THE COLLECTION OF LANDFILL MONITORING DATA AT THE FORMER PIN-2 DEW LINE SITE

Cape Young, Nunavut

FINAL REPORT– 2014

(O/Ref.: CD3654) (Y/Ref.: DLC MON (Kitik 13))

DEFENCE CONSTRUCTION CANADA

JUNE 2015

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Presented to: Nahed Farah
Defence Construction Canada

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1 OUTLINE

1.1 OBJECTIVES AND SCOPE OF WORK

The objective of the Defence Construction Canada (DCC) Landfill Monitoring Program is to collect sufficient information to assess the landfill's performance from geotechnical and environmental perspectives. DCC has specified the requirements for the Landfill Monitoring Program in the document *Terms of Reference (TOR) – Consulting 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. (Terms of Reference (TOR), reference A).

Table I below summarizes the monitoring requirements of the 2014 season. No deviations from the TOR were experienced while completing the 2014 monitoring.

Table I: 2014 Monitoring Requirements for PIN-2 Landfills

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

1.2 FIELD PROGRAM STAFF

The 2014 on-site field program at PIN-2 Cape Young took place between August 14-17, 2014. Biogenie sub-contracted Sila Remediation Inc. (Sila) from Igloolik, Nunavut to perform the field work. The Sila field program was executed by Mr. Andrew Passalis and 4 local Inuit representatives.

The team was made up of the following individuals:

- Andrew Passalis, Project Engineer (Sila)
- John Henry Etegak, Field Technician (Sila)
- Benjamin Kaniak, Field Technician (Sila)
- Dyson Koaha, Field Technician (Sila)
- Joe Koaha, Wildlife Monitor (Sila)

1.3 2014 WEATHER CONDITIONS

Seasonally warm weather conditions were observed during the PIN-2 Cape Young monitoring event with daytime temperatures ranging between 6-9ºC. Skies were mixed with periods of sun and cloud throughout the monitoring period with light to moderate winds out of the northwest ranging between 10-40 km/h. Precipitation was not observed during the monitoring period.

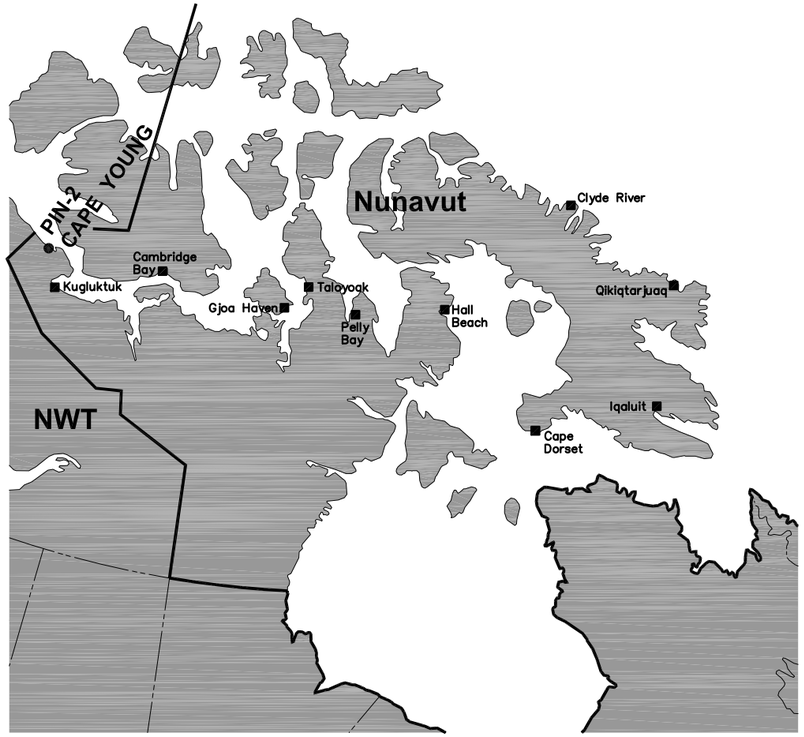
1.4 REPORT FORMAT

This report describes the work carried out in August 2014 at nine landfill sites at PIN-2 Cape Young. Results from soil and groundwater samplings, thermal monitoring, and visual inspection of the sites are also presented in the formats described in the TOR. An electronic version of the report and its components: tables, figures and data files are included in an Addendum DVD-ROM, which is appended to the report.

The report is organized with a separate chapter for each of the landfill areas. Each chapter contains all relevant information gathered for that landfill during the 2014 Landfill Monitoring Program. The following information is provided for each landfill:

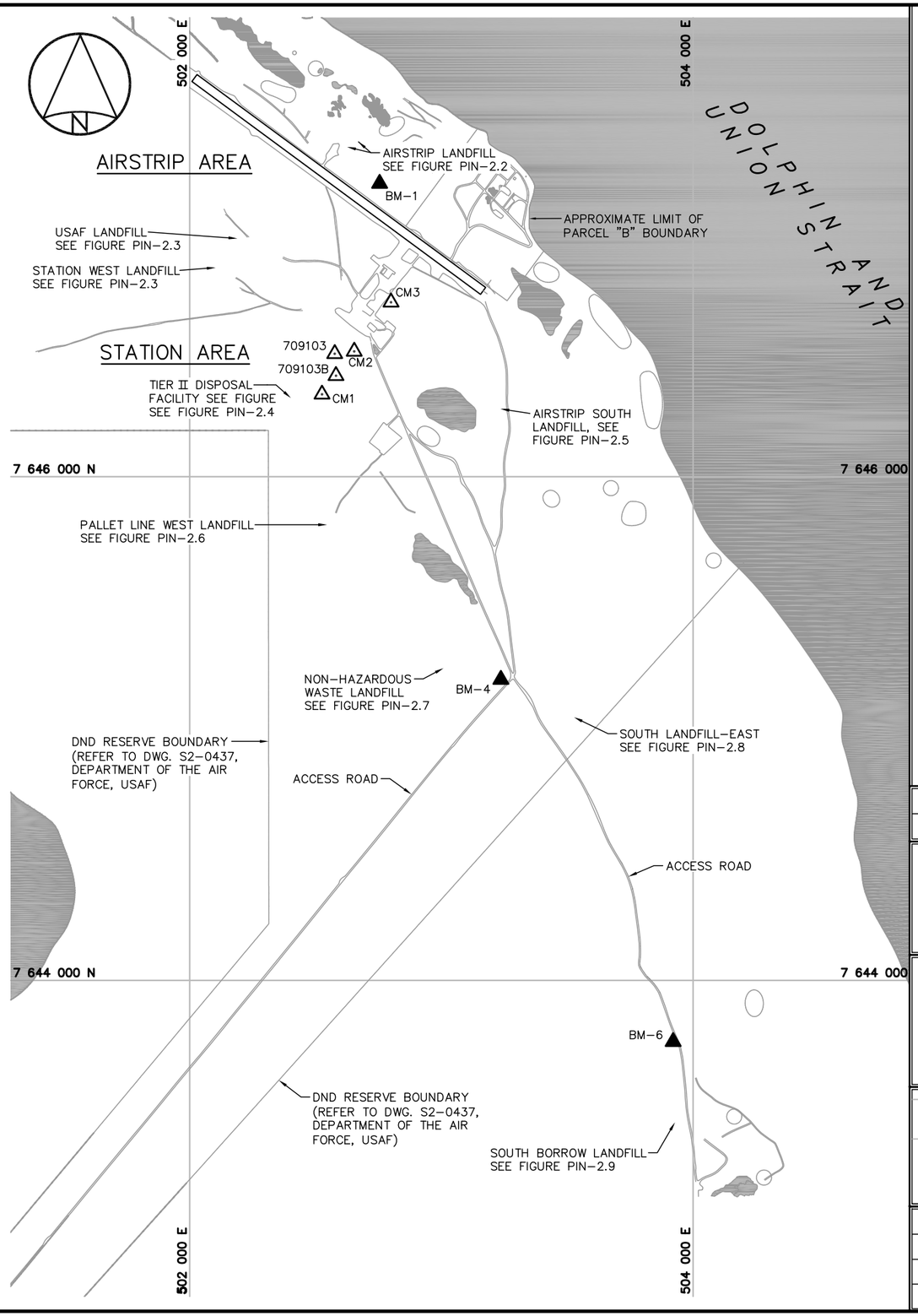
- Visual inspection check-list
- Visual inspection drawing mark-up
- Selection of visual inspection photos
- Thermal monitoring summary (where applicable)
- Summary of 2014 soil analytical data
- Summary of 2014 groundwater analytical data (where applicable)
- Monitoring well development/sampling reports (where applicable)

For the photographic record, the printed copy of the report only includes an index of photos for each of the landfill areas. The actual photos are included in electronic format in the Addendum DVD-ROM to the report. Certificates of Analysis, QA/QC analytical results and field notes are attached in appendices.



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

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

SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES NORTHING	UTM COORDINATES EASTING	ELEV.	DESCRIPTION
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 NORTHING	UTM COORDINATES EASTING	ELEV.	DESCRIPTION
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	15-06-26	P.L.	A.P.	P.G.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

LOCATION PLAN

SITE REMEDIATION SOLUTIONS

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MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 20,000	JUNE 2015
DRAWN BY: L. LA PIERRE	VERIFIED BY: A. PASSALIS	APPROVED BY: P. GELINAS, P. ENG.
PROJECT NO: CD3654_200_213	DRAWING NO: CD3654_200_213-PIN-2A-PL	PAGE PL

FIGURE PIN-2.1

2 OUTLINE AND METHODOLOGY

2.1 VISUAL INSPECTION

Data and information collected during the visual inspection of the PIN-2 landfills are included in the visual inspection datasheets. These datasheets include such inspection data 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 tag to be used consistently each year in an effort to track changes in condition for each specific feature. New features are added to the checklist and are noted as new observations. This letter is shown on the figures for each landfill along with the symbol for the particular feature.

Digital photos with a measure of scale were taken to show the actual general state of the landfills as well as features of interest. Annotated sketches/diagrams are included in the present report for each landfill. Some photos are provided for supplemental purposes only and do not warrant placement on the Figures (i.e., they are not specifically referenced in the report or within the tables).

The photos were taken with a Sony DSC-TX5 10.2 megapixel (MP) digital camera. Full resolution digital jpg. copies are furnished on a DVD-ROM appended with the DRAFT REPORT. The photo log, including the local coordinates from where the photo was taken, orientation (relative to map north), feature 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:

- Canadian Council of Ministers of Environment (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 93* (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 93* (CCME catalogue - http://www.ccme.ca/pdfs/cat_eng.pdf)
- *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 (http://www.ccme.ca/publications/ceqg_rcqe.html)

Testpits were dug using a hand shovel down to refusal or permafrost. The shovel was cleaned between testpits. 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. For the 2014 monitoring event, 38 soil-sampling stations were visited. One surface sample (0-10 cm depth below surface) and one subsurface sample (40-50 cm depth below surface) were taken at each sampling station. No frozen ground or frost was encountered at the soil stations during the August 2014 sampling.

As specified in the TOR, the following soil sampling procedures were adhered to:

- Where required, the soil samples were collected from locations between two to four meter radius of the monitoring wells
- Blind field duplicates (10%) were collected for QA/QC purposes
- Duplicate samples (10%) were also taken and sent to a second laboratory for quality control purposes
- An additional 10% of soil samples taken were sent to the owner's representative (ESG OPS CENTRE) in Kingston for archiving as specified by DCC

The soil samples were analyzed for requested parameters (TPH (F1-F3), total metals and PCBs) as specified by DCC. Table II below summarizes the soil sampling at PIN-2 during the August, 2014 field program.

Table II: Summary of Soil Sampling at PIN-2 – August 2014

Landfill Site	Soil Sample Locations					
USAF Landfill	P2-1	P2-2	P2-3	P2-4		
Station West Landfill	P2-5	P2-6	P2-7	P2-8		
Pallet Line West Landfill	P2-9	P2-10	P2-11	P2-12		
Airstrip South Landfill	P2-13	P2-14	P2-15	P2-16		
South Landfill - East	P2-17	P2-18	P2-19	P2-20		
Airstrip Landfill	P2-21	P2-22	P2-23	P2-24	P2-25	P2-26
South Borrow Landfill	P2-27	P2-28	P2-29	P2-30		
Tier II Disposal Facility	MW-1	MW-2	MW-3	MW-4		
Non-Hazardous Waste Landfill	MW-5	MW-2	MW-7	MW-8		

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).

Well dedicated Waterra foot valves and tubing were used to sample the groundwater. Wells were purged as specified and measurements of *in-situ* temperature, conductivity, and pH were taken. Sampling took place when these parameters were stabilized. Bottles provided by the lab for metal analysis were not acidified and not filtered (as directed in the TOR).

The 2014 field program included the monitoring of eight locations at PIN-2. One of the four wells at the Tier II Soil Disposal Facility (MW-1) and one of the four wells at the Non-Hazardous Waste Landfll (MW-8) were found to contain insufficient water at the time of monitoring and consequently could not be sampled. A summary of the status of the monitoring wells and the attempts made are summarized in Table III.

In sampled wells, no sign of free phase hydrocarbon product was detected. Monitoring Well Development and Sampling Record forms are included in appropriate sections of this report.

Table III: Summary of Groundwater Sampling at PIN-2 – August 2014

Landfill Site	Groundwater Sample Locations			
Tier II Soil Disposal Facility	MW-1 (dry)	MW-2	MW-3	MW-4
Non-Hazardous Waste Landfill	MW-5	MW-6	MW-7	MW-8 (dry)

All monitoring wells were inspected and found to be in good condition with no significant concerns identified.

2.4 THERMAL MONITORING

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, where all communication failed due to extremely low battery levels. The communication issue could not be rectified on-site and the datalogger was removed from site and shipped to the manufacturer for evaluation and repair. All analogues/thermocouples were observed to be functioning properly at the time of inspection. All internal memories were reset and clocks were synchronized using the Prolog software.

Specific detailed information regarding temperature data is contained in the report section on the Tier II Soil Disposal Facility. Raw data retrieved directly from the dataloggers were provided to DCC with the field progress report in October 2014. The manual thermal monitoring data is presented in tabular form on the thermistor inspection sheets for each landfill.

2.5 FIELD NOTES AND DATA

Field notes from the 2014 landfill monitoring program, including soil and water sampling are included in Annex 3 for reference. Notes were written on waterproof field sheet and in field books, and scanned to an Adobe pdf document for future reference and back-up. Locations of all observations and features for the visual inspection were recorded using a hand-held Garmin Oregon 300 GPS device, which included a combination of continuous tracks and discrete waypoints. Data packages collected from the individual vertical thermistors were downloaded directly to a field laptop computer.

2.6 QUALITY CONTROL

Sila implemented standard sample collection techniques to decrease the likelihood of compromising collected samples. The methods used for sample collection are summarized in Sections 2.4 and 2.5 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
- All samples were stored in chilled coolers/refrigerators throughout the field program and chilled coolers during subsequent transfer to the respective laboratory

Chains of Custody (COC) forms were completed by the Project Engineer after sample collection. The samples were refrigerated prior to off-site shipment by First Air Cargo directly to Maxxam (via Yellowknife) and Exova in Edmonton and ESG Solutions, via Ottawa to Kingston, Ontario where they were checked in by laboratory representatives. All analysis was completed as specified on COC forms.

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% Blind Duplicate Samples of soil were sent to Exova
- 10% Interlab Duplicate Samples were sent to Maxxam (looking for variation in procedures causing significant difference in analytical result). Results for both the blind duplicates and the interlab duplicates can be found in Annex 2, as actual values and relative percent differences
- 10% Archival Samples to ESG (soils)

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 2014 Landfill Monitoring activities:

A. *Terms of Reference – Consulting 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.
B. Technical Proposal – The Collection of Landfill Monitoring Data for the Nunavut territory – Kitikmeot region at PIN-2, PIN-4, CAM-1. *Project Ref 6121-150,* May 2013.
C. *Post-Field Progress Report, PIN-2 Landfill Monitoring 2014*, October 2014.

3 AIRSTRIP LANDFILL

3.1 SUMMARY

The 2014 monitoring of the Airstrip Landfill was performed on August 16, 2014 and included a visual inspection to identify evidence of settlement or erosion, and collection of soil samples at upgradient and downgradient locations to monitor for the presence of leachate.

No elevated concentration of PCBs, TPH or metals was detected in the soil samples.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the Airstrip Landfill. Evidence of settlement was noted at one location on the northeast side slope of Lobe A consisting of a single linear depression in the coarse granular landfill cover. This feature was not noted during the previous landfill inspection period. No erosion feature was noted. Evidence of exposed debris was not noted at the landfill, however four small pieces of metal surface debris (strapping) were noted between the two lobes (Feature A). Three of the pieces were noted during the previous 2013 inspection, with an additional fourth piece located in proximity to soil sample location P2-23. The debris did not appear to be related to the landfill regrades.

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 and features.

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 (Regrade Landfill)
DATE OF INSPECTION: August 16, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE IV: AIRSTRIP LANDFILL VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: Airstrip Landfill
Designation: Existing Regrade Area
Date Inspected: August 16, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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 - New Obs.)	1.5 m	0.2 - 0.3 m	0.1 - 0.15 m	< 1%	Minor depression	ALF-18, 19	Acceptable	New Observation. Single linear depression in the coarse granular landfill cover.
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 and E&F - 1 New Obs.)	0.3 m	0.03 m	Surface	Isolated	Miscellaneous metal debris - surface	ALF-25 - 28	Acceptable	Four small pieces of metal surface debris located between lobes. Three were noted in previous investigation.
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.
Overall Landfill Performance:	**Acceptable**									

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.

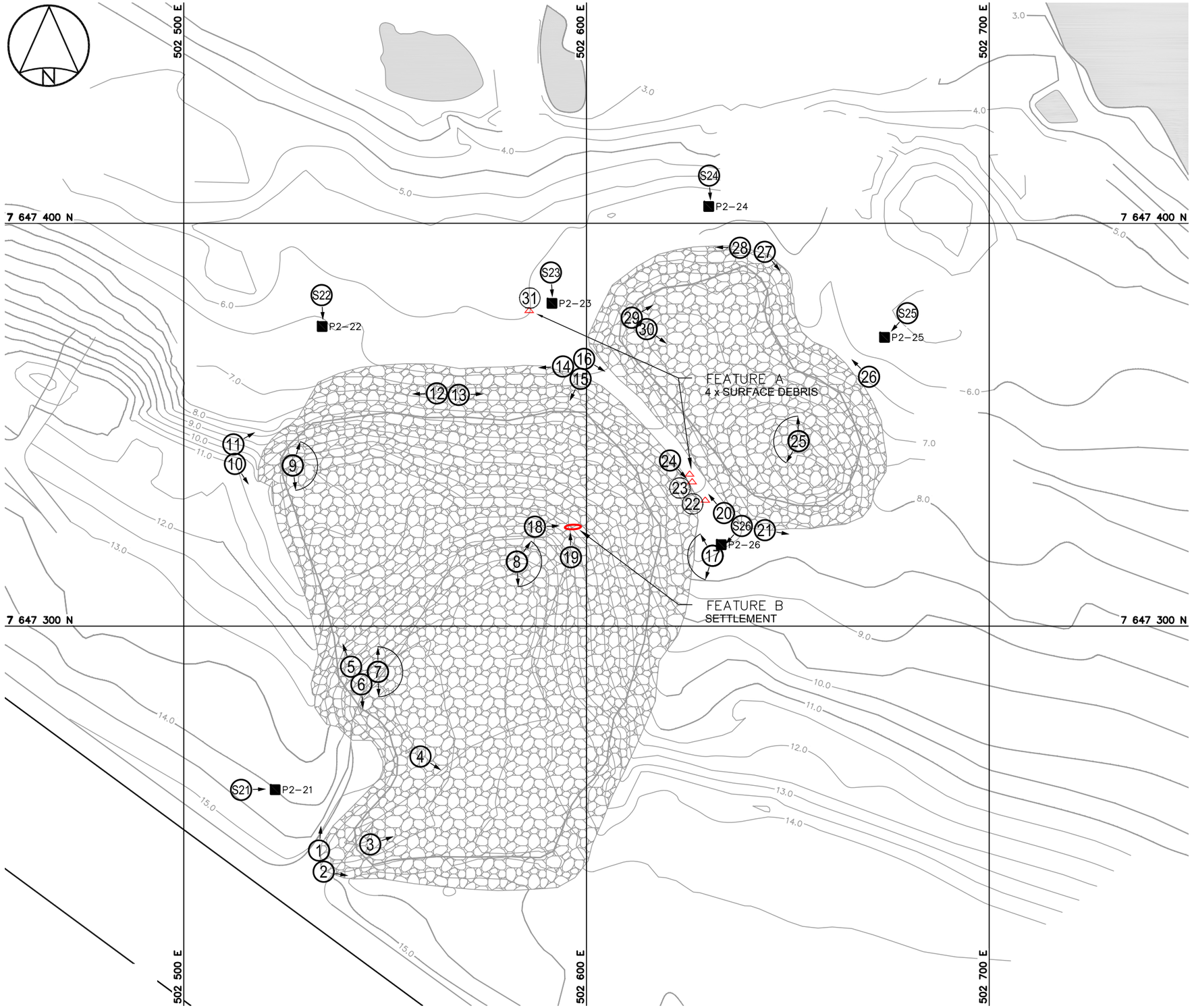
Table V: Preliminary Stability Assessment – Airstrip Landfill

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 material is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.
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.



LEGEND

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

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

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AIRSTRIP LANDFILL

SITE REMEDIATION SOLUTIONS

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PROJECT NO:	DRAWING NO:	PAGE
CD3654_200_213	CD3654_200_213-PIN-2B-PL	PL

FIGURE PIN-2.2

3.4 PHOTOGRAPHIC RECORD

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

Table VI: Visual Inspection Photo Log – Airstrip Landfill (page 1 of 2)

Photo (ALF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
LOBE A						
1	P214_2005	4,384	16/08/14	502534	7647243	View looking north along west side of Airstrip Landfill - Lobe A
2	P214_2006	4,277	16/08/14	502534	7647241	View looking east along south side of Airstrip Landfill - Lobe A
3	P214_2007	4,317	16/08/14	502546	7647246	View looking northeast at southwest corner of Airstrip Landfill - Lobe A
4	P214_2008	4,295	16/08/14	502558	7647268	View looking southeast across south cover of Airstrip Landfill - Lobe A
5	P214_2009	4,258	16/08/14	502543	7647288	View north-northwest along northwest crest of Airstrip Landfill - Lobe A
6	P214_2010	4,426	16/08/14	502544	7647287	View looking south along west side of Airstrip Landfill - Lobe A
7	P214_2011	1,587	16/08/14	502545	7647288	Panoramic view looking north to south across Airstrip Landfill - Lobe A
8	P214_2012	1,577	16/08/14	502583	7647316	Panoramic view looking north to south across east cover of Airstrip Landfill - Lobe A
9	P214_2019	1,638	16/08/14	502527	7647340	Panoramic view looking north to south across north cover of Airstrip Landfill - Lobe A
10	P214_2017	4,406	16/08/14	502513	7647342	View looking south-southeast along west toe of Airstrip Landfill - Lobe A
11	P214_2018	4,405	16/08/14	502513	7647344	View looking east-northeast along northwest toe of Airstiip Landfill - Lobe A
12	P214_2020	4,273	16/08/14	502565	7647358	View looking west along north side slope of Airstrip Landfill - Lobe A
13	P214_2021	4,465	16/08/14	502566	7647358	View looking east along north side slope of Airstrip Landfill - Lobe A
14	P214_2022	4,372	16/08/14	502598	7647364	View looking west along north toe of Airstrip Landfill - Lobe A
15	P214_2023	4,279	16/08/14	502599	7647363	View looking southwest at northeast corner of Airstrip Landfill - Lobe A
16	P214_2024	4,418	16/08/14	502599	7647365	View looking southeast between Lobes A and E & F of Airstrip Landfill
17	P214_2027	1,525	16/08/14	502630	7647317	Panoramic view looking south-southwest to north-northwest at east side of Airstriip Landfill - Lobe A
18	P214_2013	4,435	16/08/14	502589	7647325	View looking east at linear depression on northeast side slope - FEATURE B
19	P214_2014	4,364	16/08/14	502596	7647318	View looking north at linear depression on northeast side slope - FEATURE B
LOBES E & F						
20	P214_2028	4,450	16/08/14	502636	7647327	View looking northwest along west side slope of Airstrip Landfill - Lobes E & F
21	P214_2029	4,420	16/08/14	502641	7647324	View looking east along south toe of Airstrip Landfill - Lobes E & F
22	P214_2030	4,304	16/08/14	502629	7647331	Miscellaneous metal debris on surface between Lobe A and Lobes E & F
23	P214_2031	4,377	16/08/14	502626	7647335	Miscellaneous metal debris on surface between Lobe A and Lobes E & F
24	P214_2032	4,362	16/08/14	502624	7647338	View looking southeast at miscellaneous metal debris on surface between Lobe A and Lobes E & F
25	P214_2033	1,441	16/08/14	502653	7647346	Panoramic view looking southwest to north across cover of Airstriip Landfill - Lobes E & F
26	P214_2034	4,269	16/08/14	502670	7647362	View looking northwest along east side of Airstrip Landfill - Lobes E & F
27	P214_2035	4,353	16/08/14	502642	7647393	View looking southeast along east side of Airstrip Landfill - Lobes E & F
28	P214_2036	4,361	16/08/14	502640	7647394	View looking west-southwest along north side of Airstrip Landfill - Lobes E & F
29	P214_2037	4,307	16/08/14	502612	7647377	View looking east-northeast along north crest of Airstrip Landfill - Lobes E & F
30	P214_2038	4,352	16/08/14	502614	7647374	View looking southeast across cover of Airstrip Landfill - Lobes E & F
31	P214_2039	4,310	16/08/14	502585	7647380	Miscellaneous metal debris on surface between Lobe A and Lobes E & F

Table VI: Visual Inspection Photo Log – Airstrip Landfill (page 2 of 2)

Photo (ALF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
Soil Sampling						
P2-21	P214_2046	4,382	16/08/14	502523	7647260	Sampling location P214-21 located upgradient of Airstrip Landfill
S21	P214_2047	4,415	16/08/14	502515	7647259	View looking east at P214-21 located upgradient of Airstrip Landfill
P2-22	P214_2044	4,379	16/08/14	502535	7647374	Sampling location P214-22 located downgradient of Airstrip Landfill
S22	P214_2045	4,347	16/08/14	502534	7647381	View looking south at P214-22 located downgradient of Airstrip Landfill
P2-23	P214_2042	4,304	16/08/14	502591	7647380	Sampling location P214-23 located downgradient of Airstrip Landfill
S23	P214_2043	4,414	16/08/14	502591	7647386	View looking south at P214-23 located downgradient of Airstrip Landfill
P2-24	P214_2040	4,305	16/08/14	502631	7647404	Sampling location P214-24 located downgradient of Airstrip Landfill
S24	P214_2041	4,428	16/08/14	502631	7647408	View looking south at P214-24 located downgradient of Airstrip Landfill
P2-25	P214_2025	4,305	16/08/14	502674	7647372	Sampling location P214-25 located downgradient of Airstrip Landfill
S25	P214_2026	4,427	16/08/14	502678	7647377	View looking southwest at P214-25 located downgradient of Airstrip Landfill
P2-26	P214_2015	4,375	16/08/14	502634	7647320	Sampling location P214-26 located downgradient of Airstrip Landfill
S26	P214_2016	4,358	16/08/14	502638	7647323	View looking southwest at P214-26 located downgradient of Airstrip Landfill

3.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results for the 2014 Airstrip Landfill samples are presented in Tables VII below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table VII: Soil Chemical Analysis Results – Airstrip Landfill

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-21A	P2-21	0-15	3.1	0.06	4.1	1.6	5.4	5.3	3.5	13	<0.01	<0.1	<10	<50	<50
P214-21B		40-50	3.7	0.04	7.0	2.0	4.8	<5.0	4.9	10	<0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-22A	P2-22	0-15	6.0	0.03	3.2	1.5	3.1	5.4	3.0	8	<0.01	<0.1	<10	<50	<50
P214-22B		40-50	5.8	0.04	3.3	2.4	4.0	<4.9	4.4	9	<0.01	<0.1	<10	<50	<50
P214-23A	P2-23	0-15	8.3	0.04	3.2	1.8	4.9	9.0	4.1	8	<0.01	<0.1	<10	<50	<50
P214-23B		40-50	7.7	0.03	3.9	2.0	9.6	6.8	7.6	9	<0.01	<0.1	<10	<50	<50
P214-24A	P2-24	0-15	10.0	0.05	3.4	1.8	5.7	13.2	3.9	12	<0.01	<0.1	<10	<50	<50
P214-24B		40-50	6.6	0.05	2.8	1.1	3.3	6.6	2.4	8	<0.01	<0.1	<10	<50	<50
P214-25A	P2-25	0-15	6.8	0.05	2.1	1.1	2.6	<5.0	2.3	6	<0.01	<0.1	<10	<50	<50
P214-25B		40-50	5.8	0.04	2.6	1.2	3.0	5.0	3.7	6	<0.01	<0.1	<10	<50	<50
P214-26A	P2-26	0-15	3.8	0.02	2.2	0.9	13.5	<4.9	1.9	7	<0.01	<0.1	<10	<50	<50
P214-26B		40-50	4.3	0.04	2.6	1.3	2.8	<5.0	2.7	7	<0.01	<0.1	<10	<50	<50

4 USAF LANDFILL

4.1 SUMMARY

The 2014 monitoring of the USAF Landfill was conducted on August 16, 2014 and included a visual inspection to identify evidence of settlement or erosion, and collection of soil samples to monitor for the presence of leachate. Shallow bedrock was encountered at three soil sample locations (P2-2, 3, and 4) at the USAF Landfill, resulting in the depth samples to be collected no deeper than 40 cm below grade at these locations.

PCB was detected in the surface soil sample at location P2-4 (0.4 mg/kg). No TPH or elevated levels of metals were detected.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the USAF Landfill. Evidence of settlement was noted at one location on the west side slope of the landfill consisting of a single pothole-type depression in the coarse granular landfill cover. This feature was not noted during the previous landfill inspection period. No erosion feature or exposed debris was noted during the investigation.

As of 2014, the USAF Landfill performance is rated as acceptable.

The Visual Inspection Checklist is included in Table VIII 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 features.

Table VIII: 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 (Regrade Landfill)
DATE OF INSPECTION: August 16, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE VIII: USAF LANDFILL VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: USAF Landfill
Designation: Existing Regrade Area
Date Inspected: August 16, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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 - New Obs.)	0.5 m	0.3 m	0.2 m	< 1%	Minor depression	USAF-10, 11	Acceptable	Pothole-type depression.
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.
Overall Landfill Performance:	**Acceptable**									

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 IX below.

Table IX: Preliminary Stability Assessment – USAF Landfill

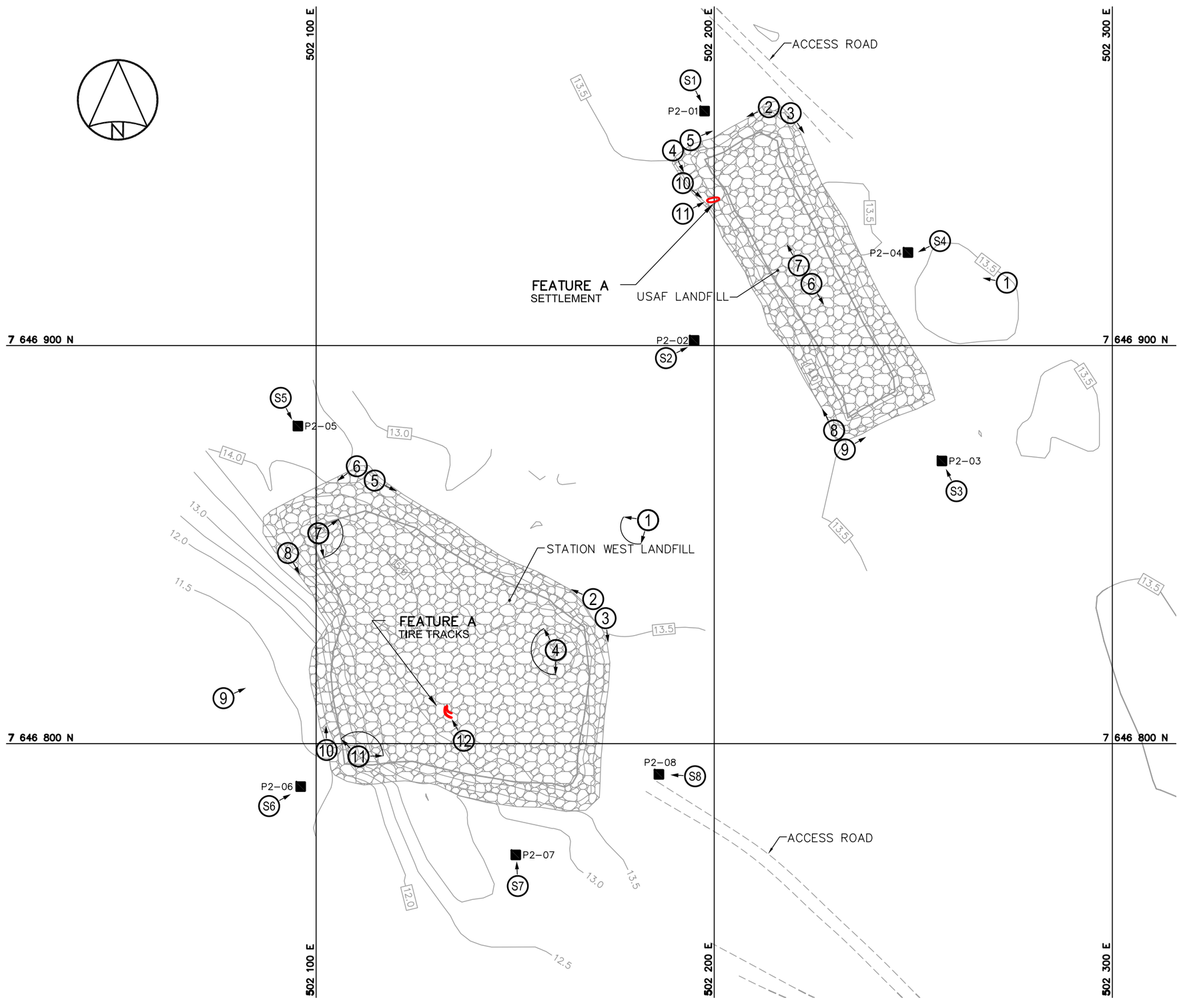
Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Not observed	None
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

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 material is compromised. Examples may include: • Debris exposed in erosion channels or areas of differential settlement. • Liner exposed. • Slope failure.

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.



LEGEND

- MONITORING SOIL SAMPLE LOCATION (8)
- S2 → APPROX. PHOTOGRAPHIC VIEWPOINT
- TIRE TRACKS (NTS)
- SETTLEMENT (NTS)

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

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FIMAL	15-06-26	P.L.	A.P.	P.G.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

USAF LANDFILL AND STATION WEST LANDFILL

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	JUNE 2015
DRAWN BY: L. LA PIERRE	VERIFIED BY: A. PASSALIS	APPROVED BY: P. GELINAS, P. ENG.
PROJECT NO: CD3654_200_213	DRAWING NO: CD3654_200_213-PIN-2C-PL	PAGE PL

FIGURE PIN-2.3

G:\CD3654\PIN-2\FINAL\2014\CD3654_200_213-PIN-2C-PL.dwg, PL, 2015-06-26 3:51:02 PM

4.4 PHOTOGRAPHIC RECORD

The Photographic Record for the USAF Landfill has been completed as per the TOR and is included as Table X hereafter. The Photographic Record contains only an index of photographs. Full sized photographs are contained in the Addendum DVD-ROM.

