (As)	2015/09/11	<1.0		mg/kg	
		Total Cadmium (Cd)	2015/09/11	<0.050		mg/kg	
		Total Chromium (Cr)	2015/09/11	<1.0		mg/kg	
		Total Cobalt (Co)	2015/09/11	<0.50		mg/kg	
		Total Copper (Cu)	2015/09/11	<1.0		mg/kg	
		Total Lead (Pb)	2015/09/11	<0.50		mg/kg	
		Total Mercury (Hg)	2015/09/11	<0.050		mg/kg	
		Total Nickel (Ni)	2015/09/11	<1.0		mg/kg	
		Total Zinc (Zn)	2015/09/11	<10		mg/kg	
	RPD	Total Arsenic (As)	2015/09/11	NC		%	35
		Total Cadmium (Cd)	2015/09/11	NC		%	35
		Total Chromium (Cr)	2015/09/11	7.9		%	35
		Total Cobalt (Co)	2015/09/11	8.4		%	35
		Total Copper (Cu)	2015/09/11	3.9		%	35
		Total Lead (Pb)	2015/09/11	11		%	35
		Total Mercury (Hg)	2015/09/11	NC		%	35
		Total Nickel (Ni)	2015/09/11	5.0		%	35
		Total Zinc (Zn)	2015/09/11	NC		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

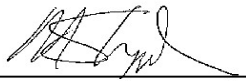
Validation Signature Page

Maxxam Job #: B577696

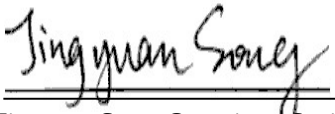
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ghayasuddin Khan, M.Sc., B.Ed., P.Chem, Scientific Specialist



Michael Sheppard, Senior Scientific Specialist



Jingyuan Song, Organics – Senior Analyst

Veronica Falk, Scientific Specialist

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your P.O. #: N/A
Your Project #: B577696
Your C.O.C. #: na

Attention:Alina Kenstavicius

Maxxam Analytics
2021 41st Ave NE
Calgary, AB
T2E 6P2

Report Date: 2015/09/17
Report #: R3664629
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B5I1712
Received: 2015/09/09, 10:00

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Moisture	7	N/A	2015/09/11	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	1	N/A	2015/09/14	CAM SOP-00445	Carter 2nd ed 51.2 m
Polychlorinated Biphenyl in Soil	1	2015/09/12	2015/09/12	CAM SOP-00309	EPA 8082A m
Polychlorinated Biphenyl in Soil	7	2015/09/14	2015/09/14	CAM SOP-00309	EPA 8082A m

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Polychlorinated Biphenyl in Water	2	2015/09/11	2015/09/12	CAM SOP-00309	EPA 8082A m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Andrea Rieth, Project Manager
Email: ARieth@maxxam.ca
Phone# (905)817-5787 Ext:5787

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

RESULTS OF ANALYSES OF SOIL

Maxxam ID		AYJ405	AYJ407	AYJ408	AYJ409		
Sampling Date		2015/08/15	2015/08/17	2015/08/17	2015/08/17		
COC Number		na	na	na	na		
	UNITS	NB7352 \ P215-2WA	NB7355 \ P415-8WA	NB7356 \ P415-4A	NB7357 \ P415-21A	RDL	QC Batch
Inorganics							
Moisture	%	17	10	11	11	1.0	4187240

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		AYJ410	AYJ411	AYJ412		AYN937		
Sampling Date		2015/08/18	2015/08/17	2015/08/17		2015/08/17		
COC Number		na	na	na		na		
	UNITS	NB7358 \ P415-15A	NB7359 \ P415-12A	NB7360 \ P415-23B	QC Batch	NB7362 \ P415-3WB	RDL	QC Batch
Inorganics								
Moisture	%	15	46	23	4187240	9.9	1.0	4188288

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		AYJ405	AYJ407	AYJ408	AYJ409		
Sampling Date		2015/08/15	2015/08/17	2015/08/17	2015/08/17		
COC Number		na	na	na	na		
	UNITS	NB7352 \ P215-2WA	NB7355 \ P415-8WA	NB7356 \ P415-4A	NB7357 \ P415-21A	RDL	QC Batch
PCBs							
Aroclor 1016	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Aroclor 1221	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Aroclor 1232	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Aroclor 1248	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Aroclor 1254	ug/g	<0.010	0.015	<0.010	<0.010	0.010	4188130
Aroclor 1260	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Aroclor 1262	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Aroclor 1268	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	4188130
Total PCB	ug/g	<0.010	0.015	<0.010	<0.010	0.010	4188130
Surrogate Recovery (%)							
Decachlorobiphenyl	%	96	93	100	88	N/A	4188130

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		AYJ410		AYJ411		AYJ412		
Sampling Date		2015/08/18		2015/08/17		2015/08/17		
COC Number		na		na		na		
	UNITS	NB7358 \ P415-15A	RDL	NB7359 \ P415-12A	RDL	NB7360 \ P415-23B	RDL	QC Batch
PCBs								
Aroclor 1016	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1221	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1232	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1242	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1248	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1254	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1260	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1262	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Aroclor 1268	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Total PCB	ug/g	<0.010	0.010	<0.020	0.020	<0.010	0.010	4188130
Surrogate Recovery (%)								
Decachlorobiphenyl	%	95	N/A	80	N/A	88	N/A	4188130

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		AYJ412		AYN937		
Sampling Date		2015/08/17		2015/08/17		
COC Number		na		na		
	UNITS	**NB7360 \ P415-23B Lab-Dup**	**QC Batch**	**NB7362 \ P415-3WB**	**RDL**	**QC Batch**
PCBs						
Aroclor 1016	ug/g	<0.010	4188130	<0.010	0.010	4187559
Aroclor 1221	ug/g	<0.010	4188130	<0.010	0.010	4187559
Aroclor 1232	ug/g	<0.010	4188130	<0.010	0.010	4187559
Aroclor 1242	ug/g	<0.010	4188130	<0.010	0.010	4187559
Aroclor 1248	ug/g	<0.010	4188130	<0.010	0.010	4187559
Aroclor 1254	ug/g	<0.010	4188130	<0.010	0.010	4187559
Aroclor 1260	ug/g	0.011	4188130	<0.010	0.010	4187559
Aroclor 1262	ug/g	<0.010	4188130	<0.010	0.010	4187559
Aroclor 1268	ug/g	<0.010	4188130	<0.010	0.010	4187559
Total PCB	ug/g	0.011	4188130	<0.010	0.010	4187559
Surrogate Recovery (%)						
Decachlorobiphenyl	%	84	4188130	93	N/A	4187559

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		AYJ406	AYJ413		
Sampling Date		2015/08/15	2015/08/18		
COC Number		na	na		
	UNITS	NB7353 \ P215-2W	NB7361 \ P415-3W	RDL	QC Batch
PCBs					
Aroclor 1016	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1221	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1232	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1242	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1248	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1254	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1260	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1262	ug/L	<0.05	<0.05	0.05	4186524
Aroclor 1268	ug/L	<0.05	<0.05	0.05	4186524
Total PCB	ug/L	<0.05	<0.05	0.05	4186524
Surrogate Recovery (%)					
Decachlorobiphenyl	%	94	84	N/A	4186524

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

TEST SUMMARY

Maxxam ID: AYJ405 **Collected:** 2015/08/15
Sample ID: NB7352 \ P215-2WA **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4187240	N/A	2015/09/11	Chun Yan
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

Maxxam ID: AYJ406 **Collected:** 2015/08/15
Sample ID: NB7353 \ P215-2W **Shipped:**
Matrix: Water **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Water	GC/ECD	4186524	2015/09/11	2015/09/12	Li Peng

Maxxam ID: AYJ407 **Collected:** 2015/08/17
Sample ID: NB7355 \ P415-8WA **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4187240	N/A	2015/09/11	Chun Yan
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

Maxxam ID: AYJ408 **Collected:** 2015/08/17
Sample ID: NB7356 \ P415-4A **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4187240	N/A	2015/09/11	Chun Yan
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

Maxxam ID: AYJ409 **Collected:** 2015/08/17
Sample ID: NB7357 \ P415-21A **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4187240	N/A	2015/09/11	Chun Yan
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

Maxxam ID: AYJ410 **Collected:** 2015/08/18
Sample ID: NB7358 \ P415-15A **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4187240	N/A	2015/09/11	Chun Yan
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

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Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

TEST SUMMARY

Maxxam ID: AYJ411 **Collected:** 2015/08/17
Sample ID: NB7359 \ P415-12A **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4187240	N/A	2015/09/11	Chun Yan
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

Maxxam ID: AYJ412 **Collected:** 2015/08/17
Sample ID: NB7360 \ P415-23B **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4187240	N/A	2015/09/11	Chun Yan
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

Maxxam ID: AYJ412 Dup **Collected:** 2015/08/17
Sample ID: NB7360 \ P415-23B **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	4188130	2015/09/14	2015/09/14	Li Peng

Maxxam ID: AYJ413 **Collected:** 2015/08/18
Sample ID: NB7361 \ P415-3W **Shipped:**
Matrix: Water **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Water	GC/ECD	4186524	2015/09/11	2015/09/12	Li Peng

Maxxam ID: AYN937 **Collected:** 2015/08/17
Sample ID: NB7362 \ P415-3WB **Shipped:**
Matrix: Soil **Received:** 2015/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4188288	N/A	2015/09/14	Valentina Kaftani
Polychlorinated Biphenyl in Soil	GC/ECD	4187559	2015/09/12	2015/09/12	Svitlana Shaula

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Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	3.0°C

Revised Report (2015/09/17): Additional sample has been included in the report.

Sample AYJ411-01 : PCB Analysis: Detection limits were adjusted for high moisture content.

Results relate only to the items tested.

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Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4186524	LPG	Matrix Spike	Decachlorobiphenyl	2015/09/12		75	%	60 - 130
			Aroclor 1260	2015/09/12		81	%	60 - 130
			Total PCB	2015/09/12		81	%	60 - 130
4186524	LPG	Spiked Blank	Decachlorobiphenyl	2015/09/12		67	%	60 - 130
			Aroclor 1260	2015/09/12		76	%	60 - 130
			Total PCB	2015/09/12		76	%	60 - 130
4186524	LPG	Method Blank	Decachlorobiphenyl	2015/09/12		98	%	60 - 130
			Aroclor 1016	2015/09/12	<0.05		ug/L	
			Aroclor 1221	2015/09/12	<0.05		ug/L	
			Aroclor 1232	2015/09/12	<0.05		ug/L	
			Aroclor 1242	2015/09/12	<0.05		ug/L	
			Aroclor 1248	2015/09/12	<0.05		ug/L	
			Aroclor 1254	2015/09/12	<0.05		ug/L	
			Aroclor 1260	2015/09/12	<0.05		ug/L	
			Aroclor 1262	2015/09/12	<0.05		ug/L	
			Aroclor 1268	2015/09/12	<0.05		ug/L	
			Total PCB	2015/09/12	<0.05		ug/L	
4186524	LPG	RPD	Aroclor 1016	2015/09/12	NC		%	40
			Aroclor 1221	2015/09/12	NC		%	40
			Aroclor 1232	2015/09/12	NC		%	40
			Aroclor 1242	2015/09/12	NC		%	30
			Aroclor 1248	2015/09/12	NC		%	30
			Aroclor 1254	2015/09/12	NC		%	30
			Aroclor 1260	2015/09/12	NC		%	30
			Aroclor 1262	2015/09/12	NC		%	40
			Aroclor 1268	2015/09/12	NC		%	40
			Total PCB	2015/09/12	NC		%	40
4187240	NS3	RPD	Moisture	2015/09/11	3.0		%	20
4187559	SVS	Matrix Spike	Decachlorobiphenyl	2015/09/12		99	%	60 - 130
			Aroclor 1260	2015/09/12		79	%	60 - 130
			Total PCB	2015/09/12		79	%	60 - 130
4187559	SVS	Spiked Blank	Decachlorobiphenyl	2015/09/12		103	%	60 - 130
			Aroclor 1260	2015/09/12		95	%	60 - 130
			Total PCB	2015/09/12		95	%	60 - 130
4187559	SVS	Method Blank	Decachlorobiphenyl	2015/09/12		93	%	60 - 130
			Aroclor 1016	2015/09/12	<0.010		ug/g	
			Aroclor 1221	2015/09/12	<0.010		ug/g	
			Aroclor 1232	2015/09/12	<0.010		ug/g	
			Aroclor 1242	2015/09/12	<0.010		ug/g	
			Aroclor 1248	2015/09/12	<0.010		ug/g	
			Aroclor 1254	2015/09/12	<0.010		ug/g	
			Aroclor 1260	2015/09/12	<0.010		ug/g	
			Aroclor 1262	2015/09/12	<0.010		ug/g	
			Aroclor 1268	2015/09/12	<0.010		ug/g	
			Total PCB	2015/09/12	<0.010		ug/g	
4187559	SVS	RPD	Aroclor 1242	2015/09/12	NC		%	50
			Aroclor 1248	2015/09/12	NC		%	50
			Aroclor 1254	2015/09/12	NC		%	50
			Aroclor 1260	2015/09/12	NC		%	50
			Total PCB	2015/09/12	NC		%	50
4188130	LPG	Matrix Spike [AYJ412-01]	Decachlorobiphenyl	2015/09/14		93	%	60 - 130
			Aroclor 1260	2015/09/14		76	%	60 - 130
			Total PCB	2015/09/14		76	%	60 - 130

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Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4188130	LPG	Spiked Blank	Decachlorobiphenyl	2015/09/14		104	%	60 - 130
			Aroclor 1260	2015/09/14		92	%	60 - 130
			Total PCB	2015/09/14		92	%	60 - 130
4188130	LPG	Method Blank	Decachlorobiphenyl	2015/09/14		98	%	60 - 130
			Aroclor 1016	2015/09/14	<0.010		ug/g	
			Aroclor 1221	2015/09/14	<0.010		ug/g	
			Aroclor 1232	2015/09/14	<0.010		ug/g	
			Aroclor 1242	2015/09/14	<0.010		ug/g	
			Aroclor 1248	2015/09/14	<0.010		ug/g	
			Aroclor 1254	2015/09/14	<0.010		ug/g	
			Aroclor 1260	2015/09/14	<0.010		ug/g	
			Aroclor 1262	2015/09/14	<0.010		ug/g	
			Aroclor 1268	2015/09/14	<0.010		ug/g	
			Total PCB	2015/09/14	<0.010		ug/g	
4188130	LPG	RPD [AYJ412-01]	Aroclor 1016	2015/09/14	NC		%	50
			Aroclor 1221	2015/09/14	NC		%	50
			Aroclor 1232	2015/09/14	NC		%	50
			Aroclor 1242	2015/09/14	NC		%	50
			Aroclor 1248	2015/09/14	NC		%	50
			Aroclor 1254	2015/09/14	NC		%	50
			Aroclor 1260	2015/09/14	NC		%	50
			Aroclor 1262	2015/09/14	NC		%	50
			Aroclor 1268	2015/09/14	NC		%	50
			Total PCB	2015/09/14	NC		%	50
4188288	VGS	RPD	Moisture	2015/09/14	NC		%	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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Maxxam Job #: B5I1712
Report Date: 2015/09/17

Maxxam Analytics
Client Project #: B577696
Your P.O. #: N/A

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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SILA REMEDIATION
4495 BL. WILFRID- HAMEL, BUR 1
QUEBEC PQ
CANADA G1P 2T7

Inv Attn: JEAN-PIERRE PELLETIER

Task Order:
Line Item:

Printed: 2015/09/06 Version 2
Reception Date: 2015/09/04
Reception Time: 18:55
Login Date: 2015/09/06
REQUIRED DATE: 2015/09/22, 18:00
Quote Number:

Report: EnGlobe Corp
QUEBEC
1260, boul. Lebourgneuf Blvd
bureau/suite 250
Québec QC
CANADA G2K 2G2

Attention: ANDREW PASSALIS
PHONE: (418) 626 - 1688Ext:
FAX: (418) 647 - 2540
EMAIL: andrew.passalis@gmail.com

Project Coordinator: AKM

P.O. Number:
PROJECT NUMBER: PIN-2/PIN-4
Site Location: CAPE YOUNG/ BYRON BAY
Site #:
Client Number: 4781
Rpt Address #: 32287
Q.C. Samples: No

Maxxam Number	Client Sample ID/Report ID	Cont's	Store Code	Recd. OK	Sampling Date	Matrix	Test Codes
NB7352-01R	P215-2WA P215-2WA	1-COR2	N/A-INS-0	Yes	2015/08/15	SOIL	B-HOT, CR6AC-S, ICPMSAB-S BTEXHSAB-S, CCMEPREP-S F24FIDE-S, F4GRVE-S, MOIST-S VOLPREPE-S, DISPOSAL
NB7352-02R	P215-2WA P215-2WA	1-COR2	N/A-INS-0	Yes	2015/08/15	SOIL	ESUBPCB-S
NB7353-01R	P215-2W P215-2W	1-CM	N/A-INS-0	Yes	2015/08/15	WATER	CDLOW-T, ICPAB-T, ICPMSABL-T DISPOSAL
NB7353-02R	P215-2W P215-2W	2-CF2	N/A-INS-0	Yes	2015/08/15	WATER	F24FIDE-W
NB7353-03R	P215-2W P215-2W	2-1LAG	N/A-INS-0	Yes	2015/08/15	WATER	ESUBPCB-W
NB7353-04R	P215-2W P215-2W	3-CBTX	N/A-INS-0	Yes	2015/08/15	WATER	BTEXHSAB-W
NB7353-05R	P215-2W P215-2W	1-THG	N/A-INS-0	Yes	2015/08/15	WATER	HGAFLL-T
NB7355-01R	P415-8WA P415-8WA	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	B-HOT, CR6AC-S, ICPMSAB-S BTEXHSAB-S, CCMEPREP-S F24FIDE-S, F4GRVE-S, MOIST-S VOLPREPE-S, DISPOSAL
NB7355-02R	P415-8WA P415-8WA	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	ESUBPCB-S
NB7356-01R	P415-4A P415-4A	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	B-HOT, CR6AC-S, ICPMSAB-S BTEXHSAB-S, CCMEPREP-S F24FIDE-S, F4GRVE-S, MOIST-S VOLPREPE-S, DISPOSAL
NB7356-02R	P415-4A P415-4A	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	ESUBPCB-S
NB7357-01R	P415-21A P415-21A	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	B-HOT, CR6AC-S, ICPMSAB-S BTEXHSAB-S, CCMEPREP-S F24FIDE-S, F4GRVE-S, MOIST-S VOLPREPE-S, DISPOSAL
NB7357-02R	P415-21A P415-21A	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	ESUBPCB-S
NB7358-01R	P415-15A P415-15A	1-COR2	N/A-INS-0	Yes	2015/08/18	SOIL	B-HOT, CR6AC-S, ICPMSAB-S BTEXHSAB-S, CCMEPREP-S F24FIDE-S, F4GRVE-S, MOIST-S VOLPREPE-S, DISPOSAL
NB7358-02R	P415-15A P415-15A	1-COR2	N/A-INS-0	Yes	2015/08/18	SOIL	ESUBPCB-S
NB7359-01R	P415-12A P415-12A	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	B-HOT, CR6AC-S, ICPMSAB-S BTEXHSAB-S, CCMEPREP-S F24FIDE-S, F4GRVE-S, MOIST-S VOLPREPE-S, DISPOSAL

Continued...

Report Name: Entry

Job #: B577696

Maxxam Number	Client Sample ID/Report ID	Cont's	Store Code	Recd. OK	Sampling Date	Matrix	Test Codes
NB7359-02R	P415-12A	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	ESUBPCB-S
	P415-12A						
NB7360-01R	P415-23B	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	B-HOT, CR6AC-S, ICPMSAB-S
	P415-23B						BTEXHSAB-S, CCMEPREP-S
							F24FIDE-S, F4GRVE-S, MOIST-S
NB7360-02R	P415-23B	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	VOLPREPE-S, DISPOSAL
	P415-23B						ESUBPCB-S
NB7361-01R	P415-3W	1-CM	N/A-INS-0	Yes	2015/08/18	WATER	CDLOW-T, ICPAB-T, ICPMSABL-T
	P415-3W						DISPOSAL
NB7361-02R	P415-3W	2-CF2	N/A-INS-0	Yes	2015/08/18	WATER	F24FIDE-W
	P415-3W						
NB7361-03R	P415-3W	2-1LAG	N/A-INS-0	Yes	2015/08/18	WATER	ESUBPCB-W
	P415-3W						
NB7361-04R	P415-3W	1-THG	N/A-INS-0	Yes	2015/08/18	WATER	HGAFLL-T
	P415-3W						
NB7362-01R	P415-3WB	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	ARCHIVE
	P415-3WB						
NB7362-02R	P415-3WB	1-COR2	N/A-INS-0	Yes	2015/08/17	SOIL	ARCHIVE
	P415-3WB						

Remarks: HD0
PROCEED WITH EXPIRED SAMPLES AS PER AKM 2015/09/06 @ 15:07
MCAL 3/2/2

Inspected by: JLT
Date: 2015/09/06
Time: 16:16

Approved by:
Date:
Time:

Date of Sample Disposal:
Disposal by:

Continued...

Maxxam
A Bureau Veritas Group Company

4606 Canada Way, Burnaby, BC Canada V5G 1K5 Ph: 604 734 7276 Toll Free: 1 800 665 8566 Fax: 604 731 2386

CHAIN OF CUSTODY RECORD

Page: 1 of 1

Maxxam Job#: 259

G 102365

Invoice To: Require Report? Yes [X] No [ ]

Company Name: Sila Remediation
Contact Name: J.P. Pelletiès
Address: 1260 boul Lebourgneuf Québec PC: G2K 2G2
Phone / Fax#: Ph: Fax:
E-mail: jean-pierre.pelletier@englobecorp.com

Report To:

Company Name: Englobe Corp.
Contact Name:
Address: Same
PC:
Phone / Fax#: Ph: Fax:
E-mail: andrew.passalis@gmail.com

PO #:	
Quotation #:	KITIK13
Project #:	B40832
Proj. Name:	PIN-2 / PIN-4
Location:	Cape Young / Byron Bay
Sampled By:	A. Passalis

REGULATORY REQUIREMENTS SERVICE REQUESTED:

- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other
- [ ] DRINKING WATER

- [X] Regular Turn Around Time (TAT) (5 days for most tests)
- [ ] RUSH (Please contact the lab) [ ] 1 Day [ ] 2 Day [ ] 3 Day
- Date Required:

Special Instructions:

Return Cooler [ ] Ship Sample Bottles (please specify) [ ]

Soil + Water - Metals to include: (As, Cr, Cd, Co, Cu, Pb, Ni, Zn, Hg)

ANALYSIS: BTEX/VPH, VOC/VPH, EPH, PAH, MTBE, TEH, LEPH/HEPH, CCME-PHC (Fractions 1-4 Plus BTEX), CCME-PHC (Fractions 2-4), CCME BTEX (Fraction 1 Plus BTEX), PCB, Phenols by 4AAP, Phenols by GCMS, TOG, MOG, SWOG, Dissolved Metals (Field Filtered? Y/N, Field Acidified? Y/N), Totals Metals Field Acidified? Y/N, Nitrate, Fecal, Total & E.Coli, Asbestos, METALS (As, Cd, Cr, Co, Cu, Pb, Ni, Zn, Hg), CONTAINERS, HOLD

#	Sample Identification	Lab Identification	Sample Type	Date/Time Sampled	CCME-PHC (Fractions 1-4 Plus BTEX)	PCB	Totals Metals Field Acidified	METALS (As, Cd, Cr, Co, Cu, Pb, Ni, Zn, Hg)	CONTAINERS
1	P215-2WA		Soil	15/8/15	X	X		X	2
2	P215-2W		Water	"	X	X	X		7
3	P415-3WA		Soil	15/8/17	X	X		X	2
4	P415-8WA		Soil	15/8/17	X	X		X	2
5	P415-4A		Soil	15/8/17	X	X		X	2
6	P415-21A		Soil	15/8/18	X	X		X	2
7	P415-15A		Soil	15/8/17	X	X		X	2
8	P415-12A		Soil	15/8/17	X	X		X	2
9	P415-23B		Soil	15/8/18	X	X		X	2
10	P415-3W		~~Soil~~ Water	15/8/17	X	X			7
11									
12									

Samples are from a Drinking Water Source? YES / NO X
Does source supply multiple households? YES / NO

RECEIVED IN YELLOWKNIFE
By: [signature] 18:55
2015-09-04

Temp: 4, 5, 5

Laboratory Use Only

*Relinquished by:	Date (YY/MM/DD):	Time:	Received by:	Date (YY/MM/DD):	Time:	Time Sensitive	Temperature on Receipt (°C)	Custody Seal Intact on Cooler?
[signature]	15/8/19	900	[signature] Jesse Luong	15/09/06	0900	[ ]	3, 2, 2	Yes [X] No [ ]

*IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

COC-1020 (05/10)

Maxxam International Corporation o/a Maxxam Analytics

ICE-Y

JLT
INS-0018
Alina Konstavicius
B577696
04-Sep-15 18:55

Continued...

09-Sep-15 10:00
Andrea Rieth
B5I1712

MAF ENV-698

MAXXAM ANALYTICS
4000 19st N.E
Calgary, Alberta, T2E 6P8
Phone: (403) 291-3077
Fax: (403) 291-9468

SILA REMEDIATION
Maxxam PM Alina Kenstavicius

SUBCONTRACTING REQUEST FORM

To: Maxxam Ontario (From Calgary)

Job# B577696

☐ Yes ☒ No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
☐ Yes ☒ No Special Protocol (if yes, Protocol _____)

Sample ID	Matrix	Test(s) Required	Container	Date Sampled	Date Required
NB7352-02R \ P215-2WA	SOIL	PCB in Soil - Subcontract	1(COR2)	2015/08/15	2015/09/21
NB7353-03R \ P215-2W	WATER	PCB in Water - Subcontract	2(1LAG)	2015/08/15	2015/09/21
NB7355-02R \ P415-8WA	SOIL	PCB in Soil - Subcontract	1(COR2)	2015/08/17	2015/09/21
NB7356-02R \ P415-4A	SOIL	PCB in Soil - Subcontract	1(COR2)	2015/08/17	2015/09/21
NB7357-02R \ P415-21A	SOIL	PCB in Soil - Subcontract	1(COR2)	2015/08/17	2015/09/21
NB7358-02R \ P415-15A	SOIL	PCB in Soil - Subcontract	1(COR2)	2015/08/18	2015/09/21
NB7359-02R \ P415-12A	SOIL	PCB in Soil - Subcontract	1(COR2)	2015/08/17	2015/09/21
NB7360-02R \ P415-23B	SOIL	PCB in Soil - Subcontract	1(COR2)[1]	2015/08/17	2015/09/21
NB7361-03R \ P415-3W	WATER	PCB in Water - Subcontract	2(1LAG)	2015/08/18	2015/09/21

	Temp. 1	Temp. 2	Temp. 3			
Cooler #1	4	3	7	Custody Seal Present	YES ✓	NO
				Custody Seal Intact	YES ✓	NO
				Ice Present Upon Receipt	YES ✓	NO
Cooler #2	2	3	4	Custody Seal Present	YES ✓	NO
				Custody Seal Intact	YES ✓	NO
				Ice Present Upon Receipt	YES ✓	NO
Cooler #3				Custody Seal Present	YES	NO
				Custody Seal Intact	YES	NO
				Ice Present Upon Receipt	YES	NO

Receiving Maxxam Location: Maxxam Ontario (From Calgary) JOB # _____

Relinquished by (Sign) _____ (Print) Helen Dong Date and Time 2015/09/08 1000

Received by (Sign) _____ (Print) ASAD BHATTI Date and Time 2015/09/09 10:00

Continued...