Table X: Landfill Visual Inspection Photo Log – USAF Landfill

Photo (USAF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P214_1896	4,287	16/08/14	502273	7646916	View looking west-northwest at east side of USAF Landfill
2	P214_1898	4,253	16/08/14	502215	7646959	View looking southwest along north side of USAF Landfill
3	P214_1899	4,363	16/08/14	502217	7646959	View looking south-southeast along east side of USAF Landfill
4	P214_1900	4,385	16/08/14	502192	7646949	View looking south-southeast along west side of USAF Landfill
5	P214_1901	4,335	16/08/14	502193	7646950	View looking northeast along north side of USAF Landfill
6	P214_1906	4,291	16/08/14	502224	7646917	View looking southeast across south cover of USAF Landfill
7	P214_1907	4,367	16/08/14	502223	7646919	View looking northwest across north cover of USAF Landfill
8	P214_1908	4,282	16/08/14	502231	7646877	View looking north-northwest along west side of USAF Landfill
9	P214_1909	4,358	16/08/14	502232	7646876	View looking northeast along south side of USAF Landfill
10	P214_1903	4,331	16/08/14	502194	7646940	View looking southeast at pothole on west side slope - FEATURE A (new)
11	P214_1904	4,378	16/08/14	502194	7646934	View looking northeast at pothole on west side slope - FEATURE A (new)
Soil Sampling						
P2-1	P214_1926	4,347	16/08/14	502197	7646960	Sampling location P214-1 located downgradient of USAF Landfill
S1	P214_1927	4,356	16/08/14	502194	7646966	View looking southeast at P214-1 located downgradient of USAF Landfill
P2-2	P214_1928	4,311	16/08/14	502197	7646902	Sampling location P214-2 located downgradient of USAF Landfill
S2	P214_1929	4,388	16/08/14	502191	7646898	View looking northeast at P214-2 located downgradient of USAF Landfill
P2-3	P214_1930	4,337	16/08/14	502257	7646871	Sampling location P214-3 located downgradient of USAF Landfill
S3	P214_1931	4,424	16/08/14	502260	7646865	View looking northwest at P214-3 located downgradient of USAF Landfill
P2-4	P214_1923	4,367	16/08/14	502249	7646923	Sampling location P214-4 located downgradient of USAF Landfill
S4	P214_1924	4,395	16/08/14	502255	7646925	View looking southwest at P214-4 located downgradient of USAF Landfill

4.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results for the 2014 USAF Landfill samples are presented in Tables XI below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table XI: Soil Chemical Analysis Results – USAF Landfill

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.1	10	50	50
Downgradient Soil Samples															
P214-1A	P2-1	0-15	2.6	0.12	5.0	2.6	6.5	<5.0	2.9	26	0.01	<0.1	<10	<50	<50
P214-1B		40-50	1.9	0.05	6.8	2.6	3.5	<4.9	3.6	14	<0.01	<0.1	<10	<50	<50
P214-2A	P2-2	0-15	3.4	0.07	6.7	2.5	4.1	<5.0	4.3	17	0.01	<0.1	<10	<50	<50
P214-2B		40-50	4.3	0.08	7.6	2.8	7.7	<4.9	6.1	17	<0.01	<0.1	<10	<50	<50
P214-3A	P2-3	0-15	2.5	0.10	3.7	1.8	5.0	<4.9	2.0	22	0.02	<0.1	<10	<50	<50
P214-3B		40-50	2.7	0.09	6.0	3.5	6.7	<5.0	4.1	15	0.01	<0.1	<10	<50	<50
P214-4A	P2-4	0-15	4.7	0.11	6.1	1.5	3.8	9.2	3.3	15	0.02	0.4	<10	<50	<50
P214-4B		40-50	5.1	0.16	6.6	1.6	4.0	9.5	1.8	30	<0.01	<0.1	<10	<50	<50

5 STATION WEST LANDFILL

5.1 SUMMARY

The 2014 monitoring of the Station West Landfill was conducted on August 16, 2014 and included a visual inspection to identify evidence of settlement or erosion, and collection of soil samples at upgradient and downgradient locations to monitor for the presence of leachate.

No PCBs or elevated levels of metals were detected in the soil samples collected. TPH, fraction F3, was detected in surface samples collected at locations P2-5 and P2-6 (104 and 56 mg/kg, respectively) and at depth sample collected at location P2-6 (62 mg/kg).

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the Station West Landfill. No evidence of erosion, settlement or exposed debris was noted during the investigation. One set of vehicle tracks was noted on the south central cover of the landfill and was consistent with observation noted during the previous 2013 inspection period.

As of 2014, the Station West Landfill performance is rated as acceptable.

The Visual Inspection Checklist is included in Table XII 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 and erosional features.

Table XII: 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 (Regrade Landfill)
DATE OF INSPECTION: August 16, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE XII: STATION WEST LANDFILL VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: Station West Landfill
Designation: Existing Regrade Area
Date Inspected: August 16, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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-11, 12	Acceptable	Vehicle tracks on south central cover. Consistent with 2013 observations.
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.
Overall Landfill Performance:	**Acceptable**									

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 XIII below.

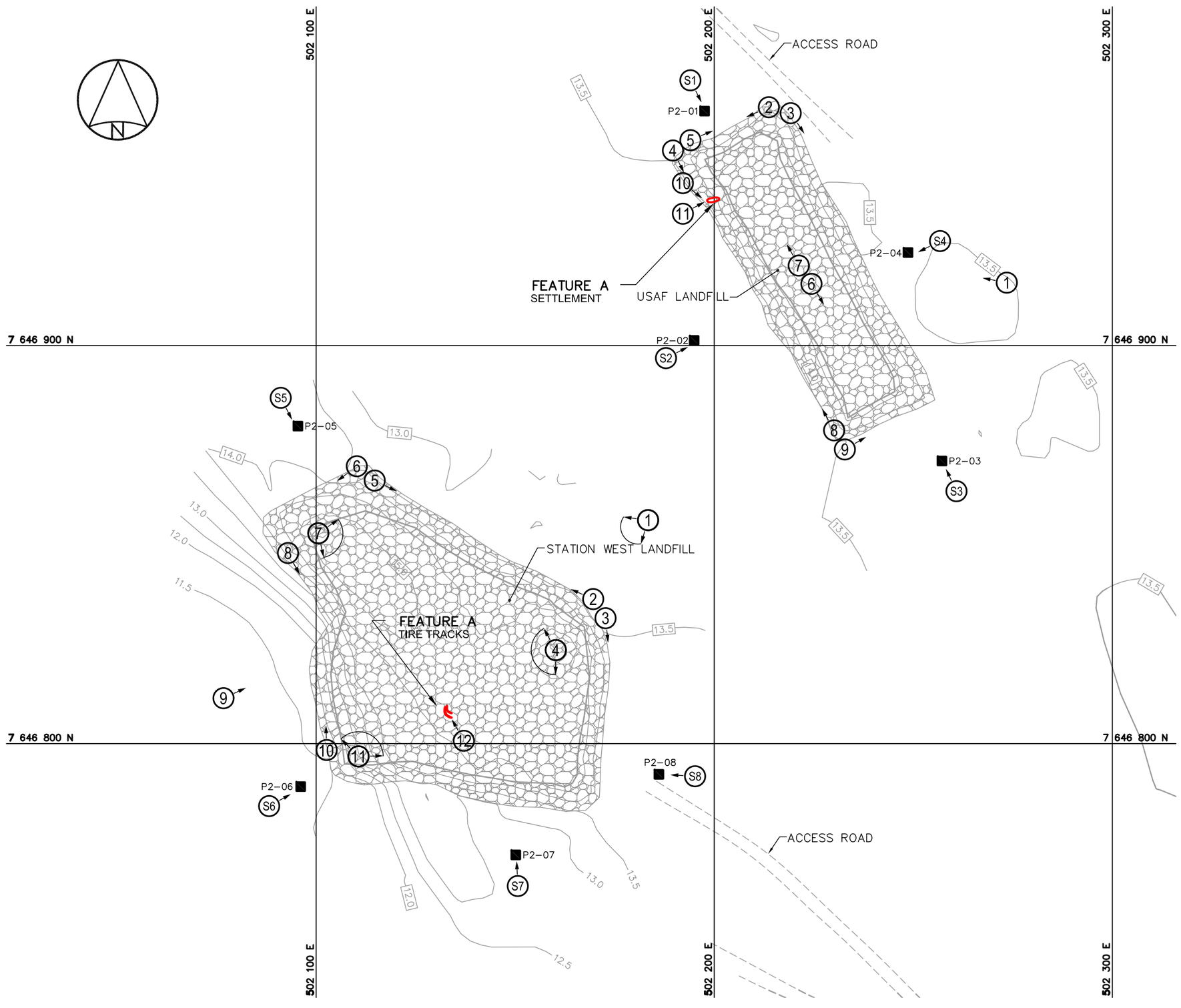
Table XIII: Preliminary Stability Assessment – Station West Landfill

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.
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.



LEGEND

- MONITORING SOIL SAMPLE LOCATION (8)
- S2 → APPROX. PHOTOGRAPHIC VIEWPOINT
- TIRE TRACKS (NTS)
- SETTLEMENT (NTS)

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

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FIMAL	15-06-26	P.L.	A.P.	P.G.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

USAF LANDFILL AND STATION WEST LANDFILL

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	JUNE 2015
DRAWN BY: L. LA PIERRE	VERIFIED BY: A. PASSALIS	APPROVED BY: P. GELINAS, P. ENG.
PROJECT NO: CD3654_200_213	DRAWING NO: CD3654_200_213-PIN-2C-PL	PAGE PL

FIGURE PIN-2.3

G:\CD3654\PIN-2\FINAL\2014\CD3654_200_213-PIN-2C-PL.dwg, PL, 2015-06-26 3:51:02 PM

5.4 PHOTOGRAPHIC RECORD

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

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

Photo (SWLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P214_1911	895	16/08/14	502183	7646855	Panoramic view looking south to west at northeast side of Station West Landfill
2	P214_1912	4,311	16/08/14	502171	7646834	View looking northwest along northeast side of Station West Landfill
3	P214_1913	4,395	16/08/14	502171	7646833	View looking south along east side of Station West Landfill
4	P214_1914	1,544	16/08/14	502160	7646824	Panoramic view looking south to north-northwest across cover of Station West Landfill
5	P214_1915	4,321	16/08/14	502113	7646867	View looking southeast along northeast side of Station West Landfill
6	P214_1916	4,334	16/08/14	502111	7646868	View looking southwest along north side of Station West Landfill
7	P214_1917	1,894	16/08/14	502101	7646853	Panoramic view looking northeast to south across cover from northwest corner of Station West Landfill
8	P214_1918	4,352	16/08/14	502093	7646848	View looking southeast along northwest toe of Station West Landfill
9	P214_1919	4,358	16/08/14	502078	7646812	View looking east-northeast at west side of Station West Landfill\
10	P214_1920	4,331	16/08/14	502103	7646798	View looking north along west side of Station West Landfill
11	P214_1921	1,714	16/08/14	502110	7646797	Panoramic view looking northwest to east across south cover of Station West Landfill
12	P214_1922	4,391	16/08/14	502137	7646801	View of vehicle tracks on south cover area of Station West Landfill - FEATURE A
Soil Sampling						
P2-5	P214_2003	4,412	16/08/14	502095	7646880	Sampling location P214-5 located downgradient of Station West Landfill
S5	P214_2004	4,353	16/08/14	502092	7646885	View looking southeast at P214-5 located downgradient of Station West Landfill
P2-6	P214_2001	4,451	16/08/14	502096	7646789	Sampling location P214-6 located downgradient of Station West Landfill
S6	P214_2002	4,354	16/08/14	502090	7646786	View looking northeast at P214-6 located downgradient of Station West Landfill
P2-7	P214_1999	4,371	16/08/14	502150	7646772	Sampling location P214-7 located downgradient of Station West Landfill
S7	P214_2000	4,426	16/08/14	502151	7646767	View looking north at P214-7 located downgradient of Station West Landfill
P2-8	P214_1997	4,383	16/08/14	502187	7646793	Sampling location P214-8 located downgradient of Station West Landfill
S8	P214_1998	4,397	16/08/14	502193	7646792	View looking west at P214-8 located downgradient of Station West Landfill

5.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results for the 2014 Station West Landfill samples are presented in Table XV below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table XV: Soil Chemical Analysis Results – Station West Landfill

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-5A	P2-5	0-15	1.2	0.57	3.0	2.6	11.1	<5	2.9	101	0.05	<0.1	<10	<50	104
P214-5B		40-50	2.3	0.07	5.5	2.7	4.6	<4.9	3.8	13	<0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-6A	P2-6	0-15	3.0	0.28	9.8	4.5	8.3	6.4	6.6	29	0.05	<0.1	<10	<50	56
P214-6B		40-50	2.9	0.11	5.8	1.9	3.3	<5.0	3.3	13	0.02	<0.1	<10	<50	62
P214-7A	P2-7	0-15	2.9	0.11	4.2	1.6	2.6	<5.0	1.7	16	<0.01	<0.1	<10	<50	<50
P214-7B		40-50	2.9	0.08	3.6	1.4	2.1	<4.9	3.3	12	<0.01	<0.1	<10	<50	<50
P214-8A	P2-8	0-15	2.5	0.07	3.7	1.5	3.9	<4.9	2.0	16	0.01	<0.1	<10	<50	<50
P214-8B		40-50	2.3	0.05	3.7	1.4	1.6	<5.0	1.8	9	<0.01	<0.1	<10	<50	<50

6 TIER II SOIL DISPOSAL FACILITY

6.1 SUMMARY

The 2014 monitoring of the Tier II Soil Disposal Facility was conducted on August 16, 2014 and included visual inspection to verify for evidence of settlement or erosion, collection of soil and groundwater samples to monitor for the presence of leachate, and retrieval of data from the thermistors. Soil at all stations was sampled as specified. Inspection and monitoring was carried out at each of the monitoring wells as per the TOR. Monitoring well MW-1 was dry at the time of sampling and consequently was not sampled.

TPH, fraction F3, was detected in surface soil samples collected at location MW-04 and MW-01 (85 and 59 mg/kg, respectively). No PCBs or elevated level of metals was detected in the soil samples collected.

No PCBs, TPH or elevated levels of metals was detected in the groundwater samples collected.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the Station West Landfill. Minor settlement were noted at several locations below the southwest crest and at one location below the east crest. With the exception of two new depessions, all existing areas of settlement appear consistent with observations noted during the previous 2013 inspection. Evidence of minor surface erosion was noted at several locations on the southwest, southeast and northwest facing slopes of the facility. All locations consisted of shallow surface erosion of fines that extended from the crest down slope. Evidence of exposed debris was not noted. Several northeast-southwest orientated linear striations were noted on the north cover of the facility.

As of 2014, the Tier II Soil Disposal Facility performance is rated as acceptable.

The Visual Inspection Checklist is included in Table XVI 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 Soil Disposal Facility detailing the location of photographs and erosional features.

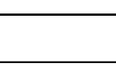
Table XVI: Visual Inspection Checklist / Report – Tier II Soil Disposal Facility

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 Soil Disposal Facility (New Landfill)
DATE OF INSPECTION: August 16, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE XVI: TIER II DISPOSAL FACILITY VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: Tier II Disposal Facility
Designation: New Landfill\
Date Inspected: August 16, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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 - 1 New Obs.)	0.25 - 1 m	0.2 - 0.25 m	0.1 - 0.15 m	< 1%	Minor depressions	Tier II-34, 35, 44 - 48	Acceptable	3 previously observed and one new Linear and oval shaped depressions. The previously observed depression are consitent with 2013 observations.
		FEATURE D See Figure PIN-2.4 (NE crest - New Obs.)	0.7 m	0.3 m	0.15 m	Isolated	Minor depression	Tier II-21, 22	Acceptable	New isolated linear depression.
Erosion	Yes	FEATURE B See Figure PIN-2.4 (SW side slope)	7 m	0.1-0.15 m	0.02 m	< 1%	Minor erosion	Tier II-50, 51	Acceptable	Washing of fines, self armouring. Slope appears stable. Second erosion feature noted in 2013 not visible.
		FEATURE C See Figure PIN-2.4 (SE side slope- 2 New Obs.)	7 - 14 m	0.1 - 0.3 m	0.05 m	Occasional (< 1%)	Minor erosion	Tier II-36 - 39, 41, 42	Acceptable	1 old and 2 new observations. Washing of fines, self armouring. Slope appears stable. The previously observed feature is consitent with 2013 observation.
		FEATURE E See Figure PIN-2.4 (NW side slope- New Obs.)	7 - 15 m	0.2 m	0.05 m	Occasional (< 1%)	Minor erosion	Tier II-59-62	Acceptable	2 locations. Washing of fines, self armouring. 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	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-2.4 (N cover - New Obs.)	4 - 9 m	0.15 m	0.02 - 0.05 m	< 2%	Shallow Striations	Tier II-14, 17, 63, 64	Acceptable	Parallel striations resulting from heavy equipment during final grading of cover.
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.
Overall Landfill Performance:	**Acceptable**									

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 XVII hereafter.

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

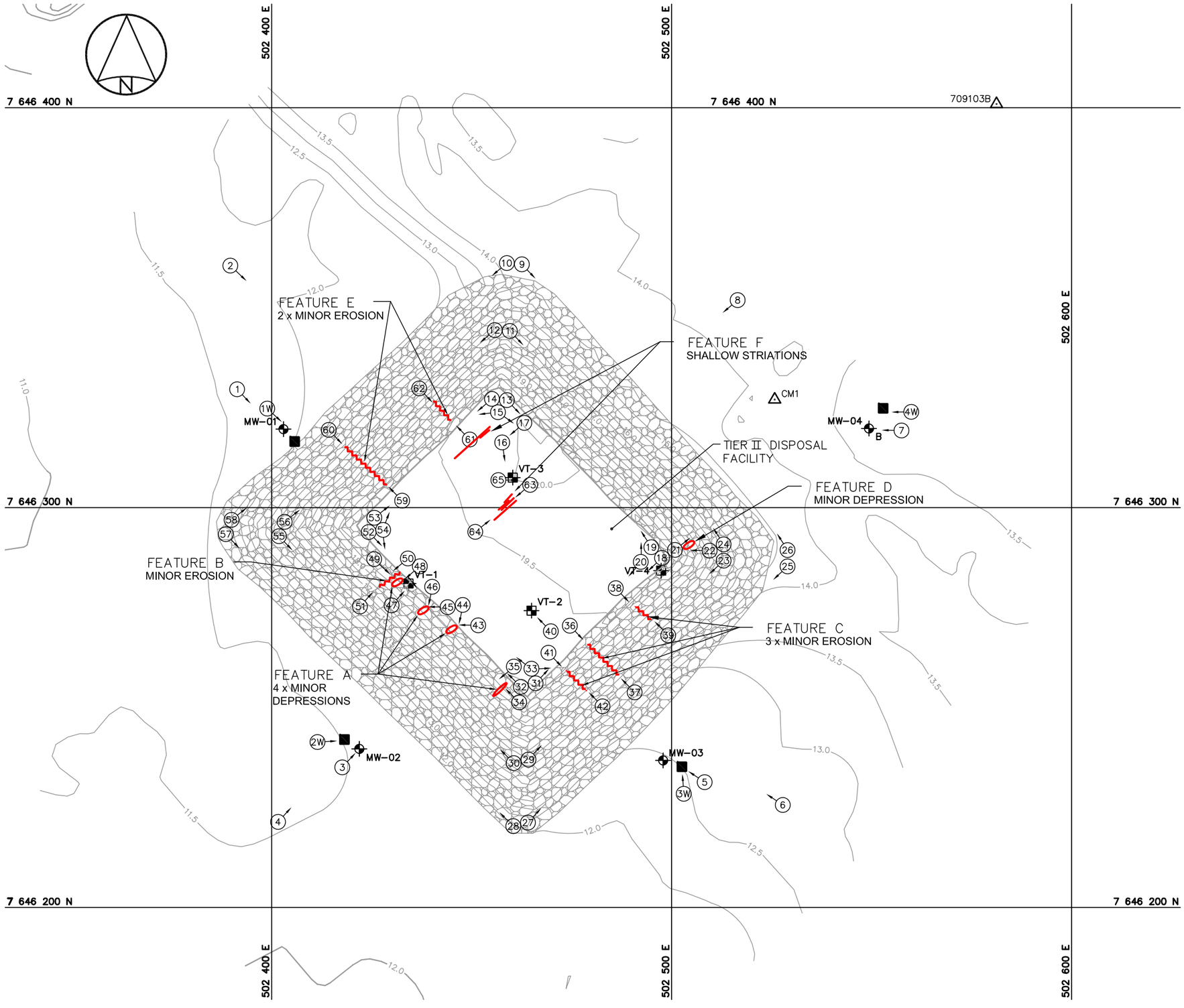
Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Acceptable	Isolated
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

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.

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.



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.	A.P.	P.G.
1	FINAL	15-06-26	PAR	VERIF.	APPR.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

TIER II DISPOSAL FACILITY

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	JUNE 2015
DRAWN BY:	VERIFIED BY:	APPROVED BY:
L. LA PIERRE	A. PASSALIS	P. GELINAS, P. ENG.
PROJECT NO:	DRAWING NO:	PAGE
CD3654_200_213	CD3654_200_213-PIN-2D-PL	PL

FIGURE PIN-2.4

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6.4 PHOTOGRAPHIC RECORD

The Photographic Record for the Tier II Soil Disposal Facility has been completed as per the TOR and is included as Table XVIII hereafter. The Photographic Record contains only an index of photographs. Full-sized photographs are contained in the Addendum DVD-ROM.

Table XVIII: 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	P214_1932	4,307	16/08/14	502391.9	7646329	View looking southeast at MW-01
2	P214_1933	4,293	16/08/14	502390	7646360	View looking southeast at northwest side of Tier II DF
3	P214_1934	4,342	16/08/14	502417.4	7646235	View looking northeast at MW-02
4	P214_1935	4,447	16/08/14	502401.9	7646221	View looking northeast at southwest side of Tier II DF
5	P214_1936	4,376	16/08/14	502507.9	7646232	View looking northwest at MW-03
6	P214_1937	4,327	16/08/14	502528	7646226	View looking northwest at southeast side of Tier II DF
7	P214_1938	4,262	16/08/14	502557.2	7646320	View looking west at MW-04
8	P214_1939	4,410	16/08/14	502516.7	7646352	View looking southwest at northeast side of Tier II DF
9	P214_1940	4,416	16/08/14	502462	7646361	View looking southeast along northeast toe of Tier II DF
10	P214_1941	4,349	16/08/14	502460	7646361	View looking southwest along northwest toe of Tier II DF
11	P214_1942	4,345	16/08/14	502459	7646344	View looking southeast along northeast side slope of Tier II DF
12	P214_1943	4,366	16/08/14	502457	7646344	View looking southwest along northwest side slope of Tier II DF
13	P214_1944	4,329	16/08/14	502458	7646328	View looking southeast along northeast crest of Tier II DF
14	P214_1945	4,422	16/08/14	502456	7646328	View looking southwest along northwest crest of Tier II DF
15	P214_1946	1,933	16/08/14	502457	7646327	Panoramic view looking southeast to west from north corner of Tier II DF
16	P214_1947	4,337	16/08/14	502458	7646316	View looking south-southeast at VT-3. VT-2 in background
17	P214_1949	4,396	16/08/14	502462.7	7646321	View looking southwest at striations on north cover of Tier II DF from final grading - FEATURE F
18	P214_1950	4,374	16/08/14	502497	7646287	View looking southwest along southeast crest of Tier II DF
19	P214_1951	4,318	16/08/14	502497	7646288	View looking northwest along northeast crest of Tier II DF
20	P214_1952	1,485	16/08/14	502495	7646287	Panoramic view looking southwest to north from east corner of Tier II DF
21	P214_1953	4,418	16/08/14	502500.3	7646289	View looking northeast at small depression below east crest of Tier II DF FEATURE B
22	P214_1954	4,409	16/08/14	502508.2	7646289	View looking west at small depression below east crest of Tier II DF - FEATURE B
23	P214_1955	4,438	16/08/14	502513	7646288	View looking southwest along southeast side slope of Tier II DF
24	P214_1956	4,368	16/08/14	502513	7646289	View looking northwest along northeast side slope of Tier II DF
25	P214_1957	4,328	16/08/14	502529	7646289	View looking southwest along southeast toe of Tier II DF
26	P214_1958	4,290	16/08/14	502529	7646287	View looking northwest along northeast toe of Tier II DF
27	P214_1959	4,358	16/08/14	502463	7646221	View looking northeast along southeast toe of Tier II DF
28	P214_1960	4,328	16/08/14	502461	7646221	View looking northwest along southwest toe of Tier il DF
29	P214_1961	4,332	16/08/14	502463	7646237	View looking northeast along southeast side slope of Tier II DF
30	P214_1962	4,367	16/08/14	502461	7646236	View looking northwest along southwest side slope of Tier il DF
31	P214_1963	4,410	16/08/14	502465	7646256	View looking northeast along southeast crest of Tier II DF
32	P214_1964	4,448	16/08/14	502463	7646256	View looking northwest along southwest crest of Tier il DF
33	P214_1965	1,654	16/08/14	502464	7646258	Panoramic view looking northwest to east from south corner of Tier II DF
34	P214_1966	4,313	16/08/14	502460	7646254	View looking northwest at linear depresson on southwest crest - FEATURE A

Table XVIII: Visual Inspection Photo Log – Tier II Soil Disposal Facility (page 2 of 3)

Photo (Tier II-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
35	P214_1967	4,413	16/08/14	502460	7646259	View looking southwest at linear depresson on southwest crest - FEATURE A
36	P214_1968	4,415	16/08/14	502476	7646269	View looking southeast at minor erosion on southeast side slope - FEATURE C
37	P214_1969	4,429	16/08/14	502490	7646255	View looking northwest at minor erosion on southeast side slope - FEATURE C
38	P214_1970	4,339	16/08/14	502487	7646279	View looking southeast at minor erosion on southeast side slope - FEATURE C
39	P214_1971	4,272	16/08/14	502498	7646269	View looking northwest at minor erosion on southeast side slope - FEATURE C
40	P214_1972	4,383	16/08/14	502469	7646270	View looking northwest at VT-2. VT-1 in background
41	P214_1973	4,338	16/08/14	502471	7646262	View looking southeast at minor erosion on southeast side slope - FEATURE C
42	P214_1974	4,435	16/08/14	502482	7646252	View looking northwest at minor erosion on southeast side slope - FEATURE C
43	P214_1975	4,383	16/08/14	502450	7646271	View looking west at pothole on southwest crest of Tier II DF - FEATURE A
44	P214_1976	4,428	16/08/14	502447	7646273	View looking south at pothole on southwest crest of Tier II DF - FEATURE A
45	P214_1977	4,322	16/08/14	502443	7646275	View looking west at pothole on southwest crest of Tier II DF - FEATURE A
46	P214_1978	4,395	16/08/14	502440	7646277	View looking south at pothole on southwest crest of Tier II DF- FEATURE A
47	P214_1979	4,308	16/08/14	502431	7646277	View looking northeast at VT-1. VT-3 in background
48	P214_1980	4,377	16/08/14	502436	7646284	View looking southwest at minor depression on slope below VT-1 - FEATURE A
49	P214_1981	4,458	16/08/14	502427	7646286	View looking southeast at minor depression on slope below VT-1 - FEATURE A
50	P214_1982	4,424	16/08/14	502434	7646286	View looking southwest at minor erosion on southwest side slope - FEATURE D
51	P214_1983	4,438	16/08/14	502423	7646276	View looking northeast at minor erosion on southwest side slope - FEATURE D
52	P214_1984	4,353	16/08/14	502425	7646294	View looking southeast along southwest crest of Tier II DF
53	P214_1985	4,432	16/08/14	502425	7646296	View looking northeast along northwest crest of Tier II DF
54	P214_1986	1,670	16/08/14	502427	7646295	Panoramic view looking northeast to south from west corner of Tier II DF
55	P214_1987	4,307	16/08/14	502402	7646294	View looking southeast along southwest side slope of Tier II DF
56	P214_1988	4,308	16/08/14	502403	7646295	View looking northeast along northwest side slope of Tier II DF
57	P214_1989	4,376	16/08/14	502389	7646294	View looking southeast along southwest toe ot Tier II DF
58	P214_1990	4,334	16/08/14	502389	7646296	View looking northeast along northwest toe of Tier II DF
59	P214_1991	4,353	16/08/14	502431	7646304	View looking northwest at minor erosion on northwest side of Tier II DF - FEATURE E
60	P214_1992	4,422	16/08/14	502415	7646319	View looking southeast at minor erosion on northwest side of Tier II DF - FEATURE E
61	P214_1993	4,430	16/08/14	502448	7646320	View looking northwest at minor erosion on northwest side of Tier II DF - FEATURE E
62	P214_1994	4,278	16/08/14	502438	7646328	View looking southeast at minor erosion on northwest side of Tier II DF- FEATURE E
63	P214_1995	4,410	16/08/14	502464	7646305	View looking southwest at striations on cover of Tier II DF from final grading - FEATURE F
64	P214_1996	4,370	16/08/14	502451.7	7646295	View looking northeast at striations on cover of Tier II DF from final grading) - FEATURE F
65	P214_1839	4,308	16/08/14	502457.9	7646307	Downloading data at VT-3

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

Photo (Tier II-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
Soil Sampling						
MW-1	P214_1840	4,390	15/08/14	502406	7646317	Sampling location P213-1W located downgradient of Tier II DF
1W	P214_1841	4,276	15/08/14	502400	7646324	View looking southeast at MW-01 located downgradient of Tier II DF
MW-2	P214_1837	4,286	15/08/14	502419	7646242	Sampling location P213-2W located downgradient of Tier II DF
2W	P214_1838	4,317	15/08/14	502414	7646241	View looking east MW-02 located downgradient of Tier II DF
MW-3	P214_1834	4,415	15/08/14	502503	7646235	Sampling location P213-3W located downgradient of Tier II DF
3W	P214_1835	4,326	15/08/14	502503	7646230	View looking north MW-03 located downgradient of Tier II DF
MW-4	P214_1832	4,315	15/08/14	502553	7646324	Sampling location P213-4W located upgradient of Tier II DF
4W	P214_1833	4,336	15/08/14	502558	7646324	View looking west at MW-04 located upgradient of Tier II DF

6.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results of analytical data for the 2014 Tier II Soil Disposal Facility samples are presented in Table XIX below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table XIX: Soil Chemical Analysis Results – Tier II Soil Disposal Facility

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-4WA	MW-04	0-15	1.0	0.20	3.8	0.9	4.3	<4.9	2.8	9	<0.01	<0.1	<10	<50	85
P214-4WB		40-50	1.1	0.08	3.6	1.0	1.7	<5	2.4	8	<0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-1WA	MW-01	0-15	6.0	0.93	7.9	4.8	14.0	<5	9.9	33	0.07	<0.1	<10	<50	59
P214-1WB		40-50	3.0	0.24	4.0	1.7	4.6	<5	4.2	14	0.03	<0.1	<10	<50	<50
P214-2WA	MW-02	0-15	2.8	0.09	5.9	2.5	4.8	<4.9	5.9	18	<0.01	<0.1	<10	<50	<50
P214-2WB		40-50	4.8	0.11	6.8	3.7	9.4	<5	6.5	14	<0.01	<0.1	<10	<50	<50
P214-3WA	MW-03	0-15	1.9	0.24	4.0	1.9	6.0	<5	3.7	29	0.03	<0.1	<10	<50	<50
P214-3WB		40-50	2.7	0.09	5.6	2.2	4.1	<4.9	4.7	15	<0.01	<0.1	<10	<50	<50

6.6 GROUNDWATER SAMPLE ANALYTICAL DATA

The groundwater chemical analysis results of analytical data for the 2014 Tier II Disposal Facility samples are presented in Table XX. As noted above, MW-01 (downgradient location) contained insufficient sample volume at the time of monitoring and consequently no groundwater samples were collected at this location. Certificates of analysis and groundwater samples collected as part of the QA/QC program are presented in Annex 2.

Table XX: Groundwater Chemical Analysis Results – Tier II Soil Disposal Facility

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 [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]
Detection Limit		0.0002	0.00001	0.0005	0.0001	0.001	0.0001	0.0005	0.001	0.005	0.1	0.2	0.2	0.1
Upgradient Groundwater Sample														
P214-4W	MW-04	0.0092	0.00019	0.0696	0.0078	0.025	0.0163	0.0728	0.379	0.007	<0.1	<0.2	<0.2	<0.1
Downgradient Groundwater Samples														
P214-1W	MW-01	Insufficient Water												
P214-2W	MW-02	0.0038	0.00003	0.2720	0.0030	0.017	0.0023	0.1190	0.104	0.023	<0.1	<0.2	<0.2	<0.1
P214-3W	MW-03	0.0046	0.00012	0.0827	0.0019	0.025	0.0029	0.0570	0.152	<0.005	<0.1	<0.2	<0.2	<0.1

6.7 THERMAL MONITORING DATA

With the exception of VT-1, 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, where all communications failed due to extremely low battery levels. New batteries were installed in the VT-1 datalogger, however the communication issue could not be resolved and the datalogger was removed from site and shipped to the manufacturer for evaluation and repair. Numerous analogues/thermocouples at VT-1, including beads 2, 4, 6, 7, 8, 11, and 15 had anomalous readings at the time of inspection.

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 2013-2014 monitoring period. All internal memories were reset and clocks were synchronized using the Prolog software.

No battery replacements or maintenance is anticipated for the 2015 monitoring period with the exception of re-installation of the datalogger at VT-1. Checklist/Report has been completed as per the TOR and is included as Table XXI of this report.

Table XXI: Thermistor Annual Maintenance Reports (VT-1 to VT-4)

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**2014-08-15**
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		**2013-08-17**
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		No	Problem/Maintenance
Casing	X			
Cover	X			
Data Logger			X	Unable to reprogram settings
Cable	X			
Beads			X	Error reading in Beads 2. 4. 6. 7. 8. 11 and 15.
Battery Installation Date		**2013-08-17**		
Battery Levels	Main	**8.19**	Aux	**3.41**

Manual Ground Temperature Readings

Bead	ohms	Degrees C	Bead	ohms	Degrees C
1	10.496	7.0843	9	11.483	7.227
2	1183.7	61.1552	10	9.582	7.9761
3	12.852	4.6874	11	882.8	69.397
4	2.015	45.0708	12	21.44	-5.4387
5	15.348	1.153	13	21.67	-5.7659
6	546.1	83.6818	14	22.2	-6.1729
7	1761.6	50.2024	15	292.9	103.6945
8	2.997	36.1407	16	22.55	-6.5878

Observations and Proposed Maintenance

Clock error upon initial connection to site computer. Battery levels reported to be 8.19 V (main) and 3.41 V (Aux). Install new ULB-1 and proceed to complete a full memory dump which also resulted in a communication error. Try to reprogram and reset datalogger with continuous communication errors.

Retrieve datalogger for repair in Edmonton.

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**2014-08-15**
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		**2013-08-17**
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		No	Problem/Maintenance
Casing	X			
Cover	X			
Data Logger			X	Unable to reprogram settings
Cable	X			
Beads			X	Error reading in Beads 2. 4. 6. 7. 8. 11 and 15.
Battery Installation Date		**2013-08-17**		
Battery Levels	Main	**8.19**	Aux	**3.41**

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	10.496	7.0843
2	1183.7	61.1552
3	12.852	4.6874
4	2.015	45.0708
5	15.348	1.153
6	546.1	83.6818
7	1761.6	50.2024
8	2.997	36.1407

Bead	ohms	Degrees C
9	11.483	7.227
10	9.582	7.9761
11	882.8	69.397
12	21.44	-5.4387
13	21.67	-5.7659
14	22.2	-6.1729
15	292.9	103.6945
16	22.55	-6.5878

Observations and Proposed Maintenance

Clock error upon initial connection to site computer. Battery levels reported to be 8.19 V (main) and 3.41 V (Aux). Install new ULB-1 and proceed to complete a full memory dump which also resulted in a communication error. Try to reprogram and reset datalogger with continuous communication errors.

Retrieve datalogger for repair in Edmonton.

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**2014-08-15**
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	**2013-08-17**
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			Cover cracked. However still functional.
Data Logger	X			
Cable	X			
Beads	X			
Battery Installation Date		**2013-08-17**		
Battery Levels	Main	**11.34**	Aux	**14.11**

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	10.041	9.959
2	10.638	8.5688
3	11.407	7.1619
4	13.079	4.4579
5	14.506	2.4011
6	16.26	0.1456
7	16.59	-0.2068
8	17.348	-1.1234

Bead	ohms	Degrees C
9	18.468	-2.338
10	19.474	-3.4153
11	20.33	-4.3415
12	21.25	-5.177
13	21.85	-5.6799
	-	-
	-	-
	-	-

Observations and Proposed Maintenance

Download file: Site_024_PIN-2 VT-2_Aug_15_2014

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**2014-08-15**
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	**2013-08-17**
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	**2013-08-17**			
Battery Levels	Main **11.34**		Aux **13.14**	

Manual Ground Temperature Readings

Bead	ohms	Degrees C
1	11.322	7.227
2	12.523	5.154
3	14.05	3.0944
4	15.705	0.8455
5	17.131	-0.835
6	17.879	-1.7998
7	18.825	-2.7053
8	19.99	-3.9914

Bead	ohms	Degrees C
9	21.24	-5.1583
10	21.92	-5.7901
11	22.63	-6.395
12	22.83	-6.6286
	-	-
	-	-
	-	-
	-	-

Observations and Proposed Maintenance

Download file: Site_029_PIN-2 VT-3_Aug_15_2014

Contractor Name:	**Sila Remediation Inc.**	Inspection Date:	**2014-08-15**
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		**2013-08-17**
Coordinates and Elevation	N	**7646284.2**	E	**502497.4**	Elev	**19.9**	
Length of Cable (m)		Cable Lead Above Ground (m)	**2.5**	Nodal Points			**16**
Datalogger Serial #	**7010044**			Cable Serial Number			**VT-4**

Thermistor Inspection

	Good			
	Yes		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		**2013-08-17**		
Battery Levels	Main	**11.34**	Aux	**13.5**

Manual Ground Temperature Readings

Bead	ohms	Degrees C	Bead	ohms	Degrees C
1	11.867	-82.1999	9	20.48	-90.1096
2	12.805	4.9319	10	21.28	-5.1583
3	14.189	2.8943	11	21.38	-5.3959
4	15.78	0.8077	12	21.92	-5.7659
5	17.215	-0.9217	13	22.1	-6.0379
6	18.2	-1.9437	14	22.29	-6.2135
7	18.899	-2.7053	15	22.46	-6.395
8	20.1	-3.9914	16	22.66	-6.5579

Observations and Proposed Maintenance

Download file: Site_044_PIN-2 VT-4_Aug_15_2014

6.8 MONITORING WELL SAMPLING/INSPECTION LOGS (MW-1 TO MW-4)

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

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-15	Time:	16:30
Names of Samplers:	A.Passalis		
Landfill Name:	Tier II Disposal Facility		
Monitoring Well ID:	MW-1		
Sample Number:	N/A	Insufficient sample volume	
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	55		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	340		
Length screened section (cm)=	300		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	228	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	173		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	233	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	5		
Static volume of water in well (mL)=	63		
Free product thickness (mm)=	0	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	N	Purging/Sampling Equipment:	N/A
Volume Purged Water=	N/A		
Decontamination required: (Y/N)	N/A		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	N/A		
Final Conductivity (uS/cm)=	N/A		
Final Temperature (degC)=	N/A		

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-21	Time:	16:20
Names of Samplers:	A.Passalis		
Landfill Name:	Tier II Disposal Facility		
Monitoring Well ID:	MW-2		
Sample Number:	P214-2W		
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	53		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	340		
Length screened section (cm)=	300		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	143.5	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	90.5		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	294	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	150.5		
Static volume of water in well (mL)=	1891		
Free product thickness (mm)=	0	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	Y	Purging/Sampling Equipment:	Waterra Tubing, Foot Valve
Volume Purged Water=	3.0 L		
Decontamination required: (Y/N)	N, dedicated		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	8.0		
Final Conductivity (uS/cm)=	747		
Final Temperature (degC)=	2.9		

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-21	Time:	15:50
Names of Samplers:	A.Passalis		
Landfill Name:	Tier II Disposal Facility		
Monitoring Well ID:	MW-3		
Sample Number:	P214-3W		
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	58		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	340		
Length screened section (cm)=	300		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	207	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	149		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	273	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	66		
Static volume of water in well (mL)=	829		
Free product thickness (mm)=	0	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	Y	Purging/Sampling Equipment:	Waterra Tubing, Foot Valve
Volume Purged Water=	1.5 L		
Decontamination required: (Y/N)	N, dedicated		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	7.9		
Final Conductivity (uS/cm)=	732		
Final Temperature (degC)=	3.1		

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-21	Time:	15:30
Names of Samplers:	A.Passalis		
Landfill Name:	Tier II Disposal Facility		
Monitoring Well ID:	MW-4		
Sample Number:	P214-4W		
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	55		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	340		
Length screened section (cm)=	300		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	154	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	99		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	290	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	136		
Static volume of water in well (mL)=	1709		
Free product thickness (mm)=	0	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	Y	Purging/Sampling Equipment:	Waterra Tubing, Foot Valve
Volume Purged Water=	2.5 L		
Decontamination required: (Y/N)	N, dedicated		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	7.8		
Final Conductivity (uS/cm)=	753		
Final Temperature (degC)=	3.8		

7 AIRSTRIP SOUTH LANDFILL

7.1 SUMMARY

The 2014 monitoring of the Airstrip South Landfill was conducted on August 15, 2014 and included a visual inspection to identify evidence of settlement or erosion, and collection of soil samples at upgradient and downgradient locations to monitor for the presence of leachate.

No PCBs, TPH or elevated levels of metals were detected in the soil samples collected.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the Airstrip South Landfill. Indications of new settlement were observed at one location on the west side slope of the landfill, consisting of a single linear depression. No evidence of erosion feature or exposed debris was noted during the investigation.

As of 2014, the Airstrip South Landfill performance is rated as acceptable.

The Visual Inspection Checklist is included in Table XXII 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 erosional features.

Table XXII: 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 (Regrade Landfill)
DATE OF INSPECTION: August 15, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE XXII: AIRSTRIP SOUTH LANDFILL VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: Airstrip South Landfill
Designation: Existing Regrade Area
Date Inspected: August 15, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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 - New Obs.)	6 m	0.2 - 0.3 m	0.1 - 0.15 m	< 1%	Linear depression	ASLF-9, 10	Acceptable	Shallow depression. Slope appears stable.
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.
Overall Landfill Performance:	**Acceptable**									

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 XXIV hereafter.

Table XXIII: 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.
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.

503 100 E

503 175 E

503 250 E

7 646 300 N

7 646 225 N

FEATURE A
LINEAR DEPRESSION

ACCESS ROAD

AIRSTRIP SOUTH
LANDFILL

APPROX. ACCESS ROAD

P2–16

P2–15

P2–14

P2–13

S13

S14

S15

S16

1

2

3

4

5

6

7

8

9

10

11

12

13

14.0

15.0

16.0

N

LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- S16 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.	P.G.
1	FINAL	15–06–26	PAR	VERIF.	APPR.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

AIRSTRIP SOUTH LANDFILL

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month–year):
Metre	1 : 750	JUNE 2015
DRAWN BY:	VERIFIED BY:	APPROVED BY:
L. LA PIERRE	A. PASSALIS	P. GELINAS, P. ENG.
PROJECT NO:	DRAWING NO:	PAGE
CD3654_200_213	CD3654_200_213-PIN-2E-PL	PL

FIGURE PIN-2.5

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7.4 PHOTOGRAPHIC RECORD

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

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

Photo (ASLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P214_1874	4,285	15/08/14	503230	7646261	View looking north along east toe of Airstrip South Landfill
2	P214_1875	4,368	15/08/14	503229	7646261	View looking west along south toe of Airstrip South Landfill
3	P214_1876	1,426	15/08/14	503225	7646265	Panoramic view looking southwest to north from southeast corner of Airstrip South Landfill
4	P214_1877	4,322	15/08/14	503225	7646322	View looking south along east side of Airstrip South Landfill
5	P214_1878	4,352	15/08/14	503223	7646322	View looking west-southwest along north side of Airstrip South Landfill
6	P214_1879	4,366	15/08/14	503184	7646310	View looking east-northeast along north side of Airstrip South Landfill
7	P214_1880	4,415	15/08/14	503182	7646309	View looking south along west side of Airstrip South Landfill
8	P214_1881	1,560	15/08/14	503188	7646306	Panoramic view looking northeast to south from northwest corner of Airstrip South Landfill
9	P214_1882	4,330	15/08/14	503187	7646298	View looking west at linear depression on west side slope of Airstrip South Landfill - FEATURE A
10	P214_1883	4,377	15/08/14	503177	7646298	View looking east at linear depression on west side slope of Airstrip South Landfill - FEATURE A
11	P214_1884	4,405	15/08/14	503202	7646261	View looking north-northwest along west side of Airstrip South Landfill
12	P214_1885	4,319	15/08/14	503203	7646261	View looking east along south side of Airstrip South Landfill
13	P214_1886	4,299	15/08/14	503223	7646258	View looking southeast at area affected by seasonal ponding immediately south of Airstrip South Landfill
Soil Sampling						
P2-13	P214_1893	4,307	15/08/14	503171	7646266	Sampling location P214-13 located upgradient of Station West Landfill
S13	P214_1894	4,315	15/08/14	503166	7646266	View looking east at P214-13 located upgradient of Station West Landfill
P2-14	P214_1891	4,379	15/08/14	503234	7646248	Sampling location P214-14 located downgradient of Station West Landfill
S14	P214_1892	4,209	15/08/14	503235	7646245	View looking northwest at P214-14 located downgradient of Station West Landfill
P2-15	P214_1889	4,416	15/08/14	503244	7646296	Sampling location P214-15 located downgradient of Station West Landfill
S15	P214_1890	4,452	15/08/14	503249	7646297	View looking west at P214-15 located downgradient of Station West Landfill
P2-16	P214_1887	4,329	15/08/14	503221	7646338	Sampling location P214-16 located downgradient of Station West Landfill
S16	P214_1888	4,379	15/08/14	503221	7646342	View looking south at P214-16 located downgradient of Station West Landfill

7.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results for the 2014 Airstrip South Landfill samples are presented in Table XXV below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table XXV: Soil Chemical Analysis Results – Airstrip South Landfill

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-13A	P2-13	0-15	2.8	0.13	3.8	2.1	7.2	<5	5.0	23	0.02	<0.1	<10	<50	<50
P214-13B		40-50	2.5	0.12	3.8	1.9	6.9	<5	2.0	21	0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-14A	P2-14	0-15	1.5	0.06	3.9	1.1	5.0	<4.9	2.6	9	<0.01	<0.1	<10	<50	<50
P214-14B		40-50	1.9	0.04	6.4	2.2	3.8	<5	4.5	9	<0.01	<0.1	<10	<50	<50
P214-15A	P2-15	0-15	3.6	0.04	3.0	0.8	2.0	<5	1.1	10	0.01	<0.1	<10	<50	<50
P214-15B		40-50	4.0	0.04	3.1	1.1	2.2	<4.9	2.5	10	<0.01	<0.1	<10	<50	<50
P214-16A	P2-16	0-15	2.8	0.06	3.9	1.9	2.8	<4.9	4.3	18	0.01	<0.1	<10	<50	<50
P214-16B		40-50	2.9	0.06	4.4	2.3	3.3	<5	4.2	19	<0.01	<0.1	<10	<50	<50

8 PALLET LINE WEST LANDFILL

8.1 SUMMARY

The 2014 monitoring of the Pallet Line West Landfill was conducted on August 15, 2014 and included a visual inspection to identify evidence of settlement or erosion, and collection of soil samples at upgradient and downgradient locations to monitor for the presence of leachate. Shallow bedrock was encountered at one soil sample location (P2-11), resulting in the depth sample at this location to be collected between 25-35 cm below grade.

TPH, fraction F3, was detected in surface soil samples collected at location P2-11 and P2-12 (118 and 143 mg/kg, respectively) and in bottom sample from P2-12 (140 mg/kg). No PCBs or elevated level of metals was detected.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the Pallet Line West Landfill. Indications of new settlement were observed at one location on the south crest of the landfill, consisting of a single linear depression. No evidence of erosion feature or exposed debris was noted during the investigation.

As of 2014, the Pallet Line West Landfill performance is rated as acceptable.

The Visual Inspection Checklist is included in Table XXVI 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 erosional features.

Table XXVI: 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 (Regrade Landfill)
DATE OF INSPECTION: August 15, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE XXVI: PALLET LINE WEST LANDFILL VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: Pallet Line West Landfill
Designation: Existing Regrade Area
Date Inspected: August 15, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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 - New Obs.)	1 m	0.2 m	0.05 m	Isolated	Linear depression	PLW-16, 17	Acceptable	Feature not observed during previous inspection.
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.
Overall Landfill Performance:	**Acceptable**									

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 XXVIII below.

Table XXVII: 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.

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.

502 525 E

502 600 E

502 675 E

7 645 875 N

7 645 800 N

7 645 725 N

ACCESS ROAD

P2–12

P2–11

P2–10

P2–09

FEATURE A
LINEAR DEPRESSION

PALLET LINE WEST LANDFILL
LOBE A, B, C AND D

13.0

13.5

14.0

12.0

12.5

LEGEND

- MONITORING SOIL SAMPLE LOCATION (6)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- LINEAR DEPRESSION (NTS)

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

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	15–06–26	P.L.	A.P.	P.G.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

PALLET LINE WEST LANDFILL

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month–year):
Metre	1 : 750	JUNE 2015
DRAWN BY: L. LA PIERRE	VERIFIED BY: A. PASSALIS	APPROVED BY: P. GELINAS, P. ENG.
PROJECT NO: CD3654_200_213	DRAWING NO: CD3654_200_213-PIN-2F-PL	PAGE PL

FIGURE PIN-2.6

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8.4 PHOTOGRAPHIC RECORD

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

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

Photo (PLW-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P214_1845	4,427	15/08/14	502563	7645861	View looking southwest along north side of Pallet Line West Landfill
2	P214_1846	4,339	15/08/14	502564	7645860	View looking southeast along northeast side of Pallet Line West Landfill
3	P214_1847	1,622	15/08/14	502561	7645854	Panoramic view looking southeast to west across north cover of Pallet Line West Landfill
4	P214_1848	4,358	15/08/14	502545	7645848	View looking south along west side of Pallet Line West Landfill
5	P214_1849	4,278	15/08/14	502553	7645810	View looking south along west crest of Pallet Line West Landfill
6	P214_1850	4,378	15/08/14	502559	7645775	View looking north along west crest of Pallet Line West Landfill
7	P214_1851	4,431	15/08/14	502559	7645774	View looking southeast along southwest crest of Pallet Line West Landfill
8	P214_1852	1,584	15/08/14	502560	7645776	Panoramic view looking north to southeast across cover from southwest corner of Pallet Line West Landfill
9	P214_1853	4,254	15/08/14	502553	7645770	View looking north along west toe of Pallet Line West Landfill
10	P214_1854	4,328	15/08/14	502554	7645769	View looking southeast along southwest toe of Pallet Line West Landfill
11	P214_1855	4,335	15/08/14	502598	7645753	View looking north-northeast along east toe of Pallet Line West Landfill
12	P214_1856	4,272	15/08/14	502580	7645767	View looking north-northeast across south cover of Pallet Line West Landfill
13	P214_1858	4,330	15/08/14	502622	7645805	View looking south-southwest along east side of Pallet Line West Landfill\
14	P214_1859	4,306	15/08/14	502622	7645806	View looking north-northwest along northeast side of Pallet Line West Landfill
15	P214_1860	4,320	15/08/14	502616	7645823	View looking west along north side of Pallet Line West Landfill
16	P214_1863	4,341	15/08/14	502584	7645754	View looking north at linear depression below south crest - FEATURE A
17	P214_1864	4,360	15/08/14	502580	7645760	View looking southeast at linear depression below south crest - FEATURE A
18	P214_1865	4,402	15/08/14	502615	7645785	View of typical sparse vegetation on east side slope of Pallet Line West Landfill
Soil Sampling						
P2-9	P214_1872	4,368	15/08/14	502570	7645742	Sampling location P214-9 located upgradient of Pallet Line West Landfill
S9	P214_1873	4,324	15/08/14	502568	7645737	View looking north at P214-9 located upgradient of Pallet Line West Landfill
P2-10	P214_1870	4,269	15/08/14	502631	7645787	Sampling location P214-10 located downgradient of Pallet Line West Landfill
S10	P214_1871	4,416	15/08/14	502637	7645788	View looking west at P214-10 located downgradient of Pallet Line West Landfill
P2-11	P214_1866	4,322	15/08/14	502595	7645845	Sampling location P214-11 located downgradient of Pallet Line West Landfill
S11	P214_1867	4,441	15/08/14	502595	7645849	View looking south at P214-11 located downgradient of Pallet Line West Landfill
P2-12	P214_1861	4,363	15/08/14	502540	7645863	Sampling location P214-12 located downgradient of Pallet Line West Landfill
S12	P214_1862	4,419	15/08/14	502537	7645866	View looking southeast at P214-12 located downgradient of Pallet Line West Landfill

8.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results for the 2014 Pallet Line West Landfill samples are presented in Table XXIX below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table XXIX: Soil Chemical Analysis Results – Pallet Line West Landfill

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-9A	P2-9	0-15	2.4	0.06	3.8	1.5	3.6	<4.9	2.8	84	0.01	<0.1	<10	<50	<50
P214-9B		40-50	1.9	0.04	3.3	1.2	2.6	<5.0	3.3	16	0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-10A	P2-10	0-15	3.1	0.27	4.6	2.0	4.5	<4.9	3.4	35	0.04	<0.1	<10	<50	<50
P214-10B		40-50	7.0	0.16	5.8	2.7	3.4	<5.0	4.9	33	0.01	<0.1	<10	<50	<50
P214-11A	P2-11	0-15	1.8	0.35	6.9	2.3	11.0	<5.0	5.9	40	0.04	<0.1	<10	<50	118
P214-11B		40-50	2.8	0.13	5.9	1.7	6.1	<4.9	4.5	18	0.01	<0.1	<10	<50	<50
P214-12A	P2-12	0-15	0.9	0.18	1.8	0.3	5.8	<5.0	2.7	6	0.06	<0.1	<10	<50	143
P214-12B		40-50	0.8	0.21	2.4	0.4	7.2	<4.9	3.9	6	0.06	<0.1	<10	<50	140

9 NON-HAZARDOUS WASTE LANDFILL (NHWL)

9.1 SUMMARY

The 2014 monitoring of the NHWLF was conducted on August 15, 2014 and included visual inspection to verify for evidence of settlement or erosion, and collection of soil and groundwater samples to monitor for the presence of leachate. Monitoring well MW-4 was dry at the time of sampling and consequently was not sampled.

No PCBs, TPH or elevated levels of metals were detected in soil samples collected. TPH, faction F3, was detected in the groundwater sampled collected at MW-07 (0.1 mg/L). No PCBs or elevated levels of metals were detected in the groundwater samples collected.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the NHWLF. Five settlement features were noticed during the inspection: two localized depressions, consisting of one previously noted pothole-type depression situated on the slope below the southwest corner of the landfill, and a second newly observed linear depression orientated along the south crest; a single, isolated depression located above the southeast crest; and two oval depressions situated below the north crest. Evidence of 5 minor surface erosion was noted in two general areas at the NHWLF, including two newly observed locations extending from crest to toe on the southwest and southeast side slopes, and three previously noted locations consistent with observations made during the 2013 inspection. Evidence of partially exposed or surface debris was not noted.

As of 2014, the NHWLF performance is rated as acceptable.

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-2.7 for a sketch of the NHWLF detailing the location of photographs and erosional features.

Table XXX: 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: NHWLF (New Landfill)
DATE OF INSPECTION: August 15, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE XXX: NON-HAZARDOUS WASTE LANDFILL VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: Non-Hazardous Waste Landfill
Designation: Existing Regrade Area
Date Inspected: August 15, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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 - 1 New Obs.)	0.4 - 2 m	0.4 m	0.05 - 0.15 m	Isolated	Minor depressions	NHWLF-28, 29, 30, 31	Acceptable	Linear depressions orientated parallel and perpendicular to crest.
		FEATURE C See Figure PIN-2.7 (SE crest - New Obs.)	0.8 m	0.2-0.4 m	0.05 - 0.1 m	Isolated	Minor depression	NHWLF-48, 49	Acceptable	Linear depression orientated along crest.
		FEATURE D See Figure PIN-2.7 (N crest - New Obs.)	0.6 - 0.8 m	0.4 - 0.5 m	0.05 - 0.1 m	Isolated	Minor depressions	NHWLF-7, 8, 9	Acceptable	Two depressions below north crest.
Erosion	Yes	FEATURE B See Figure PIN-2.7 (SE side slope- 2 New Obs.)	7 - 18 m	0.1 - 0.15 m	0.02 - 0.07 m	Occasional (<1%)	Minor erosion	NHWLF-33, 34, 39-41, 44-46	Acceptable	5 areas of minor erosion, washing of fines, self armouring. Slope appears stable.
		FEATURE E See Figure PIN-2.7 (N side slope- New Obs.)	9 - 12 m	0.15 - 0.2 m	0.02 - 0.05 m	Occasional (<1%)	Minor erosion	NHWLF-10-15	Acceptable	3 Areas - washing of fines, self armouring. 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	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- New Obs.)	10 m	0.2 m	0.05 m	Isolated	Minor depressions	NHWLF-50	Acceptable	Appears to be vehicle tracks extending parallel to east cover.
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.
Overall Landfill Performance:	**Acceptable**									

9.2 PRELIMINARY STABILITY ASSESSMENT

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

Table XXXI: 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.
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.

503 000 E

503 100 E

503 200 E

7 645 300 N

7 645 200 N

FEATURE E
3 x MINOR EROSION

NON-HAZARDOUS
WASTE LANDFILL

FEATURE D
2 x DEPRESSIONS

FEATURE C

ADDITIONAL TYPE 2
GRANULAR FILL
PLACEMENT

FEATURE C
DEPRESSION

FEATURE B
2 x MINOR EROSION

FEATURE A
2 x DEPRESSIONS

FEATURE B
3 x MINOR EROSION

MW-05

MW-06

MW-07

MW-08

17.5 18.0 18.5 19.0 17.0 16.5 16.0 21.0

LEGEND

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

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

NO.	VERSION	DATE	P.L.	A.P.	P.G.
1	FINAL	15-06-29	P.L.	A.P.	P.G.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF
LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

NON-HAZARDOUS WASTE LANDFILL

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 1,000	JUNE 2015
DRAWN BY:	VERIFIED BY:	APPROVED BY:
L. LA PIERRE	A. PASSALIS	P. GELINAS, P. ENG.
PROJECT NO:	DRAWING NO:	PAGE
CD3654_200_213	CD3654_200_213-PIN-2G-PL	PL

FIGURE PIN-2.7

G:\CD3654\PIN-2\FINAL\2014\CD3654_200_213-PIN-2G-PL.dwg, PL, 2015-06-26 4:05:20 PM

9.4 PHOTOGRAPHIC RECORD

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

Table XXXII: Visual Inspection Photo Log – NHWLF (page 1 of 2)

Photo (NHWLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P214_2052	4,336	15/08/14	503093	7645326	View looking south-southwest at north side of NHWLF
2	P214_2053	4,384	15/08/14	503116	7645280	View looking west-northwest along north toe of NHWLF
3	P214_2054	4,327	15/08/14	503117	7645278	View looking south along east toe of NHWLF
4	P214_2055	4,381	15/08/14	503099	7645271	View looking west-northwest along north crest of NHWLF
5	P214_2056	4,416	15/08/14	503100	7645270	View looking south along east crest of NHWLF
6	P214_2057	1,688	15/08/14	503097	7645270	Panoramic view looking south to northwest across cover from northeast corner of NHWLF
7	P214_2059	4,367	15/08/14	503084	7645289	View looking south-southeast at minor depression 1 m below crest on north side of NHWLF - FEATURE D (new)
8	P214_2060	4,376	15/08/14	503073	7645289	View looking northeast at two depressions 1 m below crest on north side of NHWLF - FEATURE D (new)
9	P214_2061	4,300	15/08/14	503080	7645291	View looking south-southeast at minor depression 1 m below crest on north side of NHWLF- FEATURE D (new)
10	P214_2062	4,283	15/08/14	503077	7645281	View looking north-northeast at minor erosion on north side slope of NHWLF - FEATURE E (new)
11	P214_2063	4,418	15/08/14	503085	7645297	View looking south-southwest at minor erosion on north side slope of NHWLF - FEATURE E (new)
12	P214_2064	4,269	15/08/14	503063	7645289	View looking north-northeast at minor erosion on north side slope of NHWLF - FEATURE E (new)
13	P214_2065	4,238	15/08/14	503071	7645302	View looking south-southwest at minor erosion on north side slope of NHWLF - FEATURE E (new)
14	P214_2066	4,280	15/08/14	503055	7645298	View looking north-northeast at minor erosion on north side slope of NHWLF - FEATURE E (new)
15	P214_2067	4,356	15/08/14	503061	7645307	View looking south-southwest at minor erosion on north side slope of NHWLF - FEATURE E (new)
16	P214_2068	4,381	15/08/14	503054	7645294	View looking south along west crest of NHWLF
17	P214_2069	4,422	15/08/14	503055	7645294	View looking east along north crest of NHWLF
18	P214_2070	1,948	15/08/14	503055	7645291	Panoramic view looking east to southwest across cover from northwest corner of NHWLF
19	P214_2071	4,351	15/08/14	503046	7645310	View looking south-southwest along west toe of NHWLF
20	P214_2072	4,305	15/08/14	503052	7645312	View looking east along north toe of NHWLF
21	P214_2073	4,410	15/08/14	503003	7645292	View looking east-southeast at west side of NHWLF
22	P214_2074	4,328	15/08/14	503008	7645239	View looking east-southeast along south toe of NHWLF
23	P214_2075	4,382	15/08/14	503007	7645240	View looking north along west toe of NHWLF
24	P214_2078	4,311	15/08/14	503021	7645189	View looking northeast at south side of NHWLF
25	P214_2081	4,347	15/08/14	503032	7645247	View looking east-southeast along south crest of NHWLF
26	P214_2082	4,352	15/08/14	503031	7645249	View looking north along west crest of NHWLF
27	P214_2083	1,830	15/08/14	503034	7645249	Panoramic view looking north to southeast across cover from southwest corner of NHWLF
28	P214_2084	4,455	15/08/14	503026	7645246	View looking northeast at minor depression 1 m below southwest crest of NHWLF - FEATURE A

Table XXXII: Visual Inspection Photo Log – NHWLF (page 2 of 2)

Photo (NHWLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
29	P214_2086	4,385	15/08/14	503034	7645242	View looking southwest at minor depression 1 m below southwest crest of NHWLF - FEATURE A
30	P214_2087	4,409	15/08/14	503044	7645241	View looking northwest at linear depression on crest of NHWLF - FEATURE A (new)
31	P214_2088	4,417	15/08/14	503040	7645246	View looking southeast at linear depression on crest of NHWLF - FEATURE A (new)
32	P214_2089	4,367	15/08/14	503046	7645233	Typical sparse vegetation noted on south side slope of NHWLF
33	P214_2091	4,355	15/08/14	503068	7645229	View looking southwest at minor erosion on southeast corner of NHWLF - FEATURE B
34	P214_2092	4,419	15/08/14	503059	7645211	View looking northeast at minor erosion on southeast corner of NHWLF - FEATURE B
35	P214_2093	4,414	15/08/14	503069	7645216	Typical sparse vegetation noted on southeast corner of NHWLF
36	P214_2094	4,323	15/08/14	503078	7645226	View looking north-northeast along east crest of NHWLF
37	P214_2095	4,369	15/08/14	503077	7645225	View looking northwest along south crest of NHWLF
38	P214_2096	1,568	15/08/14	503076	7645227	Panoramic view looking west to northeast across crest from southeast corner of NHWLF
39	P214_2097	4,393	15/08/14	503079	7645221	View looking southeast at minor erosion on southeast corner of NHWLF - FEATURE B
40	P214_2098	4,469	15/08/14	503075	7645213	View looking east-southeast at minor erosion on southeast corner of NHWLF - FEATURE B
41	P214_2099	4,353	15/08/14	503083	7645204	View looking northwest at minor erosion on southeast corner of NHWLF - FEATURE B
42	P214_2100	4,422	15/08/14	503084	7645206	View looking north along east toe of NHWLF
43	P214_2101	4,371	15/08/14	503081	7645205	View looking northwest along south toe of NHWLF
44	P214_2102	4,492	15/08/14	503091	7645208	View looking northwest at minor erosion on southeast corner of NHWLF - FEATURE B
45	P214_2104	4,431	15/08/14	503094	7645215	View looking west-northwest at minor erosion on southeast corner of NHWLF - FEATURE B
46	P214_2105	4,395	15/08/14	503080	7645224	View looking southeast at minor erosion on southeast corner of NHWLF - FEATURE B
47	P214_2107	4,427	15/08/14	503125	7645231	View looking northwest at east side of NHWLF
48	P214_2108	4,389	15/08/14	503083	7645234	View looking northeast at linear depression along crest on southeast corner of NHWLF- FEATURE C (new)
49	P214_2109	4,413	15/08/14	503079	7645234	View looking southeast at linear depression along crest on southeast corner of NHWLF - FEATURE C (new)
50	P214_2110	4,403	15/08/14	503094	7645262	View looking south at vehicle ruts along east crest of NHWLF - FEATURE F (new)
Soil Sampling						
MW-5	P214_2076	4,338	15/08/14	503002	7645226	Sampling location P214-5W located downgradient of NHWLF
5W	P214_2077	4,314	15/08/14	503002	7645222	View looking north-northwest at P214-5W located downgradient of NHWLF
MW-6	P214_2079	4,394	15/08/14	503039	7645207	Sampling location P214-6W located downgradient of NHWLF
6W	P214_2080	4,298	15/08/14	503040	7645200	View looking north-northeast at P214-6W located downgradient of NHWLF
MW-7	P214_2048	4,412	15/08/14	503075	7645196	Sampling location P214-7W located downgradient of NHWLF
7W	P214_2049	4,439	15/08/14	503079	7645189	View looking northwest at P214-7W located downgradient of NHWLF
MW-8	P214_2050	4,336	15/08/14	503082	7645314	Sampling location P214-8W located upgradient of NHWLF
8W	P214_2051	4,370	15/08/14	503084	7645319	View looking south at P214-8W located upgradient of NHWLF

9.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results of analytical data for the 2014 Non-Hazardous Waste Landfill samples are presented in Table XXXIII below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table XXXIII: Soil Chemical Analysis Results – Non-Hazardous Waste Landfill

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-8WA	MW-08	0-15	2.4	0.08	3.2	1.3	3.2	<4.9	2.6	13	0.03	<0.1	<10	<50	<50
P214-8WB		40-50	2.4	0.07	3.2	1.9	4.2	<4.9	3.7	12	0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-5WA	MW-05	0-15	1.1	0.09	2.7	0.8	4.0	<4.9	2.6	11	<0.01	<0.1	<10	<50	<50
P214-5WB		40-50	1.2	0.07	5.6	1.7	5.4	<4.9	4.9	16	<0.01	<0.1	<10	<50	<50
P214-6WA	MW-06	0-15	2.4	0.07	2.9	1.1	4.9	<5.0	2.9	11	0.01	<0.1	<10	<50	<50
P214-6WB		40-50	4.3	0.27	7.4	1.2	5.4	<4.9	3.0	40	<0.01	<0.1	<10	<50	<50
P214-7WA	MW-07	0-15	2.1	0.09	6.0	2.9	7.6	<4.9	5.6	20	0.03	<0.1	<10	<50	<50
P214-7WB		40-50	2.3	0.07	5.9	3.0	8.6	<4.9	5.8	16	0.01	<0.1	<10	<50	<50

9.6 GROUNDWATER SAMPLE ANALYTICAL DATA

The groundwater chemical analysis results of analytical data for the 2014 Non-Hazardous Waste Landfill samples are presented in Table XXXIV. As noted above, MW-08 (upgradient location) contained insufficient sample volume at the time of monitoring and consequently no groundwater samples were collected at this location. Certificates of analysis and groundwater samples collected as part of the QA/QC program are presented in Annex 2.

Table XXXIV: Groundwater Chemical Analysis Results – NHWL

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 [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]
Detection Limit		0.0002	0.00001	0.0005	0.0001	0.001	0.0001	0.0005	0.001	0.005	0.1	0.2	0.2	0.1
Upgradient Groundwater Sample														
P214-8W	MW-08	Insufficient Water												
Downgradient Groundwater Samples														
P214-5W	MW-05	0.0061	<0.00001	0.2640	0.0015	0.046	0.0023	0.0390	0.065	0.008	<0.1	<0.2	<0.2	<0.1
P214-6W	MW-06	0.0179	0.00013	0.8780	0.0069	0.237	0.0069	0.2390	3.700	0.016	<0.1	<0.2	<0.2	<0.1
P214-7W	MW-07	0.0130	0.00037	0.4850	0.0130	0.062	0.0067	0.1320	0.266	0.033	<0.1	<0.2	<0.2	0.1

9.7 MONITORING WELL SAMPLING/INSPECTION LOGS (MW-5 TO MW-8)

The monitoring well sampling and inspection logs for MW-5 to MW-8 are presented in this section.