MAXXAM ANALYTICS
4000 19st N.E
Calgary, Alberta, T2E 6P8
Phone: (403) 291-3077
Fax: (403) 291-9468

Maxxam

SILA REMED
Maxxam PM Alina Kensta

SUBCONTRACTING REQUEST FORM

NOTES:
1) Please call us if due date cannot be met. Please reference Sample ID on your report.
2) Include copy of this completed form, Client COC & signed final report to **calgarycustomerservice@maxxamanalytics.com**

Reporting Requirements:
National:
Regional:

SHIPPING INSTRUCTIONS

☐ Ship Immediately (highlight Yellow)
☐ Requires 9am
☐ Requires Sat. Delivery
☐ Regular Ship next available day
☐ Ship Cold
☐ Ship Room Temp
☐ Ship Frozen
☐ COC Must be Attached

Sender (Print) _____ Initial _____

SHIPPING DEPARTMENT CHECKLIST

☐ Correct Shipping location
☐ Correct Sample Ids (Paperwork vs Bottles)
☐ Yes ☐ No Special-Cooler, Ice, Tape-custody seal, Date&Sign
Date Shipped _____ Number of coolers _____
Shipper (Print) _____ Initial _____

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Report Transmission Cover Page

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Contact & Affiliation	Address	Delivery Commitments
Angela Lyster Exova - Employees	Bay 5, 2712 - 37 Avenue, c/o Exova Calgary, Alberta T1Y 5L3 Phone: (403) 291-2022 Fax: (403) 291-2021 Email: angela.lyster@exova.com	On [Report Approval] send (Test Report, COC) by Email - Single Report
Andrew Passalis SILA Remediation	350, rue Franquet Sainte-Foy, Quebec G1P 4P3 Phone: (204) 791-4938 Fax: (418) 653-3583 Email: andrew.passalis@gmail.com	On [Report Approval] send (COC, Test Report) by Email - Single Report On [Report Approval] send (Test Report, COC) by Email - Single Report
Jean-Pierre Pelletier SILA Remediation	250-1260 Boul Lebourgneuf Quebec, Quebec G2K 2G2 Phone: (581) 984-2585 Fax: null Email: jean-pierre.pelletier@lvm.ca	On [Report Approval] send (COC, Test Report) by Email - Single Report On [Report Approval] send (COC, Test Report) by Email - Single Report On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report

Notes To Clients:

- Report was issued to include QC ALL report required by Jean-Pierre Pelletier of SILA Remediation. Previous report 2036229.
- Report was issued to remove the metals not originally requested and to adjust detection limits for extractable hydrocarbons and PCB's as requested by Jean-Pierre Pelletier of Englobe. Previous report 2039565.
- Note that due to required lower detection limit for PCB analysis in both water and soil the Nominal Detection limit was set to 0.05.

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Reference Number		1089482-1	1089482-2	1089482-3	
Sample Date		Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
Sample Time		NA	NA	NA	
Sample Location					
Sample Description		P215-1WA	P215-1WB	P215-2WA	
Matrix		Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.05	0.02	<0.01	0.01
Arsenic	Strong Acid Extractable	mg/kg	4.5	3.4	2.8	0.2
Cadmium	Strong Acid Extractable	mg/kg	0.33	0.18	0.09	0.01
Chromium	Strong Acid Extractable	mg/kg	5.1	3.5	5.2	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.1	1.1	1.7	0.1
Copper	Strong Acid Extractable	mg/kg	7.7	4.5	3.3	1
Lead	Strong Acid Extractable	mg/kg	3.0	2.4	2.4	0.1
Nickel	Strong Acid Extractable	mg/kg	6.3	3.3	3.8	0.5
Zinc	Strong Acid Extractable	mg/kg	17	11	12	1
Mono-Aromatic Hydrocarbons - Soil						
Benzene	Dry Weight	mg/kg	<0.005	<0.005	<0.005	0.005
Toluene	Dry Weight	mg/kg	<0.02	<0.02	<0.02	0.02
Ethylbenzene	Dry Weight	mg/kg	<0.010	<0.010	<0.010	0.01
Total Xylenes (m,p,o)	Dry Weight	mg/kg	<0.03	<0.03	<0.03	0.03
Volatile Petroleum Hydrocarbons - Soil						
Extraction Date	Volatiles		22-Aug-15	22-Aug-15	22-Aug-15	
F1 C6-C10	Dry Weight	mg/kg	<10	<10	<10	10
F1 -BTEX	Dry Weight	mg/kg	<10	<10	<10	10
Extractable Petroleum Hydrocarbons - Soil						
Extraction Date	Total Extractables		22-Aug-15	22-Aug-15	22-Aug-15	
F2c C10-C16	Dry Weight	mg/kg	<40	<40	<40	40
F3c C16-C34	Dry Weight	mg/kg	77	41	<40	40
F4c C34-C50	Dry Weight	mg/kg	57	<40	<40	40
F4HTGCc C34-C50+	Dry Weight	mg/kg	78	53	<40	40
% C50+		%	13.6	14.8	<5	
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	51.80	22.20	13.70	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1221	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1232	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1242	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1248	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1254	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

		Reference Number	1089482-1	1089482-2	1089482-3	
		Sample Date	Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P215-1WA	P215-1WB	P215-2WA	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Polychlorinated Biphenyls - Soil - Continued						
Aroclor 1260	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1262	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1268	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Total PCBs	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	130	130	50-150

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Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

		Reference Number	1089482-4	1089482-5	1089482-6	
		Sample Date	Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P215-2WB	P215-3WA	P215-3WB	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	<0.01	0.02	<0.01	0.01
Arsenic	Strong Acid Extractable	mg/kg	5.8	2.8	2.8	0.2
Cadmium	Strong Acid Extractable	mg/kg	0.11		0.11	0.01
Chromium	Strong Acid Extractable	mg/kg	6.1	6.3	5.9	0.5
Cobalt	Strong Acid Extractable	mg/kg	3.1	2.3	2.0	0.1
Copper	Strong Acid Extractable	mg/kg	3.3	4.5	4.1	1
Lead	Strong Acid Extractable	mg/kg	2.5	3.2	3.1	0.1
Nickel	Strong Acid Extractable	mg/kg	5.0	4.2	5.3	0.5
Zinc	Strong Acid Extractable	mg/kg	12	17	14	1
Mono-Aromatic Hydrocarbons - Soil						
Benzene	Dry Weight	mg/kg	<0.005	<0.005	<0.005	0.005
Toluene	Dry Weight	mg/kg	<0.02	<0.02	<0.02	0.02
Ethylbenzene	Dry Weight	mg/kg	<0.010	<0.010	<0.010	0.01
Total Xylenes (m,p,o)	Dry Weight	mg/kg	<0.03	<0.03	<0.03	0.03
Volatile Petroleum Hydrocarbons - Soil						
Extraction Date	Volatiles		22-Aug-15	22-Aug-15	22-Aug-15	
F1 C6-C10	Dry Weight	mg/kg	<10	<10	<10	10
F1 -BTEX	Dry Weight	mg/kg	<10	<10	<10	10
Extractable Petroleum Hydrocarbons - Soil						
Extraction Date	Total Extractables		22-Aug-15	22-Aug-15	22-Aug-15	
F2c C10-C16	Dry Weight	mg/kg	<40	<40	<40	40
F3c C16-C34	Dry Weight	mg/kg	<40	<40	<40	40
F4c C34-C50	Dry Weight	mg/kg	<40	<40	<40	40
F4HTGCc C34-C50+	Dry Weight	mg/kg	<40	42	<40	40
% C50+		%	<5	23.3	<5	
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	8.35	46.90	19.40	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1221	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1232	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1242	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1248	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1254	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

		Reference Number	1089482-4	1089482-5	1089482-6	
		Sample Date	Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P215-2WB	P215-3WA	P215-3WB	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Polychlorinated Biphenyls - Soil - Continued						
Aroclor 1260	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1262	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1268	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Total PCBs	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	150	140	140	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

		Reference Number	1089482-7	1089482-8	1089482-9	
		Sample Date	Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P215-4WA	P215-4WB	P215-BD1	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	<0.01	<0.01	<0.01	0.01
Arsenic	Strong Acid Extractable	mg/kg	1.9	4.8	3.0	0.2
Cadmium	Strong Acid Extractable	mg/kg	0.12	0.07	0.10	0.01
Chromium	Strong Acid Extractable	mg/kg	3.8	6.3	5.9	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.1	2.2	1.9	0.1
Copper	Strong Acid Extractable	mg/kg	2.1	4.1	3.4	1
Lead	Strong Acid Extractable	mg/kg	2.3	3.2	2.3	0.1
Nickel	Strong Acid Extractable	mg/kg	2.4	5.0	4.2	0.5
Zinc	Strong Acid Extractable	mg/kg	9	11	12	1
Mono-Aromatic Hydrocarbons - Soil						
Benzene	Dry Weight	mg/kg	<0.005	<0.005	<0.005	0.005
Toluene	Dry Weight	mg/kg	<0.02	<0.02	<0.02	0.02
Ethylbenzene	Dry Weight	mg/kg	<0.010	<0.010	<0.010	0.01
Total Xylenes (m,p,o)	Dry Weight	mg/kg	<0.03	<0.03	<0.03	0.03
Volatile Petroleum Hydrocarbons - Soil						
Extraction Date	Volatiles		22-Aug-15	22-Aug-15	22-Aug-15	
F1 C6-C10	Dry Weight	mg/kg	<10	<10	<10	10
F1 -BTEX	Dry Weight	mg/kg	<10	<10	<10	10
Extractable Petroleum Hydrocarbons - Soil						
Extraction Date	Total Extractables		22-Aug-15	22-Aug-15	22-Aug-15	
F2c C10-C16	Dry Weight	mg/kg	<40	<40	<40	40
F3c C16-C34	Dry Weight	mg/kg	<40	<40	<40	40
F4c C34-C50	Dry Weight	mg/kg	<40	<40	<40	40
F4HTGCc C34-C50+	Dry Weight	mg/kg	<40	<40	<40	40
% C50+		%	<5	<5	<5	
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	12.00	12.00	17.40	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1221	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1232	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1242	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1248	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1254	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

		Reference Number	1089482-7	1089482-8	1089482-9	
		Sample Date	Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P215-4WA	P215-4WB	P215-BD1	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Polychlorinated Biphenyls - Soil - Continued						
Aroclor 1260	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1262	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Aroclor 1268	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Total PCBs	Dry Weight	mg/kg	<0.05	<0.05	<0.05	0.05
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	130	120	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

		Reference Number	1089482-10	1089482-11	1089482-12	
		Sample Date	Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P215-1W	P215-2W	P215-3W	
		Matrix	Water	Water	Water	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Total						
Mercury	Total	mg/L	<0.000005	<0.000005	<0.000005	0.000005
Arsenic	Total	mg/L	0.0009	0.0007	0.0004	0.0002
Cadmium	Total	mg/L	0.00003	0.00015	0.00022	0.00001
Chromium	Total	mg/L	0.0014	0.0060	0.0022	0.0005
Cobalt	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Copper	Total	mg/L	0.010	0.001	0.002	0.001
Lead	Total	mg/L	<0.0001	0.0002	0.0002	0.0001
Nickel	Total	mg/L	0.0053	0.0035	0.0047	0.0005
Zinc	Total	mg/L	0.049	0.010	0.018	0.001
Mono-Aromatic Hydrocarbons - Water						
Benzene		mg/L	<0.001	<0.001	<0.001	0.001
Toluene		mg/L	<0.0004	<0.0004	<0.0004	0.0004
Ethylbenzene		mg/L	<0.001	<0.001	<0.001	0.001
Total Xylenes (m,p,o)		mg/L	<0.001	<0.001	<0.001	0.001
Volatile Petroleum Hydrocarbons - Water						
F1 -BTEX		mg/L	<0.1	<0.1	<0.1	0.1
F1 C6-C10		mg/L	<0.1	<0.1	<0.1	0.1
F2 C10-C16		mg/L	<0.1	<0.1	<0.1	0.1
Extractable Petroleum Hydrocarbons - Water						
F3 C16-C34		mg/L	<0.1	<0.1	<0.1	0.1
F3+ C34+		mg/L	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Water						
Aroclor 1016		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1221		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1232		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1242		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1248		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1254		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1260		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1262		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1268		ug/L	<0.05	<0.05	<0.05	0.05
Total PCBs		ug/L	<0.05	<0.05	<0.05	0.05
Polychlorinated Biphenyls - Water - Surrogate						
Decachlorobiphenyl	Surrogate	%	102	105	98	50-150

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Analytical Report

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Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
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Date Received:	Aug 21, 2015
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Reference Number		1089482-13	1089482-14	1089482-15	
Sample Date		Aug 15, 2015	Aug 15, 2015	Aug 15, 2015	
Sample Time		NA	NA	NA	
Sample Location					
Sample Description		P215-4W	P215-BDW1	P215-FB	
Matrix		Water	Water	Water	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Total						
Mercury	Total	mg/L	<0.000005	<0.000005	<0.000005	0.000005
Arsenic	Total	mg/L	0.0010	0.0007	<0.0002	0.0002
Cadmium	Total	mg/L	0.00004	0.00015	<0.00001	0.00001
Chromium	Total	mg/L	0.0074	0.0077	<0.0005	0.0005
Cobalt	Total	mg/L	0.0007	<0.0001	<0.0001	0.0001
Copper	Total	mg/L	0.003	0.001	<0.001	0.001
Lead	Total	mg/L	0.0013	0.0003	<0.0001	0.0001
Nickel	Total	mg/L	0.0086	0.0041	<0.0005	0.0005
Zinc	Total	mg/L	0.052	0.01	<0.001	0.001
Mono-Aromatic Hydrocarbons - Water						
Benzene		mg/L	<0.001	<0.001	<0.001	0.001
Toluene		mg/L	<0.0004	<0.0004	<0.0004	0.0004
Ethylbenzene		mg/L	<0.001	<0.001	<0.001	0.001
Total Xylenes (m,p,o)		mg/L	<0.001	<0.001	<0.001	0.001
Volatile Petroleum Hydrocarbons - Water						
F1 -BTEX		mg/L	<0.1	<0.1	<0.1	0.1
F1 C6-C10		mg/L	<0.1	<0.1	<0.1	0.1
F2 C10-C16		mg/L	<0.1	<0.1	<0.1	0.1
Extractable Petroleum Hydrocarbons - Water						
F3 C16-C34		mg/L	<0.1	<0.1	<0.1	0.1
F3+ C34+		mg/L	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Water						
Aroclor 1016		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1221		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1232		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1242		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1248		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1254		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1260		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1262		ug/L	<0.05	<0.05	<0.05	0.05
Aroclor 1268		ug/L	<0.05	<0.05	<0.05	0.05
Total PCBs		ug/L	<0.05	<0.05	<0.05	0.05
Polychlorinated Biphenyls - Water - Surrogate						
Decachlorobiphenyl	Surrogate	%	97	96	105	50-150

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	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
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Report Number:	2071649

Approved by:

Benjamin Morris, B.Sc
Client Services Team Leader

Data have been validated by Analytical Quality Control and Exova's Integrated Data Validation System (IDVS).
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Methodology and Notes

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
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Method of Analysis

Method Name	Reference		Method	Date Analysis Started	Location
BTEX-CCME - Soil	CCME	*	Reference Method for Canada-Wide Standard for PHC in Soil, CWS PHCS TIER 1	22-Aug-15	Exova Calgary
BTEX-CCME - Soil	US EPA	*	Volatile Organic Compounds in Various Sample Matrices Using Equilibrium Headspace Analysis/Gas Chromatography Mass Spectrometry, 5021/8260	22-Aug-15	Exova Calgary
BTEX-CCME - Water	US EPA	*	Volatile Organic Compounds in Various Sample Matrices Using Equilibrium Headspace Analysis/Gas Chromatography Mass Spectrometry, 5021/8260	22-Aug-15	Exova Calgary
Mercury (Hot Block) in Soil	US EPA	*	Determination of Hg in Sediment by Cold Vapor Atomic Absorption Spec, 245.5	27-Aug-15	Exova Edmonton
Mercury (Total) in water	EPA	*	Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, 245.7	25-Aug-15	Exova Edmonton
Metals ICP (Hot Block) in soil	EPA	*	Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements, October 1999, 200.2	27-Aug-15	Exova Edmonton
Metals ICP-MS (Total) in water	APHA/USEPA	*	Metals By Inductively Coupled Plasma/Mass Spectrometry, APHA 3125 B / USEPA 200.2, 200.8	24-Aug-15	Exova Edmonton
PCB - Soil	US EPA	*	Polychlorinated Biphenyls (PCBs) by Gas Chromatography, 8082A	22-Aug-15	Exova Calgary
PCB - Water	US EPA	*	Polychlorinated Biphenyls (PCBs) by Gas Chromatography, 8082A	22-Aug-15	Exova Calgary
TEH-CCME - Water	EPA/CCME	*	Separatory Funnel Liquid-liquid Extraction/CCME, EPA 3510/CCME	22-Aug-15	Exova Calgary
TEH-CCME-Soil (Shake)	CCME	*	Reference Method for Canada-Wide Standard for PHC in Soil, CWS PHCS TIER 1	22-Aug-15	Exova Calgary

** Reference Method Modified*

References

CCME	Canadian Council of Ministers of the Environment
EPA/CCME	Environmental Protection Agency Test Methods - US/CCME
SW-846	Test Methods for Evaluating Solid Waste
US EPA	US Environmental Protection Agency Test Methods

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Methodology and Notes

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	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
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Comments:

- Report was issued to include QC ALL report required by Jean-Pierre Pelletier of SILA Remediation. Previous report 2036229.
- Report was issued to remove the metals not originally requested and to adjust detection limits for extractable hydrocarbons and PCB's as requested by Jean-Pierre Pelletier of Englobe. Previous report 2039565.
- Note that due to required lower detection limit for PCB analysis in both water and soil the Nominal Detection limit was set to 0.05.

Please direct any inquiries regarding this report to our Client Services group.
Results relate only to samples as submitted.
The test report shall not be reproduced except in full, without the written approval of the laboratory.

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Analytical Report

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Report To:	SILA Remediation	ID:	KITIK13	Control Number:	C0008992
	250-1260 Boul Lebourgneuf	Name:		Date Received:	Aug 21, 2015
	Quebec, QC, Canada	Location:	PIN-2	Date Reported:	Dec 23, 2015
	G2K 2G2	LSD:	Cape Young, NU	Report Number:	2071649
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	Sila Remediation				

Petroleum Hydrocarbons in Soil

Batch Notes

1. The method used complies with the Reference Method for the Canada Wide Standards for Petroleum Hydrocarbons in Soil - Tier 1, April 2001, including Addendum 1, and is accredited for use in Exova.
2. Modifications of the method: See Notes and Methodology for nonconformances (if applicable).
3. Qualifications on results: See Notes and Methodology for nonconformances (if applicable).
4. Silica gel treatment is performed for fractions F2, F3, F4.
5. F1-BTEX: BTEX has been subtracted from the F1 fraction.
6. If analyzed, naphthalene has been subtracted from fraction F2 and selected PAHs have been subtracted from fraction F3.
7. F4HTGC is reported when more than 5% of the total carbon envelope elutes past C_{50}.
8. Exova does not routinely report Gravimetric Heavy Hydrocarbons (F4G or F4G-sg), F4HTGC through extended range high temperature GC is reported instead.
9. When both F4(C_{34}-C_{50}) and F4HTGC are reported, F4HTGC is the final F4 that is to be used for interpreting the CWS.
10. Quality criteria met for the batch: Data is reported in Quality Control Section of report (if requested).
    -nC_6 and nC_{10} response factors (RF) are within 30% of RF for toluene
    -nC_{10}, nC_{16} and nC_{34} RFs are within 10% of each other
    -nC_{50} RF is within 30% of the average RF for nC_{10}+nC_{16}+nC_{34}
    -linearity is within 15% for each of the calibrated carbon ranges
11. Batch data for analytical quality control are available on request.
12. Extraction and analysis holding times were met: See Notes and Methodology for nonconformances (if applicable).

Approved by:

Benjamin Morris, B.Sc
Client Services Team Leader

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Quality Control

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	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
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Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
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Metals Strong Acid Digestion

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
1472314-2		August 27, 2015			
Antimony	ug/L	0.0856742	-0.1	0.2	yes
Arsenic	ug/L	-0.00103047	-0.2	0.2	yes
Barium	ug/L	0.0463477	-1	1	yes
Beryllium	ug/L	-0.000335535	-0.1	0.1	yes
Cadmium	ug/L	0.0011372	-0.01	0.01	yes
Chromium	ug/L	-0.0119774	-0.5	0.5	yes
Cobalt	ug/L	0.00444415	-0.1	0.1	yes
Copper	ug/L	-0.000870258	-0.6	1.2	yes
Lead	ug/L	0.11878	-5.0	5.0	yes
Molybdenum	ug/L	0.05969	-1.0	1.0	yes
Nickel	ug/L	-0.00138617	-0.4	0.7	yes
Selenium	ug/L	0.00363618	-0.3	0.3	yes
Silver	ug/L	-0.000492332	-0.09	0.14	yes
Thallium	ug/L	0.00160872	-0.04	0.04	yes
Tin	ug/L	4.42089	0.0	7.2	yes
Uranium	ug/L	0.00926293	-0.5	0.5	yes
Vanadium	ug/L	0.0270562	-0.1	0.1	yes
Zinc	ug/L	-0.174626	-1	1	yes
1472314-41		August 27, 2015			
Antimony	ug/L	0.0509184	-0.1	0.2	yes
Arsenic	ug/L	0.0170971	-0.2	0.2	yes
Barium	ug/L	0.104224	-1	1	yes
Beryllium	ug/L	-0.00043759	-0.1	0.1	yes
Cadmium	ug/L	0.00173652	-0.01	0.01	yes
Chromium	ug/L	0.00773357	-0.5	0.5	yes
Cobalt	ug/L	0.0176222	-0.1	0.1	yes
Copper	ug/L	0.00586703	-0.6	1.2	yes
Lead	ug/L	0.0430135	-5.0	5.0	yes
Molybdenum	ug/L	0.0405046	-1.0	1.0	yes
Nickel	ug/L	0.0300583	-0.4	0.7	yes
Selenium	ug/L	0.00412471	-0.3	0.3	yes
Silver	ug/L	0.000171198	-0.09	0.14	yes
Thallium	ug/L	0.0015591	-0.04	0.04	yes
Tin	ug/L	4.47673	0.0	7.2	yes
Uranium	ug/L	0.00575455	-0.5	0.5	yes
Vanadium	ug/L	0.0139238	-0.1	0.1	yes
Zinc	ug/L	0.142463	-1	1	yes
1472315-4		August 27, 2015			
Mercury	ug/L	-0.01	-0.07	0.13	yes
1472315-42		August 27, 2015			
Mercury	ug/L	-0.02	-0.07	0.13	yes

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Quality Control

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Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

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Metals Strong Acid Digestion - Continued

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
1472314-4		August 27, 2015				
Antimony	mg/kg	<0.2	<0.2	20	0.4	yes
Arsenic	mg/kg	4.5	4.3	20	0.4	yes
Barium	mg/kg	45	46	20	2	yes
Beryllium	mg/kg	0.2	0.2	20	0.2	yes
Cadmium	mg/kg	0.33	0.35	20	0.02	yes
Chromium	mg/kg	5.1	5.3	20	1.1	yes
Cobalt	mg/kg	2.1	2.3	20	0.2	yes
Copper	mg/kg	7.7	7.6	20	2.2	yes
Lead	mg/kg	3.0	3.1	20	0.2	yes
Molybdenum	mg/kg	<1.0	<1.0	20	2.2	yes
Nickel	mg/kg	6.3	6.4	20	1.1	yes
Selenium	mg/kg	0.6	0.6	20	0.7	yes
Silver	mg/kg	<0.1	<0.1	20	0.22	yes
Thallium	mg/kg	0.07	0.07	20	0.11	yes
Tin	mg/kg	2.5	2.4	20	2.2	yes
Uranium	mg/kg	2.4	2.4	20	1.1	yes
Vanadium	mg/kg	9.6	11.6	20	0.2	yes
Zinc	mg/kg	17	19	20	2	yes
1472314-21		August 27, 2015				
Antimony	mg/kg	<0.2	<0.2	20	0.4	yes
Arsenic	mg/kg	8.5	8.1	20	0.4	yes
Barium	mg/kg	247	234	20	2	yes
Beryllium	mg/kg	0.6	0.5	20	0.2	yes
Cadmium	mg/kg	0.20	0.18	20	0.02	yes
Chromium	mg/kg	15.1	15.2	20	1.1	yes
Cobalt	mg/kg	11.9	11.9	20	0.2	yes
Copper	mg/kg	21.7	20.8	20	2.2	yes
Lead	mg/kg	11.9	11.4	20	0.2	yes
Molybdenum	mg/kg	1.9	1.8	20	2.2	yes
Nickel	mg/kg	28.6	27.7	20	1.1	yes
Selenium	mg/kg	0.7	0.7	20	0.7	yes
Silver	mg/kg	0.1	0.1	20	0.22	yes
Thallium	mg/kg	0.22	0.21	20	0.11	yes
Tin	mg/kg	1.4	1.3	20	2.2	yes
Uranium	mg/kg	3.4	3.5	20	1.1	yes
Vanadium	mg/kg	31.2	30.2	20	0.2	yes
Zinc	mg/kg	63	60	20	2	yes
1472315-5		August 27, 2015				
Mercury	mg/kg	0.05	0.04	10	0.03	yes
1472315-22		August 27, 2015				
Mercury	mg/kg	0.02	0.02	10	0.03	yes