Development of Monitoring Wells

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-21	Time:	17:30
Names of Samplers:	A.Passalis		
Landfill Name:	Non-Hazardous Waste Landfill		
Monitoring Well ID:	MW-5	(dup: P214-BDW1)	
Sample Number:	P214-5W		
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	54		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	340		
Length screened section (cm)=	300		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	181	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	127		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	326	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	145		
Static volume of water in well (mL)=	1822		
Free product thickness (mm)=	0	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	Y	Purging/Sampling Equipment:	Waterra Tubing, Foot Valve
Volume Purged Water=	3.2 L		
Decontamination required: (Y/N)	N, dedicated		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	8.5		
Final Conductivity (uS/cm)=	420		
Final Temperature (degC)=	3.5		

Development of Monitoring Wells

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-21	Time:	18:00
Names of Samplers:	A.Passalis		
Landfill Name:	Non-Hazardous Waste Landfill		
Monitoring Well ID:	MW-6		
Sample Number:	P214-6W		
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	53		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	340		
Length screened section (cm)=	300		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	192	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	139		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	283	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	91		
Static volume of water in well (mL)=	1144		
Free product thickness (mm)=	0	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	Y	Purging/Sampling Equipment:	Waterra Tubing, Foot Valve
Volume Purged Water=	2.0 L		
Decontamination required: (Y/N)	N, dedicated		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	8.3		
Final Conductivity (uS/cm)=	766		
Final Temperature (degC)=	3.9		

Development of Monitoring Wells

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-21	Time:	18:20
Names of Samplers:	A.Passalis		
Landfill Name:	Non-Hazardous Waste Landfill		
Monitoring Well ID:	MW-7		
Sample Number:	P214-7W		
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	50		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	340		
Length screened section (cm)=	300		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	224	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	174		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	285	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	61		
Static volume of water in well (mL)=	767		
Free product thickness (mm)=	0	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	Y	Purging/Sampling Equipment:	Waterra Tubing, Foot Valve
Volume Purged Water=	1.0 L		
Decontamination required: (Y/N)	N, dedicated		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	8.3		
Final Conductivity (uS/cm)=	560		
Final Temperature (degC)=	4.0		

Development of Monitoring Wells

Site Name:	**PIN-2**	**Cape Young**	**Nunavut**
Date of Sampling Event:	2014-08-15	Time:	17:00
Names of Samplers:	A.Passalis		
Landfill Name:	Non-Hazardous Waste Landfill		
Monitoring Well ID:	MW-8		
Sample Number:	N/A (dry)		
Condition of Well:	Good		
Measured Data			
Well pipe height above ground	53		
Diameter of well (cm)=	4	ID	
Depth of well installation (cm)= (from ground surface)	440		
Length screened section (cm)=	200		
Depth to top of screen (cm)= (from ground surface)	40		
Depth to water surface (cm)= (from top of pipe)	N/A	Measurement method: (meter, tape, etc)	Interface Meter
Static water level (cm)= (below ground surface)	N/A		
Measured well refusal depth (cm)= (i.e. depth to frozen ground)	139	Evidence of sludge or siltation:	No
Thickness of water column (cm)=	N/A		
Static volume of water in well (mL)=	N/A		
Free product thickness (mm)=	N/A	Measurement method: (meter, paste, etc)	Interface Meter
Purging: (Y/N)	N	Purging/Sampling Equipment:	N/A
Volume Purged Water=	N/A		
Decontamination required: (Y/N)	N/A		
Number washes:	N/A		
Number rinses:	N/A		
Final pH=	N/A		
Final Conductivity (uS/cm)=	N/A		
Final Temperature (degC)=	N/A		

10 SOUTH LANDFILL - EAST

10.1 SUMMARY

The 2014 monitoring of the South Landfill - East was conducted on August 15, 2014 and included a visual inspection to identify evidence of settlement or erosion, and collection of soil samples at upgradient and downgradient locations to monitor for the presence of leachate. Shallow bedrock was encountered at one soil sample location (P2-18) at the South Landfill – East, resulting in the depth sample at this location to be collected between 20-30 cm below grade.

TPH, faction F3, was detected in surface soil samples collected at locations P2-18 and P2-19 (83 and 90 mg/kg, respectively). No PCBs or elevated levels of metals were detected in soil samples collected.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the South Landfill - East. A single area of minor settlement was noted on the northeast corner of the landfill consisting of a linear depression. This feature was marginally larger than previously noted during the 2013 inspection. One area of minor erosion was noted on the central cover area of the landfill consisting of fines washing along the cover. This feature appears to be self-armouring and is consistent with observations made during the previous 2013 inspection. Evidence of partially exposed or surface debris was not noted.

As of 2014, the South Landfill - East performance is rated as acceptable.

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

Table XXXV: 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 (Regrade Landfill)
DATE OF INSPECTION: August 15, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE XXXVI: SOUTH LANDFILL - EAST VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: South Landfill - East
Designation: Existing Regrade Area
Date Inspected: August 15, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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, 9	Acceptable	Linear depression. Marginal increase in length and depth from 2013 assessment.
Erosion	Yes	FEATURE B See Figure PIN-2.8 (Central cover)	7 m	0.1 - 0.2 m	0.05 m	Isolated	Minor erosion	SLE-19, 20	Acceptable	Self armouring. Consistent with 2013 assessment.
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.
Overall Landfill Performance:	**Acceptable**									

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 XXXVII below.

Table XXXVI: Preliminary Stability Assessment – South Landfill - East

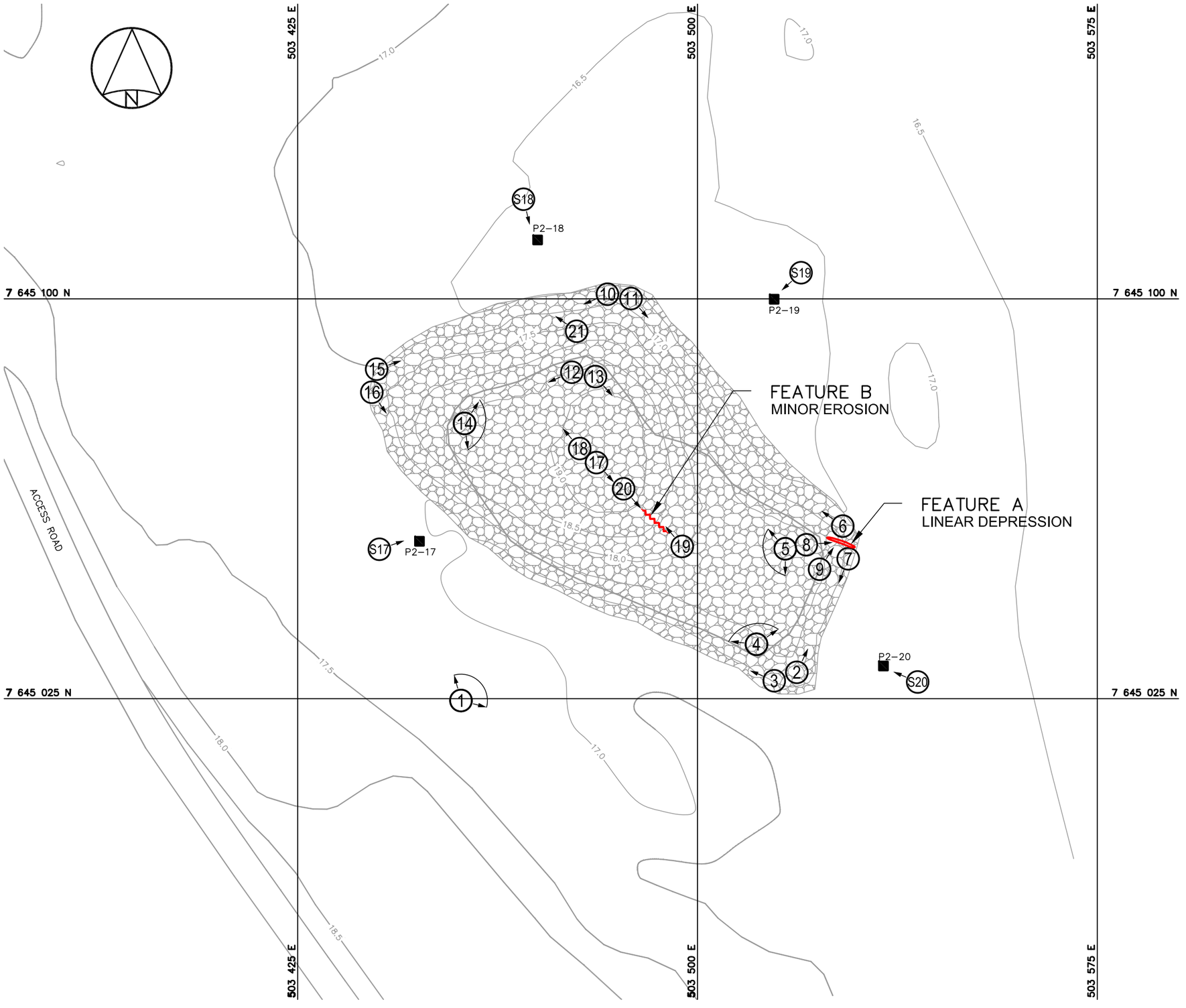
Feature	Severity Rating	Extent
Settlement	Acceptable	Isolated
Erosion	Acceptable	Isolated
Frost Action	Not observed	None
Staining	Not observed	None
Vegetation Stress	Not observed	None
Seepage/Ponded Water	Not observed	None
Debris exposure	Not observed	None
Overall Landfill Performance	**Acceptable**	

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.

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.



LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- LINEAR DEPRESSION (NTS)
- MINOR EROSION (NTS)

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

NO.	VERSION	DATE	PAR	VERIF.	APPR.
1	FINAL	15–06–26	P.L.	A.P.	P.G.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

SOUTH LANDFILL - EAST

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month–year):
Metre	1 : 750	JUNE 2015
DRAWN BY:	VERIFIED BY:	APPROVED BY:
L. LA PIERRE	A. PASSALIS	P. GELINAS, P. ENG.
PROJECT NO:	DRAWING NO:	PAGE
CD3654_200_213	CD3654_200_213-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 XXXVIII hereafter. The Photographic Record contains only an index of photographs. Full sized photographs are contained in the Addendum DVD-ROM.

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

Photo (SLE-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P214_1802	909	15/08/14	503456	7645024	Panoramic view looking northwest to east at south side of South Landfill - East
2	P214_1803	4,395	15/08/14	503518	7645029	View looking north-northeast along southeast side of South Landfill - East
3	P214_1804	4,348	15/08/14	503516	7645029	View looking northwest along south side of South Landfill - East
4	P214_1805	1,513	15/08/14	503511	7645035	Panoramic view looking west to northeast across cover from southeast corner of South Landfill - East
5	P214_1806	1,369	15/08/14	503520	7645053	Panoramic view looking south to northwest across cover from northeast corner of South Landfill - East
6	P214_1807	4,410	15/08/14	503527	7645056	View looking northwest along northeast side of South Landfill - East
7	P214_1808	4,414	15/08/14	503528	7645052	View looking south along east side of South Landfill - East
8	P214_1809	4,292	15/08/14	503522	7645054	View looking east at linear depression on northeast corner of South Landfill - East - FEATURE A
9	P214_1810	4,309	15/08/14	503523	7645050	View looking northeast at linear depression on northeast corner of South Landfill - East - FEATURE A
10	P214_1813	4,302	15/08/14	503483	7645101	View looking west along north side of South Landfill - East
11	P214_1814	4,398	15/08/14	503487	7645101	View looking southeast along northeast side of South Landfill - East
12	P214_1815	4,297	15/08/14	503478	7645086	View looking west along north crest of South Landfill - East
13	P214_1816	4,301	15/08/14	503480	7645085	View looking southeast along northeast crest of South Landfill - East
14	P214_1817	1,435	15/08/14	503455	7645077	Panoramic view looking northeast to south across cover from northwest corner of South Landfill - East
15	P214_1818	4,359	15/08/14	503440	7645086	View looking east-northeast along north side of South Landfill - East
16	P214_1819	4,467	15/08/14	503439	7645084	View looking southeast along southwest side of South Landfill - East
17	P214_1820	4,321	15/08/14	503480	7645070	View looking northwest across north cover of South Landfill - East
18	P214_1821	4,318	15/08/14	503479	7645071	View looking southeast across south cover of South Landfill - East
19	P214_1822	4,433	15/08/14	503496	7645055	View looking northwest at minor erosion on central cover area of South Landfill - East - FEATURE B
20	P214_1823	4,282	15/08/14	503487	7645063	View looking southeast at minor erosion on central cover area of South Landfill - East - FEATURE B
21	P214_1826	4,407	15/08/14	503476	7645094	Typical sparse vegetation on southeast side slope and north corner of South Landfill - East
Soil Sampling						
P2-17	P214_1830	4,370	15/08/14	503448	7645055	Sampling location P214-17 located upgradient of South Landfill - East
S17	P214_1831	4,302	15/08/14	503443	7645054	View looking northeast at P214-17 located upgradient of South Landfill - East
P2-18	P214_1828	4,344	15/08/14	503470	7645112	Sampling location P214-18 located downgradient of South Landfill - East
S18	P214_1829	4,275	15/08/14	503468	7645116	View looking south at P214-18 located downgradient of South Landfill - East
P2-19	P214_1824	4,409	15/08/14	503514	7645100	Sampling location P214-19 located downgradient of South Landfill - East
S19	P214_1825	4,319	15/08/14	503518	7645103	View looking southwest at P214-19 located downgradient of South Landfill - East
P2-20	P214_1811	4,355	15/08/14	503535	7645031	Sampling location P214-20 located downgradient of South Landfill - East
S20	P214_1812	4,312	15/08/14	503539	7645029	View looking northwest at P214-20 located downgradient of South Landfill - East

10.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results of analytical data for the 2014 South Landfill - East samples are presented in Table XXXVIII below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Soil Chemical Analysis Results – South Landfill – East

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-17A	P2-17	0-15	1.9	0.26	5.2	2.7	8.6	<5.0	5.2	30	0.02	<0.1	<10	<50	<50
P214-17B		40-50	2.4	0.07	6.4	3.4	7.8	<5.0	6.0	12	<0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-18A	P2-18	0-15	2.5	0.13	11.7	3.4	11.2	6.8	9.8	17	0.03	<0.1	<10	<50	83
P214-18B		20-30	2.1	0.05	8.2	3.8	5.5	<5.0	7.7	13	<0.01	<0.1	<10	<50	<50
P214-19A	P2-19	0-15	1.4	0.24	9.7	2.1	8.5	7.0	5.6	20	0.02	<0.1	<10	<50	90
P214-19B		40-50	2.2	0.12	5.1	1.4	2.7	<4.9	3.3	14	0.01	<0.1	<10	<50	<50
P214-20A	P2-20	0-15	3.1	0.33	6.9	3.7	13.6	<4.9	5.9	31	0.01	<0.1	<10	<50	<50
P214-20B		40-50	2.1	0.07	5.1	3.4	5.4	<4.9	4.7	12	<0.01	<0.1	<10	<50	<50

11 SOUTH BORROW LANDFILL

11.1 SUMMARY

The 2014 monitoring of the South Borrow Landfill was conducted on August 15, 2014 and included a visual inspection to identify evidence of settlement or erosion, and collection of soil samples at upgradient and downgradient locations to monitor for the presence of leachate.

TPH, faction F3, was detected in surface and bottom samples collected at locations P2-27, P2-28 and P2-29 (190/510, 147/488 and 254/194 mg/kg, respectively). Elevated levels of copper were also detected in both surface and bottom samples at location P2-28 (25.5 and 123.0 mg/kg) and in bottom sample sample collected at P2-29 (56.5 mg/kg). No PCBs were detected.

As of 2014, no features with “significant” or “unacceptable” severity ratings were identified in the Preliminary Stability Assessment of the South Borrow Landfill. Minor settlement was noted at two areas on the landfill cover, including pothole type depressions on the north side slope and east landfill cover that were consistent with observations made during the previous 2013 inspection. A new erosion feature was noted at one location on the east side slope of the landfill. Evidence of minor staining was noted within a wetted area along the southwest toe of the landfill that was consistent with observations made during the previous 2012 and 2013 inspection periods. There was no exposed debris noted.

As of 2014, the South Borrow Landfill performance is rated as acceptable.

The Visual Inspection Checklist is included in Table XXXIX 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 and erosional features.

Table XXXVIII: 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 (Regrade Landfill)
DATE OF INSPECTION: August 15, 2014
DATE OF PREVIOUS INSPECTION: August 17, 2013
INSPECTED BY: A. Passalis
REPORT PREPARED BY: A. Passalis
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.

TABLE XXXIX: SOUTH BORROW LANDFILL VISUAL INSPECTION (PAGE 2 OF 2)

Site Name: PIN-2, CAPE YOUNG
Landfill: South Borrow Landfill
Designation: Existing Regrade Area
Date Inspected: August 15, 2014
Inspected by: Andrew Passalis, P.Eng..

Signature: 

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 - 1 New Obs.)	0.5 - 0.6 m	0.2 - 0.5 m	0.1 m	Isolated	Minor depressions	SBLF-3, 4, 12	Acceptable	Pothole type.
		FEATURE D See Figure PIN-2.9 (N and E sides - 1 New Obs.)	0.5 - 0.8 m	0.2 - 0.5 m	0.15 m	Isolated	Minor depressions	SBLF-3, 4, 12	Acceptable	Pothole type.
Erosion	Yes	FEATURE C See Figure PIN-2.9 (E side slope - New Obs.)	2 m	0.2 m	0.1 m	Isolated	Minor erosion	SBLF-27, 28	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)	10 m	0.2 - 1 m	Unknown	Isolated	Rust coloured staining in ponded area along toe	SBLF-17-19	Acceptable	Non-hydrocarbon sheen noted on water. Consistent with 2012/2013 assessments.
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 corners)	7 - 20 m	5 m	Unknown	N/A	Ponded areas on north and southwest sides	SBLF-1, 5-7, 17-19	Acceptable	Ponded areas do not appear to be influencing the performance of the landfill regrade. Consistent with previous observation.
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.
Overall Landfill Performance:	**Acceptable**									

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 XL hereafter.

Table XXXIX: 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.

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.

LEGEND

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

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

NO.	VERSION	DATE	P.L.	A.P.	P.G.
1	FINAL	15-06-26	PAR	VERIF.	APPR.

Construction de Défense Canada
Defence Construction Canada

COLLECTION OF LANDFILL MONITORING DATA

PIN-2, CAPE YOUNG, NUNAVUT

SOUTH BORROW LANDFILL

SITE REMEDIATION SOLUTIONS

Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel blvd, Suite 200
Quebec, (Quebec) CANADA G1P 2J7
Phone : 418-653-4422 www.biogenie-env.com

MEASUREMENT UNIT	SCALE:	DATE (month-year):
Metre	1 : 750	JUNE 2015
DRAWN BY: L. LA PIERRE	VERIFIED BY: A. PASSALIS	APPROVED BY: P. GELINAS, P. ENG.
PROJECT NO: CD3654_200_213	DRAWING NO: CD3654_200_213-PIN-2I-PL	PAGE PL

FIGURE PIN-2.9

11.4 PHOTOGRAPHIC RECORDS

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

Table XL: Landfill Visual Inspection Photo Log – South Borrow Landfill

Photo (SBLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
1	P214_1762	4,298	15/08/14	503951	7643495	View looking west-northwest along north side of South Borrow Landfill
2	P214_1763	4,361	15/08/14	503951	7643493	View looking south along east side of South Borrow Landfill
3	P214_1764	4,371	15/08/14	503941	7643496	View looking west at minor depression on north side slope of South Borrow Landfill - FEATURE A
4	P214_1765	4,461	15/08/14	503936	7643493	View looking north at minor depression on north side slope of South Borrow Landfill - FEATURE A
5	P214_1766	4,399	15/08/14	503933	7643499	View looking northwest at ponded water on northwest corner of South Borrow Landfill
6	P214_1767	4,353	15/08/14	503925	7643501	View looking north at ponded water at northwest toe of South Borrow Landfill
7	P214_1769	4,428	15/08/14	503920	7643502	View looking south along west toe of South Borrow Landfill
8	P214_1768	4,417	15/08/14	503920	7643500	View looking east along north toe of South Borrow Landfill
9	P214_1770	4,367	15/08/14	503928	7643492	View looking south along west crest of South Borrow Landfill
10	P214_1771	4,399	15/08/14	503927	7643492	View looking east along north crest of South Borrow Landfill
11	P214_1772	1,587	15/08/14	503928	7643491	Panormamic view looking east to south across cover from northwest corner of South Borrow Landfill
12	P214_1773	4,346	15/08/14	503927	7643496	View southeast at minor settlement on northwest corner of South Borrow Landfill - FEATURE A (new)
13	P214_1774	1,425	15/08/14	503935	7643443	Panormamic view looking north to east across cover from southwest corner of South Borrow Landfill
14	P214_1775	4,399	15/08/14	503933	7643442	View looking north along west crest of South Borrow Landfill
15	P214_1776	4,290	15/08/14	503934	7643441	View looking east along south crest of South Borrow Landfill
16	P214_1778	4,355	15/08/14	503931	7643435	View looking east along south toe of South Borrow Landfill
17	P214_1779	4,370	15/08/14	503927	7643435	View looking north at iron coloured staining in ponded area on southwest corner of South Borrow Landfill - FEATURE B
18	P214_1780	4,370	15/08/14	503929	7643436	View northwest at non-hydrocarbon sheen on water at southwest toe of South Borrow Landfill - FEATURE B
19	P214_1781	4,273	15/08/14	503917	7643425	View northeast at non-hydrocarbon sheen on water at southwest toe of South Borrow Landfill - FEATURE B
20	P214_1789	4,316	15/08/14	503950.4	7643440	View looking north along east side of South Borrow Landfill
21	P214_1790	4,338	15/08/14	503949.5	7643439	View looking west along south side of South Borrow Landfill
22	P214_1792	4,394	15/08/14	503946.5	7643442	Typical sparse vegetation noted on south side of South Borrow Landfill
23	P214_1793	4,396	15/08/14	503953.6	7643452	View looking west at localized pothole on east crest of South Borrow Landfill - FEATURE D (new)
24	P214_1794	4,390	15/08/14	503949.8	7643448	View looking north at localized pothole on east crest of South Borrow Landfill - FEATURE D (new)
25	P214_1795	4,338	15/08/14	503955.6	7643470	View looking west at deptression on east crest of South Borrow Landfill - FEATURE D
26	P214_1796	4,360	15/08/14	503951.3	7643466	View looking north at deptression on east crest of South Borrow Landfill - FEATURE D
27	P214_1797	4,378	15/08/14	503957.7	7643479	View looking west at minor erosion on east cover of South Borrow Landfill - FEATURE C (new)
28	P214_1798	4,452	15/08/14	503947.5	7643478	View looking east at minor erosion on east cover of South Borrow Landfill - FEATURE C (new)

Photo (SBLF-)	Filename	Size (KB)	Date	Vantage Point		Caption
				Easting	Northing	
Soil Sampling						
P2-27	P214_1787	4,339	15/08/14	503912	7643429	Sampling location P214-27 located downgradient of South Borrow Landfill
S27	P214_1788	4,360	15/08/14	503908	7643427	View looking northeast at P214-27 located downgradient of South Borrow Landfill
P2-28	P214_1775	4,399	15/08/14	503906	7643470	Sampling location P214-28 located downgradient of South Borrow Landfill
S28	P214_1776	4,290	15/08/14	503902	7643469	View looking east at P214-28 located downgradient of South Borrow Landfill
P2-29	P214_1783	4,358	15/08/14	503910	7643504	Sampling location P214-29 located downgradient of South Borrow Landfill
S29	P214_1784	4,284	15/08/14	503906	7643506	View looking southeast at P214-29 located downgradient of South Borrow Landfill
P2-30	P214_1799	4,441	15/08/14	503970	7643471	Sampling location P214-30 located upgradient of South Borrow Landfill
S30	P214_1800	4,446	15/08/14	503974	7643471	View looking west at P214-30 located upgradient of South Borrow Landfill

11.5 SOIL SAMPLE ANALYTICAL DATA

The soil chemical analysis results of analytical data for the 2014 South Borrow Landfill samples are presented in Table XLI below. Field and inter-laboratory duplicates collected as part of the QA/QC program are presented in Annex 2 at the end of this report.

Table XLI: Soil Chemical Analysis Results – South Borrow Landfill

Sample #	Location	Depth (cm)	Parameters										F1	F2	F3
			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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit			0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.1	10	50	50
Upgradient Soil Samples															
P214-30A	P2-30	0-15	2.5	0.04	11.7	4.4	7.5	<4.9	10.3	18	<0.01	<0.1	<10	<50	<50
P214-30B		40-50	2.8	0.05	7.4	3.4	6.6	<4.9	6.2	12	<0.01	<0.1	<10	<50	<50
Downgradient Soil Samples															
P214-27A	P2-27	0-15	8.7	0.03	2.1	1.5	3.8	<4.9	3.0	12	0.02	<0.1	<10	<50	190
P214-27B		40-50	2.0	0.09	7.5	1.8	7.4	<5	7.7	13	0.02	<0.1	<10	<50	510
P214-28A	P2-28	0-15	4.8	0.06	9.7	2.2	25.5	<5	15.7	15	0.01	<0.1	<10	<50	147
P214-28B		40-50	8.7	0.79	9.2	3.1	123.0	<5	17.1	18	0.03	<0.1	<10	<50	488
P214-29A	P2-29	0-15	4.1	0.16	7.0	1.7	10.6	<5	11.5	7	0.02	<0.1	<10	<50	254
P214-29B		40-50	7.0	1.30	17.6	4.0	56.5	6.2	20.5	16	<0.01	<0.1	<10	<50	194

Annex 1

Laboratory Results

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Sample Integrity Scorecard

Lots received between 'Aug 01, 2014' and 'Dec 05, 2014'

Client: sila

Sample Integrity Summary

	Total Lots	Total	Total Failed	% Passed
Process	5	3	2	60
Data Quality	5	4	1	80

Agreement: 105540 (Special Project - Cambridge Bay)

Lot ID: 1022226 PIN-3

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? No * If No, please explain: Maxxam containers

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? No * If No, please explain: See note.

Was the sample received in the prescribed temperature range? Yes Please provide temperature ℃:

Were all samples received intact (not damaged/broken)? No * If No, please explain: See note.

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 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: 1 Data Quality: 2 *Total: 3*

Lot ID: 1022352 PIN-2

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:

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Sample Integrity Scorecard

Lots received between 'Aug 01, 2014' and 'Dec 05, 2014'

Lot ID: 1022352 PIN-2

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 ℃: 4.0

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 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*

Lot ID: 1023068 CAM-3

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 ℃:

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 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*

Lot ID: 1023106 PIN-4

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:

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Sample Integrity Scorecard

Lots received between 'Aug 01, 2014' and 'Dec 05, 2014'

Lot ID: 1023106 PIN-4

Process

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 ℃:

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 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*

Lot ID: 1023703 CAM-1

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? No * If No, please explain: see nots

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 ℃:

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 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: 1 Data Quality: 0 *Total: 1*

* is a non-conformance

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Report Transmission Cover Page

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Contact & Affiliation	Address	Delivery Commitments
Accounts Payable SILA Remediation	350, rue Franquet Sainte-Foy, Quebec G1P 4P3 Phone: (418) 653-4422 Fax: (418) 653-3583 Email: n/a	On [Lot Approval and Final Test Report Approval] send (Invoice) by Post M On [Lot Approval and Final Test Report Approval] send (Invoice) by Post M
Eric Thomassin-Lacroix SILA Remediation	350, rue Franquet Sainte-Foy, Quebec G1P 4P3 Phone: (418) 653-4422 Fax: (418) 653-3583 Email: n/a	On [Lot Approval and Final Test Report Approval] send (COC, Test Report, Invoice) by Post M On [Lot Approval and Final Test Report Approval] send (COC, Invoice) by Post M
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 (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: Email: jean-peirre.pelletier@lvm.ca	On [Report Approval] send (Test Report, COC) by Email - Single Report On [Report Approval] send (Test Report, COC) by Email - Single Report On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report

Notes To Clients:

- Reports was issued to include QC data as requested by Jean-Pierre Pelletier on March 17, 2015. Previous report 1043013.
- Analysis was performed on samples 1022352(1-82, 92-93) that exceeded the recommended holding time for BTEX/F1 analysis

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-1	1022352-2	1022352-3
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-1A	P214-1B	P214-2A
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
Antimony	Strong Acid Extractable	mg/kg	0.3	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.6	1.9	3.4	0.2
Barium	Strong Acid Extractable	mg/kg	15	16	17	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.2	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.12	0.05	0.07	0.01
Chromium	Strong Acid Extractable	mg/kg	5.0	6.8	6.7	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.6	2.6	2.5	0.1
Copper	Strong Acid Extractable	mg/kg	6.5	3.5	4.1	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	2.9	3.6	4.3	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	0.2	0.3	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.9	2.7	2.6	1
Uranium	Strong Acid Extractable	mg/kg	0.8	0.7	0.8	0.5
Vanadium	Strong Acid Extractable	mg/kg	13.3	12.9	18.1	0.1
Zinc	Strong Acid Extractable	mg/kg	26	14	17	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		28-Aug-14	28-Aug-14	28-Aug-14	
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		28-Aug-14	28-Aug-14	28-Aug-14	
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		28-Aug-14	28-Aug-14	28-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

		Reference Number	1022352-1	1022352-2	1022352-3
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
		Sample Time	NA	NA	NA
		Sample Location			
		Sample Description	P214-1A	P214-1B	P214-2A
		Matrix	Soil	Soil	Soil
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	20.10	11.70	8.58	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	120	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-4	1022352-5	1022352-6
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-2B	P214-3A	P214-3B
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	4.3	2.5	2.7	0.2
Barium	Strong Acid Extractable	mg/kg	19	14	18	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.1	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.08	0.10	0.09	0.01
Chromium	Strong Acid Extractable	mg/kg	7.6	3.7	6.0	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.8	1.8	3.5	0.1
Copper	Strong Acid Extractable	mg/kg	7.7	5.0	6.7	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	6.1	2.0	4.1	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.05	<0.05	0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.5	2.8	2.5	1
Uranium	Strong Acid Extractable	mg/kg	0.9	0.7	0.6	0.5
Vanadium	Strong Acid Extractable	mg/kg	19.5	10.2	14.1	0.1
Zinc	Strong Acid Extractable	mg/kg	17	22	15	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		28-Aug-14	28-Aug-14	28-Aug-14	
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		28-Aug-14	28-Aug-14	28-Aug-14	
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		28-Aug-14	28-Aug-14	28-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

		Reference Number	1022352-4	1022352-5	1022352-6	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-2B	P214-3A	P214-3B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	7.25	13.70	15.30	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	140	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-7	1022352-8	1022352-9
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-4A	P214-4B	P214-5A
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.02	<0.01	0.05	0.01
Antimony	Strong Acid Extractable	mg/kg	1.1	3.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	4.7	5.1	1.2	0.2
Barium	Strong Acid Extractable	mg/kg	11	11	20	1
Beryllium	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.11	0.16	0.57	0.01
Chromium	Strong Acid Extractable	mg/kg	6.1	6.6	3.0	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.5	1.6	2.6	0.1
Copper	Strong Acid Extractable	mg/kg	3.8	4.0	11.1	1
Lead	Strong Acid Extractable	mg/kg	9.2	9.5	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	1.1	1.1	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	3.3	1.8	2.9	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	3.1	3.2	3.4	1
Uranium	Strong Acid Extractable	mg/kg	1.4	1.6	1.5	0.5
Vanadium	Strong Acid Extractable	mg/kg	12.2	16.1	7.9	0.1
Zinc	Strong Acid Extractable	mg/kg	15	30	101	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		28-Aug-14	28-Aug-14	28-Aug-14	
Benzene	Dry Weight	mg/kg	<0.005	<0.005	0.006	0.005
Toluene	Dry Weight	mg/kg	<0.02	<0.02	0.06	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		28-Aug-14	28-Aug-14	28-Aug-14	
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		28-Aug-14	28-Aug-14	28-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	104	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number			1022352-7	1022352-8	1022352-9
Sample Date			Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time			NA	NA	NA
Sample Location					
Sample Description			P214-4A	P214-4B	P214-5A
Matrix			Soil	Soil	Soil
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	4.09	5.18	73.20	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	0.4	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	0.4	<0.1	<0.1	0.1
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:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-10	1022352-11	1022352-12
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-5B	P214-6A	P214-6B
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	<0.01	0.05	0.02	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.3	3.0	2.9	0.2
Barium	Strong Acid Extractable	mg/kg	16	37	18	1
Beryllium	Strong Acid Extractable	mg/kg	0.1	0.2	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.07	0.28	0.11	0.01
Chromium	Strong Acid Extractable	mg/kg	5.5	9.8	5.8	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.7	4.5	1.9	0.1
Copper	Strong Acid Extractable	mg/kg	4.6	8.3	3.3	1
Lead	Strong Acid Extractable	mg/kg	<4.9	6.4	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	3.8	6.6	3.3	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	0.4	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.05	0.06	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.9	2.4	2.8	1
Uranium	Strong Acid Extractable	mg/kg	0.7	2.0	1	0.5
Vanadium	Strong Acid Extractable	mg/kg	19.0	18.6	12.8	0.1
Zinc	Strong Acid Extractable	mg/kg	13	29	13	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		28-Aug-14	28-Aug-14	28-Aug-14	
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		28-Aug-14	28-Aug-14	28-Aug-14	
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		28-Aug-14	28-Aug-14	28-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	56	62	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	26.6	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

		Reference Number	1022352-10	1022352-11	1022352-12	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-5B	P214-6A	P214-6B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	10.90	52.50	52.00	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
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:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-13	1022352-14	1022352-15
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-7A	P214-7B	P214-8A
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	0.3	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.9	2.9	2.5	0.2
Barium	Strong Acid Extractable	mg/kg	13	8	11	1
Beryllium	Strong Acid Extractable	mg/kg	<0.1	<0.1	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.11	0.08	0.07	0.01
Chromium	Strong Acid Extractable	mg/kg	4.2	3.6	3.7	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.6	1.4	1.5	0.1
Copper	Strong Acid Extractable	mg/kg	2.6	2.1	3.9	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<4.9	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	1.7	3.3	2.0	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	3.2	3.2	3.3	1
Uranium	Strong Acid Extractable	mg/kg	0.9	0.8	0.7	0.5
Vanadium	Strong Acid Extractable	mg/kg	11.1	9.7	10.8	0.1
Zinc	Strong Acid Extractable	mg/kg	16	12	16	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