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	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
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Metals Strong Acid Digestion - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
1472314-1		August 27, 2015			
Antimony	mg/kg	36.6	34.2	42.0	yes
Arsenic	mg/kg	40.1	36.3	43.9	yes
Barium	mg/kg	204	189	219	yes
Beryllium	mg/kg	19.8	17.4	22.2	yes
Cadmium	mg/kg	2.09	1.88	2.28	yes
Chromium	mg/kg	101	94.2	107.8	yes
Cobalt	mg/kg	19.9	18.5	22.5	yes
Copper	mg/kg	195	179.5	210.5	yes
Lead	mg/kg	20.2	18.6	21.8	yes
Molybdenum	mg/kg	209	186.8	222.8	yes
Nickel	mg/kg	99.5	91.6	108.4	yes
Selenium	mg/kg	39.3	36.1	42.9	yes
Silver	mg/kg	20.5	18.70	22.90	yes
Thallium	mg/kg	10.7	9.57	11.23	yes
Tin	mg/kg	204	185.9	215.9	yes
Uranium	mg/kg	103	90.3	108.0	yes
Vanadium	mg/kg	20.2	18.4	22.4	yes
Zinc	mg/kg	200	180	220	yes
1472314-40		August 27, 2015			
Antimony	mg/kg	39.1	34.2	42.0	yes
Arsenic	mg/kg	40.9	36.3	43.9	yes
Barium	mg/kg	204	189	219	yes
Beryllium	mg/kg	19.6	17.4	22.2	yes
Cadmium	mg/kg	2.04	1.88	2.28	yes
Chromium	mg/kg	103	94.2	107.8	yes
Cobalt	mg/kg	20.7	18.5	22.5	yes
Copper	mg/kg	199	179.5	210.5	yes
Lead	mg/kg	19.3	18.6	21.8	yes
Molybdenum	mg/kg	208	186.8	222.8	yes
Nickel	mg/kg	101	91.6	108.4	yes
Selenium	mg/kg	39.3	36.1	42.9	yes
Silver	mg/kg	19.8	18.70	22.90	yes
Thallium	mg/kg	9.97	9.57	11.23	yes
Tin	mg/kg	199	185.9	215.9	yes
Uranium	mg/kg	95.7	90.3	108.0	yes
Vanadium	mg/kg	21.3	18.4	22.4	yes
Zinc	mg/kg	202	180	220	yes
1472315-2		August 27, 2015			
Mercury	mg/kg	0.31	0.28	0.34	yes
1472315-40		August 27, 2015			
Mercury	mg/kg	0.30	0.28	0.34	yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Strong Acid Digestion - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
1472315-1		August 27, 2015			
Mercury	mg/kg	0.08	0.05	0.11	yes
1472315-39		August 27, 2015			
Mercury	mg/kg	0.08	0.05	0.11	yes
1472314-3		August 27, 2015			
Antimony	mg/kg	1	0.3	1.1	yes
Arsenic	mg/kg	90.2	74.0	106.0	yes
Barium	mg/kg	263	227	287	yes
Beryllium	mg/kg	0.5	0.4	0.9	yes
Cadmium	mg/kg	2.19	1.49	2.63	yes
Chromium	mg/kg	35.6	31.0	42.8	yes
Cobalt	mg/kg	14.1	11.4	16.0	yes
Copper	mg/kg	216	185.0	227.0	yes
Lead	mg/kg	134	106.0	154.0	yes
Molybdenum	mg/kg	2.8	2.1	4.0	yes
Nickel	mg/kg	64.1	51.8	78.2	yes
Selenium	mg/kg	0.7	0.3	0.9	yes
Silver	mg/kg	0.9	0.42	1.38	yes
Thallium	mg/kg	0.37	0.29	0.43	yes
Tin	mg/kg	4.1	2.4	6.8	yes
Uranium	mg/kg	1.4	1.0	1.6	yes
Vanadium	mg/kg	41.3	37.6	47.2	yes
Zinc	mg/kg	529	470	572	yes
1472314-42		August 27, 2015			
Antimony	mg/kg	1.0	0.3	1.1	yes
Arsenic	mg/kg	91.7	74.0	106.0	yes
Barium	mg/kg	261	227	287	yes
Beryllium	mg/kg	0.7	0.4	0.9	yes
Cadmium	mg/kg	2.19	1.49	2.63	yes
Chromium	mg/kg	36.7	31.0	42.8	yes
Cobalt	mg/kg	13.5	11.4	16.0	yes
Copper	mg/kg	219	185.0	227.0	yes
Lead	mg/kg	138	106.0	154.0	yes
Molybdenum	mg/kg	3.6	2.1	4.0	yes
Nickel	mg/kg	64.7	51.8	78.2	yes
Selenium	mg/kg	0.7	0.3	0.9	yes
Silver	mg/kg	1	0.42	1.38	yes
Thallium	mg/kg	0.39	0.29	0.43	yes
Tin	mg/kg	4.5	2.4	6.8	yes
Uranium	mg/kg	1.4	1.0	1.6	yes
Vanadium	mg/kg	42.5	37.6	47.2	yes
Zinc	mg/kg	524	470	572	yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Strong Acid Digestion - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
1472315-3		August 27, 2015			
Mercury	mg/kg	0.35	0.15	0.42	yes
1472315-41		August 27, 2015			
Mercury	mg/kg	0.37	0.15	0.42	yes

Metals Total

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
1471254-5		August 24, 2015			
Aluminum	mg/L	-0.0064	-0.01	0.02	yes
Calcium	mg/L	-0.0593	-0.1	0.1	yes
Iron	mg/L	-0.0006	-0.01	0.02	yes
Magnesium	mg/L	-0.0104	-0.04	0.04	yes
Manganese	mg/L	-0.0018	-0.003	0.003	yes
Potassium	mg/L	0.0352	-0.1	0.2	yes
Silicon	mg/L	0.0042	-0.03	0.04	yes
Sodium	mg/L	-0.005	-0.1	0.2	yes
Sulfur	mg/L	0.0117	-0.1	0.2	yes
1471255-5		August 24, 2015			
Antimony	ug/L	-0.012698	-0.2	0.2	yes
Arsenic	ug/L	0.00603979	-0.2	0.2	yes
Barium	ug/L	0.0167363	-1	1	yes
Beryllium	ug/L	0.00111591	-0.1	0.1	yes
Bismuth	ug/L	0.00459623	-0.5	0.5	yes
Boron	ug/L	1.12599	-1	3	yes
Cadmium	ug/L	-0.000402762	-0.007	0.012	yes
Chromium	ug/L	0.00206851	-0.7	0.3	yes
Cobalt	ug/L	0.00107846	-0.1	0.1	yes
Copper	ug/L	-0.00021954	-1	1	yes
Lead	ug/L	0.00628757	-0.1	0.1	yes
Lithium	ug/L	0.0428298	-1	1	yes
Molybdenum	ug/L	0.00392857	-1	1	yes
Nickel	ug/L	-0.0019175	-0.5	0.5	yes
Selenium	ug/L	0.00124179	-0.2	0.2	yes
Silver	ug/L	-0.000887556	-0.02	0.10	yes
Strontium	ug/L	0.0100428	-1	1	yes
Thallium	ug/L	0.000509783	-0.05	0.05	yes
Tin	ug/L	-0.0168559	-1	1	yes
Titanium	ug/L	0.0490963	-0.5	0.5	yes
Uranium	ug/L	0.000742795	-0.5	0.5	yes
Vanadium	ug/L	-0.00123259	-0.1	0.1	yes
Zinc	ug/L	0.693808	-0	1	yes
Zirconium	ug/L	0.00838731	-1	1	yes

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Quality Control

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	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Total - Continued

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
1471574-5		August 25, 2015				
Mercury	ug/L	0.001	-0.038000	0.070000		yes
Client Sample Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
1471254-34		August 24, 2015				
Aluminum	mg/L	<0.04	<0.04	15	0.03	yes
Calcium	mg/L	229	232	15	0.6	yes
Iron	mg/L	0.1	0.1	15	0.20	yes
Magnesium	mg/L	164	166	15	0.40	yes
Manganese	mg/L	0.328	0.331	15	0.010	yes
Potassium	mg/L	23.7	23.9	15	1.2	yes
Silicon	mg/L	3.76	3.80	15	0.10	yes
Sodium	mg/L	294	296	15	1.2	yes
Sulfur	mg/L	288	292	15	0.1	yes
1471255-10		August 24, 2015				
Antimony	ug/L	<50	<50	15	0.4	yes
Arsenic	ug/L	<50	<50	15	0.4	yes
Barium	ug/L	2600	2600	15	2	yes
Beryllium	ug/L	<30	<30	15	0.2	yes
Bismuth	ug/L	<100	<100	15	1.1	yes
Boron	ug/L	19000	18000	15	4	yes
Cadmium	ug/L	<1	<1	15	0.022	yes
Chromium	ug/L	<100	<100	15	1.1	yes
Cobalt	ug/L	<30	<30	15	0.2	yes
Copper	ug/L	<200	<200	15	2	yes
Lead	ug/L	<30	<30	15	0.2	yes
Lithium	ug/L	7100	7000	15	2	yes
Molybdenum	ug/L	<200	<200	15	2	yes
Nickel	ug/L	<100	<100	15	1.1	yes
Selenium	ug/L	<50	<50	15	0.4	yes
Silver	ug/L	<2	<2	15	0.22	yes
Strontium	ug/L	852000	832000	15	2	yes
Thallium	ug/L	<10	<10	15	0.11	yes
Tin	ug/L	<200	<200	15	2	yes
Titanium	ug/L	<100	<100	15	1.1	yes
Uranium	ug/L	<100	<100	15	1.1	yes
Vanadium	ug/L	<30	<30	15	0.2	yes
Zinc	ug/L	<200	<200	15	2	yes
Zirconium	ug/L	<200	<200	15	2	yes
1471255-30		August 24, 2015				
Antimony	ug/L	<1	<1	15	0.4	yes
Arsenic	ug/L	<1	<1	15	0.4	yes
Barium	ug/L	140	140	15	2	yes

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Bill To:	SILA Remediation	Project:		Lot ID:	**1089482**
Report To:	SILA Remediation	ID:	KITIK13	Control Number:	C0008992
	250-1260 Boul Lebourgneuf	Name:		Date Received:	Aug 21, 2015
	Quebec, QC, Canada	Location:	PIN-2	Date Reported:	Dec 23, 2015
	G2K 2G2	LSD:	Cape Young, NU	Report Number:	2071649
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	Sila Remediation				

Metals Total - Continued

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Beryllium	ug/L	<0.5	<0.5	15	0.2	yes
Bismuth	ug/L	<2	<2	15	1.1	yes
Boron	ug/L	977	966	15	4	yes
Cadmium	ug/L	0.04	0.053	15	0.022	yes
Chromium	ug/L	7.8	7.3	15	1.1	yes
Cobalt	ug/L	0.8	0.8	15	0.2	yes
Copper	ug/L	7	7	15	2	yes
Lead	ug/L	<0.5	<0.5	15	0.2	yes
Lithium	ug/L	53	52	15	2	yes
Molybdenum	ug/L	5	5	15	2	yes
Nickel	ug/L	22	22	15	1.1	yes
Selenium	ug/L	<1	<1	15	0.4	yes
Silver	ug/L	<0.05	<0.05	15	0.22	yes
Strontium	ug/L	594	571	15	2	yes
Thallium	ug/L	<0.3	<0.3	15	0.11	yes
Tin	ug/L	<5	<5	15	2	yes
Titanium	ug/L	7.6	6.7	15	1.1	yes
Uranium	ug/L	25	25	15	1.1	yes
Vanadium	ug/L	0.8	0.8	15	0.2	yes
Zinc	ug/L	30	30	15	2	yes
Zirconium	ug/L	<5	<5	15	2	yes
1471574-6		August 25, 2015				
Mercury	mg/L	<0.000005	<0.000005	10	0.000300	yes
1471574-23		August 25, 2015				
Mercury	mg/L	<0.000005	<0.000005	10	0.000300	yes

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
1471254-4		August 24, 2015			
Aluminum	mg/L	3.94	3.61	4.45	yes
Calcium	mg/L	51.6	48.4	54.2	yes
Iron	mg/L	2.11	1.83	2.19	yes
Magnesium	mg/L	19.9	18.14	22.14	yes
Manganese	mg/L	0.516	0.472	0.568	yes
Potassium	mg/L	51.2	45.8	55.8	yes
Silicon	mg/L	2.07	1.81	2.21	yes
Sodium	mg/L	52.2	45.9	56.0	yes
Sulfur	mg/L	10.2	8.9	10.9	yes
1471255-4		August 24, 2015			
Antimony	ug/L	12.2	10.8	13.2	yes
Arsenic	ug/L	12.2	10.8	12.9	yes
Barium	ug/L	61	54	68	yes
Beryllium	ug/L	6.1	4.9	6.8	yes
Bismuth	ug/L	31.8	26.2	35.8	yes

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Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Boron	ug/L	124	102	139	yes
Cadmium	ug/L	0.609	0.567	0.687	yes
Chromium	ug/L	30.1	26.5	33.7	yes
Cobalt	ug/L	5.9	5.2	6.8	yes
Copper	ug/L	58	53	67	yes
Lead	ug/L	6.4	5.2	7.1	yes
Lithium	ug/L	59	53	77	yes
Molybdenum	ug/L	60	56	66	yes
Nickel	ug/L	30.4	25.6	33.4	yes
Selenium	ug/L	12.3	9.9	13.5	yes
Silver	ug/L	5.92	5.39	7.13	yes
Strontium	ug/L	60	54	69	yes
Thallium	ug/L	3.14	2.81	3.89	yes
Tin	ug/L	62	56	66	yes
Titanium	ug/L	31.1	26.6	35.7	yes
Uranium	ug/L	31.6	25.7	36.3	yes
Vanadium	ug/L	6.1	5.1	7.2	yes
Zinc	ug/L	61	53	67	yes
Zirconium	ug/L	62	53	67	yes
1471574-4		August 25, 2015			
Mercury	mg/L	0.000747	0.000600	0.000960	yes
1471255-3		August 24, 2015			
Antimony	ug/L	39.8	37.5	43.1	yes
Arsenic	ug/L	40.7	36.5	43.5	yes
Barium	ug/L	196	186	216	yes
Beryllium	ug/L	19.9	17.1	21.9	yes
Bismuth	ug/L	103	91.3	106.3	yes
Boron	ug/L	392	343	436	yes
Cadmium	ug/L	2.02	1.915	2.205	yes
Chromium	ug/L	101	90.0	110.0	yes
Cobalt	ug/L	19.7	18.1	21.7	yes
Copper	ug/L	199	182	214	yes
Lead	ug/L	21.2	18.6	21.8	yes
Lithium	ug/L	186	173	222	yes
Molybdenum	ug/L	202	189	225	yes
Nickel	ug/L	101	90.0	110.0	yes
Selenium	ug/L	40.0	36.1	42.9	yes
Silver	ug/L	19.6	18.00	22.00	yes
Strontium	ug/L	203	182	212	yes
Thallium	ug/L	10.2	9.16	10.96	yes
Tin	ug/L	202	191	213	yes
Titanium	ug/L	102	91.5	106.3	yes

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	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Uranium	ug/L	100	90.2	109.0	yes
Vanadium	ug/L	20.4	16.9	22.1	yes
Zinc	ug/L	206	183	218	yes
1471255-29		August 24, 2015			
Antimony	ug/L	39.7	37.5	43.1	yes
Arsenic	ug/L	39.8	36.5	43.5	yes
Barium	ug/L	196	186	216	yes
Beryllium	ug/L	20.3	17.1	21.9	yes
Bismuth	ug/L	103	91.3	106.3	yes
Boron	ug/L	398	343	436	yes
Cadmium	ug/L	2.04	1.915	2.205	yes
Chromium	ug/L	99.3	90.0	110.0	yes
Cobalt	ug/L	19.3	18.1	21.7	yes
Copper	ug/L	194	182	214	yes
Lead	ug/L	21.0	18.6	21.8	yes
Lithium	ug/L	194	173	222	yes
Molybdenum	ug/L	200	189	225	yes
Nickel	ug/L	99.3	90.0	110.0	yes
Selenium	ug/L	41.8	36.1	42.9	yes
Silver	ug/L	19.3	18.00	22.00	yes
Strontium	ug/L	194	182	212	yes
Thallium	ug/L	10.3	9.16	10.96	yes
Tin	ug/L	204	191	213	yes
Titanium	ug/L	97.8	91.5	106.3	yes
Uranium	ug/L	97.9	90.2	109.0	yes
Vanadium	ug/L	19.9	16.9	22.1	yes
Zinc	ug/L	202	183	218	yes
1471574-3		August 25, 2015			
Mercury	mg/L	0.00285	0.002600	0.003200	yes
1471255-2		August 24, 2015			
Antimony	ug/L	12.3	10.8	13.2	yes
Arsenic	ug/L	12.1	10.8	13.2	yes
Barium	ug/L	63	55	67	yes
Beryllium	ug/L	6.1	5.2	6.5	yes
Boron	ug/L	120	108	132	yes
Cadmium	ug/L	0.616	0.560	0.692	yes
Chromium	ug/L	30.4	27.0	33.0	yes
Cobalt	ug/L	5.8	5.4	6.6	yes
Copper	ug/L	58	54	66	yes
Lead	ug/L	6.4	5.4	6.6	yes
Lithium	ug/L	61	53	66	yes
Molybdenum	ug/L	59	54	66	yes

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	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Nickel	ug/L	30.2	27.0	33.0	yes
Selenium	ug/L	12.1	10.3	13.4	yes
Silver	ug/L	5.90	5.40	6.60	yes
Strontium	ug/L	60	54	66	yes
Thallium	ug/L	3.08	0.00	6.00	yes
Tin	ug/L	61	54	66	yes
Titanium	ug/L	30.5	27.0	33.0	yes
Uranium	ug/L	30.8	27.0	33.0	yes
Vanadium	ug/L	6.1	5.4	6.6	yes
Zinc	ug/L	61	57	69	yes
Zirconium	ug/L	60	54	66	yes
1471255-28		August 24, 2015			
Antimony	ug/L	12.1	10.8	13.2	yes
Arsenic	ug/L	12.0	10.8	13.2	yes
Barium	ug/L	59	55	67	yes
Beryllium	ug/L	6.3	5.2	6.5	yes
Boron	ug/L	123	108	132	yes
Cadmium	ug/L	0.618	0.560	0.692	yes
Chromium	ug/L	30.2	27.0	33.0	yes
Cobalt	ug/L	5.9	5.4	6.6	yes
Copper	ug/L	58	54	66	yes
Lead	ug/L	6.4	5.4	6.6	yes
Lithium	ug/L	61	53	66	yes
Molybdenum	ug/L	59	54	66	yes
Nickel	ug/L	30.3	27.0	33.0	yes
Selenium	ug/L	12.5	10.3	13.4	yes
Silver	ug/L	5.92	5.40	6.60	yes
Strontium	ug/L	60	54	66	yes
Thallium	ug/L	3.01	0.00	6.00	yes
Tin	ug/L	61	54	66	yes
Titanium	ug/L	30.0	27.0	33.0	yes
Uranium	ug/L	30.1	27.0	33.0	yes
Vanadium	ug/L	6.1	5.4	6.6	yes
Zinc	ug/L	62	57	69	yes
Zirconium	ug/L	60	54	66	yes
1471574-2		August 25, 2015			
Mercury	mg/L	0.000764	0.000700	0.000880	yes
1471255-1		August 24, 2015			
Antimony	ug/L	2.0	1.8	2.2	yes
Arsenic	ug/L	2.1	1.7	2.2	yes
Barium	ug/L	10	9	11	yes
Beryllium	ug/L	1.0	0.8	1.1	yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Bismuth	ug/L	5.4	4.8	5.6	yes
Boron	ug/L	20	17	23	yes
Cadmium	ug/L	0.098	0.092	0.116	yes
Chromium	ug/L	5.1	4.6	5.4	yes
Cobalt	ug/L	1	0.9	1.1	yes
Copper	ug/L	10	9	11	yes
Lead	ug/L	1.1	0.9	1.1	yes
Lithium	ug/L	10	9	11	yes
Molybdenum	ug/L	10	9	11	yes
Nickel	ug/L	5.1	4.5	5.5	yes
Selenium	ug/L	2.0	1.6	2.2	yes
Silver	ug/L	1.00	0.89	1.13	yes
Strontium	ug/L	10	9	11	yes
Thallium	ug/L	0.51	0.48	0.57	yes
Tin	ug/L	10	10	11	yes
Titanium	ug/L	5.2	4.5	5.4	yes
Uranium	ug/L	5.2	4.5	5.5	yes
Vanadium	ug/L	1.0	0.9	1.2	yes
Zinc	ug/L	11	9	11	yes
Zirconium	ug/L	10	9	11	yes
1471255-27		August 24, 2015			
Antimony	ug/L	2.0	1.8	2.2	yes
Arsenic	ug/L	2.1	1.7	2.2	yes
Barium	ug/L	10	9	11	yes
Beryllium	ug/L	1.0	0.8	1.1	yes
Bismuth	ug/L	5.5	4.8	5.6	yes
Boron	ug/L	22	17	23	yes
Cadmium	ug/L	0.100	0.092	0.116	yes
Chromium	ug/L	5.0	4.6	5.4	yes
Cobalt	ug/L	1	0.9	1.1	yes
Copper	ug/L	10	9	11	yes
Lead	ug/L	1.1	0.9	1.1	yes
Lithium	ug/L	10	9	11	yes
Molybdenum	ug/L	10	9	11	yes
Nickel	ug/L	5.0	4.5	5.5	yes
Selenium	ug/L	2.0	1.6	2.2	yes
Silver	ug/L	0.97	0.89	1.13	yes
Strontium	ug/L	10	9	11	yes
Thallium	ug/L	0.52	0.48	0.57	yes
Tin	ug/L	10	10	11	yes
Titanium	ug/L	5.2	4.5	5.4	yes
Uranium	ug/L	5.2	4.5	5.5	yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Vanadium	ug/L	1.1	0.9	1.2	yes
Zinc	ug/L	10	9	11	yes
Zirconium	ug/L	10	9	11	yes
1471574-1		August 25, 2015			
Mercury	mg/L	0.000077	0.000064	0.000093	yes
1471254-3		August 24, 2015			
Aluminum	mg/L	19.5	18.80	20.60	yes
Calcium	mg/L	244	236.0	263.6	yes
Iron	mg/L	9.38	9.07	10.15	yes
Magnesium	mg/L	95.2	92.78	104.72	yes
Manganese	mg/L	2.40	2.260	2.560	yes
Potassium	mg/L	244	234.2	261.8	yes
Silicon	mg/L	9.99	9.13	10.93	yes
Sodium	mg/L	243	228.8	269.4	yes
Sulfur	mg/L	147	135.5	165.3	yes
1471254-2		August 24, 2015			
Aluminum	mg/L	3.85	3.49	4.47	yes
Calcium	mg/L	51.2	46.5	56.5	yes
Iron	mg/L	2.04	1.86	2.26	yes
Magnesium	mg/L	19.7	17.79	21.81	yes
Manganese	mg/L	0.510	0.466	0.568	yes
Potassium	mg/L	48.9	45.0	55.0	yes
Silicon	mg/L	2.07	1.92	2.22	yes
Sodium	mg/L	50.4	45.9	55.9	yes
Sulfur	mg/L	10.1	9.2	11.2	yes
1471254-1		August 24, 2015			
Aluminum	mg/L	0.38	0.36	0.44	yes
Calcium	mg/L	5.3	4.8	5.8	yes
Iron	mg/L	0.21	0.19	0.25	yes
Magnesium	mg/L	2.00	1.84	2.20	yes
Manganese	mg/L	0.052	0.047	0.059	yes
Potassium	mg/L	5.1	4.7	5.7	yes
Silicon	mg/L	0.20	0.17	0.23	yes
Sodium	mg/L	5.1	4.8	5.6	yes
Sulfur	mg/L	3.0	2.8	3.3	yes

Mono-Aromatic Hydrocarbons - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
1470918-16		August 22, 2015			
Benzene	ng	0	-0.005	0.005	yes
Toluene	ng	0	-0.06	0.06	yes
Ethylbenzene	ng	0	-0.030	0.030	yes

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Quality Control

Bill To:	SILA Remediation	Project:		Lot ID:	**1089482**
Report To:	SILA Remediation	ID:	KITIK13	Control Number:	C0008992
	250-1260 Boul Lebourgneuf	Name:		Date Received:	Aug 21, 2015
	Quebec, QC, Canada	Location:	PIN-2	Date Reported:	Dec 23, 2015
	G2K 2G2	LSD:	Cape Young, NU	Report Number:	2071649
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	Sila Remediation				

Mono-Aromatic Hydrocarbons - Soil - Continued

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
Total Xylenes (m,p,o)	ng	0	-0.09	0.09		yes
Styrene	ng	0	-0.030	0.030		yes
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470918-15		August 22, 2015				
Benzene	ng	113.00	85	115		yes
Toluene	ng	98.60	85	115		yes
Ethylbenzene	ng	91.40	85	115		yes
Total Xylenes (m,p,o)	ng	94.00	85	115		yes
Styrene	ng	89.80	85	115		yes
Client Sample Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
1470918-5		August 22, 2015				
Benzene	mg/kg	<0.005	<0.005	50	0.010	yes
Toluene	mg/kg	<0.02	<0.02	50	0.04	yes
Ethylbenzene	mg/kg	<0.010	<0.010	50	0.020	yes
m,p-Xylene	mg/kg	<0.02	<0.02	50	0.04	yes
o-Xylene	mg/kg	<0.02	<0.02	50	0.04	yes
Total Xylenes (m,p,o)	mg/kg	<0.03	<0.03	50	0.06	yes
Styrene	mg/kg	<0.010	<0.010	50	0.020	yes
Matrix Spike	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470918-4		August 22, 2015				
Benzene	mg/kg	87	80	120		yes
Toluene	mg/kg	80	80	120		yes
Ethylbenzene	mg/kg	90	80	120		yes
Total Xylenes (m,p,o)	mg/kg	102	80	120		yes

Mono-Aromatic Hydrocarbons - Water

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
1470964-12		August 22, 2015				
Benzene	ng	0	-0.002	0.002		yes
Toluene	ng	0	-0.0015	0.0015		yes
Ethylbenzene	ng	0	-0.002	0.002		yes
Total Xylenes (m,p,o)	ng	0	-0.002	0.002		yes
Styrene	ng	0	-0.002	0.002		yes
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470964-11		August 22, 2015				
Benzene	ng	108.20	85	115		yes
Toluene	ng	85.20	85	115		yes
Ethylbenzene	ng	89.80	85	115		yes
Total Xylenes (m,p,o)	ng	88.67	85	115		yes
Styrene	ng	86.20	85	115		yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Mono-Aromatic Hydrocarbons - Water - Continued

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
1470964-3		August 22, 2015				
Benzene	mg/L	<0.001	<0.001	15	0.002	yes
Toluene	mg/L	<0.0004	<0.0004	15	0.0020	yes
Ethylbenzene	mg/L	<0.001	<0.001	15	0.002	yes
Total Xylenes (m,p,o)	mg/L	<0.001	<0.001	15	0.002	yes
Styrene	mg/L	<0.001	<0.001	15	0.002	yes
Matrix Spike	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470964-2		August 22, 2015				
Benzene	mg/L	107	85	115		yes
Toluene	mg/L	86	85	115		yes
Ethylbenzene	mg/L	90	85	115		yes
Total Xylenes (m,p,o)	mg/L	93	85	115		yes
Styrene	mg/L	85	85	115		yes

Volatile Petroleum Hydrocarbons - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
1470918-16		August 22, 2015				
F1 C6-C10	ng	0	-10	10		yes
Client Sample Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
1470918-5		August 22, 2015				
F1 C6-C10	mg/kg	<10	<10	50	0	yes
F1 -BTEX	mg/kg	<10	<10	50	0	yes
Matrix Spike	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470918-2		August 22, 2015				
F1 C6-C10	mg/kg	95	80	120		yes