		Reference Number	1022352-13	1022352-14	1022352-15	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-7A	P214-7B	P214-8A	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	7.65	8.22	9.53	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	110	130	120	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-16	1022352-17	1022352-18
Sample Date		Aug 16, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time		NA	NA	NA
Sample Location				
Sample Description		P214-8B	P214-9A	P214-9B
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.3	2.4	1.9	0.2
Barium	Strong Acid Extractable	mg/kg	7	9	9	1
Beryllium	Strong Acid Extractable	mg/kg	0.1	<0.1	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.05	0.06	0.04	0.01
Chromium	Strong Acid Extractable	mg/kg	3.7	3.8	3.3	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.4	1.5	1.2	0.1
Copper	Strong Acid Extractable	mg/kg	1.6	3.6	2.6	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	1.8	2.8	3.3	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	3.0	4.2	3.1	1
Uranium	Strong Acid Extractable	mg/kg	0.7	0.5	<0.5	0.5
Vanadium	Strong Acid Extractable	mg/kg	10.1	7.8	6.6	0.1
Zinc	Strong Acid Extractable	mg/kg	9	84	16	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-16	1022352-17	1022352-18	
		Sample Date	Aug 16, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-8B	P214-9A	P214-9B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	6.44	1.57	3.11	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	110	110	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-19	1022352-20	1022352-21
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-10A	P214-10B	P214-11A
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.04	0.01	0.04	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	0.2	0.6	0.2
Arsenic	Strong Acid Extractable	mg/kg	3.1	7.0	1.8	0.2
Barium	Strong Acid Extractable	mg/kg	21	18	27	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.1	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.27	0.16	0.35	0.01
Chromium	Strong Acid Extractable	mg/kg	4.6	5.8	6.9	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.0	2.7	2.3	0.1
Copper	Strong Acid Extractable	mg/kg	4.5	3.4	11.0	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<5.0	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	3.4	4.9	5.9	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	0.6	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.06	0.06	0.08	0.05
Tin	Strong Acid Extractable	mg/kg	2.6	2.6	2.6	1
Uranium	Strong Acid Extractable	mg/kg	1.1	0.8	2.7	0.5
Vanadium	Strong Acid Extractable	mg/kg	10.2	14.9	12.6	0.1
Zinc	Strong Acid Extractable	mg/kg	35	33	40	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	118	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	108	100
% C50+		%	<5	<5	13.1	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-19	1022352-20	1022352-21	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-10A	P214-10B	P214-11A	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	33.70	8.93	61.20	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	110	110	110	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-22	1022352-23	1022352-24
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-11B	P214-12A	P214-12B
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.01	0.06	0.06	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.8	0.9	0.8	0.2
Barium	Strong Acid Extractable	mg/kg	19	14	15	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	<0.1	<0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.13	0.18	0.21	0.01
Chromium	Strong Acid Extractable	mg/kg	5.9	1.8	2.4	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.7	0.3	0.4	0.1
Copper	Strong Acid Extractable	mg/kg	6.1	5.8	7.2	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<5.0	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	4.5	2.7	3.9	0.5
Selenium	Strong Acid Extractable	mg/kg	0.3	0.4	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.07	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	3.1	3.6	3.6	1
Uranium	Strong Acid Extractable	mg/kg	0.9	0.9	0.9	0.5
Vanadium	Strong Acid Extractable	mg/kg	10.7	4.4	4.8	0.1
Zinc	Strong Acid Extractable	mg/kg	18	6	6	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	143	140	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	165	132	100
% C50+		%	15.0	25.5	17.3	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-22	1022352-23	1022352-24	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-11B	P214-12A	P214-12B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	24.00	69.60	67.10	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	110	100	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-25	1022352-26	1022352-27
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-13A	P214-13B	P214-14A
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.02	0.01	<0.01	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.8	2.5	1.5	0.2
Barium	Strong Acid Extractable	mg/kg	24	22	13	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.2	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.13	0.12	0.06	0.01
Chromium	Strong Acid Extractable	mg/kg	3.8	3.8	3.9	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.1	1.9	1.1	0.1
Copper	Strong Acid Extractable	mg/kg	7.2	6.9	5.0	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<5.0	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	5.0	2.0	2.6	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	0.05	0.05
Tin	Strong Acid Extractable	mg/kg	3.0	3.0	3.2	1
Uranium	Strong Acid Extractable	mg/kg	0.6	0.6	0.7	0.5
Vanadium	Strong Acid Extractable	mg/kg	9.4	10.1	11.3	0.1
Zinc	Strong Acid Extractable	mg/kg	23	21	9	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	24.7	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-25	1022352-26	1022352-27	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-13A	P214-13B	P214-14A	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	12.30	9.40	8.95	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	120	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-28	1022352-29	1022352-30
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-14B	P214-15A	P214-15B
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	1.9	3.6	4.0	0.2
Barium	Strong Acid Extractable	mg/kg	13	9	8	1
Beryllium	Strong Acid Extractable	mg/kg	0.1	0.1	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.04	0.04	0.04	0.01
Chromium	Strong Acid Extractable	mg/kg	6.4	3.0	3.1	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.2	0.8	1.1	0.1
Copper	Strong Acid Extractable	mg/kg	3.8	2.0	2.2	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<5.0	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	4.5	1.1	2.5	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	3.1	3.1	2.6	1
Uranium	Strong Acid Extractable	mg/kg	0.6	1	1.4	0.5
Vanadium	Strong Acid Extractable	mg/kg	12.7	10.5	10.4	0.1
Zinc	Strong Acid Extractable	mg/kg	9	10	10	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-28	1022352-29	1022352-30	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-14B	P214-15A	P214-15B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	6.09	5.87	4.55	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	130	90	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-31	1022352-32	1022352-33
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-16A	P214-16B	P214-17A
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	0.02	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.8	2.9	1.9	0.2
Barium	Strong Acid Extractable	mg/kg	9	9	22	1
Beryllium	Strong Acid Extractable	mg/kg	<0.1	0.2	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.06	0.06	0.26	0.01
Chromium	Strong Acid Extractable	mg/kg	3.9	4.4	5.2	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.9	2.3	2.7	0.1
Copper	Strong Acid Extractable	mg/kg	2.8	3.3	8.6	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<5.0	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	4.3	4.2	5.2	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	0.1	0.1	0.2	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.5	2.6	2.3	1
Uranium	Strong Acid Extractable	mg/kg	1.3	1.1	0.8	0.5
Vanadium	Strong Acid Extractable	mg/kg	11.8	13.2	13.2	0.1
Zinc	Strong Acid Extractable	mg/kg	18	19	30	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	11.21 2014-08-27	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	14.5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-31	1022352-32	1022352-33	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-16A	P214-16B	P214-17A	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	12.00	7.98	15.60	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	90	90	90	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-34	1022352-35	1022352-36
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-17B	P214-18A	P214-18B
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	<0.01	0.03	<0.01	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.4	2.5	2.1	0.2
Barium	Strong Acid Extractable	mg/kg	16	21	12	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.3	0.3	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.07	0.13	0.05	0.01
Chromium	Strong Acid Extractable	mg/kg	6.4	11.7	8.2	0.5
Cobalt	Strong Acid Extractable	mg/kg	3.4	3.6	3.8	0.1
Copper	Strong Acid Extractable	mg/kg	7.8	11.2	5.5	1
Lead	Strong Acid Extractable	mg/kg	<5.0	6.8	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	6.0	9.8	7.7	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	0.4	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	0.2	0.2	0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.4	1.9	2.2	1
Uranium	Strong Acid Extractable	mg/kg	0.8	1.1	0.7	0.5
Vanadium	Strong Acid Extractable	mg/kg	21.9	28.3	23.5	0.1
Zinc	Strong Acid Extractable	mg/kg	12	17	13	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	83	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	22.8	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-34	1022352-35	1022352-36	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-17B	P214-18A	P214-18B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	6.98	25.30	6.03	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	100	100	100	50-150

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	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-37	1022352-38	1022352-39
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-19A	P214-19B	P214-20A
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.02	0.01	0.01	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	1.4	2.2	3.1	0.2
Barium	Strong Acid Extractable	mg/kg	15	7	36	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.2	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.24	0.12	0.33	0.01
Chromium	Strong Acid Extractable	mg/kg	9.7	5.1	6.9	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.1	1.4	3.7	0.1
Copper	Strong Acid Extractable	mg/kg	8.5	2.7	13.6	1
Lead	Strong Acid Extractable	mg/kg	7.0	<4.9	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	5.6	3.3	5.9	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	0.1	0.1	0.2	0.1
Thallium	Strong Acid Extractable	mg/kg	0.06	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.4	2.5	2.7	1
Uranium	Strong Acid Extractable	mg/kg	1.3	1.3	1.1	0.5
Vanadium	Strong Acid Extractable	mg/kg	21.8	14.4	15.9	0.1
Zinc	Strong Acid Extractable	mg/kg	20	14	31	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
Benzene	Dry Weight	mg/kg	0.005	0.006	0.008	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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	90	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	19.4	<5	26.9	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-37	1022352-38	1022352-39	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-19A	P214-19B	P214-20A	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	38.20	14.10	24.00	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	140	140	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-40	1022352-41	1022352-42
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-20B	P214-21A	P214-21B
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.1	3.1	3.7	0.2
Barium	Strong Acid Extractable	mg/kg	16	8	7	1
Beryllium	Strong Acid Extractable	mg/kg	0.3	0.1	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.07	0.06	0.04	0.01
Chromium	Strong Acid Extractable	mg/kg	5.1	4.1	7.0	0.5
Cobalt	Strong Acid Extractable	mg/kg	3.4	1.6	2.0	0.1
Copper	Strong Acid Extractable	mg/kg	5.4	5.4	4.8	1
Lead	Strong Acid Extractable	mg/kg	<4.9	5.3	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	4.7	3.5	4.9	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	0.1	0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.5	2.6	2.5	1
Uranium	Strong Acid Extractable	mg/kg	0.9	1.1	1.1	0.5
Vanadium	Strong Acid Extractable	mg/kg	13.2	11.1	10.0	0.1
Zinc	Strong Acid Extractable	mg/kg	12	13	10	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

		Reference Number	1022352-40	1022352-41	1022352-42	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-20B	P214-21A	P214-21B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	5.68	3.15	3.86	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	130	110	50-150

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Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-43	1022352-44	1022352-45
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-22A	P214-22B	P214-23A
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	6.0	5.8	8.3	0.2
Barium	Strong Acid Extractable	mg/kg	4	3	3	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.2	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.03	0.04	0.04	0.01
Chromium	Strong Acid Extractable	mg/kg	3.2	3.3	3.2	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.5	2.4	1.8	0.1
Copper	Strong Acid Extractable	mg/kg	3.1	4.0	4.9	1
Lead	Strong Acid Extractable	mg/kg	5.4	<4.9	9.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	1.1	1.2	1.6	1
Nickel	Strong Acid Extractable	mg/kg	3.0	4.4	4.1	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.6	2.5	2.6	1
Uranium	Strong Acid Extractable	mg/kg	1.2	1.3	1.3	0.5
Vanadium	Strong Acid Extractable	mg/kg	10.1	14.2	10.2	0.1
Zinc	Strong Acid Extractable	mg/kg	8	9	8	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number			1022352-43	1022352-44	1022352-45
Sample Date			Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time			NA	NA	NA
Sample Location					
Sample Description			P214-22A	P214-22B	P214-23A
Matrix			Soil	Soil	Soil
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	1.83	2.47	2.29	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	130	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-46	1022352-47	1022352-48
Sample Date		Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time		NA	NA	NA
Sample Location				
Sample Description		P214-23B	P214-24A	P214-24B
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	0.5	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	7.7	10.0	6.6	0.2
Barium	Strong Acid Extractable	mg/kg	4	5	5	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.2	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.03	0.05	0.05	0.01
Chromium	Strong Acid Extractable	mg/kg	3.9	3.4	2.8	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.0	1.8	1.1	0.1
Copper	Strong Acid Extractable	mg/kg	9.6	5.7	3.3	1
Lead	Strong Acid Extractable	mg/kg	6.8	13.2	6.6	0.1
Molybdenum	Strong Acid Extractable	mg/kg	1.5	1.7	1.3	1
Nickel	Strong Acid Extractable	mg/kg	7.6	3.9	2.4	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.06	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.7	2.7	2.8	1
Uranium	Strong Acid Extractable	mg/kg	1.5	1.6	1.0	0.5
Vanadium	Strong Acid Extractable	mg/kg	11.6	10.8	7.8	0.1
Zinc	Strong Acid Extractable	mg/kg	9	12	8	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-46	1022352-47	1022352-48	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-23B	P214-24A	P214-24B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	4.59	2.12	1.76	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	130	140	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-49	1022352-50	1022352-51
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-25A	P214-25B	P214-26A
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	6.8	5.8	3.8	0.2
Barium	Strong Acid Extractable	mg/kg	4	4	5	1
Beryllium	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.05	0.04	0.02	0.01
Chromium	Strong Acid Extractable	mg/kg	2.1	2.6	2.2	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.1	1.2	0.9	0.1
Copper	Strong Acid Extractable	mg/kg	2.6	3.0	13.5	1
Lead	Strong Acid Extractable	mg/kg	<5.0	5.0	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	1.5	1.4	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	2.3	3.7	1.9	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.3	2.5	2.3	1
Uranium	Strong Acid Extractable	mg/kg	0.9	0.9	0.7	0.5
Vanadium	Strong Acid Extractable	mg/kg	6.9	7.3	5.8	0.1
Zinc	Strong Acid Extractable	mg/kg	6	6	7	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-49	1022352-50	1022352-51	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-25A	P214-25B	P214-26A	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	1.95	1.77	3.20	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	140	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-52	1022352-53	1022352-54
Sample Date		Aug 16, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time		NA	NA	NA
Sample Location				
Sample Description		P214-26B	P214-27A	P214-27B
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	0.02	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	4.3	8.7	2.0	0.2
Barium	Strong Acid Extractable	mg/kg	5	84	68	1
Beryllium	Strong Acid Extractable	mg/kg	<0.1	<0.1	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.04	0.03	0.09	0.01
Chromium	Strong Acid Extractable	mg/kg	2.6	2.1	7.5	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.3	1.5	1.8	0.1
Copper	Strong Acid Extractable	mg/kg	2.8	3.8	7.4	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	1.1	<1.0	1.3	1
Nickel	Strong Acid Extractable	mg/kg	2.7	3.0	7.7	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	0.4	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.2	2.5	2.3	1
Uranium	Strong Acid Extractable	mg/kg	0.9	<0.5	0.8	0.5
Vanadium	Strong Acid Extractable	mg/kg	7.6	7.9	20.6	0.1
Zinc	Strong Acid Extractable	mg/kg	7	12	13	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	190	510	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	247	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	352	432	100
% C50+		%	<5	55.1	19.7	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-52	1022352-53	1022352-54	
		Sample Date	Aug 16, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-26B	P214-27A	P214-27B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	3.55	84.00	79.60	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	140	150	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-55	1022352-56	1022352-57
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-28A	P214-28B	P214-29A
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.01	0.03	0.02	0.01
Antimony	Strong Acid Extractable	mg/kg	0.4	0.7	0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	4.8	8.7	4.1	0.2
Barium	Strong Acid Extractable	mg/kg	59	58	38	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.4	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.06	0.79	0.16	0.01
Chromium	Strong Acid Extractable	mg/kg	9.7	9.2	7.0	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.2	3.1	1.7	0.1
Copper	Strong Acid Extractable	mg/kg	25.5	123	10.6	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<5.0	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	5.4	7.0	3.8	1
Nickel	Strong Acid Extractable	mg/kg	15.7	17.1	11.5	0.5
Selenium	Strong Acid Extractable	mg/kg	1.2	2.6	0.6	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.20	0.16	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.3	2.7	2.2	1
Uranium	Strong Acid Extractable	mg/kg	2.9	6.6	7.8	0.5
Vanadium	Strong Acid Extractable	mg/kg	55.0	39.3	33.1	0.1
Zinc	Strong Acid Extractable	mg/kg	15	18	7	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	147	488	254	50
F4c C34-C50	Dry Weight	mg/kg	<100	251	118	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	349	415	220	100
% C50+		%	61.2	18.2	21.7	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-55	1022352-56	1022352-57	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-28A	P214-28B	P214-29A	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	81.60	79.40	70.80	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	140	130	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-58	1022352-59	1022352-60
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-29B	P214-1WA	P214-1WB
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	<0.01	0.07	0.03	0.01
Antimony	Strong Acid Extractable	mg/kg	0.3	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	7.0	6.0	3.0	0.2
Barium	Strong Acid Extractable	mg/kg	79	71	25	1
Beryllium	Strong Acid Extractable	mg/kg	0.4	0.2	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	1.30	0.93	0.24	0.01
Chromium	Strong Acid Extractable	mg/kg	17.6	7.9	4.0	0.5
Cobalt	Strong Acid Extractable	mg/kg	4.0	4.8	1.7	0.1
Copper	Strong Acid Extractable	mg/kg	56.5	14.0	4.6	1
Lead	Strong Acid Extractable	mg/kg	6.2	<5.0	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	11.8	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	20.5	9.9	4.2	0.5
Selenium	Strong Acid Extractable	mg/kg	1.5	0.8	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	0.2	0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.15	0.12	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	1.9	<1.0	1.4	1
Uranium	Strong Acid Extractable	mg/kg	4.2	3.3	1.1	0.5
Vanadium	Strong Acid Extractable	mg/kg	38.2	13.6	7.5	0.1
Zinc	Strong Acid Extractable	mg/kg	16	33	14	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	194	59	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	207	<100	<100	100
% C50+		%	36.1	34.3	27.1	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-58	1022352-59	1022352-60	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-29B	P214-1WA	P214-1WB	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	81.60	58.30	13.90	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	130	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-61	1022352-62	1022352-63
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-2WA	P214-2WB	P214-3WA
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	0.03	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.8	4.8	1.9	0.2
Barium	Strong Acid Extractable	mg/kg	13	13	15	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.2	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.09	0.11	0.24	0.01
Chromium	Strong Acid Extractable	mg/kg	5.9	6.8	4.0	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.5	3.7	1.9	0.1
Copper	Strong Acid Extractable	mg/kg	4.8	9.4	6.0	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<5.0	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	5.9	6.5	3.7	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.06	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	1.5	1.7	1.1	1
Uranium	Strong Acid Extractable	mg/kg	0.7	0.7	1.3	0.5
Vanadium	Strong Acid Extractable	mg/kg	11.6	17.2	9.1	0.1
Zinc	Strong Acid Extractable	mg/kg	18	14	29	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	22.8	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-61	1022352-62	1022352-63	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-2WA	P214-2WB	P214-3WA	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	16.30	7.09	17.60	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
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:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-64	1022352-65	1022352-66
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-3WB	P214-4WA	P214-4WB
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.7	1.0	1.1	0.2
Barium	Strong Acid Extractable	mg/kg	15	8	6	1
Beryllium	Strong Acid Extractable	mg/kg	0.1	0.1	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.09	0.20	0.08	0.01
Chromium	Strong Acid Extractable	mg/kg	5.6	3.8	3.6	0.5
Cobalt	Strong Acid Extractable	mg/kg	2.2	0.9	1.0	0.1
Copper	Strong Acid Extractable	mg/kg	4.1	4.3	1.7	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	4.7	2.8	2.4	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	0.4	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	1.3	1.3	1.5	1
Uranium	Strong Acid Extractable	mg/kg	0.9	1.2	0.8	0.5
Vanadium	Strong Acid Extractable	mg/kg	10.9	8.5	7.6	0.1
Zinc	Strong Acid Extractable	mg/kg	15	9	8	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	85	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	11.5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-64	1022352-65	1022352-66	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-3WB	P214-4WA	P214-4WB	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	10.90	64.00	7.70	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	140	130	140	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-67	1022352-68	1022352-69
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-5WA	P214-5WB	P214-6WA
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	1.1	1.2	2.4	0.2
Barium	Strong Acid Extractable	mg/kg	4	11	7	1
Beryllium	Strong Acid Extractable	mg/kg	0.1	0.2	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.09	0.07	0.07	0.01
Chromium	Strong Acid Extractable	mg/kg	2.7	5.6	2.9	0.5
Cobalt	Strong Acid Extractable	mg/kg	0.8	1.7	1.1	0.1
Copper	Strong Acid Extractable	mg/kg	4.0	5.4	4.9	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	2.6	4.9	2.9	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	1.7	1.5	2.6	1
Uranium	Strong Acid Extractable	mg/kg	0.6	0.7	0.9	0.5
Vanadium	Strong Acid Extractable	mg/kg	6.2	9.4	8.0	0.1
Zinc	Strong Acid Extractable	mg/kg	11	16	11	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-67	1022352-68	1022352-69	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-5WA	P214-5WB	P214-6WA	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	30.70	16.20	10.10	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	140	140	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-70	1022352-71	1022352-72
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-6WB	P214-7WA	P214-7WB
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	<0.01	0.03	0.01	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	4.3	2.1	2.3	0.2
Barium	Strong Acid Extractable	mg/kg	6	21	14	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.2	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.27	0.09	0.07	0.01
Chromium	Strong Acid Extractable	mg/kg	7.4	6.0	5.9	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.2	2.9	3.0	0.1
Copper	Strong Acid Extractable	mg/kg	5.4	7.6	8.6	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<4.9	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	3.0	5.6	5.8	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	0.2	0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	0.06	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	1.5	1.1	1.1	1
Uranium	Strong Acid Extractable	mg/kg	1.8	0.8	0.6	0.5
Vanadium	Strong Acid Extractable	mg/kg	13.0	11.2	14.9	0.1
Zinc	Strong Acid Extractable	mg/kg	40	20	16	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	36.4	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-70	1022352-71	1022352-72	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-6WB	P214-7WA	P214-7WB	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	7.46	16.70	11.90	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	150	140	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-73	1022352-74	1022352-75
Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-8WA	P214-8WB	P214-BD1
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.03	0.01	0.02	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.4	2.4	4.1	0.2
Barium	Strong Acid Extractable	mg/kg	12	8	48	1
Beryllium	Strong Acid Extractable	mg/kg	<0.1	0.1	<0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.08	0.07	0.06	0.01
Chromium	Strong Acid Extractable	mg/kg	3.2	3.2	4.4	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.3	1.9	1.2	0.1
Copper	Strong Acid Extractable	mg/kg	3.2	4.2	4.7	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	1.0	1
Nickel	Strong Acid Extractable	mg/kg	2.6	3.7	5.0	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	1.3	1.4	1.8	1
Uranium	Strong Acid Extractable	mg/kg	0.5	0.5	0.8	0.5
Vanadium	Strong Acid Extractable	mg/kg	6.5	7.5	13.4	0.1
Zinc	Strong Acid Extractable	mg/kg	13	12	9	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
Benzene	Dry Weight	mg/kg	<0.005	<0.005	0.016	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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	121	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	12.9	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

		Reference Number	1022352-73	1022352-74	1022352-75	
		Sample Date	Aug 16, 2014	Aug 16, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-8WA	P214-8WB	P214-BD1	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	3.75	3.86	79.30	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
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:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-76	1022352-77	1022352-78
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-BD2	P214-BD3	P214-BD4
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	<0.01	0.07	<0.01	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.3	5.8	1.4	0.2
Barium	Strong Acid Extractable	mg/kg	14	71	9	1
Beryllium	Strong Acid Extractable	mg/kg	0.2	0.3	0.1	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.07	0.90	0.07	0.01
Chromium	Strong Acid Extractable	mg/kg	6.8	8.4	3.3	0.5
Cobalt	Strong Acid Extractable	mg/kg	3.5	4.3	1.1	0.1
Copper	Strong Acid Extractable	mg/kg	4.7	12.3	4.7	1
Lead	Strong Acid Extractable	mg/kg	<5.0	<4.9	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	6.1	9.2	2.8	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	0.6	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	0.07	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	1.7	<1.0	1.5	1
Uranium	Strong Acid Extractable	mg/kg	0.5	4.4	0.8	0.5
Vanadium	Strong Acid Extractable	mg/kg	21.6	12.9	8.6	0.1
Zinc	Strong Acid Extractable	mg/kg	15	33	8	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	75	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	7.5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-76	1022352-77	1022352-78	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 15, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-BD2	P214-BD3	P214-BD4	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	4.37	58.40	7.82	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	140	140	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-79	1022352-80	1022352-81
Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 16, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-BD5	P214-BD6	P214-BD7
Matrix	Soil	Soil	Soil

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Metals Strong Acid Digestion						
Mercury	Strong Acid Extractable	mg/kg	0.03	<0.01	0.01	0.01
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.2	2.8	2.3	0.2
Barium	Strong Acid Extractable	mg/kg	11	5	12	1
Beryllium	Strong Acid Extractable	mg/kg	0.1	0.1	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.09	0.08	0.09	0.01
Chromium	Strong Acid Extractable	mg/kg	4.3	2.9	6.3	0.5
Cobalt	Strong Acid Extractable	mg/kg	1.6	1.1	2.8	0.1
Copper	Strong Acid Extractable	mg/kg	5.7	4.3	4.0	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<4.9	<5.0	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	5.0	3.5	4.7	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.4	1.5	2.8	1
Uranium	Strong Acid Extractable	mg/kg	<0.5	1	0.9	0.5
Vanadium	Strong Acid Extractable	mg/kg	8.5	8.8	13.4	0.1
Zinc	Strong Acid Extractable	mg/kg	50	12	19	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

		Reference Number	1022352-79	1022352-80	1022352-81	
		Sample Date	Aug 15, 2014	Aug 15, 2014	Aug 16, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-BD5	P214-BD6	P214-BD7	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	1.65	7.19	13.30	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	130	130	140	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number	1022352-82	1022352-92	1022352-93
Sample Date	Aug 16, 2014	Aug 17, 2014	Aug 17, 2014
Sample Time	NA	NA	NA
Sample Location			
Sample Description	P214-BD8	P214-30A	P214-30B
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
Antimony	Strong Acid Extractable	mg/kg	<0.2	<0.2	<0.2	0.2
Arsenic	Strong Acid Extractable	mg/kg	2.2	2.5	2.8	0.2
Barium	Strong Acid Extractable	mg/kg	11	22	20	1
Beryllium	Strong Acid Extractable	mg/kg	0.1	0.3	0.2	0.1
Cadmium	Strong Acid Extractable	mg/kg	0.06	0.04	0.05	0.01
Chromium	Strong Acid Extractable	mg/kg	6.3	11.7	7.4	0.5
Cobalt	Strong Acid Extractable	mg/kg	3.1	4.4	3.4	0.1
Copper	Strong Acid Extractable	mg/kg	4.5	7.5	6.6	1
Lead	Strong Acid Extractable	mg/kg	<4.9	<4.9	<4.9	0.1
Molybdenum	Strong Acid Extractable	mg/kg	<1.0	<1.0	<1.0	1
Nickel	Strong Acid Extractable	mg/kg	6.2	10.3	6.2	0.5
Selenium	Strong Acid Extractable	mg/kg	<0.3	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	mg/kg	<0.1	<0.1	<0.1	0.1
Thallium	Strong Acid Extractable	mg/kg	<0.05	<0.05	<0.05	0.05
Tin	Strong Acid Extractable	mg/kg	2.5	2.7	2.5	1
Uranium	Strong Acid Extractable	mg/kg	0.7	0.5	0.5	0.5
Vanadium	Strong Acid Extractable	mg/kg	19.6	28.7	13.9	0.1
Zinc	Strong Acid Extractable	mg/kg	15	18	12	1
Mono-Aromatic Hydrocarbons - Soil						
Extraction Date	Volatiles		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
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		27-Aug-14	27-Aug-14	27-Aug-14	
F2c C10-C16	Dry Weight	mg/kg	<50	<50	<50	50
F3c C16-C34	Dry Weight	mg/kg	<50	<50	<50	50
F4c C34-C50	Dry Weight	mg/kg	<100	<100	<100	100
F4HTGCc C34-C50+	Dry Weight	mg/kg	<100	<100	<100	100
% C50+		%	<5	<5	<5	

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

		Reference Number	1022352-82	1022352-92	1022352-93	
		Sample Date	Aug 16, 2014	Aug 17, 2014	Aug 17, 2014	
		Sample Time	NA	NA	NA	
		Sample Location				
		Sample Description	P214-BD8	P214-30A	P214-30B	
		Matrix	Soil	Soil	Soil	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Silica Gel Cleanup						
Silica Gel Cleanup			Done	Done	Done	
Soil % Moisture						
Moisture	Soil % Moisture	% by weight	9.85	4.01	3.99	
Polychlorinated Biphenyls - Soil						
Aroclor 1016	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1221	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1232	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1242	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1248	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1254	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1260	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1262	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Aroclor 1268	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Total PCBs	Dry Weight	mg/kg	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Soil - Surrogate						
Decachlorobiphenyl	Surrogate	%	140	130	130	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-83	1022352-84	1022352-85	
Sample Date		Aug 17, 2014	Aug 17, 2014	Aug 17, 2014	
Sample Time		NA	NA	NA	
Sample Location					
Sample Description		P214-2W	P214-3W	P214-4W	
Matrix		Water	Water	Water	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Total						
Aluminum	Total	mg/L	1.94	1.82	16.9	0.02
Calcium	Total	mg/L	109	176	110	0.2
Iron	Total	mg/L	3.10	2.54	10.4	0.05
Magnesium	Total	mg/L	36.8	91.0	50.1	0.2
Manganese	Total	mg/L	0.109	0.087	0.433	0.005
Potassium	Total	mg/L	3.2	3.1	5.0	0.4
Silicon	Total	mg/L	5.04	5.65	30.7	0.05
Sodium	Total	mg/L	25.5	21.4	21.7	0.4
Sulfur	Total	mg/L	53.8	43.8	45.5	0.3
Mercury	Total	mg/L	0.000023	<0.000005	0.000007	0.000005
Antimony	Total	mg/L	0.0002	0.0003	0.0003	0.0002
Arsenic	Total	mg/L	0.0038	0.0046	0.0092	0.0002
Barium	Total	mg/L	0.046	0.033	0.091	0.001
Beryllium	Total	mg/L	0.0002	0.0001	0.0025	0.0001
Bismuth	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Boron	Total	mg/L	0.044	0.048	0.070	0.002
Cadmium	Total	mg/L	0.00003	0.00012	0.00019	0.00001
Chromium	Total	mg/L	0.272	0.0827	0.0696	0.0005
Cobalt	Total	mg/L	0.0030	0.0019	0.0078	0.0001
Copper	Total	mg/L	0.017	0.025	0.025	0.001
Lead	Total	mg/L	0.0023	0.0029	0.0163	0.0001
Lithium	Total	mg/L	0.004	0.004	0.014	0.001
Molybdenum	Total	mg/L	0.019	0.017	0.012	0.001
Nickel	Total	mg/L	0.119	0.0570	0.0728	0.0005
Selenium	Total	mg/L	0.0010	0.001	0.0047	0.0002
Silver	Total	mg/L	0.00003	0.00002	0.00011	0.00001
Strontium	Total	mg/L	0.169	0.162	0.160	0.001
Thallium	Total	mg/L	0.00013	0.00015	0.00038	0.00005
Tin	Total	mg/L	<0.001	<0.001	<0.001	0.001
Titanium	Total	mg/L	0.0354	0.0312	0.0462	0.0005
Uranium	Total	mg/L	0.0091	0.0073	0.0096	0.0005
Vanadium	Total	mg/L	0.0046	0.0067	0.0099	0.0001
Zinc	Total	mg/L	0.104	0.152	0.379	0.001
Zirconium	Total	mg/L	0.002	0.002	0.001	0.001
Mono-Aromatic Hydrocarbons - Water						
Benzene		mg/L	<0.001	<0.001	<0.001	0.001

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-83	1022352-84	1022352-85
Sample Date		Aug 17, 2014	Aug 17, 2014	Aug 17, 2014
Sample Time		NA	NA	NA
Sample Location				
Sample Description		P214-2W	P214-3W	P214-4W
Matrix		Water	Water	Water

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Mono-Aromatic Hydrocarbons - Water - Continued						
Toluene		mg/L	<0.001	<0.001	<0.001	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	<0.2	<0.2	<0.2	0.1
F1 C6-C10		mg/L	<0.2	<0.2	<0.2	0.1
F2 C10-C16		mg/L	<0.2	<0.2	<0.2	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	<0.1	<0.1	<0.1	0.1
Aroclor 1221		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1232		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1242		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1248		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1254		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1260		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1262		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1268		ug/L	<0.1	<0.1	<0.1	0.1
Total PCBs		ug/L	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Water - Surrogate						
Decachlorobiphenyl	Surrogate	%	119	126	101	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-86	1022352-87	1022352-88	
Sample Date		Aug 17, 2014	Aug 17, 2014	Aug 17, 2014	
Sample Time		NA	NA	NA	
Sample Location					
Sample Description		P214-5W	P214-6W	P214-7W	
Matrix		Water	Water	Water	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Total						
Aluminum	Total	mg/L	1.39	4.11	5.11	0.02
Calcium	Total	mg/L	119	326	310	0.2
Iron	Total	mg/L	2.24	8.60	11.1	0.05
Magnesium	Total	mg/L	60.5	191	182	0.2
Manganese	Total	mg/L	0.091	0.325	0.427	0.005
Potassium	Total	mg/L	2.6	4.0	3.9	0.4
Silicon	Total	mg/L	6.01	11.6	11.5	0.05
Sodium	Total	mg/L	20.9	81.2	44.4	0.4
Sulfur	Total	mg/L	14.0	24.2	18.9	0.3
Mercury	Total	mg/L	0.000008	0.000016	0.000033	0.000005
Antimony	Total	mg/L	<0.0002	0.0003	<0.0002	0.0002
Arsenic	Total	mg/L	0.0061	0.0179	0.0130	0.0002
Barium	Total	mg/L	0.023	0.102	0.063	0.001
Beryllium	Total	mg/L	<0.0001	0.0004	0.0004	0.0001
Bismuth	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Boron	Total	mg/L	0.041	0.037	0.040	0.002
Cadmium	Total	mg/L	<0.00001	0.00013	0.00037	0.00001
Chromium	Total	mg/L	0.264	0.878	0.485	0.0005
Cobalt	Total	mg/L	0.0015	0.0069	0.0130	0.0001
Copper	Total	mg/L	0.046	0.237	0.062	0.001
Lead	Total	mg/L	0.0023	0.0069	0.0067	0.0001
Lithium	Total	mg/L	0.003	0.008	0.006	0.001
Molybdenum	Total	mg/L	0.013	0.038	0.013	0.001
Nickel	Total	mg/L	0.0390	0.239	0.132	0.0005
Selenium	Total	mg/L	0.0005	0.0013	0.0018	0.0002
Silver	Total	mg/L	0.00003	0.00010	0.00007	0.00001
Strontium	Total	mg/L	0.111	0.297	0.236	0.001
Thallium	Total	mg/L	0.00008	0.00014	0.00036	0.00005
Tin	Total	mg/L	<0.001	<0.001	<0.001	0.001
Titanium	Total	mg/L	0.0244	0.0592	0.164	0.0005
Uranium	Total	mg/L	0.0099	0.0099	0.0082	0.0005
Vanadium	Total	mg/L	0.0052	0.0190	0.0200	0.0001
Zinc	Total	mg/L	0.065	3.70	0.266	0.001
Zirconium	Total	mg/L	0.001	0.002	0.001	0.001
Mono-Aromatic Hydrocarbons - Water						
Benzene		mg/L	<0.001	<0.001	<0.001	0.001

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-86	1022352-87	1022352-88
Sample Date		Aug 17, 2014	Aug 17, 2014	Aug 17, 2014
Sample Time		NA	NA	NA
Sample Location				
Sample Description		P214-5W	P214-6W	P214-7W
Matrix		Water	Water	Water
Analyte	**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Mono-Aromatic Hydrocarbons - Water - Continued					
Toluene	mg/L	<0.001	<0.001	<0.001	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	<0.2	<0.2	<0.2	0.1
F1 C6-C10	mg/L	<0.2	<0.2	<0.2	0.1
F2 C10-C16	mg/L	<0.2	<0.2	<0.2	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	<0.1	<0.1	<0.1	0.1
Aroclor 1221	ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1232	ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1242	ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1248	ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1254	ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1260	ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1262	ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1268	ug/L	<0.1	<0.1	<0.1	0.1
Total PCBs	ug/L	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Water - Surrogate					
Decachlorobiphenyl Surrogate	%	106	106	98	50-150

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-89	1022352-90	1022352-91	
Sample Date		Aug 17, 2014	Aug 17, 2014	Aug 17, 2014	
Sample Time		NA	NA	NA	
Sample Location					
Sample Description		P214-BDW1	P214-FB	Trip Blank	
Matrix		Water	Water	Water	
Analyte		**Units**	**Results**	**Results**	**Results**	Nominal Detection Limit
Metals Total						
Aluminum	Total	mg/L	2.66	<0.04	<0.02	0.02
Calcium	Total	mg/L	320	<0.4	<0.2	0.2
Iron	Total	mg/L	5.99	<0.1	<0.05	0.05
Magnesium	Total	mg/L	177	<0.40	<0.20	0.2
Manganese	Total	mg/L	0.272	<0.01	<0.005	0.005
Potassium	Total	mg/L	2.9	<0.8	<0.4	0.4
Silicon	Total	mg/L	8.41	<0.1	<0.05	0.05
Sodium	Total	mg/L	19.8	<0.8	<0.4	0.4
Sulfur	Total	mg/L	14.1	<0.6	<0.3	0.3
Mercury	Total	mg/L	0.000014	<0.000005	<0.000005	0.000005
Antimony	Total	mg/L	0.0002	<0.0004	<0.0002	0.0002
Arsenic	Total	mg/L	0.0177	<0.0004	<0.0002	0.0002
Barium	Total	mg/L	0.042	<0.002	0.001	0.001
Beryllium	Total	mg/L	0.0002	<0.0002	<0.0001	0.0001
Bismuth	Total	mg/L	<0.0005	<0.001	<0.0005	0.0005
Boron	Total	mg/L	0.039	<0.004	<0.002	0.002
Cadmium	Total	mg/L	0.00011	<0.00001	<0.00001	0.00001
Chromium	Total	mg/L	0.704	0.0025	0.0006	0.0005
Cobalt	Total	mg/L	0.0046	<0.0002	<0.0001	0.0001
Copper	Total	mg/L	0.123	<0.002	0.002	0.001
Lead	Total	mg/L	0.0064	<0.0002	0.0002	0.0001
Lithium	Total	mg/L	0.004	<0.002	<0.001	0.001
Molybdenum	Total	mg/L	0.024	<0.002	<0.001	0.001
Nickel	Total	mg/L	0.115	<0.001	<0.0005	0.0005
Selenium	Total	mg/L	0.001	<0.0004	<0.0002	0.0002
Silver	Total	mg/L	0.00007	<0.00002	<0.00001	0.00001
Strontium	Total	mg/L	0.205	<0.002	<0.001	0.001
Thallium	Total	mg/L	0.00013	<0.0001	<0.00005	0.00005
Tin	Total	mg/L	<0.001	<0.002	<0.001	0.001
Titanium	Total	mg/L	0.0593	<0.001	<0.0005	0.0005
Uranium	Total	mg/L	0.0115	<0.001	<0.0005	0.0005
Vanadium	Total	mg/L	0.0167	<0.0002	<0.0001	0.0001
Zinc	Total	mg/L	0.163	<0.002	0.002	0.001
Zirconium	Total	mg/L	0.002	<0.002	<0.001	0.001
Mono-Aromatic Hydrocarbons - Water						
Benzene		mg/L	<0.001	<0.001	<0.001	0.001

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Analytical Report

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Reference Number		1022352-89	1022352-90	1022352-91
Sample Date		Aug 17, 2014	Aug 17, 2014	Aug 17, 2014
Sample Time		NA	NA	NA
Sample Location				
Sample Description		P214-BDW1	P214-FB	Trip Blank
Matrix		Water	Water	Water

Analyte		Units	Results	Results	Results	Nominal Detection Limit
Mono-Aromatic Hydrocarbons - Water - Continued						
Toluene		mg/L	<0.001	<0.001	<0.001	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	<0.2	<0.2	<0.2	0.1
F1 C6-C10		mg/L	<0.2	<0.2	<0.2	0.1
F2 C10-C16		mg/L	<0.2	<0.2	<0.2	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	<0.1	<0.1	<0.1	0.1
Aroclor 1221		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1232		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1242		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1248		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1254		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1260		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1262		ug/L	<0.1	<0.1	<0.1	0.1
Aroclor 1268		ug/L	<0.1	<0.1	<0.1	0.1
Total PCBs		ug/L	<0.1	<0.1	<0.1	0.1
Polychlorinated Biphenyls - Water - Surrogate						
Decachlorobiphenyl	Surrogate	%	120	121	120	50-150

Approved by:

Randy Neumann, BSc
Vice President

Data have been validated by Analytical Quality Control and Exova's Integrated Data Validation System (IDVS).
Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

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Quality Control

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Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Metals Strong Acid Digestion

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
Mercury	ug/L	0	-0.07	0.13	yes
Antimony	ug/L	0.162	-0.1	0.2	yes
Arsenic	ug/L	-0.023	-0.2	0.2	yes
Barium	ug/L	0.468	-1	1	yes
Beryllium	ug/L	-0.004	-0.1	0.1	yes
Cadmium	ug/L	-0.007	-0.01	0.01	yes
Chromium	ug/L	0.042	-0.5	0.5	yes
Cobalt	ug/L	0.004	-0.1	0.1	yes
Copper	ug/L	0.354	-0.6	1.2	yes
Lead	ug/L	0.141	-5.0	5.0	yes
Molybdenum	ug/L	0.074	-1.0	1.0	yes
Nickel	ug/L	0.138	-0.4	0.7	yes
Selenium	ug/L	-0.024	-0.3	0.3	yes
Silver	ug/L	0	-0.09	0.14	yes
Thallium	ug/L	0.001	-0.04	0.04	yes
Tin	ug/L	4.326	0.0	7.2	yes
Uranium	ug/L	0.038	-0.5	0.5	yes
Vanadium	ug/L	0.019	-0.1	0.1	yes
Zinc	ug/L	0.48	-1	1	yes
Date Acquired:	August 27, 2014				

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Mercury	mg/kg	0.02	0.02	10	0.03	yes
Antimony	mg/kg	<0.2	<0.2	20	0.4	yes
Arsenic	mg/kg	5.2	5.1	20	0.4	yes
Barium	mg/kg	198	192	20	2	yes
Beryllium	mg/kg	0.4	0.4	20	0.2	yes
Cadmium	mg/kg	0.18	0.19	20	0.02	yes
Chromium	mg/kg	9.8	9.9	20	1.1	yes
Cobalt	mg/kg	7.1	7.1	20	0.2	yes
Copper	mg/kg	10.3	10.3	20	2.2	yes
Lead	mg/kg	7.2	7.0	20	0.2	yes
Molybdenum	mg/kg	<1.0	<1.0	20	2.2	yes
Nickel	mg/kg	17.1	18.0	20	1.1	yes
Selenium	mg/kg	0.5	0.5	20	0.7	yes
Silver	mg/kg	<0.1	<0.1	20	0.22	yes
Thallium	mg/kg	0.21	0.21	20	0.11	yes
Tin	mg/kg	1.9	1.9	20	2.2	yes
Uranium	mg/kg	1.7	1.8	20	1.1	yes
Vanadium	mg/kg	18.1	18.5	20	0.2	yes
Zinc	mg/kg	40	39	20	2	yes
Date Acquired:	August 27, 2014					

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC

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Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Metals Strong Acid Digestion - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Mercury	mg/kg	0.30	0.28	0.34	yes
Antimony	mg/kg	37.9	36.1	43.9	yes
Arsenic	mg/kg	41.1	36.7	44.3	yes
Barium	mg/kg	194	185	215	yes
Beryllium	mg/kg	21.0	17.4	22.2	yes
Cadmium	mg/kg	2.07	1.80	2.20	yes
Chromium	mg/kg	104	92.2	105.8	yes
Cobalt	mg/kg	22.4	18.5	22.5	yes
Copper	mg/kg	201	176.3	207.3	yes
Lead	mg/kg	21.1	18.6	21.8	yes
Molybdenum	mg/kg	201	172.6	215.4	yes
Nickel	mg/kg	102	90.6	107.4	yes
Selenium	mg/kg	39.4	36.1	42.9	yes
Silver	mg/kg	21.4	16.69	21.97	yes
Thallium	mg/kg	11.2	9.57	11.23	yes
Tin	mg/kg	183	171.9	201.9	yes
Uranium	mg/kg	104	90.3	108.0	yes
Vanadium	mg/kg	17.9	16.3	20.3	yes
Zinc	mg/kg	208	180	220	yes
Date Acquired:	August 27, 2014				
Mercury	mg/kg	0.08	0.05	0.11	yes
Date Acquired:	August 27, 2014				
Mercury	mg/kg	0.27	0.15	0.42	yes
Antimony	mg/kg	0.7	0.3	1.1	yes
Arsenic	mg/kg	76.8	65.9	97.9	yes
Barium	mg/kg	242	213	270	yes
Beryllium	mg/kg	0.8	0.5	0.9	yes
Cadmium	mg/kg	1.91	1.50	2.64	yes
Chromium	mg/kg	34.5	27.4	39.2	yes
Cobalt	mg/kg	13.8	11.3	16.0	yes
Copper	mg/kg	193	162.7	222.9	yes
Lead	mg/kg	123	99.6	135.6	yes
Molybdenum	mg/kg	3.2	2.0	3.8	yes
Nickel	mg/kg	61.2	47.1	73.5	yes
Selenium	mg/kg	0.9	0.3	1.3	yes
Silver	mg/kg	0.6	0.25	1.15	yes
Thallium	mg/kg	0.37	0.26	0.40	yes
Tin	mg/kg	3.6	1.0	5.4	yes
Uranium	mg/kg	1.3	0.9	1.5	yes
Vanadium	mg/kg	41.3	31.5	56.1	yes
Zinc	mg/kg	475	355	550	yes
Date Acquired:	August 27, 2014				

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Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Metals Strong Acid Digestion - Continued

Metals Total

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
Aluminum	mg/L	-0.0005	-0.01	0.02	yes
Calcium	mg/L	-0.0216	-0.1	0.1	yes
Iron	mg/L	0.0167	-0.01	0.02	yes
Magnesium	mg/L	0.0013	-0.04	0.04	yes
Manganese	mg/L	-0.0002	-0.003	0.003	yes
Potassium	mg/L	0.0397	-0.1	0.2	yes
Silicon	mg/L	0.0042	-0.03	0.04	yes
Sodium	mg/L	0.026	-0.1	0.2	yes
Sulfur	mg/L	0.0218	-0.1	0.2	yes
Mercury	ug/L	0.0075	-0.038000	0.070000	yes
Antimony	ug/L	-0.0556076	-0.2	0.2	yes
Arsenic	ug/L	-0.00983016	-0.2	0.2	yes
Barium	ug/L	0.0291302	-1	1	yes
Beryllium	ug/L	-0.0141299	-0.1	0.1	yes
Bismuth	ug/L	0	-0.5	0.5	yes
Boron	ug/L	-0.141559	-1	3	yes
Cadmium	ug/L	0	-0.007	0.012	yes
Chromium	ug/L	-0.164509	-0.7	0.3	yes
Cobalt	ug/L	0.00404158	-0.1	0.1	yes
Copper	ug/L	-0.0519404	-1	1	yes
Lead	ug/L	0.008	-0.1	0.1	yes
Lithium	ug/L	-0.164646	-1	1	yes
Molybdenum	ug/L	0.00229671	-1	1	yes
Nickel	ug/L	-0.0481584	-0.5	0.5	yes
Selenium	ug/L	0.0083377	-0.2	0.2	yes
Silver	ug/L	0.0319904	-0.02	0.10	yes
Strontium	ug/L	0.0100379	-1	1	yes
Thallium	ug/L	0.00458557	-0.05	0.05	yes
Tin	ug/L	-0.630863	-1	1	yes
Titanium	ug/L	0.00065494	-0.5	0.5	yes
Uranium	ug/L	0.00206223	-0.5	0.5	yes
Vanadium	ug/L	0	-0.1	0.1	yes
Zinc	ug/L	0.00334121	-0	1	yes
Zirconium	ug/L	0.00842678	-1	1	yes

Date Acquired: August 26, 2014

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Aluminum	mg/L	57.6	56.6	15	0.03	yes
Calcium	mg/L	400	391	15	0.6	yes
Iron	mg/L	23.7	23.6	15	0.20	yes
Magnesium	mg/L	160	156	15	0.40	yes

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	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Metals Total - Continued

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Manganese	mg/L	0.101	0.101	15	0.010	yes
Potassium	mg/L	18.1	17.5	15	1.2	yes
Silicon	mg/L	6.99	6.57	15	0.10	yes
Sodium	mg/L	54.8	53.4	15	1.2	yes
Sulfur	mg/L	316	306	15	0.1	yes
Mercury	mg/L	0.000080	0.000075	10	0.000300	yes
Antimony	ug/L	<0.2	<0.2	15	0.4	yes
Arsenic	ug/L	1.9	1.9	15	0.4	yes
Barium	ug/L	67	70	15	2	yes
Beryllium	ug/L	0.1	0.1	15	0.2	yes
Bismuth	ug/L	<0.5	<0.5	15	1.1	yes
Boron	ug/L	92	96	15	4	yes
Cadmium	ug/L	<0.005	<0.005	15	0.022	yes
Chromium	ug/L	36.3	37.9	15	1.1	yes
Cobalt	ug/L	0.8	0.8	15	0.2	yes
Copper	ug/L	11	11	15	2	yes
Lead	ug/L	2.1	2.2	15	0.2	yes
Lithium	ug/L	11	11	15	2	yes
Molybdenum	ug/L	3	3	15	2	yes
Nickel	ug/L	21.5	21.7	15	1.1	yes
Selenium	ug/L	0.8	0.7	15	0.4	yes
Silver	ug/L	<0.01	<0.01	15	0.22	yes
Strontium	ug/L	343	344	15	2	yes
Thallium	ug/L	0.20	0.20	15	0.11	yes
Tin	ug/L	<1	<1	15	2	yes
Titanium	ug/L	355	365	15	1.1	yes
Uranium	ug/L	10.9	11.1	15	1.1	yes
Vanadium	ug/L	8.6	8.7	15	0.2	yes
Zinc	ug/L	5	5	15	2	yes
Zirconium	ug/L	10	10	15	2	yes
Date Acquired:	August 26, 2014					

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Aluminum	mg/L	3.81	3.46	4.30	yes
Calcium	mg/L	51.6	45.5	52.7	yes
Iron	mg/L	2.17	1.83	2.19	yes
Magnesium	mg/L	20.3	18.14	22.14	yes
Manganese	mg/L	0.513	0.442	0.538	yes
Potassium	mg/L	53.0	45.8	55.8	yes
Silicon	mg/L	2.11	1.81	2.21	yes
Sodium	mg/L	54.1	45.9	56.0	yes
Sulfur	mg/L	10.4	8.9	10.9	yes
Mercury	mg/L	0.000760	0.000600	0.000960	yes

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

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
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Report Number:	1995994

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Antimony	ug/L	11.9	10.8	13.2	yes
Arsenic	ug/L	12.3	10.4	12.5	yes
Barium	ug/L	64	54	68	yes
Beryllium	ug/L	6.2	4.9	6.8	yes
Bismuth	ug/L	31.2	24.8	34.4	yes
Boron	ug/L	125	102	139	yes
Cadmium	ug/L	0.669	0.473	0.781	yes
Chromium	ug/L	31.4	26.5	33.7	yes
Cobalt	ug/L	6.2	5.2	6.7	yes
Copper	ug/L	65	53	67	yes
Lead	ug/L	6.6	5.2	7.1	yes
Lithium	ug/L	66	53	77	yes
Molybdenum	ug/L	64	56	66	yes
Nickel	ug/L	30.5	25.6	33.4	yes
Selenium	ug/L	11.4	9.9	12.3	yes
Silver	ug/L	6.51	5.39	7.13	yes
Strontium	ug/L	63	54	69	yes
Thallium	ug/L	3.43	2.81	3.89	yes
Tin	ug/L	65	56	66	yes
Titanium	ug/L	30.2	26.6	35.7	yes
Uranium	ug/L	32.0	25.7	36.3	yes
Vanadium	ug/L	6.1	5.1	7.2	yes
Zinc	ug/L	57	53	67	yes
Zirconium	ug/L	60	53	67	yes
Date Acquired:	August 26, 2014				
Mercury	mg/L	0.00294	0.002600	0.003200	yes
Antimony	ug/L	38.8	37.5	43.1	yes
Arsenic	ug/L	41.5	37.7	44.7	yes
Barium	ug/L	202	190	214	yes
Beryllium	ug/L	19.5	17.4	22.2	yes
Bismuth	ug/L	97.0	91.3	106.3	yes
Boron	ug/L	391	343	436	yes
Cadmium	ug/L	2.09	1.915	2.205	yes
Chromium	ug/L	99.2	90.0	110.0	yes
Cobalt	ug/L	20.1	18.1	21.4	yes
Copper	ug/L	203	185	208	yes
Lead	ug/L	19.9	18.6	21.8	yes
Lithium	ug/L	195	173	222	yes
Molybdenum	ug/L	209	189	225	yes
Nickel	ug/L	100	90.0	110.0	yes
Selenium	ug/L	40.8	36.1	42.9	yes
Silver	ug/L	20.0	18.00	22.00	yes

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

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Strontium	ug/L	194	182	212	yes
Thallium	ug/L	10.3	9.16	10.96	yes
Tin	ug/L	202	191	213	yes
Titanium	ug/L	102	91.5	106.3	yes
Uranium	ug/L	98.0	90.2	109.0	yes
Vanadium	ug/L	20.1	16.9	22.1	yes
Zinc	ug/L	195	183	218	yes
Date Acquired:	August 26, 2014				
Mercury	mg/L	0.000758	0.000700	0.000880	yes
Antimony	ug/L	11.3	10.8	13.2	yes
Arsenic	ug/L	12.6	11.2	13.6	yes
Barium	ug/L	61	54	66	yes
Beryllium	ug/L	5.7	5.2	6.5	yes
Bismuth	ug/L	28.9	27.0	33.0	yes
Boron	ug/L	111	108	132	yes
Cadmium	ug/L	0.612	0.560	0.692	yes
Chromium	ug/L	31.1	27.0	33.0	yes
Cobalt	ug/L	6.2	5.4	6.6	yes
Copper	ug/L	65	54	66	yes
Lead	ug/L	6.1	5.4	6.6	yes
Lithium	ug/L	58	53	66	yes
Molybdenum	ug/L	61	54	66	yes
Nickel	ug/L	31.8	27.0	33.0	yes
Selenium	ug/L	12.2	10.3	13.4	yes
Silver	ug/L	6.01	5.40	6.60	yes
Strontium	ug/L	63	54	66	yes
Thallium	ug/L	3.08	0.00	6.00	yes
Tin	ug/L	60	54	66	yes
Titanium	ug/L	31.3	27.0	33.0	yes
Uranium	ug/L	29.3	27.0	33.0	yes
Vanadium	ug/L	6.3	5.4	6.6	yes
Zinc	ug/L	62	57	69	yes
Zirconium	ug/L	59	54	66	yes
Date Acquired:	August 26, 2014				
Mercury	mg/L	0.000074	0.000065	0.000089	yes
Antimony	ug/L	2.0	1.8	2.2	yes
Arsenic	ug/L	2.1	1.8	2.3	yes
Barium	ug/L	10	9	11	yes
Beryllium	ug/L	0.9	0.8	1.1	yes
Bismuth	ug/L	5.0	4.5	5.4	yes
Boron	ug/L	17	17	23	yes
Cadmium	ug/L	0.105	0.092	0.116	yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Chromium	ug/L	5.2	4.6	5.4	yes
Cobalt	ug/L	1.0	0.9	1.1	yes
Copper	ug/L	11	9	11	yes
Lead	ug/L	1	0.9	1.1	yes
Lithium	ug/L	9	9	11	yes
Molybdenum	ug/L	10	9	11	yes
Nickel	ug/L	5.1	4.5	5.5	yes
Selenium	ug/L	2.1	1.6	2.2	yes
Silver	ug/L	0.98	0.87	1.07	yes
Strontium	ug/L	10	9	11	yes
Thallium	ug/L	0.49	0.48	0.57	yes
Tin	ug/L	10	10	11	yes
Titanium	ug/L	4.9	4.5	5.4	yes
Uranium	ug/L	4.8	4.5	5.5	yes
Vanadium	ug/L	1.1	0.8	1.1	yes
Zinc	ug/L	10	9	11	yes
Zirconium	ug/L	11	9	11	yes
Date Acquired:	August 26, 2014				
Aluminum	mg/L	19.5	18.80	20.60	yes
Calcium	mg/L	240	230.0	257.6	yes
Iron	mg/L	9.50	9.07	10.15	yes
Magnesium	mg/L	94.4	92.78	104.72	yes
Manganese	mg/L	2.41	2.260	2.560	yes
Potassium	mg/L	244	232.2	259.9	yes
Silicon	mg/L	9.57	9.48	10.74	yes
Sodium	mg/L	246	226.8	267.4	yes
Sulfur	mg/L	144	136.5	166.3	yes
Date Acquired:	August 26, 2014				
Aluminum	mg/L	3.99	3.46	4.44	yes
Calcium	mg/L	50.0	45.0	55.0	yes
Iron	mg/L	2.10	1.80	2.20	yes
Magnesium	mg/L	19.6	17.99	22.01	yes
Manganese	mg/L	0.504	0.449	0.551	yes
Potassium	mg/L	51.5	45.0	55.0	yes
Silicon	mg/L	2.02	1.92	2.22	yes
Sodium	mg/L	52.5	45.0	55.0	yes
Sulfur	mg/L	10.1	9.0	11.0	yes
Date Acquired:	August 26, 2014				
Aluminum	mg/L	0.40	0.36	0.44	yes
Calcium	mg/L	5.2	4.6	5.6	yes
Iron	mg/L	0.21	0.18	0.22	yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Metals Total - Continued

Control Sample	Units	Measured	Lower Limit	Upper Limit	Passed QC
Magnesium	mg/L	1.99	1.84	2.18	yes
Manganese	mg/L	0.050	0.046	0.056	yes
Potassium	mg/L	5.2	4.5	5.5	yes
Silicon	mg/L	0.21	0.18	0.22	yes
Sodium	mg/L	5.3	4.7	5.5	yes
Sulfur	mg/L	2.9	2.8	3.2	yes

Date Acquired: August 26, 2014

Mono-Aromatic Hydrocarbons - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
Benzene	ng	0	-0.005	0.005	yes
Toluene	ng	0	-0.06	0.06	yes
Ethylbenzene	ng	0	-0.030	0.030	yes
Total Xylenes (m,p,o)	ng	0	-0.09	0.09	yes
Styrene	ng	0	-0.030	0.030	yes

Date Acquired: August 26, 2014

Calibration Check	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
Benzene	ng	114.60	85	115	yes
Toluene	ng	100.60	85	115	yes
Ethylbenzene	ng	90.60	85	115	yes
Total Xylenes (m,p,o)	ng	89.33	85	115	yes
Styrene	ng	85.20	85	115	yes

Date Acquired: August 26, 2014

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
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

Date Acquired: August 26, 2014

Matrix Spike	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
Benzene	mg/kg	103	80	120	yes
Toluene	mg/kg	96	80	120	yes
Ethylbenzene	mg/kg	88	80	120	yes
Total Xylenes (m,p,o)	mg/kg	88	80	120	yes

Date Acquired: August 26, 2014

Mono-Aromatic Hydrocarbons - Water

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Mono-Aromatic Hydrocarbons - Water

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
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
Date Acquired:	August 28, 2014				

Calibration Check	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
Benzene	ng	98.60	85	115	yes
Toluene	ng	97.60	85	115	yes
Ethylbenzene	ng	95.80	85	115	yes
Total Xylenes (m,p,o)	ng	91.33	85	115	yes
Styrene	ng	86.00	85	115	yes
Date Acquired:	August 28, 2014				

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Benzene	mg/L	<0.001	<0.001	15	0.002	yes
Toluene	mg/L	<0.001	<0.001	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
Date Acquired:	August 28, 2014					

Volatile Petroleum Hydrocarbons - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
F1 C6-C10	ng	0	-10	10	yes
Date Acquired:	August 26, 2014				

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
F1 C6-C10	mg/kg	<10	<10	50	0	yes
F1 -BTEX	mg/kg	<10	<10	50	0	yes
Date Acquired:	August 26, 2014					

Matrix Spike	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
F1 C6-C10	mg/kg	104	80	120	yes
Date Acquired:	August 26, 2014				

Volatile Petroleum Hydrocarbons - Water

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
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
Date Acquired:	August 28, 2014				

Calibration Check	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
F2 C10-C16	ng	82.00	80	120	yes

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Volatile Petroleum Hydrocarbons - Water - Continued

Calibration Check	Units	% Recovery	Lower Limit	Upper Limit		Passed QC
Date Acquired: August 28, 2014						
Client Sample Replicates	**Units**	**Replicate 1**	**Replicate 2**	**% RSD Criteria**	**Absolute Criteria**	**Passed QC**
F1 C6-C10	mg/L	<0.2	<0.2	50		yes
F2 C10-C16	mg/L	<0.2	<0.2	50		yes
Date Acquired: August 28, 2014						

Extractable Petroleum Hydrocarbons - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
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
Date Acquired: August 26, 2014					

Calibration Check	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
F2c C10-C16	ug/mL	101.92	85	115	yes
F3c C16-C34	ug/mL	102.67	85	115	yes
F4c C34-C50	ug/mL	99.57	85	115	yes
F4HTGCc C34-C50+	ug/mL	98.48	85	115	yes
Date Acquired: August 26, 2014					

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
F2c C10-C16	mg/kg	<50	<50	50	10	yes
F3c C16-C34	mg/kg	56	69	50	10	yes
F4c C34-C50	mg/kg	<100	<100	50	10	yes
F4HTGCc C34-C50+	mg/kg	<100	<100	50	10	yes
Date Acquired: August 26, 2014						

Matrix Spike	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
F2c C10-C16	mg/kg	87	65	135	yes
F3c C16-C34	mg/kg	97	65	135	yes
F4c C34-C50	mg/kg	86	65	135	yes
F4HTGCc C34-C50+	mg/kg	87	65	135	yes
Date Acquired: August 26, 2014					

Extractable Petroleum Hydrocarbons - Water

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
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
Date Acquired: August 26, 2014					

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Quality Control

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Extractable Petroleum Hydrocarbons - Water - Continued

Calibration Check	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
F2 C10-C16	ug/mL	101.11	85	115	yes
F3 C16-C34	ug/mL	102.36	85	115	yes
F3+ C34+	ug/mL	101.63	85	115	yes
Date Acquired:	August 26, 2014				

Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
F2 C10-C16	mg/L	89.8	90.1	15	0.2	yes
F3 C16-C34	mg/L	98.6	97.1	15	0.2	yes
F3+ C34+	mg/L	84.8	83.7	15	0.2	yes
Date Acquired:	August 26, 2014					

Matrix Spike	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
F2 C10-C16	mg/L	90	80	120	yes
F3 C16-C34	mg/L	99	80	120	yes
F3+ C34+	mg/L	85	80	120	yes
Date Acquired:	August 26, 2014				

Polychlorinated Biphenyls - Soil

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
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
Date Acquired:	August 26, 2014				

Calibration Check	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
Aroclor 1242	ug/mL	110.00	80	120	yes
Aroclor 1254	ug/mL	120.00	80	120	yes
Date Acquired:	August 26, 2014				

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Aroclor 1016	mg/kg	<0.1	<0.1	50	0.2	yes
Aroclor 1221	mg/kg	<0.1	<0.1	50	0.2	yes
Aroclor 1232	mg/kg	<0.1	<0.1	50	0.2	yes
Aroclor 1242	mg/kg	<0.1	<0.1	50	0.2	yes
Aroclor 1248	mg/kg	<0.1	<0.1	50	0.2	yes
Aroclor 1254	mg/kg	<0.1	<0.1	50	0.2	yes
Aroclor 1260	mg/kg	<0.1	<0.1	50	0.2	yes
Aroclor 1262	mg/kg	<0.1	<0.1	50	0.2	yes

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Quality Control

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Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

Polychlorinated Biphenyls - Soil - Continued

Client Sample Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Aroclor 1268	mg/kg	<0.1	<0.1	50	0.2	yes
Total PCBs	mg/kg	<0.1	<0.1	50	0.2	yes
Date Acquired:	August 26, 2014					
Matrix Spike	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**		**Passed QC**
Aroclor 1242	mg/kg	117	50	150		yes
Date Acquired:	August 26, 2014					

Polychlorinated Biphenyls - Soil - Surrogate

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
Decachlorobiphenyl	%	100.069	50	150	yes
Date Acquired:	August 26, 2014				

Polychlorinated Biphenyls - Water

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
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
Date Acquired:	August 27, 2014				
Calibration Check	**Units**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Passed QC**
Aroclor 1242	ug/mL	110.00	80	120	yes
Aroclor 1254	ug/mL	95.00	80	120	yes
Date Acquired:	August 27, 2014				

Replicates	Units	Replicate 1	Replicate 2	% RSD Criteria	Absolute Criteria	Passed QC
Aroclor 1016	ug/L	<0.1	<0.1	20	0.2	yes
Aroclor 1221	ug/L	<0.1	<0.1	20	0.2	yes
Aroclor 1232	ug/L	<0.1	<0.1	20	0.2	yes
Aroclor 1242	ug/L	0.8	0.8	20	0.2	yes
Aroclor 1248	ug/L	<0.1	<0.1	20	0.2	yes
Aroclor 1254	ug/L	<0.1	<0.1	20	0.2	yes
Aroclor 1260	ug/L	<0.1	<0.1	20	0.2	yes
Aroclor 1262	ug/L	<0.1	<0.1	20	0.2	yes
Aroclor 1268	ug/L	<0.1	<0.1	20	0.2	yes
Date Acquired:	August 27, 2014					

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Quality Control

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	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Polychlorinated Biphenyls - Water - Continued

Matrix Spike	Units	% Recovery	Lower Limit	Upper Limit	Passed QC
Aroclor 1242	ug/L	79	50	150	yes
Date Acquired:	August 27, 2014				

Polychlorinated Biphenyls - Water - Surrogate

Blanks	Units	Measured	Lower Limit	Upper Limit	Passed QC
Decachlorobiphenyl	%	108.715	50	150	yes
Date Acquired:	August 27, 2014				

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Methodology and Notes

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

Lot ID:	**1022352**
Control Number:	C0042468
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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	26-Aug-14	Exova Calgary
BTEX-CCME - Soil	US EPA	*	Volatile Organic Compounds in Various Sample Matrices Using Equilibrium Headspace Analysis/Gas Chromatography Mass Spectrometry, 5021/8260	26-Aug-14	Exova Calgary
BTEX-CCME - Water	US EPA	*	Volatile Organic Compounds in Various Sample Matrices Using Equilibrium Headspace Analysis/Gas Chromatography Mass Spectrometry, 5021/8260	28-Aug-14	Exova Calgary
Mercury (Hot Block) in Soil	US EPA	*	Determination of Hg in Sediment by Cold Vapor Atomic Absorption Spec, 245.5	27-Aug-14	Exova Edmonton
Mercury (Total) in water	EPA	*	Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, 245.7	27-Aug-14	Exova Edmonton
Metals ICP-MS (Hot Block) in soil	SW-846	*	Acid Digestion of Sediments, Sludges, and Soils, EPA 3050B	27-Aug-14	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	26-Aug-14	Exova Edmonton
Metals Trace (Total) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	26-Aug-14	Exova Edmonton
PCB - Soil	US EPA	*	Polychlorinated Biphenyls (PCBs) by Gas Chromatography, 8082A	26-Aug-13	Exova Calgary
PCB - Soil	US EPA	*	Polychlorinated Biphenyls (PCBs) by Gas Chromatography, 8082A	26-Aug-14	Exova Calgary
PCB - Water	US EPA	*	Polychlorinated Biphenyls (PCBs) by Gas Chromatography, 8082A	27-Aug-14	Exova Calgary
TEH-CCME - Water	EPA/CCME	*	Separatory Funnel Liquid-liquid Extraction/CCME, EPA 3510/CCME	26-Aug-14	Exova Calgary
TEH-CCME-Soil (Shake)	CCME	*	Reference Method for Canada-Wide Standard for PHC in Soil, CWS PHCS TIER 1	26-Aug-14	Exova Calgary

** Reference Method Modified*

References

EPA/CCME	Environmental Protection Agency Test Methods - US/CCME
SW-846	Test Methods for Evaluating Solid Waste
CCME	Canadian Council of Ministers of the Environment
US EPA	US Environmental Protection Agency Test Methods
APHA	Standard Methods for the Examination of Water and Wastewater

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Methodology and Notes

Bill To:	SILA Remediation	Project:	
Report To:	SILA Remediation	ID:	PIN-2 2014
	250-1260 Boul Lebourgneuf	Name:	2014 LFM
	Quebec, QC, Canada	Location:	Cape Young
	G2K 2G2	LSD:	
Attn:	Jean-Pierre Pelletier	P.O.:	
Sampled By:	A. Passalis	Acct code:	
Company:	SILA		

Lot ID:	**1022352**
Control Number:	C0042468
Date Received:	Aug 25, 2014
Date Reported:	Mar 17, 2015
Report Number:	1995994

Comments:

- Reports was issued to include QC data as requested by Jean-Pierre Pelletier on March 17, 2015. Previous report 1043013.
- Analysis was performed on samples 1022352(1-82, 92-93) that exceeded the recommended holding time for BTEX/F1 analysis

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Analytical Report

Bill To:	SILA Remediation	Project:		Lot ID:	**1022352**
Report To:	SILA Remediation	ID:	PIN-2 2014	Control Number:	C0042468
	250-1260 Boul Lebourgneuf	Name:	2014 LFM	Date Received:	Aug 25, 2014
	Quebec, QC, Canada	Location:	Cape Young	Date Reported:	Mar 17, 2015
	G2K 2G2	LSD:		Report Number:	1995994
Attn:	Jean-Pierre Pelletier	P.O.:			
Sampled By:	A. Passalis	Acct code:			
Company:	SILA				

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:

Randy Neumann, BSc
Vice President

Data have been validated by Analytical Quality Control and Exova's Integrated Data Validation System (IDVS).
Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

Maxxam
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Your Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Your C.O.C. #: A135189

Attention:JEAN-PIERRE PELLETIER

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

Report Date: 2014/10/07
Report #: R1657677
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B478422
Received: 2014/09/04, 10:45

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS (MeOH extract)	5	2014/09/05	2014/09/08	AB SOP-00039	CCME CWS/EPA 8260C m
BTEX/F1 by HS GC/MS (MeOH extract)	3	2014/09/05	2014/09/09	AB SOP-00039	CCME CWS/EPA 8260C m
CCME Hydrocarbons (F2-F4 in soil)	8	2014/09/05	2014/09/09	AB SOP-00036 / AB SOP-00040	CCME PHC-CWS
Elements by ICPMS - Soils	1	2014/09/09	2014/09/09	AB SOP-00001 / AB SOP-00043	EPA 200.8 R5.4 m
Elements by ICPMS - Soils	7	2014/09/10	2014/09/10	AB SOP-00001 / AB SOP-00043	EPA 200.8 R5.4 m
Moisture	8	N/A	2014/09/06	AB SOP-00002	CCME PHC-CWS
Polychlorinated Biphenyls (1)	8	2014/09/08	2014/09/09	CAL SOP-00149	EPA 8082A R1 m

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS	1	N/A	2014/09/19	AB SOP-00039	CCME CWS/EPA 8260C m
Cadmium - low level CCME (Total)	1	2014/09/29	2014/10/06	AB SOP-00014 / AB SOP-00043	EPA 200.8 R5.4m
CCME Hydrocarbons (F2-F4 in water)	1	2014/09/09	2014/09/09	AB SOP-00037 / AB SOP-00040	CCME PHC-CWS m
Mercury - Low Level (Total) (1)	1	2014/09/09	2014/09/09	CAL SOP-00007	EPA 1631 RE 20460 m
Elements by ICPMS - Total	1	2014/09/09	2014/09/10	AB SOP-00014 / AB SOP-00043	EPA 200.8 R5.4 m
Polychlorinated Biphenyls (1)	1	2014/09/18	2014/09/19	CAL SOP-00149	EPA 8082A R1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Maxxam Calgary Environmental

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Your Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Your C.O.C. #: A135189

Attention:JEAN-PIERRE PELLETIER

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

Report Date: 2014/10/07
Report #: R1657677
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B478422
Received: 2014/09/04, 10:45

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Tanya Eugine, M.Sc., Project Manager
Email: TEugine@maxxam.ca
Phone# (780)577-7144
==========

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 #: B478422
Report Date: 2014/10/07

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		KN3053	KN3054	KN3055	KN3056	KN3057	KN3058	KN3059		
Sampling Date		2014/08/16	2014/08/16	2014/08/15	2014/08/15	2014/08/15	2014/08/15	2014/08/15		
COC Number		A135189	A135189	A135189	A135189	A135189	A135189	A135189		
	Units	P214-1A	P214-5B	P214-9A	P214-14A	P214-27A	P214-18B	P214-1WA	RDL	QC Batch
Physical Properties										
Moisture	%	18	11	2.2	9.0	78	5.8	59	0.30	7627619
RDL = Reportable Detection Limit										

Maxxam ID		KN3060		
Sampling Date		2014/08/16		
COC Number		A135189		
	Units	P214-6WA	RDL	QC Batch
Physical Properties				
Moisture	%	13	0.30	7627619
RDL = Reportable Detection Limit				

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Maxxam Job #: B478422
Report Date: 2014/10/07

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		KN3053	KN3054	KN3055	KN3056		KN3057		KN3058		
Sampling Date		2014/08/16	2014/08/16	2014/08/15	2014/08/15		2014/08/15		2014/08/15		
COC Number		A135189	A135189	A135189	A135189		A135189		A135189		
	Units	P214-1A	P214-5B	P214-9A	P214-14A	RDL	P214-27A	RDL	P214-18B	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	<10	10	<45 (1)	45	<10	10	7627782
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	<50	<50	<50	50	290 (1)	220	<50	50	7627782
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes		Yes		Yes		7627782
Surrogate Recovery (%)											
O-TERPHENYL (sur.)	%	100	94	92	96		90		82		7627782

RDL = Reportable Detection Limit
(1) Detection limits raised due to high moisture content.