Volatile Petroleum Hydrocarbons - Water

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
1470964-12		August 22, 2015				
F1 -BTEX	ng	0	-0.3	0.3		yes
F1 C6-C10	ng	0	-0.3	0.3		yes
F2 C10-C16	ng	0	-0.3	0.3		yes
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470964-4		August 22, 2015				
F2 C10-C16	ng	110.00	80	120		yes
Client Sample Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
1470964-3		August 22, 2015				
F1 C6-C10	mg/L	<0.1	<0.1	50		yes
F2 C10-C16	mg/L	<0.1	<0.1	50		yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Extractable Petroleum Hydrocarbons - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
1470916-14		August 22, 2015				
F2c C10-C16	ug/mL	0	-10	10		yes
F3c C16-C34	ug/mL	0	-30	30		yes
F4c C34-C50	ug/mL	0	-20	20		yes
F4HTGCc C34-C50+	ug/mL	0	-20	20		yes
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470916-13		August 22, 2015				
F2c C10-C16	ug/mL	93.46	85	115		yes
F3c C16-C34	ug/mL	97.06	85	115		yes
F4c C34-C50	ug/mL	94.29	85	115		yes
F4HTGCc C34-C50+	ug/mL	92.09	85	115		yes
Client Sample Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
1470916-3		August 22, 2015				
F2c C10-C16	mg/kg	<40	<40	50	10	yes
F3c C16-C34	mg/kg	77	76	50	10	yes
F4c C34-C50	mg/kg	57	57	50	10	yes
F4HTGCc C34-C50+	mg/kg	78	89	50	10	yes
Matrix Spike	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470916-2		August 22, 2015				
F2c C10-C16	mg/kg	87	65	135		yes
F3c C16-C34	mg/kg	103	65	135		yes
F4c C34-C50	mg/kg	103	65	135		yes
F4HTGCc C34-C50+	mg/kg	99	65	135		yes

Extractable Petroleum Hydrocarbons - Water

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
1470966-12		August 22, 2015				
F2 C10-C16	ug/mL	0	-0.2	0.2		yes
F3 C16-C34	ug/mL	0	-0.2	0.2		yes
F3+ C34+	ug/mL	0	-0.2	0.2		yes
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470966-11		August 22, 2015				
F2 C10-C16	ug/mL	99.20	85	115		yes
F3 C16-C34	ug/mL	100.90	85	115		yes
F3+ C34+	ug/mL	94.80	85	115		yes
Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
1470966-4		August 22, 2015				
F2 C10-C16	mg/L	100	105	15	0.2	yes
F3 C16-C34	mg/L	103	104	15	0.2	yes

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Quality Control

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Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Extractable Petroleum Hydrocarbons - Water - Continued

Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
F3+ C34+	mg/L	96.7	99.4	15	0.2	yes
Matrix Spike	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470966-2		August 22, 2015				
F2 C10-C16	mg/L	100	80	120		yes
F3 C16-C34	mg/L	103	80	120		yes
F3+ C34+	mg/L	97	80	120		yes

Polychlorinated Biphenyls - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit		Passed QC
1470924-2		August 22, 2015				
Aroclor 1016	ug/mL	0	-0.3	0.3		yes
Aroclor 1221	ug/mL	0	-0.3	0.3		yes
Aroclor 1232	ug/mL	0	-0.3	0.3		yes
Aroclor 1242	ug/mL	0	-0.3	0.3		yes
Aroclor 1248	ug/mL	0	-0.3	0.3		yes
Aroclor 1254	ug/mL	0	-0.3	0.3		yes
Aroclor 1260	ug/mL	0	-0.3	0.3		yes
Aroclor 1262	ug/mL	0	-0.3	0.3		yes
Aroclor 1268	ug/mL	0	-0.3	0.3		yes
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470924-1		August 22, 2015				
Aroclor 1260	ug/mL	90.00	80	120		yes
Client Sample Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
1470924-5		August 22, 2015				
Aroclor 1016	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1221	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1232	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1242	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1248	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1254	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1260	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1262	mg/kg	<0.05	<0.05	50	0.2	yes
Aroclor 1268	mg/kg	<0.05	<0.05	50	0.2	yes
Total PCBs	mg/kg	<0.05	<0.05	50	0.2	yes
Matrix Spike	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
1470924-4		August 22, 2015				
Aroclor 1260	mg/kg	120	50	150		yes

Polychlorinated Biphenyls - Soil - Surrogate

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Quality Control

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Report To:	SILA Remediation	ID:	KITIK13
	250-1260 Boul Lebourgneuf	Name:	
	Quebec, QC, Canada	Location:	PIN-2
	G2K 2G2	LSD:	Cape Young, NU
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	Sila Remediation		

Lot ID:	**1089482**
Control Number:	C0008992
Date Received:	Aug 21, 2015
Date Reported:	Dec 23, 2015
Report Number:	2071649

Polychlorinated Biphenyls - Soil - Surrogate

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
1470924-2		August 22, 2015			
Decachlorobiphenyl	%	137.01	50	150	yes

Polychlorinated Biphenyls - Water

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
1470968-12		August 22, 2015			
Aroclor 1016	ug/mL	0	-0.3	0.3	yes
Aroclor 1221	ug/mL	0	-0.3	0.3	yes
Aroclor 1232	ug/mL	0	-0.3	0.3	yes
Aroclor 1242	ug/mL	0	-0.3	0.3	yes
Aroclor 1248	ug/mL	0	-0.3	0.3	yes
Aroclor 1254	ug/mL	0	-0.3	0.3	yes
Aroclor 1260	ug/mL	0	-0.3	0.3	yes
Aroclor 1262	ug/mL	0	-0.3	0.3	yes
Aroclor 1268	ug/mL	0	-0.3	0.3	yes
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Passed QC**
1470968-11		August 22, 2015			
Aroclor 1260	ug/mL	90.00	80	120	yes

Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
1470968-4		August 22, 2015				
Aroclor 1016	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1221	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1232	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1242	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1248	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1254	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1260	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1262	ug/L	<0.05	<0.05	20	0.2	yes
Aroclor 1268	ug/L	<0.05	<0.05	20	0.2	yes

Matrix Spike	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
1470968-2		August 22, 2015			
Aroclor 1260	ug/L	91	50	150	yes

Polychlorinated Biphenyls - Water - Surrogate

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
1470968-12		August 22, 2015			
Decachlorobiphenyl	%	108.119	50	150	yes

Samples and Related Quality Checks

1089482-1

BTEX-CCME - Soil

Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16

Mercury (Hot Block) in Soil

Internal Std	1472315-1
Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41
Blank	1472315-42

Metals ICP (Hot Block) in soil

Internal Std	1472314-1
Blank	1472314-2
Internal Std	1472314-3
Duplicate - Cli	1472314-4
Duplicate - Cli	1472314-21
Internal Std	1472314-40
Blank	1472314-41
Internal Std	1472314-42

PCB - Soil

Calibration Ck	1470924-1
Blank	1470924-2
Spike	1470924-4
Duplicate - Cli	1470924-5

TEH-CCME-Soil (Shake)

Spike	1470916-2
Duplicate - Cli	1470916-3
Calibration Ck	1470916-13
Blank	1470916-14

1089482-2

BTEX-CCME - Soil

Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16

Mercury (Hot Block) in Soil

Internal Std	1472315-1

Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41
Blank	1472315-42
Metals ICP (Hot Block) in soil	
Internal Std	1472314-1
Blank	1472314-2
Internal Std	1472314-3
Duplicate - Cli	1472314-4
Duplicate - Cli	1472314-21
Internal Std	1472314-40
Blank	1472314-41
Internal Std	1472314-42
PCB - Soil	
Calibration Ck	1470924-1
Blank	1470924-2
Spike	1470924-4
Duplicate - Cli	1470924-5
TEH-CCME-Soil (Shake)	
Spike	1470916-2
Duplicate - Cli	1470916-3
Calibration Ck	1470916-13
Blank	1470916-14

1089482-3

BTEX-CCME - Soil	
Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16
Mercury (Hot Block) in Soil	
Internal Std	1472315-1
Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41
Blank	1472315-42

Metals ICP (Hot Block) in soil
- Internal Std 1472314-1
- Blank 1472314-2
- Internal Std 1472314-3
- Duplicate - Cli 1472314-4
- Duplicate - Cli 1472314-21
- Internal Std 1472314-40
- Blank 1472314-41
- Internal Std 1472314-42

PCB - Soil
- Calibration Ck 1470924-1
- Blank 1470924-2
- Spike 1470924-4
- Duplicate - Cli 1470924-5

TEH-CCME-Soil (Shake)
- Spike 1470916-2
- Duplicate - Cli 1470916-3
- Calibration Ck 1470916-13
- Blank 1470916-14

1089482-4

BTEX-CCME - Soil
- Spike 1470918-2
- Spike 1470918-4
- Duplicate - Cli 1470918-5
- Calibration Ck 1470918-15
- Blank 1470918-16

Mercury (Hot Block) in Soil
- Internal Std 1472315-1
- Internal Std 1472315-2
- Internal Std 1472315-3
- Blank 1472315-4
- Duplicate - Cli 1472315-5
- Duplicate - Cli 1472315-22
- Internal Std 1472315-39
- Internal Std 1472315-40
- Internal Std 1472315-41
- Blank 1472315-42

Metals ICP (Hot Block) in soil
- Internal Std 1472314-1
- Blank 1472314-2
- Internal Std 1472314-3
- Duplicate - Cli 1472314-4
- Duplicate - Cli 1472314-21
- Internal Std 1472314-40
- Blank 1472314-41
- Internal Std 1472314-42

PCB - Soil

Calibration Ck	1470924-1
Blank	1470924-2
Spike	1470924-4
Duplicate - Cli	1470924-5

TEH-CCME-Soil (Shake)

Spike	1470916-2
Duplicate - Cli	1470916-3
Calibration Ck	1470916-13
Blank	1470916-14

1089482-5

BTEX-CCME - Soil

Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16

Mercury (Hot Block) in Soil

Internal Std	1472315-1
Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41
Blank	1472315-42

Metals ICP (Hot Block) in soil

Internal Std	1472314-1
Blank	1472314-2
Internal Std	1472314-3
Duplicate - Cli	1472314-4
Duplicate - Cli	1472314-21
Internal Std	1472314-40
Blank	1472314-41
Internal Std	1472314-42

PCB - Soil

Calibration Ck	1470924-1
Blank	1470924-2
Spike	1470924-4
Duplicate - Cli	1470924-5

TEH-CCME-Soil (Shake)

Spike	1470916-2
Duplicate - Cli	1470916-3
Calibration Ck	1470916-13

Blank	1470916-14

1089482-6

BTEX-CCME - Soil

Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16

Mercury (Hot Block) in Soil

Internal Std	1472315-1
Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41
Blank	1472315-42

Metals ICP (Hot Block) in soil

Internal Std	1472314-1
Blank	1472314-2
Internal Std	1472314-3
Duplicate - Cli	1472314-4
Duplicate - Cli	1472314-21
Internal Std	1472314-40
Blank	1472314-41
Internal Std	1472314-42

PCB - Soil

Calibration Ck	1470924-1
Blank	1470924-2
Spike	1470924-4
Duplicate - Cli	1470924-5

TEH-CCME-Soil (Shake)

Spike	1470916-2
Duplicate - Cli	1470916-3
Calibration Ck	1470916-13
Blank	1470916-14

1089482-7

BTEX-CCME - Soil

Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16

Mercury (Hot Block) in Soil

Internal Std	1472315-1
Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41
Blank	1472315-42
Metals ICP (Hot Block) in soil	
Internal Std	1472314-1
Blank	1472314-2
Internal Std	1472314-3
Duplicate - Cli	1472314-4
Duplicate - Cli	1472314-21
Internal Std	1472314-40
Blank	1472314-41
Internal Std	1472314-42
PCB - Soil	
Calibration Ck	1470924-1
Blank	1470924-2
Spike	1470924-4
Duplicate - Cli	1470924-5
TEH-CCME-Soil (Shake)	
Spike	1470916-2
Duplicate - Cli	1470916-3
Calibration Ck	1470916-13
Blank	1470916-14

1089482-8

BTEX-CCME - Soil	
Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16
Mercury (Hot Block) in Soil	
Internal Std	1472315-1
Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41

Blank	1472315-42
Metals ICP (Hot Block) in soil	
Internal Std	1472314-1
Blank	1472314-2
Internal Std	1472314-3
Duplicate - Cli	1472314-4
Duplicate - Cli	1472314-21
Internal Std	1472314-40
Blank	1472314-41
Internal Std	1472314-42
PCB - Soil	
Calibration Ck	1470924-1
Blank	1470924-2
Spike	1470924-4
Duplicate - Cli	1470924-5
TEH-CCME-Soil (Shake)	
Spike	1470916-2
Duplicate - Cli	1470916-3
Calibration Ck	1470916-13
Blank	1470916-14

1089482-9

BTEX-CCME - Soil	
Spike	1470918-2
Spike	1470918-4
Duplicate - Cli	1470918-5
Calibration Ck	1470918-15
Blank	1470918-16
Mercury (Hot Block) in Soil	
Internal Std	1472315-1
Internal Std	1472315-2
Internal Std	1472315-3
Blank	1472315-4
Duplicate - Cli	1472315-5
Duplicate - Cli	1472315-22
Internal Std	1472315-39
Internal Std	1472315-40
Internal Std	1472315-41
Blank	1472315-42
Metals ICP (Hot Block) in soil	
Internal Std	1472314-1
Blank	1472314-2
Internal Std	1472314-3
Duplicate - Cli	1472314-4
Duplicate - Cli	1472314-21
Internal Std	1472314-40
Blank	1472314-41

- Internal Std 1472314-42
- PCB - Soil
  - Calibration Ck 1470924-1
  - Blank 1470924-2
  - Spike 1470924-4
  - Duplicate - Cli 1470924-5
- TEH-CCME-Soil (Shake)
  - Spike 1470916-2
  - Duplicate - Cli 1470916-3
  - Calibration Ck 1470916-13
  - Blank 1470916-14

1089482-10

- BTEX-CCME - Water
  - Spike 1470964-2
  - Duplicate - Cli 1470964-3
  - Calibration Ck 1470964-4
  - Calibration Ck 1470964-11
  - Blank 1470964-12
- Mercury (Total) in water
  - Internal Std 1471574-1
  - Internal Std 1471574-2
  - Internal Std 1471574-3
  - Internal Std 1471574-4
  - Blank 1471574-5
  - Duplicate - Cli 1471574-6
  - Duplicate - Cli 1471574-23
- Metals ICP-MS (Total) in water
  - Internal Std 1471255-1
  - Internal Std 1471255-2
  - Internal Std 1471255-3
  - Internal Std 1471255-4
  - Blank 1471255-5
  - Duplicate - Cli 1471255-10
  - Internal Std 1471255-27
  - Internal Std 1471255-28
  - Internal Std 1471255-29
  - Duplicate - Cli 1471255-30
- Metals Trace (Total) in water
  - Internal Std 1471254-1
  - Internal Std 1471254-2
  - Internal Std 1471254-3
  - Internal Std 1471254-4
  - Blank 1471254-5
  - Duplicate - Cli 1471254-34
- PCB - Water
  - Spike 1470968-2

Int. Duplicate	1470968-4
Calibration Ck	1470968-11
Blank	1470968-12
TEH-CCME - Water	
Spike	1470966-2
Int. Duplicate	1470966-4
Calibration Ck	1470966-11
Blank	1470966-12

1089482-11

BTEX-CCME - Water	
Spike	1470964-2
Duplicate - Cli	1470964-3
Calibration Ck	1470964-4
Calibration Ck	1470964-11
Blank	1470964-12
Mercury (Total) in water	
Internal Std	1471574-1
Internal Std	1471574-2
Internal Std	1471574-3
Internal Std	1471574-4
Blank	1471574-5
Duplicate - Cli	1471574-6
Duplicate - Cli	1471574-23
Metals ICP-MS (Total) in water	
Internal Std	1471255-1
Internal Std	1471255-2
Internal Std	1471255-3
Internal Std	1471255-4
Blank	1471255-5
Duplicate - Cli	1471255-10
Internal Std	1471255-27
Internal Std	1471255-28
Internal Std	1471255-29
Duplicate - Cli	1471255-30
Metals Trace (Total) in water	
Internal Std	1471254-1
Internal Std	1471254-2
Internal Std	1471254-3
Internal Std	1471254-4
Blank	1471254-5
Duplicate - Cli	1471254-34
PCB - Water	
Spike	1470968-2
Int. Duplicate	1470968-4
Calibration Ck	1470968-11
Blank	1470968-12

TEH-CCME - Water

Spike	1470966-2
Int. Duplicate	1470966-4
Calibration Ck	1470966-11
Blank	1470966-12

1089482-12

BTEX-CCME - Water

Spike	1470964-2
Duplicate - Cli	1470964-3
Calibration Ck	1470964-4
Calibration Ck	1470964-11
Blank	1470964-12

Mercury (Total) in water

Internal Std	1471574-1
Internal Std	1471574-2
Internal Std	1471574-3
Internal Std	1471574-4
Blank	1471574-5
Duplicate - Cli	1471574-6
Duplicate - Cli	1471574-23

Metals ICP-MS (Total) in water

Internal Std	1471255-1
Internal Std	1471255-2
Internal Std	1471255-3
Internal Std	1471255-4
Blank	1471255-5
Duplicate - Cli	1471255-10
Internal Std	1471255-27
Internal Std	1471255-28
Internal Std	1471255-29
Duplicate - Cli	1471255-30

Metals Trace (Total) in water

Internal Std	1471254-1
Internal Std	1471254-2
Internal Std	1471254-3
Internal Std	1471254-4
Blank	1471254-5
Duplicate - Cli	1471254-34

PCB - Water

Spike	1470968-2
Int. Duplicate	1470968-4
Calibration Ck	1470968-11
Blank	1470968-12

TEH-CCME - Water

Spike	1470966-2
Int. Duplicate	1470966-4

Calibration Ck	1470966-11
Blank	1470966-12

1089482-13

BTEX-CCME - Water

Spike	1470964-2
Duplicate - Cli	1470964-3
Calibration Ck	1470964-4
Calibration Ck	1470964-11
Blank	1470964-12

Mercury (Total) in water

Internal Std	1471574-1
Internal Std	1471574-2
Internal Std	1471574-3
Internal Std	1471574-4
Blank	1471574-5
Duplicate - Cli	1471574-6
Duplicate - Cli	1471574-23

Metals ICP-MS (Total) in water

Internal Std	1471255-1
Internal Std	1471255-2
Internal Std	1471255-3
Internal Std	1471255-4
Blank	1471255-5
Duplicate - Cli	1471255-10
Internal Std	1471255-27
Internal Std	1471255-28
Internal Std	1471255-29
Duplicate - Cli	1471255-30

Metals Trace (Total) in water

Internal Std	1471254-1
Internal Std	1471254-2
Internal Std	1471254-3
Internal Std	1471254-4
Blank	1471254-5
Duplicate - Cli	1471254-34

PCB - Water

Spike	1470968-2
Int. Duplicate	1470968-4
Calibration Ck	1470968-11
Blank	1470968-12

TEH-CCME - Water

Spike	1470966-2
Int. Duplicate	1470966-4
Calibration Ck	1470966-11
Blank	1470966-12

1089482-14

BTEX-CCME - Water

Spike	1470964-2
Duplicate - Cli	1470964-3
Calibration Ck	1470964-4
Calibration Ck	1470964-11
Blank	1470964-12

Mercury (Total) in water

Internal Std	1471574-1
Internal Std	1471574-2
Internal Std	1471574-3
Internal Std	1471574-4
Blank	1471574-5
Duplicate - Cli	1471574-6
Duplicate - Cli	1471574-23

Metals ICP-MS (Total) in water

Internal Std	1471255-1
Internal Std	1471255-2
Internal Std	1471255-3
Internal Std	1471255-4
Blank	1471255-5
Duplicate - Cli	1471255-10
Internal Std	1471255-27
Internal Std	1471255-28
Internal Std	1471255-29
Duplicate - Cli	1471255-30

Metals Trace (Total) in water

Internal Std	1471254-1
Internal Std	1471254-2
Internal Std	1471254-3
Internal Std	1471254-4
Blank	1471254-5
Duplicate - Cli	1471254-34

PCB - Water

Spike	1470968-2
Int. Duplicate	1470968-4
Calibration Ck	1470968-11
Blank	1470968-12

TEH-CCME - Water

Spike	1470966-2
Int. Duplicate	1470966-4
Calibration Ck	1470966-11
Blank	1470966-12

1089482-15

BTEX-CCME - Water

Spike	1470964-2
Duplicate - Cli	1470964-3

Calibration Ck	1470964-4
Calibration Ck	1470964-11
Blank	1470964-12
Mercury (Total) in water	
Internal Std	1471574-1
Internal Std	1471574-2
Internal Std	1471574-3
Internal Std	1471574-4
Blank	1471574-5
Duplicate - Cli	1471574-6
Duplicate - Cli	1471574-23
Metals ICP-MS (Total) in water	
Internal Std	1471255-1
Internal Std	1471255-2
Internal Std	1471255-3
Internal Std	1471255-4
Blank	1471255-5
Duplicate - Cli	1471255-10
Internal Std	1471255-27
Internal Std	1471255-28
Internal Std	1471255-29
Duplicate - Cli	1471255-30
Metals Trace (Total) in water	
Internal Std	1471254-1
Internal Std	1471254-2
Internal Std	1471254-3
Internal Std	1471254-4
Blank	1471254-5
Duplicate - Cli	1471254-34
PCB - Water	
Spike	1470968-2
Int. Duplicate	1470968-4
Calibration Ck	1470968-11
Blank	1470968-12
TEH-CCME - Water	
Spike	1470966-2
Int. Duplicate	1470966-4
Calibration Ck	1470966-11
Blank	1470966-12

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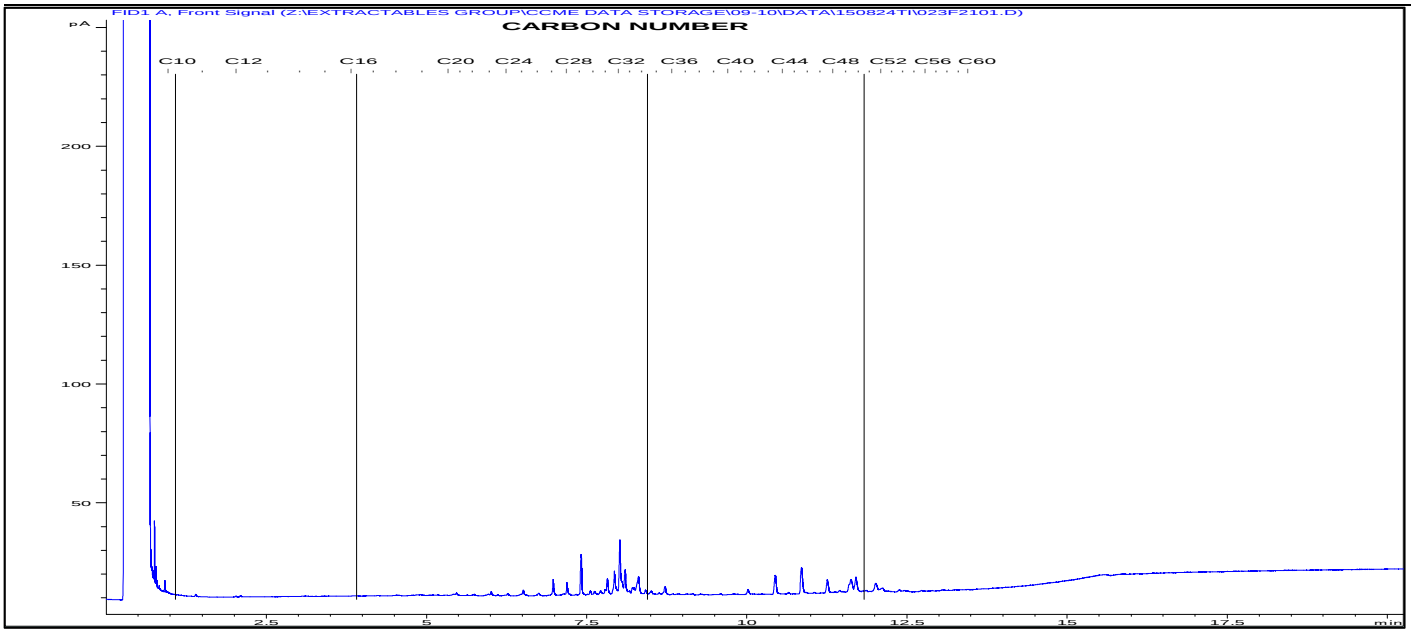
W: www.exova.com

Hydrocarbon Chromatogram

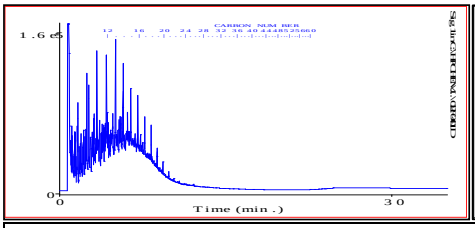
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-1 Sample Description: P215-1WA
Sample Date: Aug 15, 2015 Silica Gel Treated

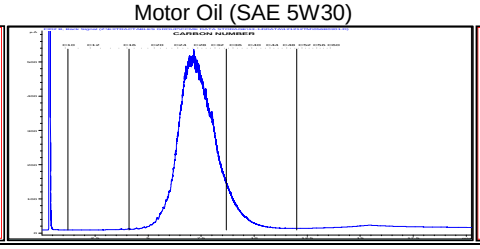


TYPICAL PRODUCT CHROMATOGRAMS

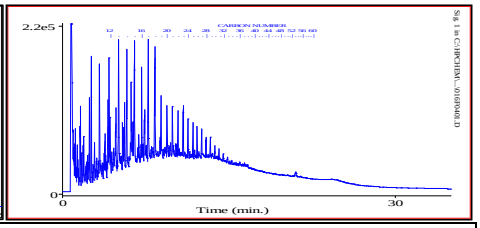
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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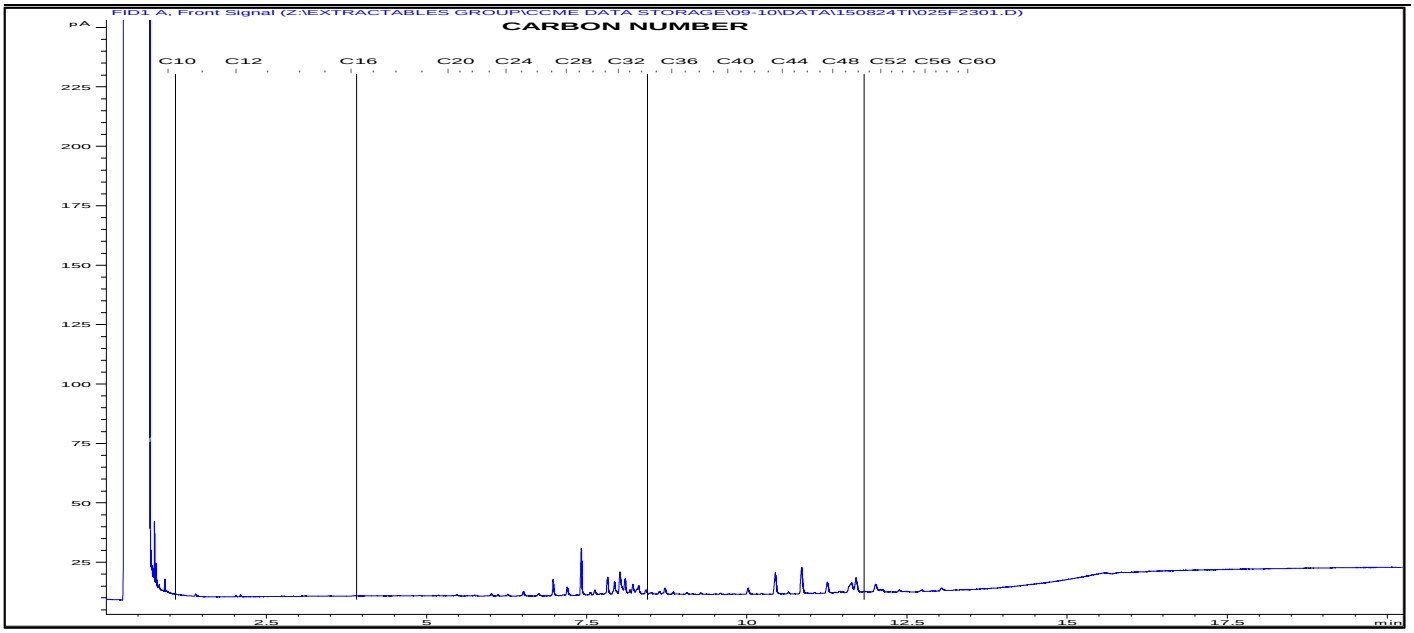
Hydrocarbon Chromatogram