Maxxam ID		KN3059		KN3060		
Sampling Date		2014/08/15		2014/08/16		
COC Number		A135189		A135189		
	Units	P214-1WA	RDL	P214-6WA	RDL	QC Batch
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<24 (1)	24	<10	10	7627782
F3 (C16-C34 Hydrocarbons)	mg/kg	140 (1)	120	<50	50	7627782
Reached Baseline at C50	mg/kg	Yes		Yes		7627782
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	99		100		7627782

RDL = Reportable Detection Limit
(1) Detection limits raised due to high moisture content.

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SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		KN3053	KN3054	KN3055	KN3056		KN3057		KN3058		
Sampling Date		2014/08/16	2014/08/16	2014/08/15	2014/08/15		2014/08/15		2014/08/15		
COC Number		A135189	A135189	A135189	A135189		A135189		A135189		
	Units	P214-1A	P214-5B	P214-9A	P214-14A	RDL	P214-27A	RDL	P214-18B	RDL	QC Batch
Polychlorinated Biphenyls											
Aroclor 1016	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1221	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1232	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1242	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1248	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1254	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1260	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1262	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Aroclor 1268	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Total Aroclors	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	<0.045	0.045	<0.010	0.010	7628742
Surrogate Recovery (%)											
NONACHLOROBIPHENYL (sur.)	%	78	79	75	74		79		68		7628742
RDL = Reportable Detection Limit											

Maxxam ID		KN3059		KN3060		
Sampling Date		2014/08/15		2014/08/16		
COC Number		A135189		A135189		
	Units	P214-1WA	RDL	P214-6WA	RDL	QC Batch
Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1221	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1232	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1242	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1248	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1254	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1260	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1262	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Aroclor 1268	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Total Aroclors	mg/kg	<0.025	0.025	<0.010	0.010	7628742
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	73		79		7628742
RDL = Reportable Detection Limit						

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Maxxam Job #: B478422
Report Date: 2014/10/07

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		KN3053		KN3054	KN3055		KN3056		
Sampling Date		2014/08/16		2014/08/16	2014/08/15		2014/08/15		
COC Number		A135189		A135189	A135189		A135189		
	Units	P214-1A	QC Batch	P214-5B	P214-9A	QC Batch	P214-14A	RDL	QC Batch
Elements									
Total Arsenic (As)	mg/kg	2.3	7632600	2.2	2.6	7632817	1.5	1.0	7632600
Total Cadmium (Cd)	mg/kg	0.10	7632600	<0.10	<0.10	7632817	<0.10	0.10	7632600
Total Chromium (Cr)	mg/kg	4.4	7632600	4.9	3.4	7632817	3.2	1.0	7632600
Total Cobalt (Co)	mg/kg	1.8	7632600	2.2	1.4	7632817	<1.0	1.0	7632600
Total Copper (Cu)	mg/kg	<5.0	7632600	<5.0	8.8	7632817	<5.0	5.0	7632600
Total Lead (Pb)	mg/kg	2.5	7632600	2.3	5.2	7632817	1.6	1.0	7632600
Total Mercury (Hg)	mg/kg	<0.050	7632600	<0.050	<0.050	7632817	<0.050	0.050	7632600
Total Nickel (Ni)	mg/kg	3.1	7632600	4.3	2.6	7632817	2.4	1.0	7632600
Total Zinc (Zn)	mg/kg	17	7632600	13	74	7632817	<10	10	7632600
RDL = Reportable Detection Limit									

Maxxam ID		KN3057			KN3058		KN3059	KN3060		
Sampling Date		2014/08/15			2014/08/15		2014/08/15	2014/08/16		
COC Number		A135189			A135189		A135189	A135189		
	Units	P214-27A	RDL	QC Batch	P214-18B	QC Batch	P214-1WA	P214-6WA	RDL	QC Batch
Elements										
Total Arsenic (As)	mg/kg	7.5	2.0	7632817	2.7	7631171	5.6	3.4	1.0	7632817
Total Cadmium (Cd)	mg/kg	<0.20	0.20	7632817			0.98	<0.10	0.10	7632817
Total Chromium (Cr)	mg/kg	4.9	2.0	7632817	6.4	7631171	6.7	2.6	1.0	7632817
Total Cobalt (Co)	mg/kg	<2.0	2.0	7632817	3.1	7631171	4.4	<1.0	1.0	7632817
Total Copper (Cu)	mg/kg	<10	10	7632817	<5.0	7631171	13	<5.0	5.0	7632817
Total Lead (Pb)	mg/kg	<2.0	2.0	7632817	2.4	7631171	3.8	2.4	1.0	7632817
Total Mercury (Hg)	mg/kg	<0.10	0.10	7632817	<0.050	7631171	0.083	<0.050	0.050	7632817
Total Nickel (Ni)	mg/kg	5.2	2.0	7632817	5.5	7631171	9.3	2.1	1.0	7632817
Total Zinc (Zn)	mg/kg	<20	20	7632817	12	7631171	35	14	10	7632817
RDL = Reportable Detection Limit										

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Maxxam Job #: B478422
Report Date: 2014/10/07

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		KN3053	KN3054	KN3055	KN3056		KN3057		KN3058		
Sampling Date		2014/08/16	2014/08/16	2014/08/15	2014/08/15		2014/08/15		2014/08/15		
COC Number		A135189	A135189	A135189	A135189		A135189		A135189		
	Units	P214-1A	P214-5B	P214-9A	P214-14A	RDL	P214-27A	RDL	P214-18B	RDL	QC Batch
Volatiles											
F1 (C6-C10) - BTEX	mg/kg	<12	<12	<12	<12	12	<54 (1)	54	<12	12	7627727
(C6-C10)	mg/kg	<12	<12	<12	<12	12	<54 (1)	54	<12	12	7627727
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	108	103	103	105		141 (2)		105		7627727
4-Bromofluorobenzene (sur.)	%	98	99	101	102		99		98		7627727
D10-ETHYLBENZENE (sur.)	%	110	104	111	102		108		108		7627727
D4-1,2-Dichloroethane (sur.)	%	92	93	95	96		93		92		7627727

RDL = Reportable Detection Limit
(1) Detection limits raised due to high moisture content.
(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam ID		KN3059		KN3060		
Sampling Date		2014/08/15		2014/08/16		
COC Number		A135189		A135189		
	Units	P214-1WA	RDL	P214-6WA	RDL	QC Batch
Volatiles						
F1 (C6-C10) - BTEX	mg/kg	<29	29	<12	12	7627727
(C6-C10)	mg/kg	<29	29	<12	12	7627727
Surrogate Recovery (%)						
1,4-Difluorobenzene (sur.)	%	136		102		7627727
4-Bromofluorobenzene (sur.)	%	98		99		7627727
D10-ETHYLBENZENE (sur.)	%	118		105		7627727
D4-1,2-Dichloroethane (sur.)	%	91		100		7627727

RDL = Reportable Detection Limit

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Maxxam Job #: B478422
Report Date: 2014/10/07

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		KN3061		
Sampling Date		2014/08/17		
COC Number		A135189		
	Units	**P214-5W**	**RDL**	**QC Batch**
Low Level Elements				
Total Cadmium (Cd)	ug/L	0.088	0.020	7657609
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Maxxam Job #: B478422
Report Date: 2014/10/07

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		KN3061		
Sampling Date		2014/08/17		
COC Number		A135189		
	Units	**P214-5W**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	0.10	7621721
F3 (C16-C34 Hydrocarbons)	mg/L	<0.20	0.20	7621721
Reached Baseline at C50	mg/L	Yes		7621721
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	93		7621721
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Maxxam Job #: B478422
Report Date: 2014/10/07

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		KN3061		
Sampling Date		2014/08/17		
COC Number		A135189		
	Units	**P214-5W**	**RDL**	**QC Batch**
Polychlorinated Biphenyls				
Aroclor 1016	mg/L	<0.000050	0.000050	7643036
Aroclor 1221	mg/L	<0.000050	0.000050	7643036
Aroclor 1232	mg/L	<0.000050	0.000050	7643036
Aroclor 1242	mg/L	<0.000050	0.000050	7643036
Aroclor 1248	mg/L	<0.000050	0.000050	7643036
Aroclor 1254	mg/L	<0.000050	0.000050	7643036
Aroclor 1260	mg/L	<0.000050	0.000050	7643036
Aroclor 1262	mg/L	<0.000050	0.000050	7643036
Aroclor 1268	mg/L	<0.000050	0.000050	7643036
Total Aroclors	mg/L	<0.000050	0.000050	7643036
Surrogate Recovery (%)				
NONACHLOROBIPHENYL (sur.)	%	64		7643036
RDL = Reportable Detection Limit				

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SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		KN3061		
Sampling Date		2014/08/17		
COC Number		A135189		
	Units	P214-5W	RDL	QC Batch
Elements				
Total Arsenic (As)	mg/L	0.0056	0.00020	7631124
Total Chromium (Cr)	mg/L	0.21	0.0010	7631124
Total Cobalt (Co)	mg/L	0.0012	0.00030	7631124
Total Copper (Cu)	mg/L	0.038	0.00020	7631124
Total Lead (Pb)	mg/L	0.0026	0.00020	7631124
Total Nickel (Ni)	mg/L	0.032	0.00050	7631124
Total Zinc (Zn)	mg/L	0.050	0.0030	7631124
Low Level Elements				
Total Mercury (Hg)	ug/L	<0.20 (1)	0.20	7630982

RDL = Reportable Detection Limit

(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly

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SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		KN3061		
Sampling Date		2014/08/17		
COC Number		A135189		
	Units	**P214-5W**	**RDL**	**QC Batch**
Volatiles				
F1 (C6-C10) - BTEX	ug/L	<100	100	7637199
(C6-C10)	ug/L	<100	100	7637199
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	100		7637199
4-Bromofluorobenzene (sur.)	%	102		7637199
D4-1,2-Dichloroethane (sur.)	%	104		7637199
RDL = Reportable Detection Limit				

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Sampler Initials: AP

GENERAL COMMENTS

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

Package 1	6.0°C

Sample KN3053-01 : Sample extracted for F24 past method-specified hold time.

Sample KN3054-01 : Sample extracted for F24 past method-specified hold time.

Sample KN3055-01 : Sample extracted for F24 past method-specified hold time.

Sample KN3056-01 : Sample extracted for F24 past method-specified hold time.

Sample KN3057-01 : Sample extracted for F24 past method-specified hold time.

Detection limits raised due to sample matrix. Parameters affected are Cr, Co, Cu, Pb, Ni, As, Zn, Cd, Hg.

Sample KN3058-01 : Sample extracted for F24 past method-specified hold time.

Sample KN3059-01 : Sample extracted for F24 past method-specified hold time.

Sample KN3060-01 : Sample extracted for F24 past method-specified hold time.

Sample KN3061-01 : Sample extracted for F24 past method-specified hold time.

Sample extracted past method-specified hold time for BTEX/F1 analysis.

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL) Comments

Sample KN3053-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time.
Sample KN3054-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time.
Sample KN3055-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time.
Sample KN3056-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time.
Sample KN3057-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time. Detection limits raised due to high moisture content, samples contain => 50% moisture.
Sample KN3058-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time.
Sample KN3059-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time. Detection limits raised due to high moisture content, samples contain => 50% moisture.
Sample KN3060-02 Polychlorinated Biphenyls: Sample extracted past method-specified hold time.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7621721	O-TERPHENYL (sur.)	2014/09/09	98	50 - 130	97	50 - 130	109	%				
7627727	1,4-Difluorobenzene (sur.)	2014/09/08	107	60 - 140	99	60 - 140	97	%				
7627727	4-Bromofluorobenzene (sur.)	2014/09/08	102	60 - 140	101	60 - 140	99	%				
7627727	D10-ETHYLBENZENE (sur.)	2014/09/08	105	60 - 130	104	60 - 130	105	%				
7627727	D4-1,2-Dichloroethane (sur.)	2014/09/08	95	60 - 140	93	60 - 140	93	%				
7627782	O-TERPHENYL (sur.)	2014/09/09	79	50 - 130	80	50 - 130	88	%				
7628742	NONACHLOROBIPHENYL (sur.)	2014/09/09	79	30 - 130	83	30 - 130	73	%				
7637199	1,4-Difluorobenzene (sur.)	2014/09/19	97	70 - 130	97	70 - 130	101	%				
7637199	4-Bromofluorobenzene (sur.)	2014/09/19	100	70 - 130	102	70 - 130	101	%				
7637199	D4-1,2-Dichloroethane (sur.)	2014/09/19	102	70 - 130	106	70 - 130	105	%				
7643036	NONACHLOROBIPHENYL (sur.)	2014/09/19	77	30 - 130	85	30 - 130	69	%				
7621721	F2 (C10-C16 Hydrocarbons)	2014/09/09	109	50 - 130	106	70 - 130	<0.10	mg/L	NC	40		
7621721	F3 (C16-C34 Hydrocarbons)	2014/09/09	109	50 - 130	106	70 - 130	<0.20	mg/L	NC	40		
7627619	Moisture	2014/09/06					<0.30	%	9.0	20		
7627727	(C6-C10)	2014/09/08	105	60 - 140	109	60 - 140	<12	mg/kg	NC	50		
7627727	F1 (C6-C10) - BTEX	2014/09/08					<12	mg/kg	NC	50		
7627782	F2 (C10-C16 Hydrocarbons)	2014/09/09	86	50 - 130	93	70 - 130	<10	mg/kg	NC	50		
7627782	F3 (C16-C34 Hydrocarbons)	2014/09/09	90	50 - 130	96	70 - 130	<50	mg/kg	NC	50		
7628742	Aroclor 1016	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Aroclor 1221	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Aroclor 1232	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Aroclor 1242	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Aroclor 1248	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Aroclor 1254	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Aroclor 1260	2014/09/09	82	30 - 130	78	30 - 130	<0.010	mg/kg	NC	50		
7628742	Aroclor 1262	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Aroclor 1268	2014/09/09					<0.010	mg/kg	NC	50		
7628742	Total Aroclors	2014/09/09					<0.010	mg/kg	NC	50		
7630982	Total Mercury (Hg)	2014/09/09	94	80 - 120	101	80 - 120	<0.0020	ug/L	NC	20		
7631124	Total Arsenic (As)	2014/09/09	108	80 - 120	105	80 - 120	<0.00020	mg/L				
7631124	Total Chromium (Cr)	2014/09/09	107	80 - 120	104	80 - 120	<0.0010	mg/L				
7631124	Total Cobalt (Co)	2014/09/09	107	80 - 120	106	80 - 120	<0.00030	mg/L				

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QUALITY ASSURANCE REPORT(CONT'D)

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7631124	Total Copper (Cu)	2014/09/09	107	80 - 120	107	80 - 120	0.00027 ,RDL=0.00020	mg/L	2.5	20		
7631124	Total Lead (Pb)	2014/09/09	111	80 - 120	109	80 - 120	<0.00020	mg/L				
7631124	Total Nickel (Ni)	2014/09/09	107	80 - 120	106	80 - 120	<0.00050	mg/L				
7631124	Total Zinc (Zn)	2014/09/09	111	80 - 120	110	80 - 120	0.0059 ,RDL=0.0030	mg/L				
7631171	Total Arsenic (As)	2014/09/09	89	75 - 125	95	75 - 125	<1.0	mg/kg	7.6	35	116	50 - 150
7631171	Total Chromium (Cr)	2014/09/09	92	75 - 125	94	75 - 125	<1.0	mg/kg	9.9	35	98	41 - 159
7631171	Total Cobalt (Co)	2014/09/09	92	75 - 125	97	75 - 125	<1.0	mg/kg	7.8	35	106	75 - 125
7631171	Total Copper (Cu)	2014/09/09	88	75 - 125	95	75 - 125	<5.0	mg/kg	NC	35	102	73 - 127
7631171	Total Lead (Pb)	2014/09/09	89	75 - 125	92	75 - 125	<1.0	mg/kg	7.9	35	104	54 - 146
7631171	Total Mercury (Hg)	2014/09/09	89	75 - 125	98	75 - 125	<0.050	mg/kg	NC	35		
7631171	Total Nickel (Ni)	2014/09/09	91	75 - 125	96	75 - 125	<1.0	mg/kg	8.7	35	117	61 - 139
7631171	Total Zinc (Zn)	2014/09/09	NC	75 - 125	96	75 - 125	<10	mg/kg	NC	35	104	72 - 128
7632600	Total Arsenic (As)	2014/09/10	94	75 - 125	94	75 - 125	<1.0	mg/kg	7.4	35	118	50 - 150
7632600	Total Cadmium (Cd)	2014/09/10	96	75 - 125	94	75 - 125	<0.10	mg/kg	NC	35		
7632600	Total Chromium (Cr)	2014/09/10	98	75 - 125	91	75 - 125	<1.0	mg/kg	6.4	35	93	41 - 159
7632600	Total Cobalt (Co)	2014/09/10	90	75 - 125	89	75 - 125	<1.0	mg/kg	1.8	35	96	75 - 125
7632600	Total Copper (Cu)	2014/09/10	89	75 - 125	89	75 - 125	<5.0	mg/kg	NC	35	97	73 - 127
7632600	Total Lead (Pb)	2014/09/10	84	75 - 125	85	75 - 125	<1.0	mg/kg	0.0063	35	96	54 - 146
7632600	Total Mercury (Hg)	2014/09/10	87	75 - 125	88	75 - 125	<0.050	mg/kg	NC	35		
7632600	Total Nickel (Ni)	2014/09/10	NC	75 - 125	90	75 - 125	<1.0	mg/kg	3.5	35	104	61 - 139
7632600	Total Zinc (Zn)	2014/09/10	NC	75 - 125	94	75 - 125	<10	mg/kg	2.4	35	106	72 - 128
7632817	Total Arsenic (As)	2014/09/10	95	75 - 125	88	75 - 125	<1.0	mg/kg	13	35	114	50 - 150
7632817	Total Cadmium (Cd)	2014/09/10	96	75 - 125	87	75 - 125	<0.10	mg/kg	NC	35		
7632817	Total Chromium (Cr)	2014/09/10	90	75 - 125	85	75 - 125	<1.0	mg/kg	3.4	35	92	41 - 159
7632817	Total Cobalt (Co)	2014/09/10	93	75 - 125	87	75 - 125	<1.0	mg/kg	7.4	35	100	75 - 125
7632817	Total Copper (Cu)	2014/09/10	93	75 - 125	88	75 - 125	<5.0	mg/kg	NC	35	104	73 - 127
7632817	Total Lead (Pb)	2014/09/10	98	75 - 125	90	75 - 125	<1.0	mg/kg	13	35	104	54 - 146
7632817	Total Mercury (Hg)	2014/09/10	100	75 - 125	96	75 - 125	<0.050	mg/kg	NC	35		
7632817	Total Nickel (Ni)	2014/09/10	NC	75 - 125	87	75 - 125	<1.0	mg/kg	9.1	35	108	61 - 139
7632817	Total Zinc (Zn)	2014/09/10	NC	75 - 125	89	75 - 125	<10	mg/kg	15	35	109	72 - 128

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QUALITY ASSURANCE REPORT(CONT'D)

SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7637199	(C6-C10)	2014/09/19	85	70 - 130	81	70 - 130	<100	ug/L	NC	40		
7637199	F1 (C6-C10) - BTEX	2014/09/19					<100	ug/L	NC	40		
7643036	Aroclor 1016	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Aroclor 1221	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Aroclor 1232	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Aroclor 1242	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Aroclor 1248	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Aroclor 1254	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Aroclor 1260	2014/09/19	96	30 - 130	99	30 - 130	<0.000050	mg/L	NC	40		
7643036	Aroclor 1262	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Aroclor 1268	2014/09/19					<0.000050	mg/L	NC	40		
7643036	Total Aroclors	2014/09/19					<0.000050	mg/L	NC	40		

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).

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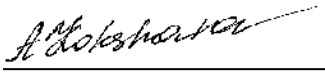
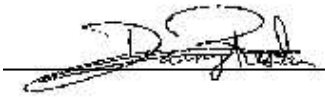
SILA REMEDIATION
Client Project #: PIN-2
Site Location: PIN-2 CAPE YOUNG
Sampler Initials: AP

VALIDATION SIGNATURE PAGE

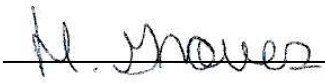
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anna Koksharova, M.Sc., Senior Analyst

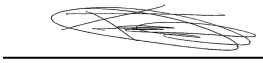


Daniel Reslan, Chem. Tech., Volatiles Supervisor



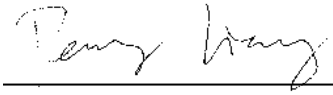
Heather Groves, Dip.BioSci, Manager Inorganics Edmonton

Justin Geisel, B.Sc., Supervisor, Organics



Kale Edwards, Senior Analyst

Luba Shymushovska, Senior Analyst, Organic Department



Peng Liang, Analyst II

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SILA REMEDIATION
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VALIDATION SIGNATURE PAGE(CONT'D)

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

Sandy Yuan, M.Sc., Scientific Specialist

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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Annex 2

QA/QC Discussion

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 Analytics 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 through the use of dedicated Waterra foot valves and tubing.

- 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.

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: 8 blind duplicate soil samples (P214-BD1 through P214-BD8) and one blind duplicate groundwater sample (P214-BDW1) were submitted, as an independent check on data reproducibility, and to assess the field QA/QC protocols. One field blank (P214-FB) was submitted for analysis.
- 10% Inter-laboratory Duplicate Samples were sent to Maxxam: Six blind duplicate soil samples (P214-27A, 18B, 1WA, 14A, 9A, 6WA, 1A and 5B) and one blind duplicate groundwater sample (P214-5W) 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 only provide a summary of the QA/QC results. The quantity of samples per batch per analysis is not provided.

Quality assurance documents from Maxxam indicate that the soil samples were in the following batches:

- Metals:
  - Batch 7632600
  - Batch 7632817
- PCBs
  - Batch 7628742
- PHC Fraction F1:
  - Batch 7627727
- PHC fraction F2-F3
  - Batch 7627782

The water samples were analyzed was analyzed the following batches:

- Batch 7631124 for most metals
  - Batch 7630982 for mercury
- Batch 7643036 for PCBs
- Batch 7637199 for PHC fraction F1
- Batch 7621721 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. Average RPD values of 30% for each parameter analyzed from the same laboratory are considered an indication of acceptable duplicate sample variability. For groundwater samples, an RPD of greater than 30% may reflect difference in sample turbidity or variance in the sample procedures. 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	5.0	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	0.50	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	5.0	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	5.0	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	25.0	mg/L	0.0002	0.0010
Pb	Exova	mg/kg	5.0	25.0	mg/L	0.0001	0.0005
	Maxxam	mg/kg	1.0	5.0	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	5.0	mg/L	0.0005	0.0025
Zn	Exova	mg/kg	1	5	mg/L	0.001	0.005
	Maxxam	mg/kg	10	50	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	0.25	mg/L	0.000200	0.001000
Total PCBs	Exova	mg/kg	0.10	0.50	ug/L	0.10	0.50
	Maxxam	mg/kg	0.01	0.05	ug/L	0.05	0.25
PHC F1	Exova	mg/kg	10	50	mg/L	0.1	0.5
	Maxxam	mg/kg	12	60	mg/L	0.1	0.5
PHC F2	Exova	mg/kg	50	250	mg/L	0.2	1
	Maxxam	mg/kg	10	50	mg/L	0.1	0.5
PHC F3	Exova	mg/kg	50	250	mg/L	0.1	0.5
	Maxxam	mg/kg	50	250	mg/L	0.2	1.0

* : The RPD Minimum is the minimum concentration to be reached for QA/QC Relative Percent Difference Calculatior

4.1.1. SOIL SAMPLES

Eight blind duplicate soil samples were 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 and III, respectively, 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. The concentration variation from nickel in 4 of the 8 samples leads to RPD values greater than 30% (from 47.4 to 56.4%). The greatest RPD was calculated for arsenic in sample P214-BD1 (71.9%). Sample P214-BD5 had the concentration of cadmium, nickel and zinc exceeding the acceptance criteria (40, 56.4 and 51%, respectively).

Results from the inter-laboratory duplicate samples shows that the acceptance criterion was only exceeded for nickel in samples P214-27A and P214-18B (53.7 and 33.3%, respectively). All other calculated RPD were within the acceptable limit. These exceedances do not raise any concern.

4.1.2. WATER SAMPLES

One blind duplicate groundwater sample (P214-BDW1 / P214-5W) 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 IV, along with the calculated RPD for each parameter and average RPD for each sample. As noted in the table, 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 significant differences in all metal concentrations between the original and intra-laboratory duplicate sample (between 85.96 and 101.64%). The RPD value for arsenic and cadmium could not be calculated, but the difference is still significant.

Review of the inter-laboratory duplicate results indicated only minor concentration variations.

Although trends and conclusions cannot be derived from only 1 sample, it should be noted that the turbidity level measured after purging of well (5W) was 216 ntu, which is higher that the turbidity measured in all other wells (from 61 to 145 ntu), while conductivity was the lowest recorded (420 compared to 560-753 uS/cm).

The results from field blank sample (P214-FB) and travel blank (P2/314-TB) that were submitted for metals, PCB and PHC analyses are also summarized in Tables IV. Chromium was detected (0.0025 mg/L) in the field blank and chromium, copper, lead and zinc were detected in the travel blank. All other parameters are below the detection limit. No explanation can be provided at this time to explain the detection of chromium in the field blank.

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' 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.

Table II: Soil Chemical Analysis Results - Intra-Laboratory Quality Assurance Samples

Sample #	Location	Parameters												
												F1	F2	F3
		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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
Detection Limit		0.2	0.01	0.5	0.1	1.0	5	0.5	1	0.01	0.1	10	50	50
RPD Minimum (Exova)		1.0	0.05	2.5	0.5	5.0	25	2.5	5	0.05	0.5	50	250	250
P214-27A	P2-27	8.7	0.03	2.1	1.5	3.8	<4.9	3	12	0.02	<0.1	<10	<50	190
P214-BD1		4.1	0.06	4.4	1.2	4.7	<5	5	9	0.02	<0.1	<10	<50	121
Relative % Difference		71.9	N/A	N/A	22.2	N/A	N/A	50.0	28.6	N/A	N/A	N/A	N/A	N/A
P214-18B	P2-18	2.1	0.05	8.2	3.8	5.5	<5	7.7	13	<0.01	<0.1	<10	<50	<50
P214-BD2		2.3	0.07	6.8	3.5	4.7	<5	6.1	15	<0.01	<0.1	<10	<50	<50
Relative % Difference		9.1	33.3	18.7	8.2	N/A	N/A	23.2	14.3	N/A	N/A	N/A	N/A	N/A
P214-1WA	MW-01	6.0	0.93	7.9	4.8	14.0	<5	9.9	33	0.07	<0.1	<10	<50	59
P214-BD3		5.8	0.90	8.4	4.3	12.3	<4.9	9.2	33	0.07	<0.1	<10	<50	75
Relative % Difference		3.4	3.3	6.1	11.0	12.9	N/A	7.3	0.0	0.0	N/A	N/A	N/A	N/A
P214-14A	P2-14	1.5	0.06	3.9	1.1	5.0	<4.9	2.6	9	<0.01	<0.1	<10	<50	<50
P214-BD4		1.4	0.07	3.3	1.1	4.7	<4.9	2.8	8	<0.01	<0.1	<10	<50	<50
Relative % Difference		6.9	15.4	16.7	0.0	N/A	N/A	7.4	11.8	N/A	N/A	N/A	N/A	N/A
P214-9A	P2-9	2.4	0.06	3.8	1.5	3.6	<4.9	2.8	84	0.01	<0.1	<10	<50	<50
P214-BD5		2.2	0.09	4.3	1.6	5.7	<4.9	5.0	50	0.03	<0.1	<10	<50	<50
Relative % Difference		8.7	40.0	12.3	6.5	N/A	N/A	56.4	51	N/A	N/A	N/A	N/A	N/A
P214-6WA	MW-06	2.4	0.07	2.9	1.1	4.9	<5	2.9	11	0.01	<0.1	<10	<50	<50
P214-BD6		2.8	0.08	2.9	1.1	4.3	<4.9	3.5	12	<0.01	<0.1	<10	<50	<50
Relative % Difference		15.4	13.3	0.0	0.0	N/A	N/A	18.8	8.7	N/A	N/A	N/A	N/A	N/A
P214-1A	P2-1	2.6	0.12	5.0	2.6	6.5	<5	2.9	26	0.01	<0.1	<10	<50	<50
P214-BD7		2.3	0.09	6.3	2.8	4.0	<5	4.7	19	0.01	<0.1	<10	<50	<50
Relative % Difference		12.2	28.6	23.0	7.4	N/A	N/A	47.4	31.1	N/A	N/A	N/A	N/A	N/A
P214-5B	P2-1	2.3	0.07	5.5	2.7	4.6	<4.9	3.8	13	<0.01	<0.1	<10	<50	<50
P214-BD8		2.2	0.06	6.3	3.1	4.5	<4.9	6.2	15	<0.01	<0.1	<10	<50	<50
Relative % Difference		4.4	15.4	13.6	13.8	N/A	N/A	48.0	14.3	N/A	N/A	N/A	N/A	N/A

Table III Soil Chemical Analysis Results - Inter-Laboratory Quality Assurance Samples

Sample #	Laboratory	Parameters												
												F1	F2	F3
		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]	C_6-C_{10} [mg/kg]	C_{10}-C_{16} [mg/kg]	C_{16}-C_{34} [mg/kg]
MDL (Exova)		0.2	0.01	0.5	0.1	1.0	5.0	0.5	1	0.01	0.10	10	50	50
RPD Minimum (Exova)		1.0	0.05	2.5	0.5	5.0	25.0	2.5	5	0.05	0.50	50	250	250
MDL (Maxxam)		1.0	0.10	1.0	1.0	5.0	1.0	1.0	10	0.05	0.01	12	10	50
RPD Minimum (Maxxam)		5.0	0.50	5.0	5.0	25.0	5.0	5.0	50	0.25	0.05	60	50	250
P214-27A	Exova	8.7	0.03	2.1	1.5	3.8	<4.9	3.0	12	0.02	<0.1	<10	<50	190
	Maxxam	7.5	<0.20	4.9	<2.0	<10	<2.0	5.2	<20	<0.10	<0.045	<54	<45	290
Relative % Difference		14.8	N/A	N/A	N/A	N/A	N/A	53.7	N/A	N/A	N/A	N/A	N/A	N/A
P214-18B	Exova	2.1	0.05	8.2	3.8	5.5	<5	7.7	13	<0.01	<0.1	<10	<50	<50
	Maxxam	2.7	N/A	6.4	3.1	<5	2.4	5.5	12	<0.05	<0.01	<12	<10	<50
Relative % Difference		N/A	N/A	24.7	N/A	N/A	N/A	33.3	8.0	N/A	N/A	N/A	N/A	N/A
P214-1WA	Exova	6.0	0.93	7.9	4.8	14.0	<5	9.9	33	0.07	<0.1	<10	<50	59
	Maxxam	5.6	0.98	6.7	4.4	13.0	3.8	9.3	35	0.083	<0.025	<29	<24	140
Relative % Difference		6.9	5.2	16.4	N/A	N/A	N/A	6.3	N/A	N/A	N/A	N/A	N/A	N/A
P214-14A	Exova	1.5	0.06	3.9	1.1	5.0	<4.9	2.6	9	<0.01	<0.1	<10	<50	<50
	Maxxam	1.5	<0.1	3.2	<1	<5	1.6	2.4	<10	<0.05	<0.01	<12	<10	<50
Relative % Difference		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
P214-9A	Exova	2.4	0.06	3.8	1.5	3.6	<4.9	2.8	84	0.01	<0.1	<10	<50	<50
	Maxxam	2.6	<0.1	3.4	1.4	8.8	5.2	2.6	74	<0.05	<0.01	<12	<10	<50
Relative % Difference		N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.7	N/A	N/A	N/A	N/A	N/A
P214-6WA	Exova	2.4	0.07	2.9	1.1	4.9	<5	2.9	11	0.01	<0.1	<10	<50	<50
	Maxxam	3.4	<0.1	2.6	<1	<5	2.4	2.1	14	<0.05	<0.01	<12	<10	<50
Relative % Difference		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
P214-1A	Exova	2.6	0.12	5.0	2.6	6.5	<5	2.9	26	0.01	<0.1	<10	<50	<50
	Maxxam	2.3	0.10	4.4	1.8	<5.0	2.5	3.1	17	<0.05	<0.01	<12	<10	<50
Relative % Difference		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
P214-5B	Exova	2.3	0.07	5.5	2.7	4.6	<4.9	3.8	13	<0.01	<0.1	<10	<50	<50
	Maxxam	2.2	<0.1	4.9	2.2	<5	2.3	4.3	13	<0.05	<0.01	<12	<10	<50
Relative % Difference		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table IV: Groundwater Chemical Analysis Results - Quality Assurance Samples

Sample #	Laboratory	Parameters												
		As [mg/L]	Cd [ug/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	0.010	0.0005	0.0001	0.0010	0.0001	0.0005	0.001	0.005	0.1	0.2	0.2	0.1
RPD Minimum (Exova)		0.0010	0.050	0.0025	0.0005	0.0050	0.0005	0.0025	0.005	0.025	0.5	1.0	1.0	0.5
MDL (Maxxam)		0.0002	0.020	0.0010	0.0003	0.0002	0.0002	0.0005	0.003	0.200	0.2	0.1	0.1	0.2
RPD Minimum (Maxxam)		0.0010	0.100	0.0050	0.0015	0.0010	0.0010	0.0025	0.015	1.000	1.0	0.5	0.5	1.0
Intra-Lab Duplicate Samples (Exova)														
P214-5W	Exova	0.0061	<0.010	0.264	0.0015	0.0460	0.0023	0.0390	0.065	0.008	<0.1	<0.2	<0.2	<0.1
P214-BDW1		0.0177	0.110	0.704	0.0046	0.1230	0.0064	0.1150	0.163	0.014	<0.1	<0.2	<0.2	0.1
Relative % Difference		N/A	N/A	90.91	101.64	91.12	94.25	98.70	85.96	N/A	N/A	N/A	N/A	N/A
Inter-Lab Duplicate Samples (Exova-Maxxam)														
P214-5W	Exova	0.0061	<0.010	0.264	0.0015	0.0460	0.0023	0.0390	0.065	0.008	<0.1	<0.2	<0.2	<0.1
	Maxxam	0.0056	0.088	0.210	0.0012	0.0380	0.0026	0.0320	0.050	<0.200	<0.2	<0.1	<0.1	<0.2
Relative % Difference		8.5	N/A	22.8	22.2	19.0	12.2	19.7	26.1	N/A	N/A	N/A	N/A	N/A

P214-FB	Field Blank	<0.004	<0.01	0.0025	<0.0002	<0.002	<0.0002	<0.001	<0.002	<0.005	<0.1	<0.2	<0.2	<0.1
P2/314-TB	Travel Blank	<0.0002	<0.01	0.0006	<0.0001	0.002	0.0002	<0.0005	0.002	<0.005	<0.1	<0.2	<0.2	<0.1

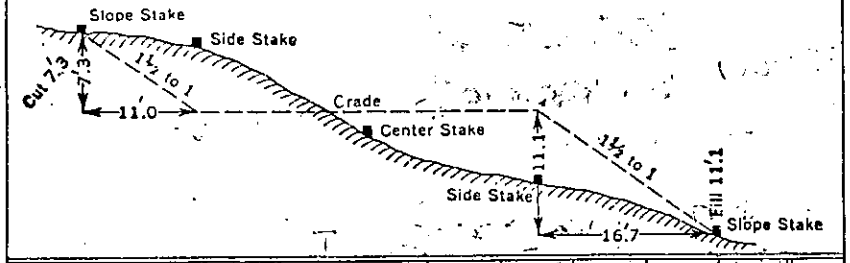
Annex 3

Field Notes and COCs

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

(1)

AUGUST 14, 2014 10°C, OVERCA
CALM.