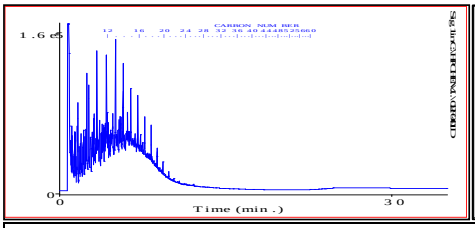
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-2 Sample Description: P215-1WB
Sample Date: Aug 15, 2015 Silica Gel Treated

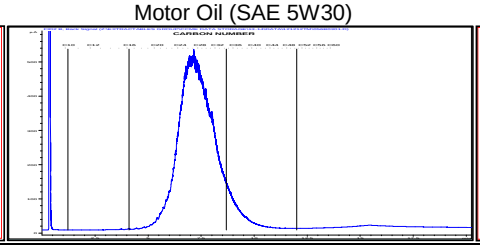


TYPICAL PRODUCT CHROMATOGRAMS

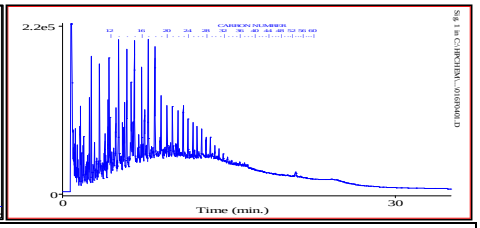
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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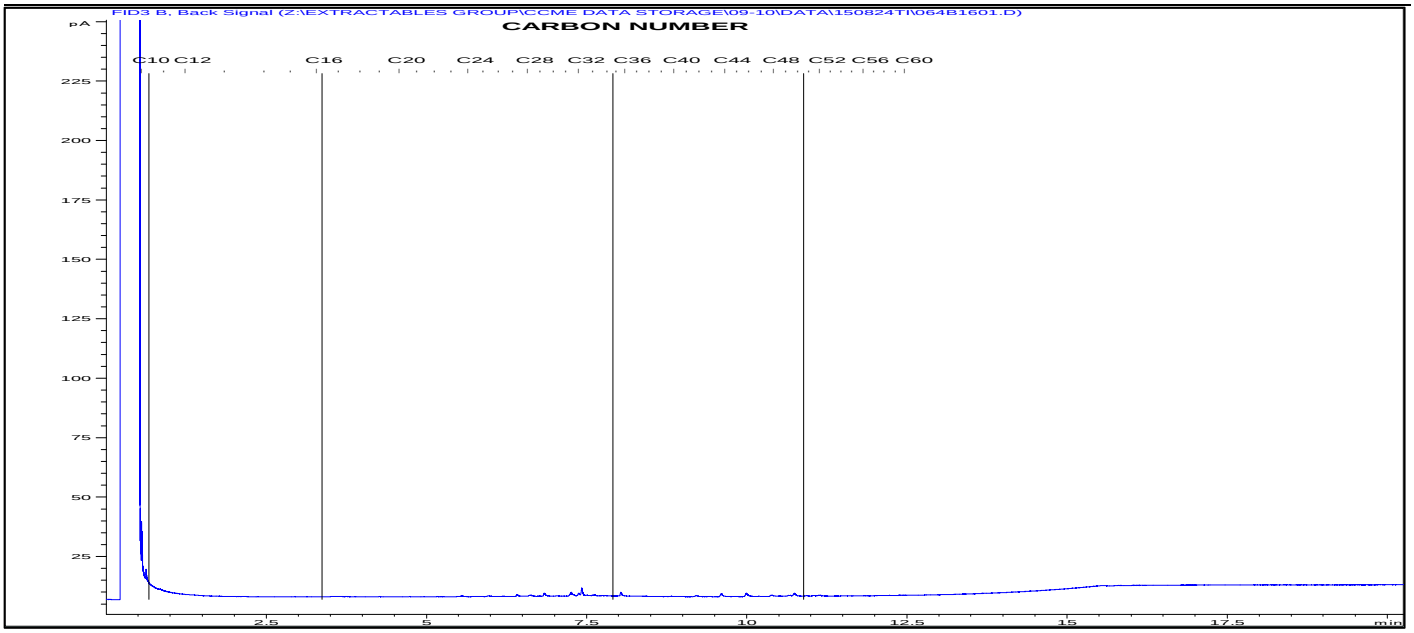
Hydrocarbon Chromatogram

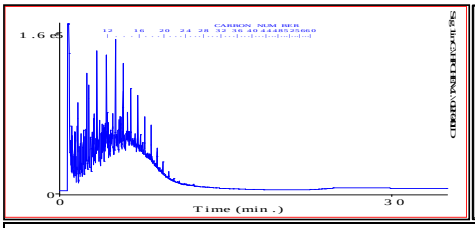
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-3 Sample Description: P215-2WA
Sample Date: Aug 15, 2015 Silica Gel Treated

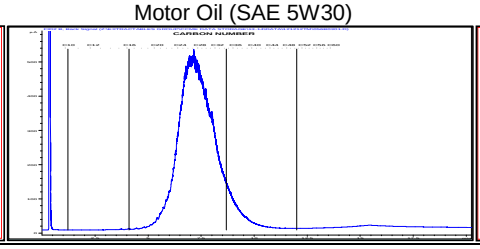


TYPICAL PRODUCT CHROMATOGRAMS

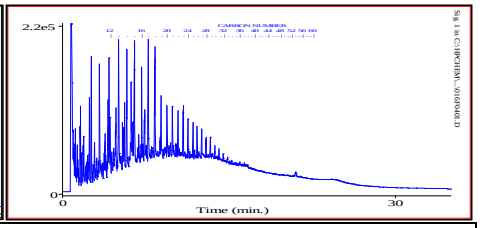
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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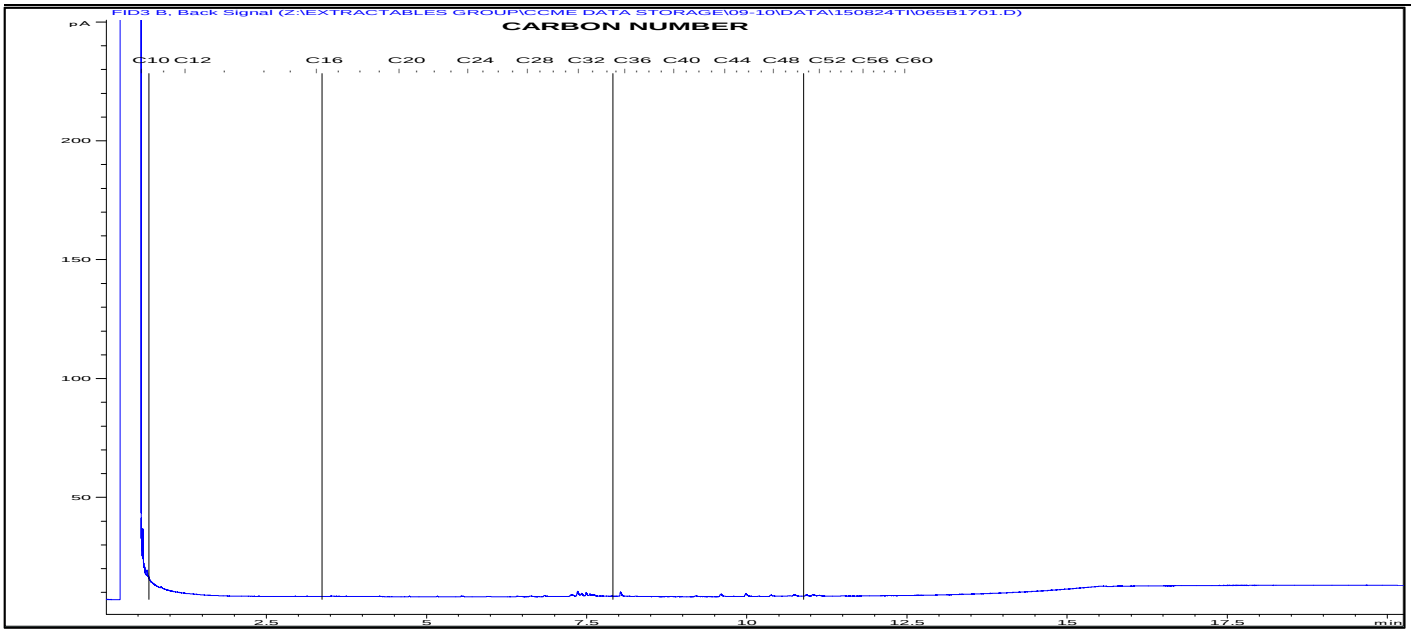
Hydrocarbon Chromatogram

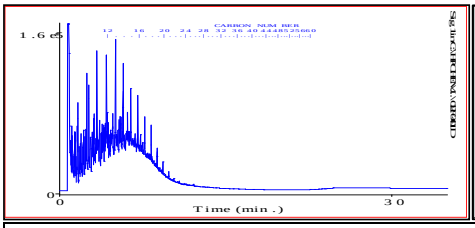
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-4 Sample Description: P215-2WB
Sample Date: Aug 15, 2015 Silica Gel Treated

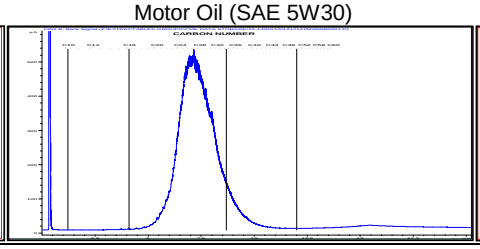


TYPICAL PRODUCT CHROMATOGRAMS

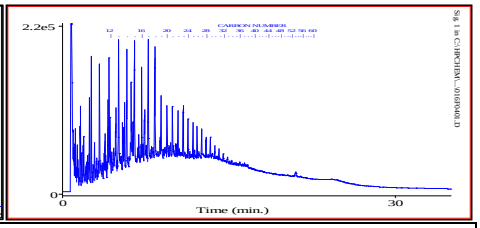
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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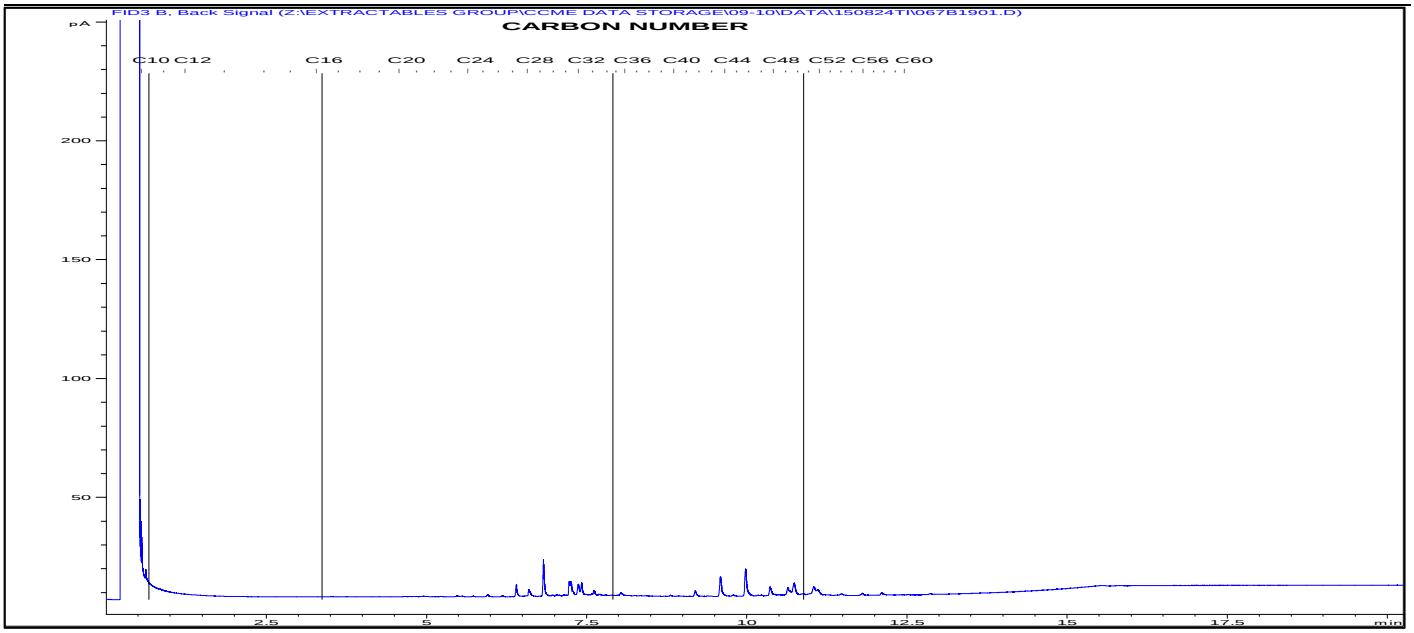
Hydrocarbon Chromatogram

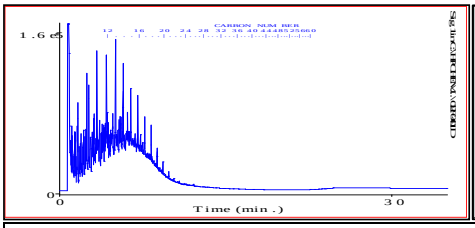
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-5 Sample Description: P215-3WA
Sample Date: Aug 15, 2015 Silica Gel Treated

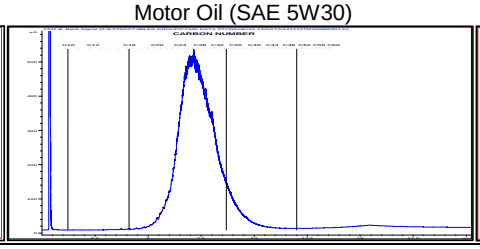


TYPICAL PRODUCT CHROMATOGRAMS

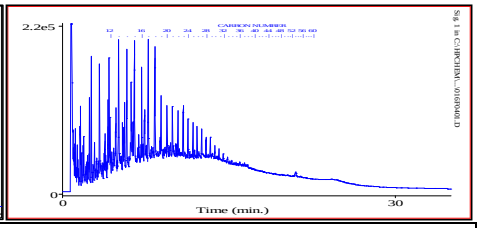
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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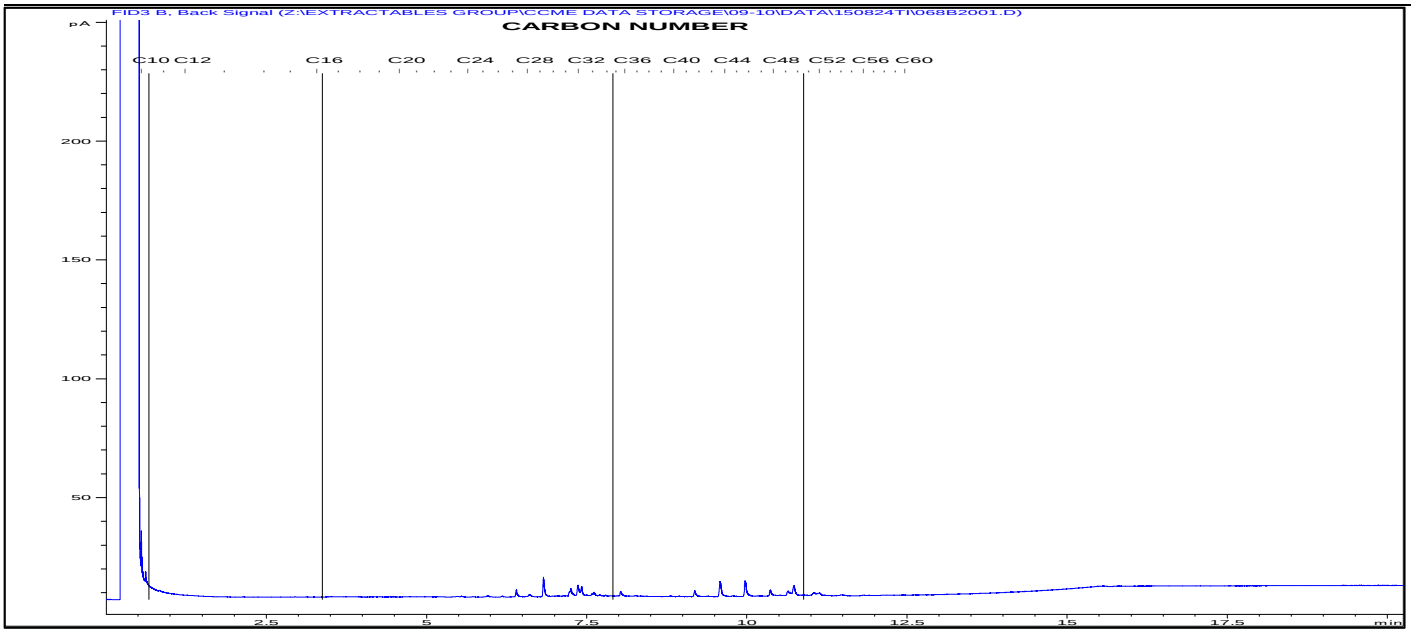
Hydrocarbon Chromatogram

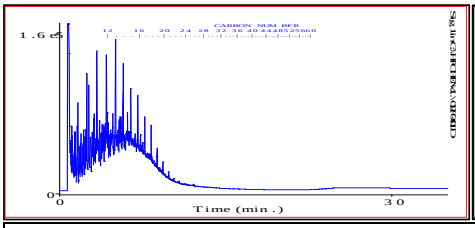
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-6 Sample Description: P215-3WB
Sample Date: Aug 15, 2015 Silica Gel Treated

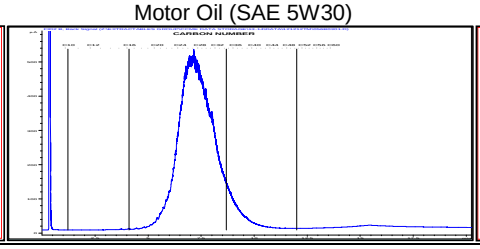


TYPICAL PRODUCT CHROMATOGRAMS

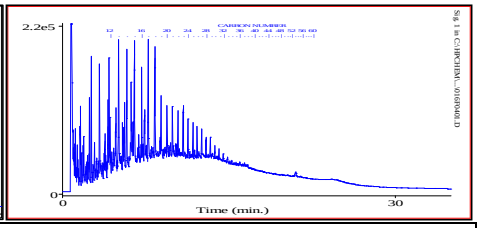
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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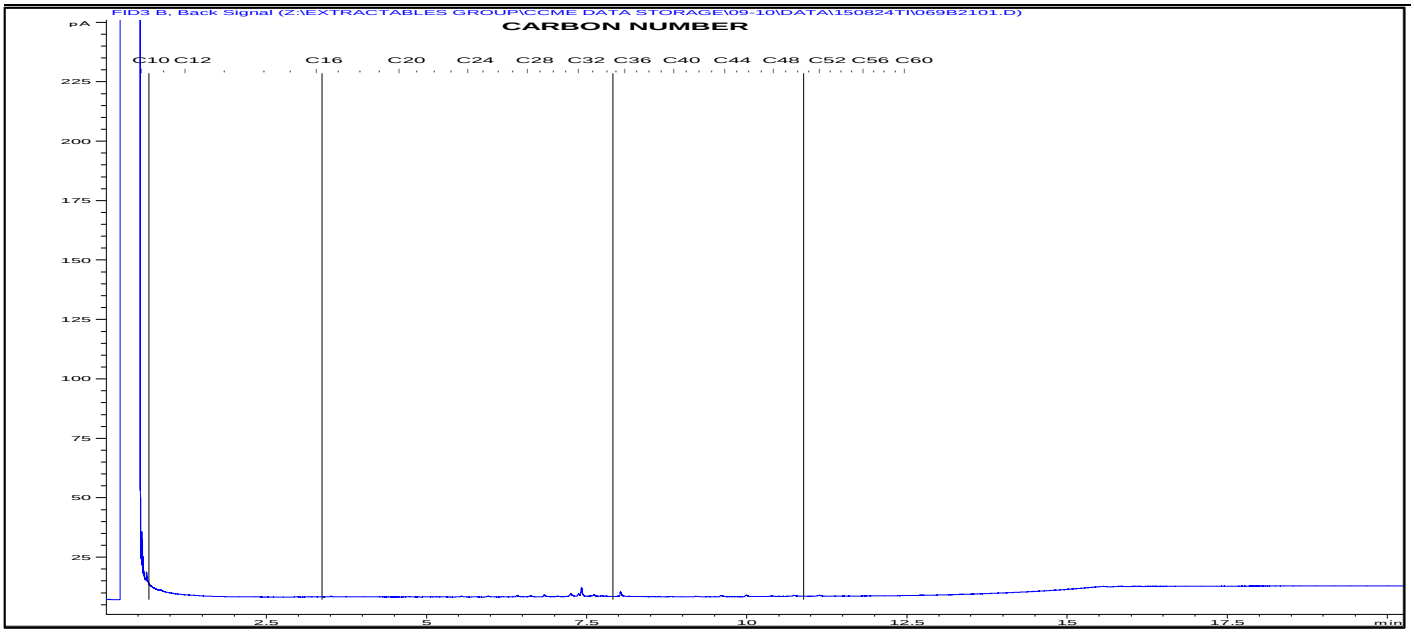
Hydrocarbon Chromatogram

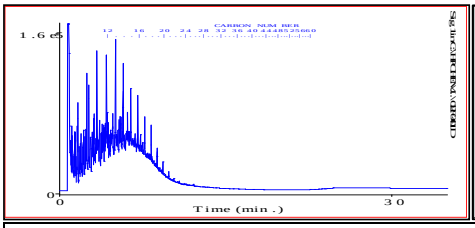
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-7 Sample Description: P215-4WA
Sample Date: Aug 15, 2015 Silica Gel Treated

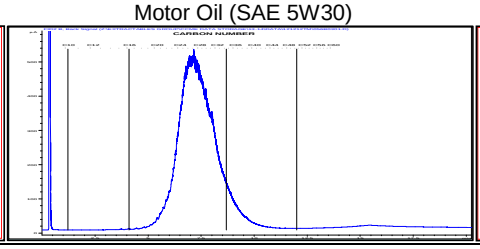


TYPICAL PRODUCT CHROMATOGRAMS

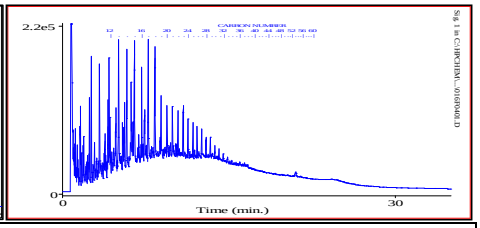
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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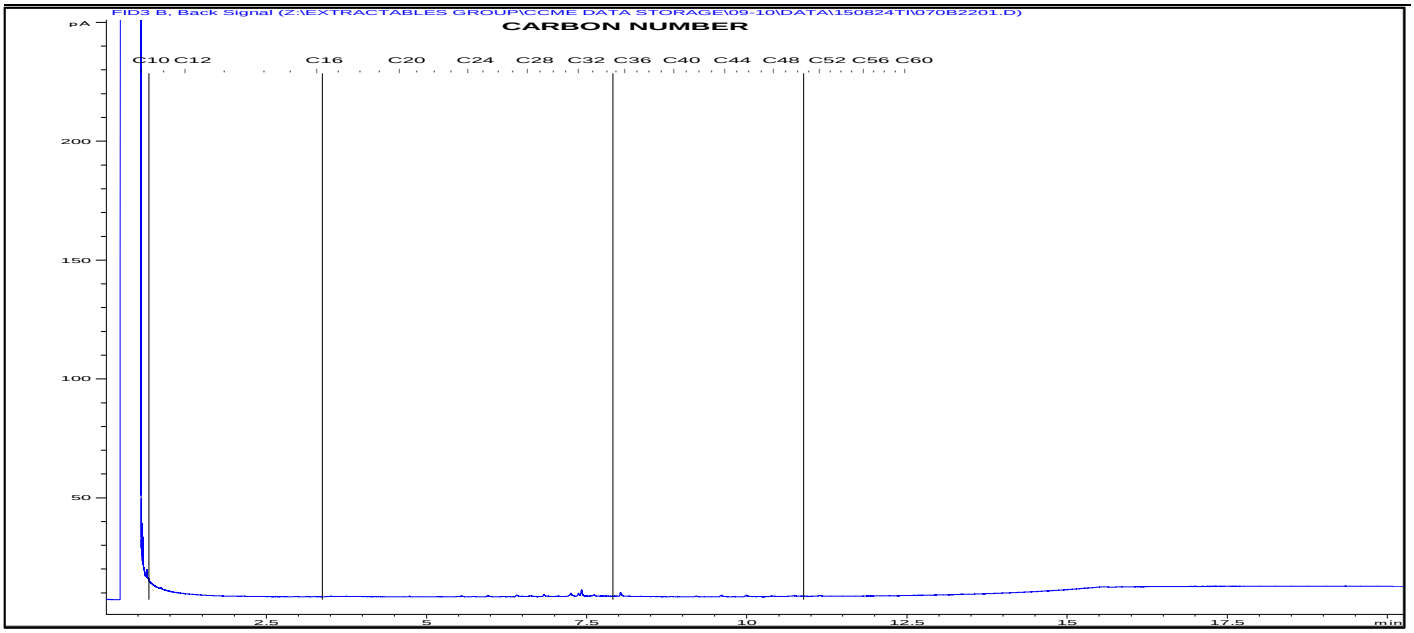
Hydrocarbon Chromatogram

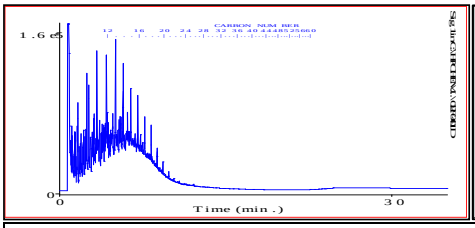
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-8 Sample Description: P215-4WB
Sample Date: Aug 15, 2015 Silica Gel Treated

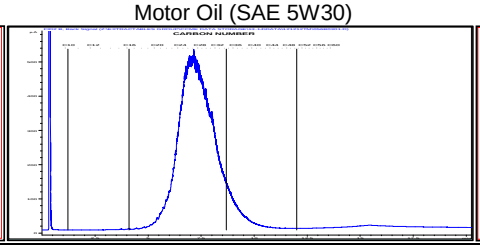


TYPICAL PRODUCT CHROMATOGRAMS

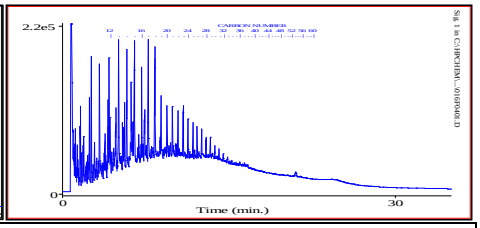
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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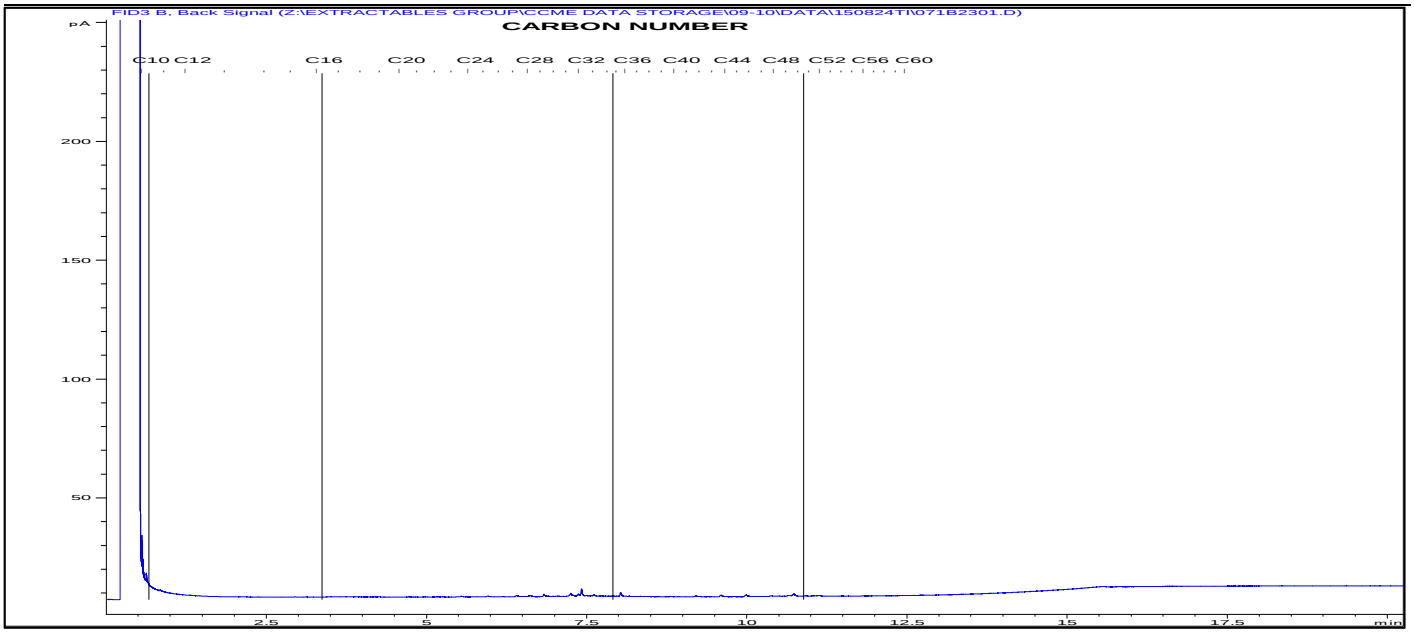
Hydrocarbon Chromatogram

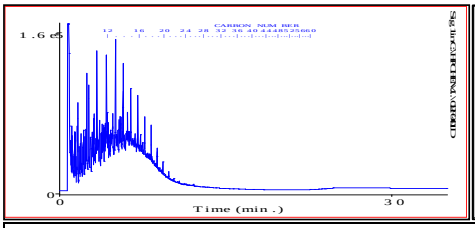
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 25, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-9 Sample Description: P215-BD1
Sample Date: Aug 15, 2015 Silica Gel Treated

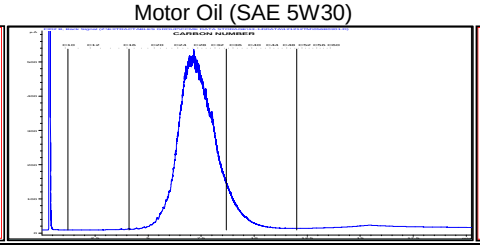


TYPICAL PRODUCT CHROMATOGRAMS

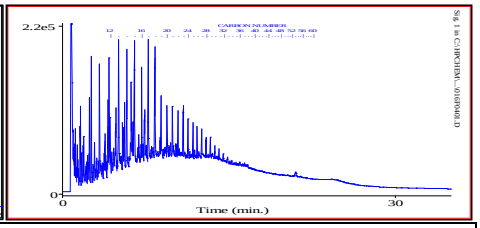
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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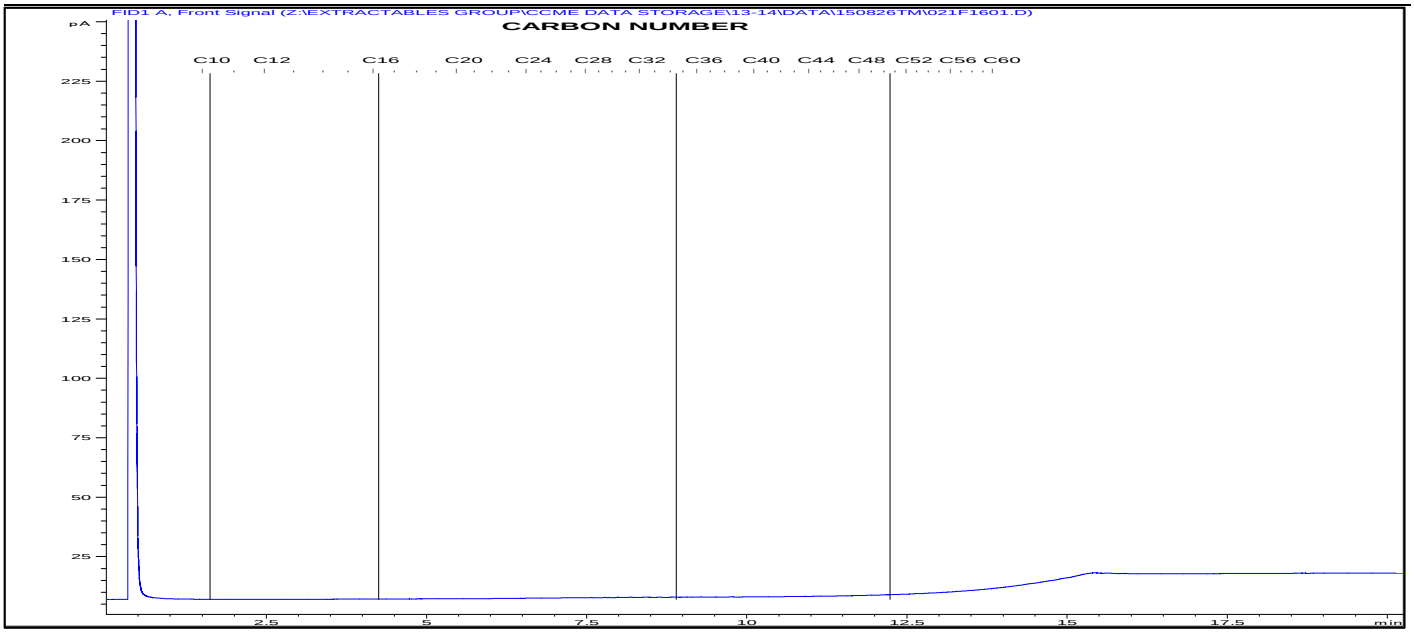
Hydrocarbon Chromatogram

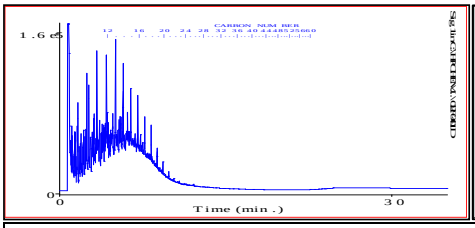
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 28, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-10 Sample Description: P215-1W
Sample Date: Aug 15, 2015

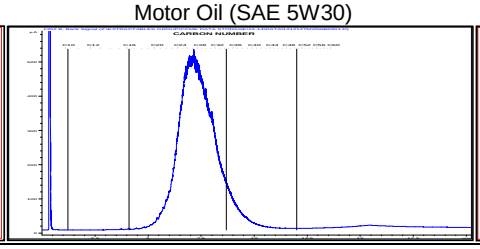


TYPICAL PRODUCT CHROMATOGRAMS

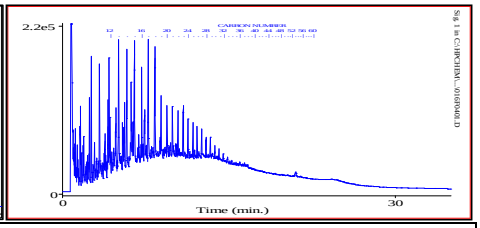
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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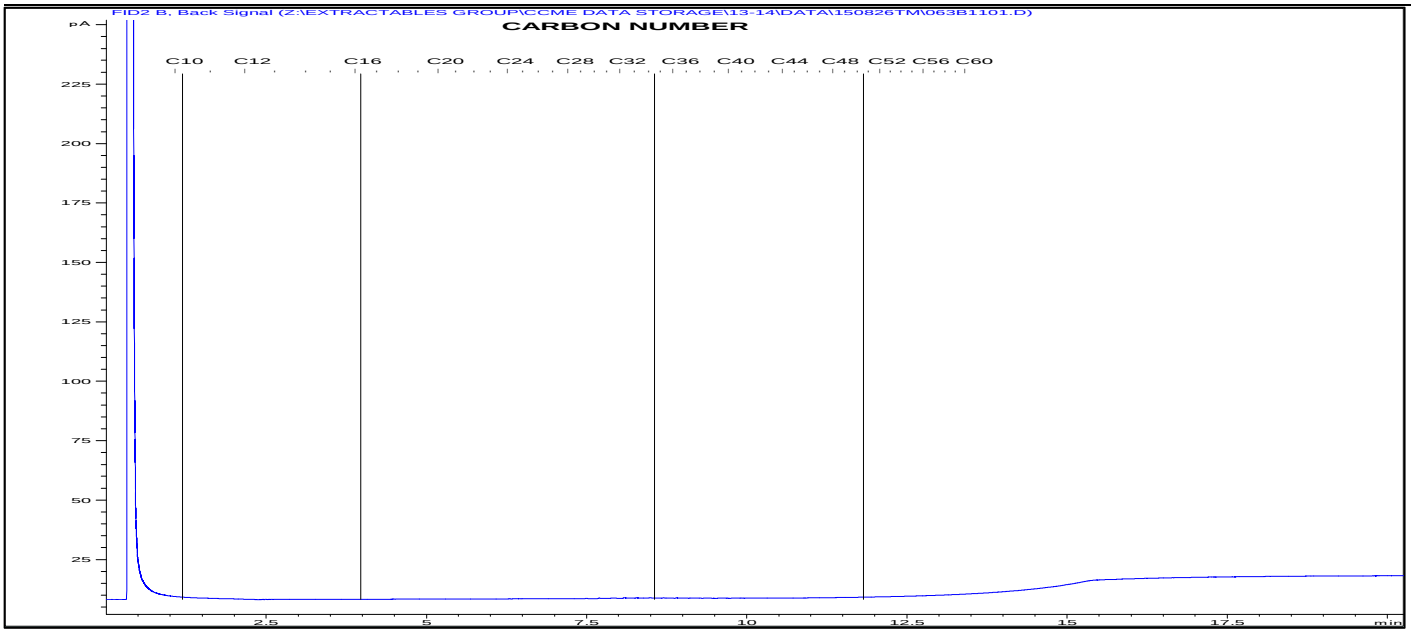
W: www.exova.com

Hydrocarbon Chromatogram

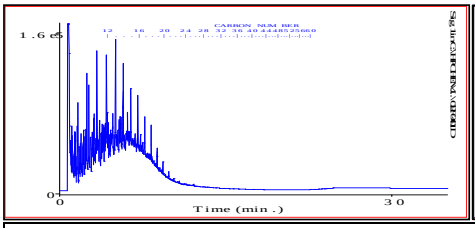
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 28, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-11 Sample Description: P215-2W
Sample Date: Aug 15, 2015

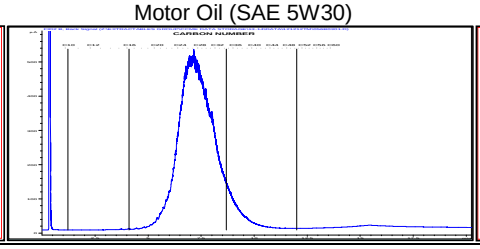


TYPICAL PRODUCT CHROMATOGRAMS

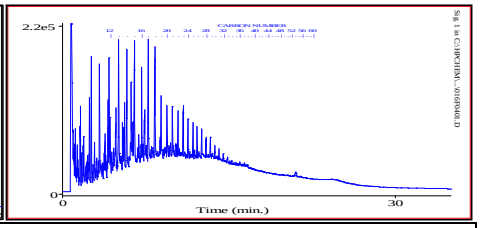
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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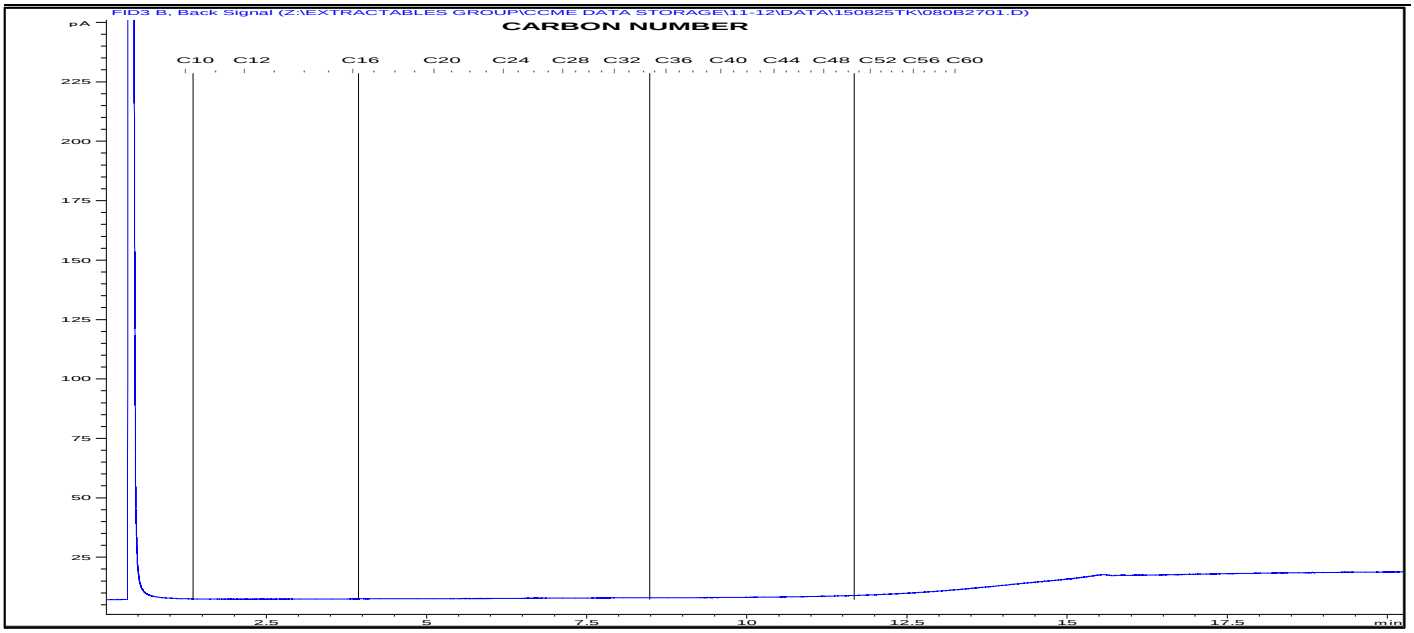
Hydrocarbon Chromatogram

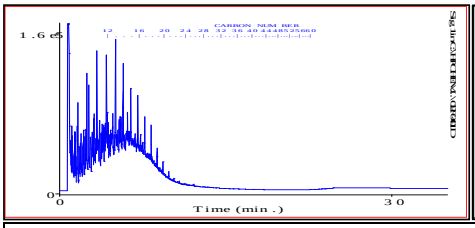
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 28, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-12 Sample Description: P215-3W
Sample Date: Aug 15, 2015

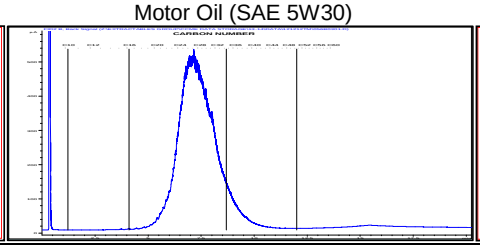


TYPICAL PRODUCT CHROMATOGRAMS

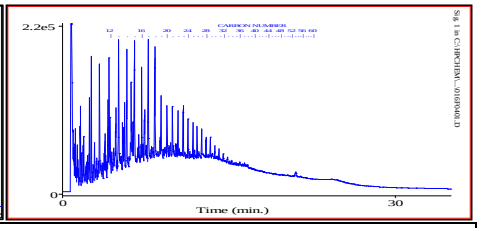
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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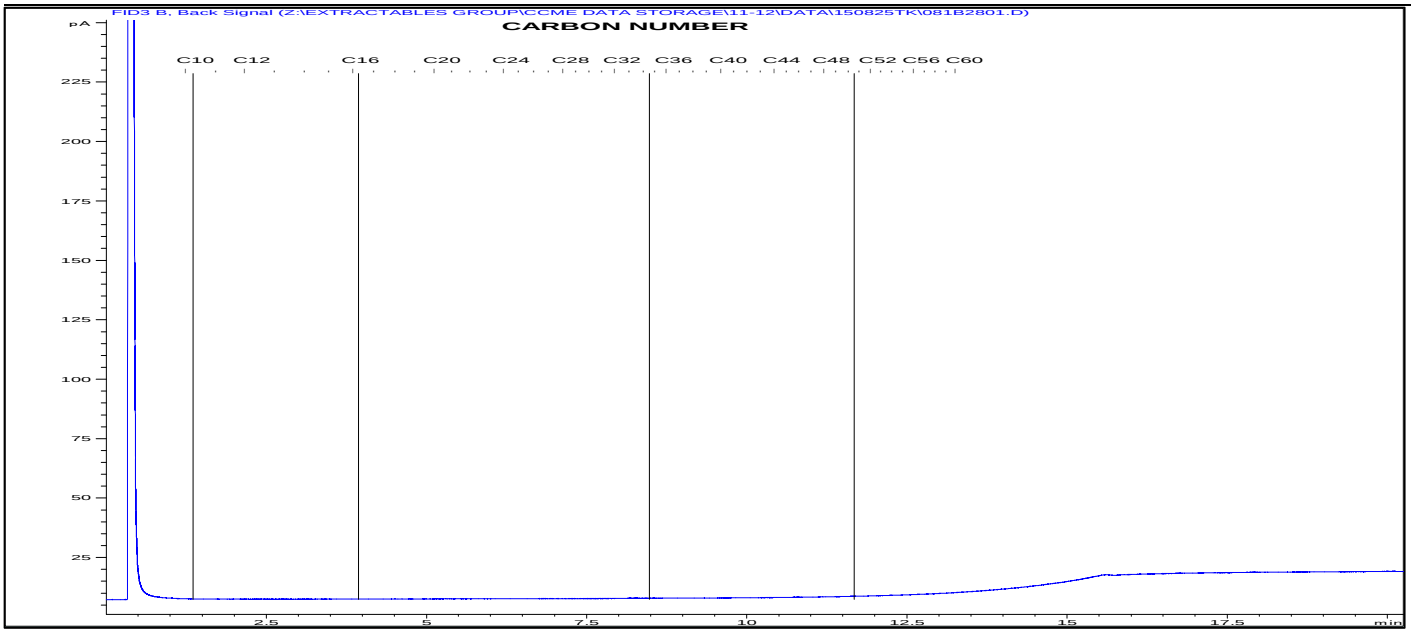
Hydrocarbon Chromatogram

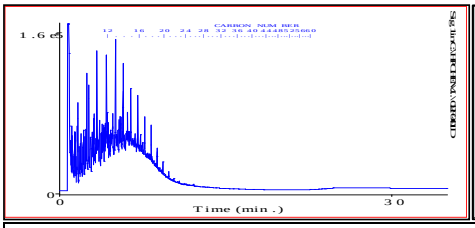
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 28, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-13 Sample Description: P215-4W
Sample Date: Aug 15, 2015

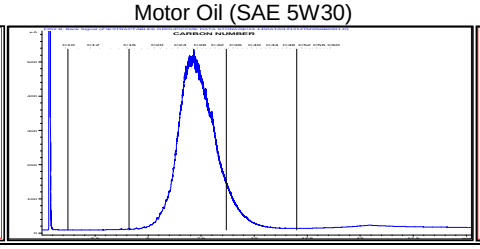


TYPICAL PRODUCT CHROMATOGRAMS

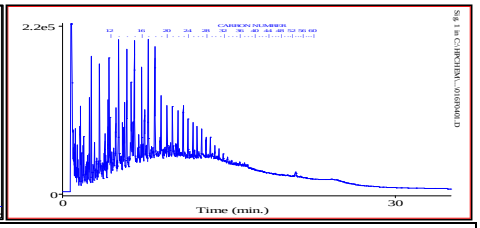
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

Terms and conditions: www.exova.ca/terms&conditions.html

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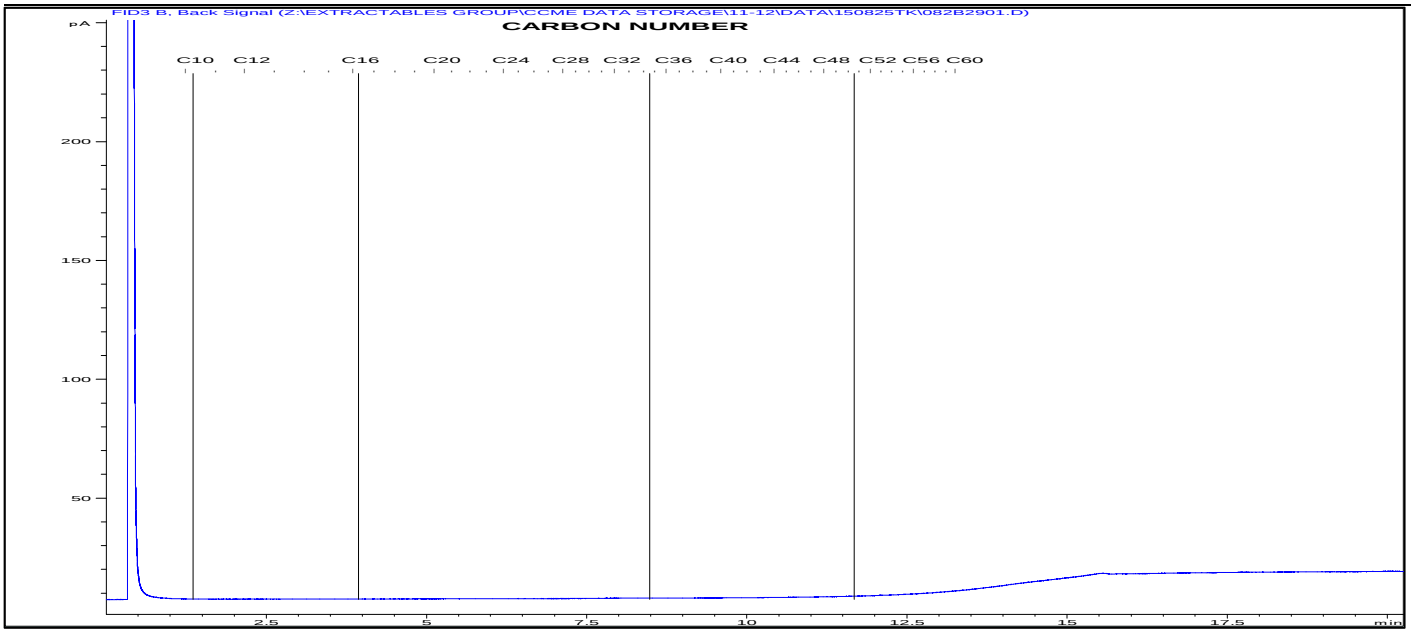
Hydrocarbon Chromatogram

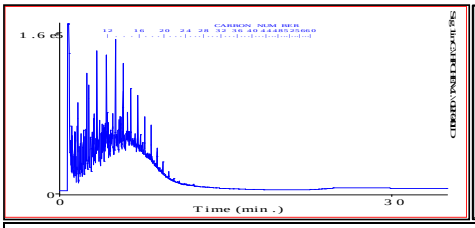
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 28, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-14 Sample Description: P215-BDW1
Sample Date: Aug 15, 2015

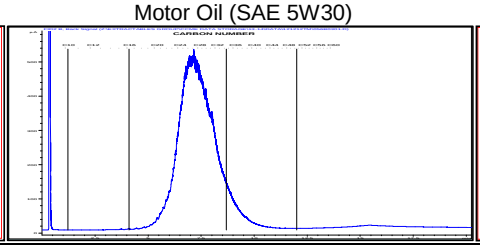


TYPICAL PRODUCT CHROMATOGRAMS

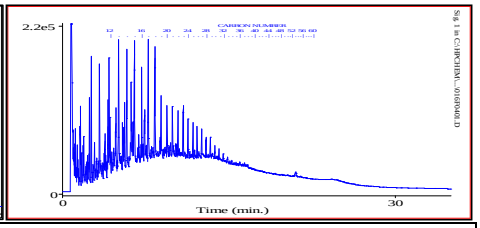
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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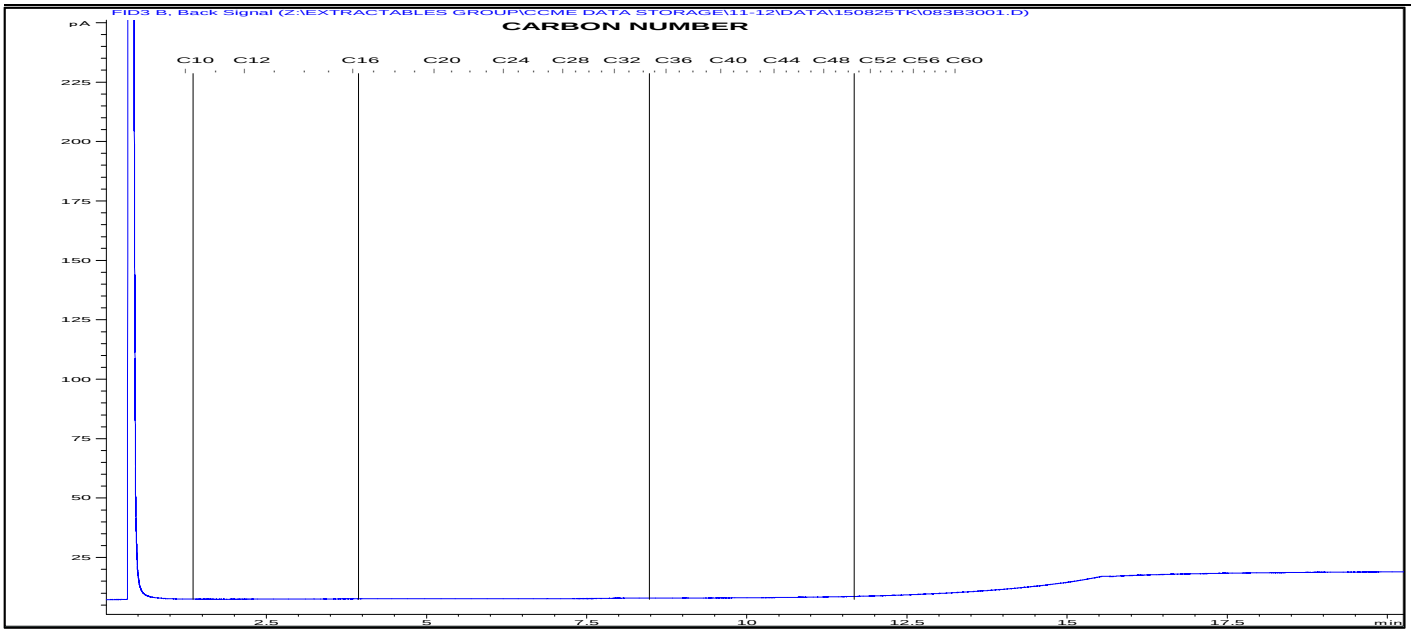
Hydrocarbon Chromatogram

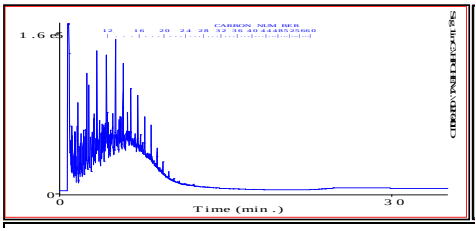
Bill To:	SILA Remediation	Project ID:	KITIK13	Lot ID:	**1089482**
Report To:	SILA Remediation	Name:		Control Number:	C0008992
		Location:	PIN-2	Date Received:	Aug 21, 2015
	250-1260 Boul Lebourgneuf	LSD:	Cape Young, NU	Date Reported:	Aug 28, 2015
	Quebec, QC, Canada	P.O.:		Report Number:	2036229
	G2K 2G2				
Attn:	Jean-Pierre Pelletier				
Sampled by:	A. Passalis				
Company:	Sila Remediation				

Exova Number: 1089482-15 Sample Description: P215-FB
Sample Date: Aug 15, 2015

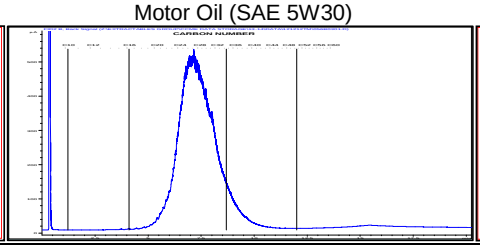


TYPICAL PRODUCT CHROMATOGRAMS

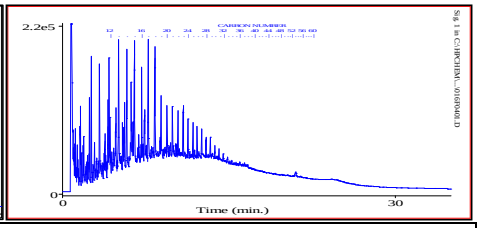
Winter Diesel



Motor Oil (SAE 5W30)



Unweathered Crude



Product Carbon Number Ranges

Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+

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Confirmation of Service Request

Lot ID: **1089482**
Number of Samples: 15
Printed Date: Oct 06, 2015

Please verify the following service request. If you have corrections or questions, please contact Client Services.

Main Contact:
Attn: Jean-Pierre Pelletier
SILA Remediation
250-1260 Boul Lebourgneuf
Quebec, QC G2K 2G2
Phone: (581) 984-2585

Primary Administrator:
Attn: Jean-Pierre Pelletier
SILA Remediation
250-1260 Boul Lebourgneuf
Quebec, QC G2K 2G2
Phone: (581) 984-2585

Invoice Delivery To:
Attn: Accounts Payable
SILA Remediation
350, rue Franquet
Sainte-Foy, QC G1P 4P3
Phone: (418) 653-4422
Fax: (418) 653-3583

Bill Paid by:
Attn: Jean-Pierre Pelletier
SILA Remediation
250-1260 Boul Lebourgneuf
Quebec, QC G2K 2G2
Phone: (581) 984-2585

Agreement Id	105540	**Well Name**	
Project Id	KITIK13	**Well Location**	
Project Name		**Field**	
Project Location	PIN-2	**Formation**	
Project Legal	Cape Young, NU	**Elevation KB**	
PO#		**Elevation GR**	
Proj. Acct. Code		**Drilling License**	
Control Id	C0008992	**Sampled By**	A. Passalis
Report Due	Sep 08, 2015	**Sampling Company**	Sila Remediation
Received Date	Aug 21, 2015	**Est. Disposal Date**	Oct 08, 2015

Service Information

Sample Id **1**
5174542

Date Sampled 08-15-2015
Priority Normal
Sample Description P215-1WA

Service	Service Name
PCB2	**B** PCBs in soil or sediments
CTGM	**B** Chromatogram supplied
CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
TT44-noB	CCME metals in soil no HWS Boron

Sample Id **2**
5174543

Date Sampled 08-15-2015
Priority Normal
Sample Description P215-1WB

Service	Service Name
PCB2	**B** PCBs in soil or sediments
CTGM	**B** Chromatogram supplied
CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
TT44-noB	CCME metals in soil no HWS Boron

Sample Id **3**
5174544

Date Sampled 08-15-2015
Priority Normal
Sample Description P215-2WA

Service	Service Name
PCB2	**B** PCBs in soil or sediments
CTGM	**B** Chromatogram supplied
CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
TT44-noB	CCME metals in soil no HWS Boron

Sample Id **4**
5174545

Date Sampled 08-15-2015
Priority Normal
Sample Description P215-2WB

Service	Service Name
PCB2	**B** PCBs in soil or sediments
CTGM	**B** Chromatogram supplied
CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
TT44-noB	CCME metals in soil no HWS Boron

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W: www.exova.com

Confirmation of Service Request

Lot ID: **1089482**
Number of Samples: 15
Printed Date: Oct 06, 2015

Please verify the following service request. If you have corrections or questions, please contact Client Services.

Sample Id	5 5174546	Service	Service Name
Date Sampled	08-15-2015	PCB2	**B** PCBs in soil or sediments
Priority	Normal	CTGM	**B** Chromatogram supplied
Sample Description	P215-3WA	CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
		TT44-noB	CCME metals in soil no HWS Boron

Sample Id	6 5174547	Service	Service Name
Date Sampled	08-15-2015	PCB2	**B** PCBs in soil or sediments
Priority	Normal	CTGM	**B** Chromatogram supplied
Sample Description	P215-3WB	CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
		TT44-noB	CCME metals in soil no HWS Boron

Sample Id	7 5174548	Service	Service Name
Date Sampled	08-15-2015	PCB2	**B** PCBs in soil or sediments
Priority	Normal	CTGM	**B** Chromatogram supplied
Sample Description	P215-4WA	CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
		TT44-noB	CCME metals in soil no HWS Boron

Sample Id	8 5174549	Service	Service Name
Date Sampled	08-15-2015	PCB2	**B** PCBs in soil or sediments
Priority	Normal	CTGM	**B** Chromatogram supplied
Sample Description	P215-4WB	CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
		TT44-noB	CCME metals in soil no HWS Boron

Sample Id	9 5174550	Service	Service Name
Date Sampled	08-15-2015	PCB2	**B** PCBs in soil or sediments
Priority	Normal	CTGM	**B** Chromatogram supplied
Sample Description	P215-BD1	CCMEC	**B** CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction
		TT44-noB	CCME metals in soil no HWS Boron

Sample Id	10 5174551	Service	Service Name
Date Sampled	08-15-2015	HG	Total Hg
Priority	Normal	TW22	Total metals - water
Sample Description	P215-1W	PCB3	**B** PCBs in water
		CTGM	**B** Chromatogram supplied
		CCMEW	**B** CCME BTEX, F1,F2, F3 in water by GC/FID/MSD

Sample Id	11 5174552	Service	Service Name
Date Sampled	08-15-2015	HG	Total Hg
Priority	Normal	TW22	Total metals - water
Sample Description	P215-2W	PCB3	**B** PCBs in water
		CTGM	**B** Chromatogram supplied
		CCMEW	**B** CCME BTEX, F1,F2, F3 in water by GC/FID/MSD

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E: Edmonton@exova.com
W: www.exova.com

Exova

Confirmation of Service Request

Lot ID: **1089482**
Number of Samples: 15
Printed Date: Oct 06, 2015

Please verify the following service request. If you have corrections or questions, please contact Client Services.

Sample Id	12 5174553	Service	Service Name
Date Sampled	08-15-2015	HG	Total Hg
Priority	Normal	TW22	Total metals - water
Sample Description	P215-3W	PCB3	**B** PCBs in water
		CTGM	**B** Chromatogram supplied
		CCMEW	**B** CCME BTEX, F1,F2, F3 in water by GC/FID/MSD

Sample Id	13 5174554	Service	Service Name
Date Sampled	08-15-2015	HG	Total Hg
Priority	Normal	TW22	Total metals - water
Sample Description	P215-4W	PCB3	**B** PCBs in water
		CTGM	**B** Chromatogram supplied
		CCMEW	**B** CCME BTEX, F1,F2, F3 in water by GC/FID/MSD

Sample Id	14 5174555	Service	Service Name
Date Sampled	08-15-2015	HG	Total Hg
Priority	Normal	TW22	Total metals - water
Sample Description	P215-BDW1	PCB3	**B** PCBs in water
		CTGM	**B** Chromatogram supplied
		CCMEW	**B** CCME BTEX, F1,F2, F3 in water by GC/FID/MSD

Sample Id	15 5174556	Service	Service Name
Date Sampled	08-15-2015	HG	Total Hg
Priority	Normal	TW22	Total metals - water
Sample Description	P215-FB	PCB3	**B** PCBs in water
		CTGM	**B** Chromatogram supplied
		CCMEW	**B** CCME BTEX, F1,F2, F3 in water by GC/FID/MSD

Other Billable Services	Service	Service Name	Quantity

Service Count

Service Name	Service Code	Service Quantity
CCME BTEX, F1,F2, F3 in water by GC/FID/MSD	CCMEW	6
CCME Hydrocarbons: BTEX, F1-F4 in Soil by Cold Extraction	CCMEC	9
CCME metals in soil no HWS Boron	TT44-noB	9
Chromatogram supplied	CTGM	15
PCBs in soil or sediments	PCB2	9
PCBs in water	PCB3	6
Total Hg	HG	6
Total metals - water	TW22	6

Notes

Note that due to required lower detection limit for PCB analysis in both water and soil the Nominal Detection limit was set to 0.05.

Report was issued to include QC ALL report required by Jean-Pierre Pelletier of SILA Remediation. Previous report 2036229.

If required for invoice approval, please sign and return to the address indicated at the top of the page.

(Signature) _____

Exova
7217 Roper Road NW
Edmonton, Alberta
Canada, T6B 3J4

T: +1 (780) 438-5522
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E: Edmonton@exova.com
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Confirmation of Service Request

Lot ID: **1089482**
Number of Samples: 15
Printed Date: Oct 06, 2015

Please verify the following service request. If you have corrections or questions, please contact Client Services.

Report Delivery Plan

Contact	Company	Address
Andrew Passalis	SILA Remediation	350, rue Franquet Sainte-Foy, QC G1P 4P3 Phone: (204) 791-4938 Fax: (418) 653-3583 Email: andrew.passalis@gmail.com

Copies	Delivery	Format
1	Email - Single Report	PDF

Contact	Company	Address
Jean-Pierre Pelletier	SILA Remediation	250-1260 Boul Lebourgneuf Quebec, QC G2K 2G2 Phone: (581) 984-2585 Fax: Email: jean-pierre.pelletier@lvm.ca

Copies	Delivery	Format
1	Email - Single Report	PDF

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Sample Integrity Scorecard

Lot ID: **1089482**
Client: **SILA Remediation** **Agreement Name:** **Special Project - Cambridge Bay**

PROCESS

Was the waybill clearly filled in?
Yes

Were the sample containers packaged well?
Yes
If No, please explain:

Was the COC received?
Yes

Was the COC filled in adequately and legibly?
Yes
If No, please explain:

Was the COC received without damage?
Yes
If No, please explain:

Were Exova supplies used?
Yes
If No, please explain:

Were the sample containers clearly labelled?
Yes
If No, please explain:

DATA QUALITY

Were the samples received within recommended holding times?
Yes

Were samples received in containers appropriate to the matrix and analysis required?
Yes

Were the expected number of samples received?
Yes
If No, please explain:

Was the sample received in the prescribed temperature range?
Yes
Please provide temperature °C:

Were all samples received intact (not damaged/broken)?
Yes
If No, please explain:

Were all samples received without adhesive tape sealing the lids?
Yes
If No, please explain:

For water samples only, were they received without a noticeable layer of sediment?
Yes
If No, please explain:

Was sufficient sample volume received?
Yes
If No, please explain:

Were the samples submitted on sampling date?
Yes
If No, please explain:

Were non-conformance/verification notes entered into Sample Login for any of the above items that did not meet Exova's sample or COC requirements?
Yes

NON-CONFORMANCES

Process	0
Data Quality	0
TOTAL	**0**

Created by: **Benjamin Morris** **Date created:** **September 04, 2015**

* is a non-conformance

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ANNEX 2

QA/QC Discussion

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QUALITY ASSURANCE / QUALITY CONTROL

Quality Assurance/Quality Control (QA/QC) program was implemented to monitor the quality of the analytical results. The main objective of this QA/QC program is to insure that sampling data and analysis results are complete, precise, exact, representative and comparable. The review consisted of evaluating sample collection/handling methodology, general laboratory comments, field (blind) duplicate samples, and inter-laboratory duplicate samples.

1. LABORATORIES

Samples collected during the monitoring program were submitted to laboratories accredited by the Canadian Association for Laboratory Accreditation (CALA):

- **Main Laboratory**
  EXOVA
  7217 Roper Road NW
  Edmonton, Alberta
  T6B 3J4, Canada
  CALA Registration number: 2602

- **Quality Assurance Laboratory**
  MAXXAM ANALTYICS INTERNATIONAL CORPORATION
  o/a Maxxam Analytics Edmonton
  9331 - 48th Street T6B 2R4
  CALA Registration number: 2996

2. FIELD QA/QC

Standard sample collection techniques were implemented to decrease the likelihood of compromising collected samples, such as:

- Pre-cleaned sample containers were provided by the laboratory.
- Monitoring equipment was decontaminated between sampling stations and dedicated sampling systems were utilized.
- Soil samples were placed directly in the laboratory provided jars/bottles and were not mixed.
- Disposable nitrile glove were worn and disposed of after each sample collection.
- Jars/bottles were cleaned prior to placement into the cooler.
- Water samples were collected using low flow methods (peristaltic pump) and the use of dedicated tubing.

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- Ice Packs or bagged ice (Ziplock bags) were used to ensure that sample temperature would be kept below 10°C during transportation.
- Samples were kept at the laboratory at temperatures below 4°C.

A sample integrity report from Exova is provided in Annex 1. This report indicates that all samples received were acceptable for analysis. It should be noted that some PHC analyses were performed after method recommended holding time (Fractions F1 to F4 for Maxxam). As a result of commercial air cargo limitations between Yellowknife and Edmonton (Canadian North), the samples sent to the Maxxam Analytics laboratory were delayed in Yellowknife and subsequently not received until September 4, 2015. These holding time exceedances could have contributed to lower concentration reported. Samples were received within the recommended hold times for all other parameters.

The duplicate samples were collected by homogenizing and splitting the respective soil samples into four sample container sets, including: the primary sample, inter-laboratory duplicate, intra-laboratory duplicate and archival sample. With the exception of the archival sample, all primary and duplicate samples were submitted for the same analyses. As outlined in the TOR and Section 2.2 of the report, the number of duplicate and archival samples represented a minimum of 10 % of the overall sample set.

The following is a summary of the analytical QA/QC procedure implemented in the field:

- 10 % field Blind Duplicate Samples of soil and water were sent to Exova: 1 blind duplicate soil sample (P215-BD1) and one blind duplicate groundwater sample (P215-BDW1) were submitted, as an independent check on data reproducibility, and to assess the field QA/QC protocols. One field blank (P215-FB) and one travel blank (P2/P4-TB) were submitted for analysis. Field blank was prepared on-site with water provided by the Laboratory.
- 10% Inter-laboratory Duplicate Samples were sent to Maxxam: one blind duplicate soil sample (P215-2WA) and one blind duplicate groundwater sample (P215-2W) were submitted (to determine if variation in procedures may cause significant difference in analytical results).
- 10 % Archival Samples of soil were sent to ESG.

3. LABORATORIES QA/QC

Quality assurance documents from Exova indicate that the soil samples were in the following batches:

- Batch 1472315 for mercury
- Batch 1472314 for metals
- Batch 1470924 for PCBs
- Batch 1470916 for TPH

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The water samples were analyzed the following batches:

- Batch 1471574 for mercury
- Batches 1471255 and 1471254 for metals
- Batch 1470968 for PCBs
- Batch 1470966 for TPH

Quality assurance documents from Maxxam indicate that the soil samples were in the following batches:

- Batch 8033634 for metals
- Batch 4188130 for PCBs
- Batch 8033544 for PHC Fraction F1
- Batch 8030910 for PHC fraction F2-F3

The water samples were analyzed in the following batches:

- Batch 8032674 for most metals
- Batch 8031761 for mercury
- Batch 4186524 for PCBs
- Batch 8030280 for PHC fraction F1
- Batch 8031163 for PHC fraction F2-F3

4. DATA MANAGEMENT AND INTERPRETATION

4.1. FIELD WORK

The relative percent difference (RPD) is used to evaluate the sample result variability. RPD values of 30% for each parameter analyzed from the same laboratory are considered an indication of acceptable duplicate sample variability. For soil samples (and especially for metal parameters), an RPD of greater than 30% may be the result of:

- Sample heterogeneity. Even though mixing of sub-samples was performed, it is still possible that the soil was not perfectly homogenous prior to placement in jars.
- Metal particles in the sample would make the sample heterogeneous and therefore a lot of variability for some specific elements (the metals would be present as flecks and would not be a part of the soil matrix – this creates a high level of variability in the sample). Notice that the results are very low and well below any guideline limit so these flecks may not even be visible or may just be a part of the soil material.

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- A third possibility is the digestion. It is possible that there are slight variations to the acid digestion which could lead to a higher extraction of certain recalcitrant elements. Chromium does tend to be one of those recalcitrant elements. Nickel generally does not fall in this category but if the chromium and nickel are together in a compound, this may be possible.

For groundwater samples, an RPD greater than 30 % may reflect difference in sample turbidity or natural variability. These performance criteria are applicable when the concentrations of the original and duplicate sample are five times or greater than the laboratory method detection limit, since the uncertainty increases dramatically as the concentration approaches the detection limit. Table I provides the detection limit for each parameter and the associated minimum concentration to be reached in order to be eligible for RPD calculation.

Table I: Minimum Concentration for QA/QC RPD Calculation

		Soil			Water		
Parameter	**Laboratory**	**Units**	**MDL**	**RPD Minimum***	**Units**	**MDL**	**RPD Minimum***
As	Exova	mg/kg	0.2	1.0	mg/L	0.0002	0.0010
	Maxxam	mg/kg	1.0	1.0	mg/L	0.0002	0.0010
Cd	Exova	mg/kg	0.01	0.05	mg/L	0.00001	0.00005
	Maxxam	mg/kg	0.10	0.05	mg/L	0.00002	0.00010
Cr	Exova	mg/kg	0.5	2.5	mg/L	0.0005	0.0025
	Maxxam	mg/kg	1.0	1.0	mg/L	0.0010	0.0050
Co	Exova	mg/kg	0.1	0.5	mg/L	0.0001	0.0005
	Maxxam	mg/kg	1.0	0.5	mg/L	0.0003	0.0015
Cu	Exova	mg/kg	1.0	5.0	mg/L	0.0010	0.0050
	Maxxam	mg/kg	5.0	1.0	mg/L	0.0002	0.0010
Pb	Exova	mg/kg	0.1	0.5	mg/L	0.0001	0.0005
	Maxxam	mg/kg	1.0	0.5	mg/L	0.0002	0.0010
Ni	Exova	mg/kg	0.5	2.5	mg/L	0.0005	0.0025
	Maxxam	mg/kg	1.0	1.0	mg/L	0.0005	0.0025
Zn	Exova	mg/kg	1	5	mg/L	0.001	0.005
	Maxxam	mg/kg	10	10	mg/L	0.003	0.015
Hg	Exova	mg/kg	0.01	0.05	mg/L	0.000005	0.000025
	Maxxam	mg/kg	0.05	0.05	mg/L	0.000020	0.000100
Total PCBs	Exova	mg/kg	0.05	0.25	ug/L	0.05	0.25
	Maxxam	mg/kg	0.01	0.05	ug/L	0.05	0.25
PHC F1	Exova	mg/kg	10	50	mg/L	0.2	1.0
	Maxxam	mg/kg	12	60	mg/L	0.1	0.5
PHC F2	Exova	mg/kg	40	200	mg/L	0.10	0.50
	Maxxam	mg/kg	10	50	mg/L	0.71	3.55
PHC F3	Exova	mg/kg	40	200	mg/L	0.1	0.5
	Maxxam	mg/kg	50	250	mg/L	1.4	7.0

* : The RPD Minimum is the minimum concentration to be reached for QA/QC Relative Percent Difference Calculation

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4.1.1. SOIL SAMPLES

One blind duplicate soil sample was submitted for intra- and inter-laboratory comparisons. The original and duplicate intra- and inter-laboratory metal, PCB and PHC soil sample results are summarized in Tables II, along with the calculated RPD for each parameter. As noted in the tables, several of the results from the original and/or duplicate samples were below or within five times the laboratory method detection limits, and therefore RPD values were not calculated for these parameters.

Review of results indicated relatively minor differences in metal concentrations within the intra-laboratory duplicate samples (highest RPD calculated at 12.6% for chromium).

Results from the inter-laboratory duplicate samples show relatively minor differences in metal concentrations, except for Cu results indicating a calculated RPD of 51.7 %. The latter can be explained by the fact that one of the values is five times below the laboratory method detection limits. Therefore, this RDP result is not considered statistically relevant. Overall, soil sample results are coherent and within the same range of results for intra- and inter-laboratory samples. The analytical results are considered to be acceptable and representative of the site conditions. The results also validate the field QA/QC procedures.

4.1.2. WATER SAMPLES

One blind duplicate groundwater sample (P215-BDW1 / P215-2W) was submitted for intra- and inter-laboratory comparisons. The original and duplicate intra- and inter-laboratory metal, PCB and PHC sample results are summarized in Table III, along with the calculated RPD for each parameter and average RPD for each sample. As noted in the table, the majority of metals and all organic parameters from the original and/or duplicate samples were below or within five times the laboratory method detection limits, and therefore RPD values were not calculated for these parameters.

Review of the results indicated minor differences in most metal concentrations and calculated RPD values between the original and intra-laboratory duplicate sample (between 0 and 24.8%).

Review of the inter-laboratory duplicate results also indicated minor differences in concentrations and calculated RPD values, even for chromium (40.0%) and nickel (37.2%).

Overall, groundwater sample results are coherent and within the same range of results for intra- and inter-laboratory samples. The analytical results are considered to be acceptable and representative of the site conditions. The results also validate the field QA/QC procedures.

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The results from field blank sample (P215-FB) and travel blank sample (F2/F4-TB) that were submitted for metals, PCB and PHC analyses are also summarized in Tables III. All parameter concentrations were below the detection limit, with the exception of the travel blank which had a trace concentration of zinc at two times the detection limit. Zinc concentration detected in the travel blank probably originated from the water provided by laboratory.

4.2. LABORATORIES

QA/QC results from both laboratories do not raise any concern or provide any explanation concerning the concentration difference noticed in the inter-laboratory duplicate samples.

It should be noted that inter-laboratory variations are common. QA/QC results from both laboratories are appended.

4.2.1. BLANKS

All blanks from both laboratories, for both matrices and for all parameters were below the detection limits.

4.2.2. ANALYTICAL DUPLICATES

All analytical duplicates from both laboratories, for both matrices and for all parameters had RSD's at or below 20%.

4.2.3. CONTROL SAMPLES

All control samples from both laboratories, for both matrices and for all parameters had concentrations between the upper and lower concentration established for each parameter.

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Table II: Soil Chemical Analysis Results - Quality Assurance Samples

Sample #	Laboratory	Parameters												
		As [mg/kg]	Cd [mg/kg]	Cr [mg/kg]	Co [mg/kg]	Cu [mg/kg]	Pb [mg/kg]	Ni [mg/kg]	Zn [mg/kg]	Hg [mg/kg]	PCBs [mg/kg]	F1 C_6-C_{10} [mg/kg]	F2 C_{10}-C_{16} [mg/kg]	F3 C_{16}-C_{34} [mg/kg]
MDL (Exova)		0.2	0.01	0.5	0.1	1.0	0.1	0.5	1	0.01	0.05	10	40	40
RPD Minimum (Exova)		1.0	0.05	2.5	0.5	5.0	0.5	2.5	5	0.05	0.25	50	200	200
MDL (Maxxam)		1.0	0.050	1.0	0.5	1.0	0.5	1.0	10	0.050	0.01	12	10	50
RPD Minimum (Maxxam)		5.0	0.250	5.0	2.5	5.0	2.5	5.0	50	0.250	0.05	60	50	250
Intra-Lab Duplicate Samples (Exova)														
P215-2WA	Exova	2.8	0.09	5.2	1.7	3.3	2.4	3.8	12	<0.01	<0.05	<10	<40	<40
P215-BD1		3.0	0.10	5.9	1.9	3.4	2.3	4.2	12	<0.01	<0.05	<10	<50	<50
Relative % Difference		6.9	10.5	12.6	11.1	3.0	4.3	10.0	0.0	N/A	N/A	N/A	N/A	N/A
Inter-Lab Duplicate Samples (Exova-Maxxam)														
P215-2WA	Exova	2.8	0.09	5.2	1.7	3.3	2.4	3.8	12	<0.01	<0.05	<10	<40	<40
	Maxxam	2.70	0.09	4.90	1.80	5.6	2.40	4.40	14	<0.050	<0.01	<12	<10	<50
Relative % Difference		3.6	3.4	5.9	5.7	51.7	0.0	14.6	15.4	N/A	N/A	N/A	N/A	N/A

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Table III: Groundwater Chemical Analysis Results - Quality Control Samples

Sample #	Laboratory	Parameters												
		As [mg/L]	Cd [mg/L]	Cr [mg/L]	Co [mg/L]	Cu [mg/L]	Pb [mg/L]	Ni [mg/L]	Zn [mg/L]	Hg [ug/L]	PCBs [ug/L]	F1 C_6-C_{10} [mg/L]	F2 C_{10}-C_{16} [mg/L]	F3 C_{10}-C_{34} [mg/L]
MDL (Exova)		0.0002	0.00001	0.0005	0.0001	0.0010	0.0001	0.0005	0.001	0.005	0.05	0.1	0.1	0.1
RPD Minimum (Exova)		0.0010	0.00005	0.0025	0.0005	0.0050	0.0005	0.0025	0.005	0.025	0.25	0.5	0.50	0.5
MDL (Maxxam)		0.00020	0.00002	0.0010	0.0003	0.0002	0.00020	0.0005	0.0030	0.0020	0.05	0.1	0.1	0.2
RPD Minimum (Maxxam)		0.00100	0.00010	0.0050	0.0015	0.0010	0.00100	0.0025	0.0150	0.0100	0.25	0.5	0.5	1.0
Intra-Lab Duplicate Samples (Exova)														
P215-2W	Exova	0.0007	0.00015	0.0060	<0.0001	0.001	0.0002	0.0035	0.01	<0.005	<0.05	<0.1	<0.1	<0.1
P215-BDW1		0.0007	0.00015	0.0077	<0.0001	0.001	0.0003	0.0041	0.01	<0.005	<0.05	<0.1	<0.1	<0.1
Relative % Difference		0.0	0.0	24.8	N/A	0.0	40.0	15.8	0.0	N/A	N/A	N/A	N/A	N/A
Inter-Lab Duplicate Samples (Exova-Maxxam)														
P215-2W	Exova	0.0007	0.00015	0.0060	<0.0001	0.001	0.0002	0.0035	0.01	<0.005	<0.05	<0.1	<0.1	<0.1
	Maxxam	0.0009	0.00018	0.0090	<0.0003	0.0015	0.00024	0.0051	0.009	<0.0020	<0.05	<0.1	<0.1	<0.2
Relative % Difference		20.5	18.2	40.0	N/A	40.0	18.2	37.2	7.3	N/A	N/A	N/A	N/A	N/A
P215-FB	Field Blank	<0.0002	<0.00001	<0.0005	<0.0001	<0.001	<0.0001	<0.0005	<0.001	<0.005	<0.05	<0.1	<0.1	<0.1
P2/P4-TB	Travel Blank	<0.0002	<0.00001	<0.0005	<0.0001	<0.001	<0.0001	<0.0005	0.002	<0.005	<0.05	<0.1	<0.1	<0.1

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ANNEX 3

Field Notes and Chain of Custody Forms

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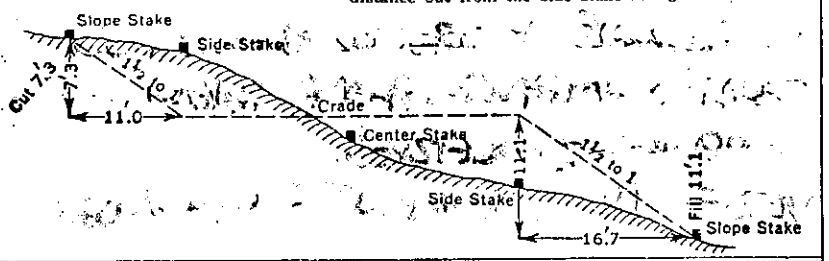
DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

2015 KITIKMEOT LFM PROGRAM

AUG 12, 2015 MOB TO YCB, COLLECT BUS SHIPMENTS, PUMP, TUBING, FIELD SUPPLIES, GROCERIES.
- VERIFY TDG SHIPMENTS VIA BUFFALO

AUG 13, 2015 MOB TO YCB
- MEET W/ KALVIK RE: ACCOMMODATION WILF'S EXPEDITING, -TRUCK RENTAL, CHECK SHIPMENTS - MISSING LABELS
- TALK W/ GORD / CO-PILOT ADLAIR RE: CHARTER SCHEDULE.
- UNPACK SUPPLIES / GROCERIES, HAVE INUIT PERSONNEL COMPLETE PAPERS

AUGUST 14, 2015 9°C, LT RAIN
- SORT COOLERS/SAMPLING SUPPLIES
- VISIT DON MILLER, NWS MANAGER
- UPDATE LAPTOP, TEST W/ DATALOGGERS
- PURCHASE WD40, FUEL, WATER, NAPTHA

LEVEL

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- CHECK P4 SAMPLE COORDINATES
  - SOME APPEAR DIFFERENT FROM WHAT IS SHOWN ON FIGURES
  @ STATION LF & NW LF

@ CAM-M TIER II, MAIN LF N, S LUBE LOCKS ON MOST THERMISTORS.

AUGUST 15 2015 D228 10°C OVERCAST 30-50 NW

SUMMIT DORNIER, JOSHUA, MATT
JOE, SUSIE, JOHN HENRY, BRANDI
840 DEPARTURE, 10°C IN CB
ARRIVE 1045, 2 PASSES FOR PHOTOS.

TIER II VT-4 007

008 P2-5 - 4 W/B, 3 m N @ MW,
∇ - 1.62 bot. 3.23. S/up 89-34

pH 7.9, 7.8, 7.8, 7.7 ✓
Cond 715, 698, 692
T 3.8, 3.4, 3.3, 3.2
Turb 88.1, 62.1, 48.3, 47.1
Sample 2x1L, 1x250 pL, 3x40 mL

TOTAL VOL = 4,100

VT-3 009

MW-1 WP 10 4 m W
∇ 1.92 bott. 2.55 S/up 87.32
pH 8.4, 8.2, 8.2
Cond. 898, 971, 968.
Temp 3.0, 3.2, 3.3
Turb 38.1, 23.6, 22.4
Collect 2x1L, 1x250 pL, 4x40 mL

TOTAL VOL 2,000

BLK ORGANICS + SAND, BRKN ROCK (FRAC)
REFUSAL @ 35

VT-1 WP 11/12

MW-2 WP 13 2 m NE.
Grey S+G, damp.

∇ 1.19 bott. 3.16 S/up, 77.25
pH (8.3), 8.0, 8.0, 7.9
Temp 4.1, 3.9, 3.3, 3.1, 3.2
Cond 669, 668, 678, 667
Turb. 10.9, 10.8, 10.8, 3.29.

TOTAL VOL. 5,200

ZW-BD1 ? INTER WATER
ZWA-BD1 SOIL

LEVEL

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VT-2 WP 14.

MW3. WP 15. 2m NW

SLVP 94-37. ↓ 179, bott 299

pH 8.2, 7.9, 8.0 ✓

Temp 2.7, 2.4, 2.1 ✓

Cond 710, 715, 712

Turb 56.7, 8.09, 7.91.

Collect 2x1L, 1x250pL, 4x40

TOTAL VOL = 2,300

18 V-NW.

19 NW/NE @ TOE

20. NW/NE @ M.O. SLOPE

21 NW/NE @ CRNR, PAN -

22/23 — LIN. DEPO. 1.0 x 30 x 15↓ NW/SW

24 " 1.3 x 30 x 10↓ E/S

25 " 50 x 30 x 20↓ CREST SW/NE

ALSO MINOR EROS. DOWNSLOPE

FINES, 3.5mL x 25W x 2.5↓.

26 " " 3.0mL x 30 x 5↓. SW/NE

27 SETT. + EROS BELOW VT-1. 3mL, 15-50W, 5-10↓ SW/SE/NE

28 VIEW - NE/SE, PAN @ W. CRNR

29 NE/SE MIDSLOPE

30 " " TOE.

31 V-NE @ SW SIDE

32 - V-SE @ NE SIDE

33 - V-SE 34. V-NW @ 5↓

EROS, MEANDERS, TOP-TOE, 15-25W

35 - V-NW @ MIN EROS, FINES WASH, 30W, TOP/TOE UP TO 5↓ END 36.

V-SE

37 V-NW @ EROS, CREST 30-40↓, 5↓

V-SE - 38- 3mL

39 V-SE/SW, PAN @ N CREST

40 V-SW @ INTER SITUATIONS V-NE

42 V-SW/NE 3-9mL, 10W, 5↓

43 V-NE/SW @ MIN EROS, 1.5mL @ CREST 15W 5↓,

44 V-SW/NW, PAN @ E CREST

45 V-SE/NW @ MIN EROS, CREST 5mL, 10W, 5↓

46 V-SE/NW " " -

180mL, 15-30W, 5↓ →47

48 V-SE/NW " " 5mL, 15-20W 5↓.

49 - V-SW/NW @ MID SLOPE.

50 " " " @ TOE

51 V-SW @ NE SIDE

LEVEL

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BORROW AREA SOUTH

52 - V - WNW/S @ NE CRNR
53 POTHOLE V - N/N 60x40x10
54 V - NW @ PONDED AREA @ TOE
55 V. N. @ → 5x7m. x 40↓, SOME IRON PRECIP. ; NO SHEEN., CONTACT 25 @ TOE
56 V - E, S @ NW TOE
57 V E, S, PAN @ CREST
58 POTHOLE ; V - SSE, 30x40x7.5
v. SPARSE VEG @ S. END/SLOPE
59 PAN NW - SW @ PONDED AREA ON SW TOE, IRON PRECIP. IRON BACT. SHEEN @ SW TOE 15mL x 1m AWAY > 5mL x 80W
V - N, E > wraps around toe to 60.
61 - V. N/E, PAN @ SW CREST
62 POTHOLE ON SE SLOPE 30x30x7
V - N/W
63 V - W/N @ SE TOE
64 POTHOLE 50x30x10↓ V - N/W
65 EROS. ON E SIDE SLOPE 4mL x 10x2.5 - V - W - E
66 MIN. POTHOLE/DEPR 60x25x2.5
V - N/W
67 V - N @ SW TOE

SOUTH LF EAST

68 - PAN. E - NW → NE @ CREST
69 V - NE/NW, PAN. @ CREST
70 V - NW/SW @ NE TOE
71 PAN @ CREST, V E - N @ LIN DEPR 7mL x 30 - 10W NARROWS TO TOE 5 - 10↓
73 - END V - NW.
74 POTHOLE ON SLOPE V - S, E 30x15x7
76 V - SW/SE
75 V - SW/SE @ CREST
77 V - NE @ MIN VEG ON SLOPE
78 - E/SE @ NW TOE
79 PAN S - NE
80 SE/NW @ ℄
81 V - NW/SE @ LIN. EROS. 6mL 10 - 15W, 5↓

NHWLF

82 - V - SW @ NE SIDE
83 V - SE @ NW SIDE
84 V - NE @ SW SIDE
85 V - NW @ SE SIDE
87 V. NW/SE @ E TOE
88 V NW/SE PAN E CREST
89 V - SW @ STRIATIONS ABOVE CREST SAME, POSSIBLE VEHICLE

LEVEL

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LTR. @ 30m.

90 - 2 POTHOLES BELOW SLOPE
V-SE (SW) SW. 30x50, 40x50x5↓
ALSO V-NE/SW @ EROS TOP/TOE
10w, 5↓

91 V-NE/SW @ EROS. TOP/TOE
15w x5↓

92 V-SW/SE @ N-TOE

93 EROS TOP/TOE IN COAST.
TYPE 1 V-SW/NE — 94
↳ SEE CORRECT LOCATION NE

95 V-SW/SE/PAN @ N-CREST

97 CRNR V-SE/NE/PAN @ W CRNR

96 POTHOLE 30x30x10 V-SW

98 LIN DEPR @ CREST 2mx30x5-7↓
V-NW/SW

99 POTHOLE 3m below crest, 30x40
V-SW, SSW x10↓

100 Sparse veg @ S. slope

101 MIN EROS. ON SLOPE, FINES, V-
S/N. 20-30m 2-3↓ →102

103 V NE/NW @ S CRNR/PAN

104 LIN DEPR ABOVE CREST 4mx10-50
x5-7↓ V-SW/SE

165 V-SE @ min. EROS @ CREST
3m↓ 15w

106 V-SE @ EROS ON CREST — TOE
10w, 5↓ 107 → V-NW

108 V-NE/NW, N @ CRNR (2)

109 MIN EROS. 2 LINEAR — L. CREST TO 109
10w x2-5↓

V-S from Crest ~5cm

110 V-NE @ STATIONS

111 V-SE/NE @ W-TOE

AIRSTRIP SOUTH LANDFILL
V-SW AT FORMER PONDED AREA

112 PAN - @ CREST

113 V-NW/SE TOE

114 V-S/W @ NE CRNR

115 V-E/S @ NW CRNR, PAN

116 LIN. DEPR. - ROCK PUSH
6mL x30x10↓

117 V-NW/NE @ SW CRNR

USAF

118 PAN.

119 V-WSW/SE @ NE CRNR

120 V-SSE, ENE @ NW CRNR

121 POTHOLE 30x40x15↓. V-SE/NW

122 V-S/N-P.C.

123 V-NNW/NE @ SW TOE

LEVEL

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STATION NWEST LF

124 PAN.
125 V-N W/S @ NE TOE
126 PAN NW-S.
~~127~~. V-SE, SW @ N END
127. PAN. S-NE
128 V-SE @ SLOPE
129 V-E
130 V-N/E,
131 PAN
132 PAN E-NW @ SW CREST
133 RUTS-SAME. V-SW

DRIFT LINE SOUTH

~~134~~ V-W, SE @ N-END
135 PAN.
136 V-S
137 LIN-DEPR. 1.5mL, 10W, 2-3↓
V-NW/SE
138 V-S
139 V-N, SE/PAN @ SW CREST
140 V-N-SE @ TOE
141 V. NE FROM SE CRNR
142 V. NNE @ C

143. LIN DEPR BELOW SLOPE
~~144~~ V-N/SE 80x15x 5↓-7. V-N/S
144 TYP VEG ON E SLOPE, SLOPE
145 V-S/N @ E CRNR
146 V-W- - SPARSE VEG
147 DEPR. BELOW CREST CRNR
~~80~~x40 x x.3-5↓ V-E, N
148 2 small depressions @ Crest
SLx. 40x50 each, V-E/N 1-2m apart

AIRSTRIP LF

149 V. N, ENE @ TOE
150 V-NE @ CREST
151 V-SE across top
152 V-N/S / PAN
153 PAN ACROSS TOP
154 PAN S-NW
155 V-E/N-C LIN DEPRESSION
2mLx 15-30W x 10↓15
156 PAN S-NE @ NW CREST
157. V SE/ ENE @ TOE
158 V-W/E @ TOE
159 V- SSW., W/ESE. @ TOE
160 PAN NW-S.

LEVEL

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161 metal strapping
162 2 pieces of strapping
163 misc rusted metal
164 V-NW/E @ TOE
165 PAN @ CREST
166 UN. DEPRESSION SLOPE, 3m2, 15w
x 5167 V-S/E, ROCK PUSH
167 V-~~SW~~ ~~@TOE~~ MID SLOPE
168 V-NW @ TOE
169 V-SE/W @ NE TOE
170 V-NE/SE @ CREST
NO VEG, ALL TYPE 1.
171 Misc metal
172 Misc metal near toe.

DEPART SITE @ 6:30 pm.
ARRIVE BACK @ 8:00 PM.

HRS 8-8 - 12 HRS

AUGUST 16, 2015 CAM-M

174 - TA4 TIER II DF
9°C, 40km/h NW, P.Sunny
Change batts 06/21
175 - TA3 download &
change batts 06/21
176 - TA1 download &
Change batt 06/21
177 - TA2 download &
Change batteries
ALL OL[D] BATTERI[ES] ULB-5

* ALL ULB1 & ULB-15
MAIN LF NORTH
VT-1
178 OLD-ULB 15
ITN-1 2 CABLES A/B.
179 Change batteries OLD-ULB-15

KALE - 10HRS
JOE/SUSIE 6HRS
GORDON 4HRS

PACKUP FOR BYRON BAY.
HOLD FOR PLANE DEPART YCB @ 6:3[0]
ARRIVE 7:00
UNPACK SET UP CAMP @ CRNR OF
ARRON 9:00PM
3 WOLVES @ THE SITE 9:45pm chase
them away, warning shots

Maxxam
A Bureau Veritas Group Company

4606 Canada Way, Burnaby, BC Canada V5G 1K5 Ph: 604 734 7276 Toll Free: 1 800 665 8566 Fax: 604 731 2386

Maxxam Job#: 254

CHAIN OF CUSTODY RECORD

Page: 1 of 1

G 102365

Invoice To: Require Report? Yes [X] No [ ]

Company Name: SILA REMEDIATION
Contact Name: J.P. Pelletier
Address: 1260 boul. Lebourgneuf
Québec PC: G2K 2G2
Phone / Fax#: Ph: Fax:
E-mail: jean-pierre.pelletier@englobe.corp.com

Report To:

Company Name: Englobe Corp.
Contact Name:
Address: Same
PC:
Phone / Fax#: Ph: Fax:
E-mail: andrew.passalis@gmail.com

PO #:
Quotation #: KITK13
Project # : B40832
Proj. Name: PIN-2 / PIN-4
Location: Cape Young / Byron Bay
Sampled By: A. PASSALIS

REGULATORY REQUIREMENTS SERVICE REQUESTED:

- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other
- [ ] DRINKING WATER
- [X] Regular Turn Around Time (TAT) (5 days for most tests)
- [ ] RUSH (Please contact the lab)
- [ ] 1 Day [ ] 2 Day [ ] 3 Day

Date Required:

Special Instructions:

Return Cooler [ ] Ship Sample Bottles (please specify) [ ]

Soil + Water – Metals to include: (As, Cr, Cd, Co, Cu, Pb, Ni, Zn, Hg)

JLT INS-0018

Alina Kenstavicius
04-Sep-15 18:55
B577696

ANALYSIS

	Sample Identification	Lab Identification	Sample Type	Date/Time Sampled	BTEX/VPH	VOC/VPH	EPH	PAH	CCME-PHC (Fractions 1-4 Plus BTEX)	CCME-PHC (Fractions 2-4)	CCME BTEX (Fraction 1 Plus BTEX)	PCB	Phenols by 4AAP	Phenols by GCMS	TOG	SWOG	MOG	Dissolved Metals Field Filtered?	Dissolved Metals Field Acidified?	Totals Metals Field Acidified?	Nitrate	Total & E.coli	Asbestos	METALS (As, Cd, Cr, Co, Cu, Pb, Ni, Zn, Hg)	CONTAINERS	HOLD
1	P215-2WA		Soil	15/8/15					X			X												X		2
2	P215-2W		Water	"					X			X								X						1
3	P415-3WA		Soil	15/8/17					X			X												X		2
4	P415-8WA		Soil	15/8/17					X			X												X		2
5	P415-4A		Soil	15/8/17					X			X												X		2
6	P415-21A		Soil	15/8/18					X			X												X		2
7	P415-15A		Soil	15/8/17					X			X												X		2
8	P415-12A		Soil	15/8/17					X			X												X		2
9	P415-23B		Soil	15/8/18					X			X												X		2
10	P415-3W		~~Soil~~	15/8/17					X			X								X						1
11			Water	~~15/8/17~~																						
12																										

RECEIVED IN YELLOWKNIFE
By: Michelle
8:55 Time
2015-09-04

Temp: 4/5/5

Samples are from a Drinking Water Source? YES NO [X]
Does source supply multiple households? YES NO

Laboratory Use Only

*Relinquished by:	Date (YY/MM/DD):	Time:	Received by:	Date (YY/MM/DD):	Time:	Time Sensitive	Temperature on Receipt (°C)	Custody Seal Intact on Cooler?
	15/8/19	900.	JESSE LIONG	15/09/06	0900	[ ]	3.2.2	Yes [X] No [ ]

*IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

ICE-Y

Exova — Testing, calibrating, advising

www.exova.com ED 120-02

Invoice to:
Company: SILA REMEDIATION
Address: 250-1260 BOUL LEBOURGNEUF, QUEBEC
Attention: J.P. PELLETIER
Phone: 581-984-2586
Cell:
Fax: 418-647-2540
E-mail: jeanpierre.pelletier@ivm.ca
Agreement ID: 105540
Copy of report: andrew.passalis@gmail.com

Report To:
Company: SAME
Address:
Attention:
Phone:
Cell:
Fax:
E-mail 1:
E-mail 2:
Copy of invoice:

Report Results

		Regulatory Requirement	
E-Mail	X	HCDWQG	
Mail		Ab Tier 1	
Online		SPIGEC	
Fax		BCCSR	
PDF	X	Other (list below)	
Excel	X		
QA/QC	X		

Project Information
Project ID: KITIKI3
Project Name:
Project Location: PIN-2
Legal Location: CAPE YOUNG, NU
PO/AFE#:
Proj. Acct. Code:
Quote # 20433

Sample Custody (please print)
Sampled by: A. PASSALIS
Company: SILA REMEDIATION

RUSH Priority
- Emergency (contact lab for turnaround and pricing)
- Priority 1-2 working days (100% surcharge)
- Urgent 2-3 working days (50% surcharge)

When "ASAP" is requested, turn around will default to a 100% RUSH priority, with pricing and turn around time to match. Please contact the lab prior to submitting RUSH samples. If not all samples require RUSH, please indicate in the special instructions.

Date Required: ROUTINE TAT Signature:

This section for Lab use only
Date/Time stamp:

Special Instructions/Comments (please include contact information including ph. # if different from above).

PLEASE INCLUDE CHROMATOGRAMS WITH REPORT

	Site I.D.	Sample Description	Depth start (cm)	Depth end (cm)	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	BTEX/F1-F4	CCME Metals+Hg	PCBs	TOTAL METALS+Hg							
1		P215-1WA			15/8/15	SOIL	TEST PIT	2	X	X	X								
2		P215-1WB						2	X	X	X								
3		P215-2WA						2	X	X	X								
4		P215-2WB						2	X	X	X								
5		P215-3WA						2	X	X	X								
6		P215-3WB						2	X	X	X								
7		P215-4WA						2	X	X	X								
8		P215-4WB						2	X	X	X								
9		P215-BD1						2	X	X	X								
10		P215-1W				WATER		7	X		X	X							
11		P215-2W						7	X		X	X							
12		P215-3W						7	X		X	X							
13		P215-4W						7	X		X	X							
14		P215-BDW1						7	X		X	X							
15		P215-FB						7	X		X	X							

Enter tests above (√ relevant samples below)

Indicate in the space allotted any deficiencies by the corresponding number.

1. Indicate any samples that were not packaged well
2. Indicate any samples not received in Exova supplies
3. Indicate any samples that were not clearly labeled
4. Indicate any samples not received within the required hold time or temp.
5. Indicate any missing or extra samples
6. Indicate any samples that were received broken
7. Indicate any samples where sufficient volume was not received
8. Indicate any samples received in an inappropriate container

ED 120-02

Submission of this form acknowledges acceptance of Exova's Standard Terms and Conditions (http://www.exova.com/about/terms-and-conditions/)

Indicate lot # or affix barcode here

Shipping: COD Y/ N
and size of coolers
Temp. received: Delivery Method:
Waybill:
Received by:

Please indicate any potentially hazardous samples

Page 1 of 1 Control # C 0008992

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ANNEX 4

Scope of the Report and Limitation of Liability

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PORTÉE ET UTILISATION DU RAPPORT ET LIMITATION DE RESPONSABILITÉ

A – Destinataire et usage

Le présent rapport (« Rapport ») a été préparé par Englobe Corp. (Englobe) à la demande et au bénéfice unique du client (« Client »), et est destiné à l'usage exclusif du Client.

B – Conditions du site

Toute description du terrain visé (« Site »), description du sol et/ou de l'eau souterraine contenue au Rapport n'est fournie qu'à titre informatif pour le Client et, à moins d'indication contraire spécifique au Rapport, telle description ne doit en aucun temps et d'aucune manière être utilisée à des fins autres qu'une meilleure compréhension du Site et des conditions de réalisation du mandat confié à Englobe par le Client (« Mandat »).

Toute information, notamment et sans en limiter la généralité, données, graphiques, descriptions, dessins, tableaux, résultats d'analyses, compilations, et toute conclusion et recommandation contenus au Rapport découlent de l'observation directe du Site pendant une période de temps précise, soit l'exécution du Mandat, et de l'interprétation des informations et données disponibles durant cette période.

Le contenu du Rapport ne s'applique d'aucune façon à l'égard de toute partie du Site ou à l'égard de tout paramètre, matériau ou analyse exclu du Mandat.

Englobe ne peut être tenue responsable de la présence de substance ou matériau de nature différente ou de même nature mais en concentrations différentes de ceux exprimés au Rapport, et ce, dans une ou des parties du Site exclues du Mandat.

Le contenu du Rapport, incluant les conclusions et recommandations, ne peut s'appliquer à quelconque moment antérieur ou ultérieur au Mandat. Les conditions physio-chimiques du Site, la nature et le degré de contamination identifiés sur le Site peuvent varier dans le temps ainsi qu'en fonction de nombreux facteurs, dont notamment les activités en cours sur le Site et/ou sur les terrains adjacents au Site.

Une révision du Rapport et/ou des modifications aux paramètres, conclusions et/ou recommandations pourraient s'avérer nécessaires advenant un changement dans les conditions du Site ou la découverte d'informations pertinentes postérieurement à la production du Rapport.

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C - Législation, réglementation, directives et politiques

L'interprétation des données et observations du Site ainsi que les conclusions et recommandations qui en découlent tiennent compte de la législation, de la réglementation, des normes, des politiques et/ou des directives applicables au projet et en vigueur au moment de l'exécution du Mandat. Dans l'éventualité où aucune loi, réglementation, politique, directive ou norme en vigueur ne s'applique au projet, Englobe prend en considération, dans l'élaboration du Rapport, des règles et pratiques environnementales et professionnelles reconnues.

Toute modification à la législation, à la réglementation, aux normes, aux politiques et/ou aux directives applicables au projet pourraient entraîner la nécessité d'une révision du Rapport et/ou d'un changement des paramètres, conclusions et/ou recommandations.

D - Utilisation du Rapport

Le Rapport s'adresse au Client uniquement et ne doit servir qu'à l'usage auquel il est destiné.

Le contenu du Rapport et ses conclusions et recommandations ne s'appliquent qu'au Site et ne peuvent en aucun temps et d'aucune manière s'appliquer à tout terrain adjacent au Site ou autre terrain situé à proximité du Site.

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