1330 DEPART CB → PIN 2
ADLAIR (NOMAD AIR). - DORNIE
228

ANDREW PASSALIS, JOHN-HENRY
DYSON & BENJAMIN & JOE.

2000 LAND AT P.N. 2, UNLOAD,
SET UP CAMP → 0:00

AUGUST 15, 2014 6°C, CALM,
OVERCAST 2 to 9°C.
MOST OF DAY

SOUTH BARROW LANDFILL

WP 2	V - WNW / S @ NE CRNR
3	V W/N @ POTHOLE 60x60x10
4	V - NW @ PONDED AREA @ NW CR
5	V - N @ PONDED I @ TOE NOS
6	V - E/S @ NW TOE
7	V - S/E @ NW TOP PAN SW
	V - SE @ SETTLEMENT @ CNRN (N-S
	60x20x10

LEVEL

8 PAN E-NW @ SW CRNR, V-S/E

9 V- E/N @ SW TOE, V-NW @ STAN + PONDED ▽

10 V- NE @ SW TOE, STAINING PRECIPITATE ALONG TOE, BACT. SHEEN ON SW CRNR

11 P214-29 A/B
0 - BLK ORG SILT A - 0-10
40 - FRACT. ROCK B - 30-40
PONDED ▽ @ SURFACE

12 P214-28 A/B
0 - BLK ORG + SILT A - 0-10
50 - ROCK B - 40-50

13 P214-27 (A/B)
0 BLK ORG + SILT (BD1) 0-10
30 GREY SILT + ORG 40-50

14 V- N/W @ SE TOE + VEG - SPARSE ALONG S SLOPE

15 V- W/N @ POTHOLE 60x40x15 N-S

16 DEPRESSION 80x60x10 V- W/N
17 MIN EROSION (E-W) V- W/E 2mx20x0 COARSE MAT'L

18 P214-18 A/B @ GRADIENT LOC.
0-1 BRN SAND + GRAVEL, DRY. U-11
40-5

SOUTH LANDFILL EAST

20 PAN NE/NW FROM S SIDE

21 V- NE/NW @ SE TOE

22 PAN NE-W @ SE CRNR.

23 PAN NW/S @ NE CRNR

24 V- NW/SSW @ NE TOE

25 MIN SETTLEMENT, 6mx20-30x10.
V- E/NE

26 P214-20 A/B
0-DK BRN SAND, WITH GRAVEL, TR ORG, DRY 0-4

27 V- SW/SE @ NE TOE

28 V- W/SE @ NE CRNR

29 PAN SE-NE @ W CRNR

30 V- NNE/SE @ W-TOE

31 V- SE/NW ALONG AXIS.

32 V- NW @ E END OF EROSION
SE 7x 10-20 x 5↓. SAME

LEVEL

VER + SPARSE SUBSCRIPT SLOPE + N CRNR

33 P214-19 A/B
0- BRN SAND WITH PLATY BLR PIECES, DRY 0-10
30- FRAC. BLR. REFUSAL 20-30

34 P214-18 A/B - BRN SAND, W/ GRAVEL 0-10
BRe30 B2 - 20-30

35 - VER - N - CRNR

36 P214-17 A/B.
0- DK BRN SAND + GRAVEL, TROBS

TIER II DF

VT-4 WP 37 - download data ✓
VT-2 WP 38 " " ✓

MW-4 4m NW WP 39
0-5 BLK ORG + SAND
5-50 GREY GRAVEL, SOME SAND, DAM
A 0-10
B 40-50

VT-3 WP 40

MW-3 W A/B 2.5m SE WP 41
0- DK BRN/GREY SAND, SOME GRAVEL, TR ORG A- 0-10
B- 40-50

VT-1 WP 43 - BAD LOGGER + SENSORS PULL LOGGER;

MW-2 W A/B WP 44
3.5m SW
0-10 DK BRN/BLK SAND + ORG
10-50 BRN SAND, SOME GRAVEL, DAMP
A 0-10
B 40-50

MW-1 WP 45 W A/B 2m SE
0-20 DK BRN/BLK ORG, NON-FIBR. 0-10 B13
20-50 BRN/GREY GRAVEL, SOME SAND 40-50

(6)

PALLET LINE WEST

46 WSW/SE @ N TOE

47 DAN @ N CRNR.

48 V-S ALONG W SIDE.

49 V-S " " MID W. SIDE

50 V-N/SE @ SW CRNR, PANSE-N

51 V-W/SE @ SW TOE

52 V-NE ALONG E SIDE

53 V-NNE ACROSS TOP.

54 V-SSW/NNW

55 V-W ALONG NW SIDE.

56 P214-12 A/B

DK BRN GRG/FIBROUS 0-10

40-50.

57 MIN LIN. DEPRESSION 1m X 20 X 5↓

ON SE CREST (NNW/SSE DIR.) V-N/E

58 V. SRBSE VEG. ON E SIDE SLOPE.

59 P214-11 A/B.

O-DK BRN SAND W/ BRKN

BIR., DAMP, BREES

A 0-10 B 25-35.

60 P214-10 A/B

O DK BRN-BRN BRKN BIRCK, SOME

TR SAND, PLATEY 0-10

40-50.

61 P214-9 A/B

LT BRN GRAVEL/ROCK, TR

SAND DRY (BDS) (A)

TIER II

MW-4 SLUP = 89-34 =

Σ 1.54 bott 2.90

T 3.5/3.6/3.8 COND 752/753/753

pH 7.9/8.0/8.0 ✓ PURGE 2.5L

COLLECT ALL TURB. 145

MW-3 SLUP = 94-36 =

Σ 2.07 bott 2.73

T-2.9/3.0/3.1 COND 759/741/732

pH 7.9/8.0/7.9 PURGE 1.5L

COLLECT ALL TURB. 96.

MW-2 SLUP = 77-24 =

Σ 1.35 bott 2.94

T = 4.8/2.9 ✓ Cond 778/760/747 ✓

pH - 8.1/8.0/8.0 ✓ Purge 3L.

COLLECT - ALL TURB. 77

MW-1 SLUP = 87-32

Σ 2.28 bott 2.33

"dry"

AIRSTRIP SOUTH LANDFILL

62 V. N/S FROM SE. CRNR/TOE

SP. MOD VEG ON S SLOPE.

(7)

LEVEL

63 PAN NNE-SW FROM SE CRNR

64 V- S/NNW FROM NE CRNR

64 V- ENE/S FROM NW CRNR, PAN SW-NE

65 → LIN. EROS/SETTLEMENT TOP-TOE

66 ↗ 6m E-W, 25-30 x 10-15 ↓
V+W/E

67 V- NNW(E) ALONG SIDES

68 V- SW C SEASONAL PONDING C TOE. S.

69 P214-16 A/B
0- DK BRN-BRN. BRKN ROCK, TR SOME
SAND, DRY, TRORG 0-10
40-50

70 P214-15 A/B
BRN/GRY GRAVEL, SOME SAND
ANG. 0-10

71 P2H-14 (A) B
LT BRN SAND, FG, SOME
GRAVEL, DRY → 0-10
(BD4) 40-50

72 P214-13 A/B
0' DK BRN GRAVEL, SOME SAND
TRORG 0-10
40-50

NON-HAZARDOUS WASTE LF

MW-08 SLUP 73.20-53
Σ swing bott 1.39

MW-05 SLUP 85-31=54
Σ 1.81 bott 3.26 TURB-216
Purge 3.2L T-4.8/3.5V cond 436 ✓426/420
pH-8.5/8.6/8.5 ✓ (BDW1) White, trans
Collect 9x40, 6x250, 6x500, 3x200pL, 3x1000gL

MW-06 SLUP 81-28
Σ 1.92 bott 2.83
Purge 2L T-4.0/3.9V cond 824/804/1766
pH-8.7/8.4/8.3 C+C TUR-61
Collect, 3x40, 2x250, 2x500, 1x1000gL, 1x200pL

MW-07 SLUP 83-33=0.50m
Σ 2.24 bott 2.85
Purge 1.0L T-4.1/4.0V cond 853/621/569
pH-8.5/8.3/8.3 TURB-82
Collect ALL C+C

LEVEL

AUGUST 16, 2010 CLEAR, 8°C - 30-40 Km/h NW

USAF LANDFILL

WP 73 V- WNW @ E SIDE

74 V- SW/SE @ NE CRNR

75 V- SE/NE @ NW CRNR

76 V- SE/NE @ POTHOLE ON SIDESLOPE 50x30x20↓

77 V- SE/NW ALONG CL

78 V- NW/NE @ SW CRNR

NO VEG, SW AREA ROUGH GRADED W/ TYPE 1

79 P214-4 A/B 0-10 BDT

BRN SAND + GRAVEL DRY 30-40

80 P214-1 A/B 0-10 BDT

BRN SAND, F-C, W/ GRAVEL, TR ORG 40-50

81 P214-2 A/B.

BRN GRAVEL/FRAC BR, SOME SAND 0-10 20-30

93 P214-3 A/B 0-10

DK BRN. GRAVEL, SOME SAND, TR ORG 30-40 L-B/R

STATION WEST LANDFILL

83 PAN NNW-S @ EAST SIDE

84 V- NW/S ALONG E SIDE

85 PAN NW-S FROM MOUND

86 V- SE/SW @ N CRNR

87 PAN SSW-NE @ NW MOUND/CRNR

88 V - SSE ALONG W SIDE

89 V - NNW @ W SIDE

90 V - N ALONG W SIDE (SW TOE CRNR)

91 PAN E-NW

TRACKS V- NO TIRE NUTS - SHALLOW - SAME

* NO VEG, NO OBV SETT/EROSION.

MOST ROUGH GRADING W/ TYPE 1 COVER

93 P214-5 A/B BD8 0-10 40-50

0-30 dk sand + org

30- brn/grey sand f-med g

94 P214-6 A/B 0-10 40-50

DK BRN GRAV + FRACT BR, SOME SAND TR ORG

95 P214-7 A/B 0-10 40-50

BRN/GREY GRAVEL, W SAND, DRY

96 P214-8 A/B 0-10 40-50

BRN GRAVEL SOME F-C SAND, DRY

TIER II

97 V- SE @ MW-1

98 V- SE @ NW SIDE

99 V- NE @ MW-2

100 V- NE @ SW SIDE

101 V- NW @ MW-3

SKIP TO PREVEE.

AIRSTRIP LANDFILL.

131 V- N/W @ S. CRNR

132 V- NE ACROSS TOP.

133 V - ENE ACROSS TOP

134 V- NW/S | PAN S-N

135 DAN S-N. | SAMPLING @ Z6.

136 DEPRESSION (SW-NE) V- N/E
150 x 20-30 x 10-15↓

137 - P214-26 A/B
BEACH GRAVEL TO 0.15, 0-10
0.15 GRAVEL, TR CS SAND. 40-50

138 V-SSE/NE ALONG W DRAINAGE.
-STARVE

139 DAN S-N. ACROSS NW COVER

140 V- W/E ACROSS N-SLOPE

141 V. W/SSW/SE @ TOE

142 P214-25 A/B. - SAME. 0-10
beach gravel, some sand 40-50

143 PAN N/NW-S

144 V- NW B/W LOBES, V- E ALONG TOE

145 SM. RUSTED METAL. 10x10.

146 STRAPPING X2 B/W LOBES, V-NW-
30-75 x 3-

148 V-SE @ STRAPPING
ALSO MISC TIN LIDS, SM SCRAP AROUND
TOE OF NE LOBE

149 PAN SSW-N. FROM PEAK

150 V-NW ALONG NE TOE

151 V- SE/W ALONG N TOE

152 V- NE (SAMPLING 24) / SE ALONG TOE

153 RUSTED TIN CAN NEAR 23
* NO VEG / EROSION.

154 - P214-24 A/B 0-10
LT BRN GRAVEL, TR SAND 40-50

155 - P214-23 A/B 0-10
LT BRN GRAVEL, SOME CS SAND 40-50

156 - P214-22 A/B 0-10
MT BRN S+G, DRY 40-50

157 P214-21 A/B 0-10
LT BRN GRAVEL, SOME SAND, DRY 40-50

LEVEL

102 V-NW @ SE S. DE
103 V-W @ NW ~~S~~
104 V-SW @ NE S. DE
105 V-SE/SW @ N TOE
106 " " MID SLOPE
107 V-SE/SW @ N CRNR, PAN W-E
~~125~~ V-S @ VT-3, VT-2 IN BKGND
~~126~~ ~~V-SW/NW DEPR ON COVER~~
108 RESULT OF CBLD-GRADING
109 V-SW/NW @ NE CNR (VT-4) PAN N-SW
~~110~~ V-NE/W @ SMALL DEPR BELOW CREST
70 x 30 x 15↓ (NE/SW)
110 V-SW/NW MID E SIDE
111 " " TOE E
112 V-NE/NW @ S TOE
113 " " MID SLOPE
114 " S CRNR, PAN E-NW
115 V-NW/SW @ DEPR (GRADING)
96 x 30 x 10
116 V-SE/NW @ MIN EROS. 14 x 20 x 30, 5↓
117 V-SE/NW MIN EROS 1.7 x 15 x 5↓
118 V-NW @ VT-2 (VT-1 - BKGND)
119 V-SE/NW @ MIN EROS 8 x 0.1-0.25 x 5↓
120 V-W/S @ POTHOLE @ CREST
40 x 30 x 15↓ (NE SW)
121 V W/S @ POTHOLE @ CREST
30 x 30 x 15↓

122 V-NE @ VT-1 (VT-3 BKGND)
123 MIN DEPR V-SW/SE 50-60, 60, 10↓
124 MIN EROS - SAME V-SW/NE
7m x 10-15 x 2↓ barely noticeable
TRACE
125 V-SE/NW @ W. CRNR, PAN S-NE
V-SE/NW - MID SLOPE
126 " " TOE
127 V-NW/SE @ MIN EROS IN TYPE 1.
15m x 20 x 5↓ NO FINES/ALL
128 V-NW/SE " EROS - self cnt
7m x 20 x 5↓ fine work
129 MIN DEPR FROM GRADING
9.4m x 15 x 2.5 V-SW
130 V-NE

NON HAZARDOUS WASTE LANDFILL

WATER SAMPLE - SEE PAGE -

MW-7W A/B 3 mi WNW
DK BRN GRAVEL, SOME SAND, TR ORG
0-10
40 50

LEVEL

WP 159 SW A/B 2m NW/NW
LT BRN/GREY GRVL, TR SAND, DRY
0-10
40-50

160 - V. SW @ N side
161 V. NW/SW @ NE TOE
162 V. NW/SW, PAN - NW-SE @ NE CRNR
↳ MIN DEPR. ON N SIDE BELOW CREST 1m. V-NE, SSW
80x50x10↓
165 MIN DEPR 3m W of 162, V-NE/SSW
60x40x5↓, 1m below crest
166 MIN EROSION TOP-TOE. V-NNE/SSW
12m x 5 x 5d
168 " " 10m L, 20W, 2↓
V-NNE/SSW ↳TOP→
169 " V-NNE/SSW " 9m TOP x 20W, 2↓
170 V-SIE, PAN SW-E @ NW CNR
171 - V-SIE AT NW TOE
172 V-SE @ W. SIDE
173 V-SE/NE @ SW TOE
174 P2 14-5W A/B 3m SE
BRN/GREY SAND W/ GRAVEL
0-10
40-50

175 V-NE @ SOUTH SIDE
177 P2 14-6W A/B BD6
LT BRN/GREY SAND, SOME GRAVEL
DRY 2.5m NNE 0-10
40-50
178 V-SE/NE, PAN SE-N @ SW CRN
179 MIN DEPR - SAME, 3m below CREST
V- SE/NE/SW 40x40x15.
180 MIN DEPR ON CREST 2m x 40x5
V-NE/SE
181 SP VEG ON S. SLOPE
182 MIN EROSION TOP-TOE: V-SW/NE
18m x 20-30 x 2↓
183 VEG ON SE SIDE
184 V- NNE/NW; PAN NE-W
@ SE CRNR 15 x 15 x 5-7↓ x2
V-SSE/NNW @ EROSION TOP-TOE - 185
185 - V- NE/NW FROM SE TOE
186 - 3m L x 15W x 5-7↓ @ TOE
V-NW
187 V-NW @ MIN EROSION ON N SIDE
OF SE CRNR 10x5↓
188 V-WNW @ EROSION - TOP @ TOE ALMOST
14m L 20 + SE W x 5-10↓
189 V-NW @ MIN EROS TOP - ½ LEVEL
10x5↓

190 - V. W-E SIDE

191. MIN DEPR. ON CREST. - S.
V-N/E 80 x 20-30 x 5-10+

192 V-S @ VEHICLE RUTS 1/2 ALONG E CREST 2x5↓

TIER II DF WATER SAMPLING
SEE PAGE —

AUGUST 17, 2014

830 — PACKING CAMP; DEMOB TO PIN-3

1115 PICK UP LOAD 1200

SETUP CAMP → 1500

LOCAL CAMPERS ON POINT

BATTERIES, MILK, SOAP, WATER SUPPLIES + COOLERS

- BRKN 10°C, 10KM/H NW
- PERIODIC RAIN.

MAIN LANDFILL

WP 193 V-W 3m E

P314-5W A/B S = 1.89

SLUP = 47 bott - 2875

LT BRN GRVLY SAND W COBBLES, DRY 0-10
40-50

A/B B01

P314-6W WP 194 V-E 1.5m N.

SLUP = 55 S 168 bott 284

BRN CS SAND, DRY, TR GRAVEL 0-10

B01 40-50

P314-7W - WP 195 A/B V-E

SLUP 30 S 240 bott 278

LT BRN SAND + FROC ROCK (GRAVEL), DRY, 0-10
B1@40 30-40

P314-8W WP 196 A/B V-NE

SLP 53 S 122 bott 256

BRN SAND, TR ORGS TO 15, DAMP 0-10
40-50.

197 V-W @ E SIDE

198 "

199 " VT-1 VISIBLE

200 "

201 V-SE/NW @ TOE

202 V-SE/SW @ TOE

203 SM DEPR @ TOE 1m x 40 x 10+ V-S

204 " " @ TOE 4m x 30-80 - 5-40 V-S/N

Exova Testing, calibrating, advising

www.exova.com ED 120-02

Invoice to:

Company: SILA REMEDIATION
Address: 1260 bd. Lebourgneuf Suite 250 Quebec, QC
Attention: J.P. Pelletier
Phone: 418-624-1683 ex5892
Cell: 581-984-2585
Fax:
E-mail: jean-pierre.pelletier@lvm.ca
Agreement ID:
Copy of report: Y

Report To:

Company:
Address:
Attention: Andrew Passalis
Phone:
Cell: 204-791-4938
Fax:
E-mail 1: andrewpassalis@gmail.com
E-mail 2:
Copy of invoice:

Project Information

Project ID: PIN-2 2014
Project Name: 2014 LFM
Project Location: CAPE YOUNG
Legal Location:
PO/AFE#:
Proj. Acct. Code:
Quote # 14-071-307613

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		

Sample Custody (please print)

Sampled by: A. PASSALIS
Company: SILA

This section for Lab use only

Date/Time stamp: Aug. 25/14

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: Signature:

Special Instructions/Comments (please include contact information including ph. # if different from above).

	Site I.D.	Sample Description	Depth start in cm	Depth end m	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	TPH (F1-F3)	PCBs	Metals (see Quote list)															Indicate in the space allotted any deficiencies by the corresponding number.
								↓	Enter tests above (√ relevant samples below)																	
1		P214-1A			16/8/14	SOIL		2	X	X	X															
2		P214-1B							X	X	X															
3		P214-2A							X	X	X															
4		P214-2B							X	X	X															
5		P214-3A							X	X	X															
6		P214-3B							X	X	X															
7		P214-4A							X	X	X															
8		P214-4B							X	X	X															
9		P214-5A							X	X	X															
10		P214-5B							X	X	X															
11		P214-6A							X	X	X															
12		P214-6B							X	X	X															
13		P214-7A							X	X	X															
14		P214-7B							X	X	X															
15		P214 8A							X	X	X															

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/)

LOT: 1022352 COC

Shipping: COD Y/ N
and size of coolers 4 TOTAL
Temp. received: 4.0
Delivery Method:
Waybill:
Received by:

Please indicate any potentially hazardous samples

Page 1 of 7 Control # C 0042468

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ED 120-02

Project Information

Project ID: PIN-2 2014
Project Name: 2014 LFM
Project Location: CAPE YOUNG
Legal Location:
PO/AFE#:
Proj. Acct. Code:
Quote #

Invoice to:

Company: SLCA
Address:
Attention:
Phone:
Cell:
Fax:
E-mail:
Agreement ID:
Copy of report:

Report To:

Company:
Address:
Attention:
Phone:
Cell:
Fax:
E-mail 1:
E-mail 2:
Copy of invoice:

Report Results		Regulatory Requirement	
E-Mail		HCDWQG	
Mail		Ab Tier 1	
Online		SPIGEC	
Fax		BCCSR	
PDF		Other (list below)	
Excel			
QA/QC			

Sample Custody (please print)

Sampled by: A PASSATH
Company: SLCA

This section for Lab use only

Date/Time stamp:

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: _____ Signature: _____

Special Instructions/Comments (please include contact information including ph. # if different from above).

	Site I.D.	Sample Description	Depth start in	Depth start cm	Depth start m	Depth end in	Depth end cm	Depth end m	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	TPH (F1-F4)	PCBs	Metals
1		P2 14 8B							16/8/14	SOIL		2	X	X	X
2		9A							15/8/14				X	X	X
3		9B											X	X	X
4		10A											X	X	X
5		10B											X	X	X
6		11A											X	X	X
7		11B											X	X	X
8		12A											X	X	X
9		12B											X	X	X
10		13A											X	X	X
11		13B											X	X	X
12		14A											X	X	X
13		14B											X	X	X
14		15A											X	X	X
15		15B											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

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 4
Temp. received:
Delivery Method:
Waybill:
Received by:

Please indicate any potentially hazardous samples

Page 2 of 7 Control # C 0042469

ED 120-02

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ED 120-02

Invoice to:

Company: SILA
Address:
Attention:
Phone:
Cell:
Fax:
E-mail:
Agreement ID:
Copy of report:

Report To:

Company:
Address:
Attention:
Phone:
Cell:
Fax:
E-mail 1:
E-mail 2:
Copy of invoice:

Report Results

		Regulatory Requirement	
E-Mail		HCDWQG	
Mail		Ab Tier 1	
Online		SPIGEC	
Fax		BCCSR	
PDF		Other (list below)	
Excel			
QA/QC			

Project Information

Project ID:
Project Name:
Project Location:
Legal Location:
PO/AFE#:
Proj. Acct. Code:
Quote #

Sample Custody (please print)

Sampled by:
Company:

This section for Lab use only

Date/Time stamp:

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: Signature:

Special Instructions/Comments (please include contact information including ph. # if different from above).

	Site I.D.	Sample Description	Depth start	Depth end	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	TPH (F1-F3)	PCBs	Metals														
1		16A			15/8/14	Soil		2	X	X	X														
2		16B						2	X	X	X														
3		17A							X	X	X														
4		17B							X	X	X														
5		18A							X	X	X														
6		18B							X	X	X														
7		19A							X	X	X														
8		19B							X	X	X														
9		20A							X	X	X														
10		20B							X	X	X														
11		21A							X	X	X														
12		21B			16/8/14				X	X	X														
13		22A							X	X	X														
14		22B							X	X	X														
15		23A							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

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 3 of 7

Control # C 0042470

ED 120-02

Exova — Testing, calibrating, advising

www.exova.com

ED 120-02

Invoice to:

Company: SLA
Address:
Attention:
Phone:
Cell:
Fax:
E-mail:
Agreement ID:
Copy of report:

Report To:

Company:
Address:
Attention:
Phone:
Cell:
Fax:
E-mail 1:
E-mail 2:
Copy of invoice:

Report Results

		Regulatory Requirement	
E-Mail		HCDWQG	
Mail		Ab Tier 1	
Online		SPIGEC	
Fax		BCCSR	
PDF		Other (list below)	
Excel			
QA/QC			

Project Information

Project ID:
Project Name:
Project Location:
Legal Location:
PO/AFE#:
Proj. Acct. Code:
Quote #

Sample Custody (please print)

Sampled by:
Company:

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: Signature:

This section for Lab use only

Date/Time stamp:

Special Instructions/Comments (please include contact information including ph. # if different from above).

	Site I.D.	Sample Description	Depth start (in / cm)	Depth end (m)	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	TPH (F1-F3)	PCB	Metals	Enter tests above (√ relevant samples below)
1		23B			16/8/14	Soil		2	X	X	X	
2		24A							X	X	X	
3		24B							X	X	X	
4		25A							X	X	X	
5		25B							X	X	X	
6		26A							X	X	X	
7		26B							X	X	X	
8		27A			15/8/14				X	X	X	
9		27B							X	X	X	
10		28A							X	X	X	
11		28B							X	X	X	
12		29A							X	X	X	
13		29B							X	X	X	
14		1WA			15/8/14				X	X	X	
15		1WB							X	X	X	

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

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 4

Temp. received:

Delivery Method:

Waybill:

Received by:

Please indicate any potentially hazardous samples

Page 4 of 7

Control # C 0042471

ED 120-02

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www.exova.com

ED 120-02

Project Information

Project ID:

Project Name:

Project Location:

Legal Location:

PO/AFE#:

Proj. Acct. Code:

Quote #

Invoice to:

Company: SLA

Address:

Attention:

Phone:

Cell:

Fax:

E-mail:

Agreement ID:

Copy of report:

Report To:

Company:

Address:

Attention:

Phone:

Cell:

Fax:

E-mail 1:

E-mail 2:

Copy of invoice:

Report Results / Regulatory Requirement

Report Results		Regulatory Requirement	
E-Mail		HCDWQG	
Mail		Ab Tier 1	
Online		SPIGEC	
Fax		BCCSR	
PDF		Other (list below)	
Excel			
QA/QC			

Sample Custody (please print)

Sampled by:

Company:

This section for Lab use only

Date/Time stamp:

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:

Signature:

Special Instructions/Comments (please include contact information including ph. # if different from above).

	Site I.D.	Sample Description	Depth start in	Depth start cm	Depth end m	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	TPH (F1-F3)	PCB	Metals										
1		2WA				15/8/14	Soil		2	X	X	X										
2		2WB								X	X	X										
3		3WA								X	X	X										
4		3WB								X	X	X										
5		4WA								X	X	X										
6		4WB								X	X	X										
7		5WA				16/8/14				X	X	X										
8		5WB								X	X	X										
9		6WA								X	X	X										
10		6WB								X	X	X										
11		7WA								X	X	X										
12		7WB								X	X	X										
13		8WA								X	X	X										
14		8WS								X	X	X										
15		BD1								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

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 2

Temp. received:

Delivery Method:

Waybill:

Received by:

Please indicate any potentially hazardous samples

Page 5 of 7

Control # C0042472

ED 120-02

Exova Testing, calibrating, advising

www.exova.com ED 120-02

Invoice to:

Company: SLR

Address:

Attention:

Phone:

Cell:

Fax:

E-mail:

Agreement ID:

Copy of report:

Report To:

Company:

Address:

Attention:

Phone:

Cell:

Fax:

E-mail 1:

E-mail 2:

Copy of invoice:

Report Results		Regulatory Requirement	
E-Mail		HCDWQG	
Mail		Ab Tier 1	
Online		SPIGEC	
Fax		BCCSR	
PDF		Other (list below)	
Excel			
QA/QC			

Project Information

Project ID:

Project Name:

Project Location:

Legal Location:

PO/AFE#:

Proj. Acct. Code:

Quote #

Sample Custody (please print)

Sampled by:

Company:

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: Signature:

Special Instructions/Comments (please include contact information including ph. # if different from above).

This section for Lab use only

Date/Time stamp:

	Site I.D.	Sample Description	Depth start	Depth end	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	TPH (F1-F3)	PCBs	Metals	
1		BD2			15/8/14	SOIL		2	X	X	X	
2		BD3			"	"		"	X	X	X	
3		BD4			"	"		"	X	X	X	
4		BD5			"	"		"	X	X	X	
5		BD6			"	"		"	X	X	X	
6		BD7			16/8/14	"		"	X	X	X	
7		BD8			"	"		"	X	X	X	
8		2W			17/8/14	WATER		9	X	X	X	
9		3W			"	"		"	X	X	X	
10		4W			"	"		"	X	X	X	
11		5W			"	"		"	X	X	X	
12		6W			"	"		"	X	X	X	
13		7W			"	"		"	X	X	X	
14		BDW1			"	"		"	X	X	X	
15		FB			"	"		"	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

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 6

Temp. received: Delivery Method:

Waybill:

Received by:

Please indicate any potentially hazardous samples

Page 6 of 7 Control # C 0042473

ED 120-02

Exova Testing, calibrating, advising

www.exova.com ED 120-02

Invoice to:

Company: SLA
Address:
Attention:
Phone:
Cell:
Fax:
E-mail:
Agreement ID:
Copy of report:

Report To:

Company:
Address:
Attention:
Phone:
Cell:
Fax:
E-mail 1:
E-mail 2:
Copy of invoice:

Report Results		Regulatory Requirement	
E-Mail		HCDWQG	
Mail		Ab Tier 1	
Online		SPIGEC	
Fax		BCCSR	
PDF		Other (list below)	
Excel			
QA/QC			

Project Information

Project ID:
Project Name:
Project Location:
Legal Location:
PO/AFE#:
Proj. Acct. Code:
Quote #

Sample Custody (please print)

Sampled by:
Company:

This section for Lab use only

Date/Time stamp:

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: Signature:

Special Instructions/Comments (please include contact information including ph. # if different from above).

	Site I.D.	Sample Description	Depth start in	Depth start cm	Depth end in	Depth end cm	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	TPH (F1-F3)	PCBs	Metals														Indicate in the space allotted any deficiencies by the corresponding number.
						m				↓	Enter tests above (√ relevant samples below)																
1		TRIP BLANK						Water		9	X	X	X														
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											
13																											
14																											
15																											

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

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Indicate lot # or affix barcode here

Shipping: COD Y/ N

and size of coolers 6

Temp. received: Delivery Method:

Waybill:

Received by:

Please indicate any potentially hazardous samples

Page 7 of 7 Control # C0042474

ED 120-02

Maxxam

Calgary: 4000 19st St. NE, T2E 6P8. Ph: (403) 291-3077, Fax: (403) 735-2240, Toll free: (800) 386-7247
Edmonton: 9331 - 48 Street, T6B 2R4. Ph: (780) 577-7100, Fax: (780) 450-4187, Toll free: (877) 465-8889
www.maxxamanalytics.com

09/190(1) MPC

Chain of Custody A135189

Page: 1 of 1

	Invoice To: C/O Report Address ☐	Report To: Same as Invoice ☒
Company:	SILA REMEDIATION	
Contact:	J.P. Pelletier	
Address:	1260 Boul Lebourgneuf	
	Prov: QUEBEC, QC PC:	Prov: PC:
Contact #s:	Ph: 418-626-1688 EXT 5892	Ph: Cell:

Report Distribution (E-Mail): andrew.passalis@gmail.com

REGULATORY GUIDELINES:
☐ AT1
☐ CCME
☐ Regulated Drinking Water
☐ Other:

All samples are held for 60 calendar days after sample receipt, unless specified otherwise.

PO #:
Project # / Name: PIN-2 /
Site Location: PIN-2 CAPE YOUNG
Quote #:
Sampled By: A. PASSALIS

SERVICE REQUESTED: ☐ RUSH (Contact lab to reserve) Date Required: ☒ REGULAR (5 to 7 Days)

	Sample ID	Depth (unit)	Matrix GW / SW Soil	Date/Time Sampled YY/MM/DD 24:00	SOIL: ~~BTEX F1-F4~~ F3	Sieve (75 micron)	Regulated Metals (CCME / AT1)	Salinity 4	Assessment ICP Metals	Basic Class II Landfill	DCBS	Metals (As, Cr, Cu, Co, Pb, Ni, Hg, Zn)	WATER: ☐VOCs	☐BTEX F1-F2	☐BTEX F1-F4	☐ Routine Water ☐ Turb ☐ F	☐ TOC ☐ DOC	Regulated Metals (CCME / AT1) Total	Regulated Metals (CCME / AT1) Dissolved	Mercury ☐ Total ☐ Dissolved	Other Analysis: TPH (F1-F3)	PCBs	Metals (TOTAL) As, Cr, Cu, Co, Pb, Ni, Hg, Zn	HOLD - Do not Analyze	# of Containers Submitted
1	~~BTEX~~ P214-1A		Soil	14/08/16	X						X	X										X			2
2	-5B			"	X						X	X													2
3	-9A			14/08/15	X						X	X													2
4	-14A				X						X	X													2
5	-27A				X						X	X													2
6	-18B				X						X	X													2
7	-1WA				X						X	X													2
8	-6WA			14/08/16	X						X	X													2
9																									
10	P214-5W		Water	14/08/17	X																	X	X	X	9
11																									
12																									

RECEIVED IN YELLOWKNIFE
By: Michelle 10:45
2014-09-04

Temp: 5/6/7

Please indicate Filtered, Preserved or Both (F, P, F/P) → F/P

Relinquished By (Signature/Print): A. PASSALIS Date (YY/MM/DD): 14/08/20 Time (24:00): 1700

Relinquished By (Signature/Print): Date (YY/MM/DD): Time (24:00):

Special Instructions:

# of Jars Used & Not Submitted

LAB USE ONLY

Received By: Amanda Hirondelle Date: 20140905 Time: 1040

Maxxam Job #: B473422 AD7/IOK

Lab Comments:

Custody Seal	Temperature	Ice
	3,4,4 present on both / 2,2,2 in both	

AB FCD-00331 Rev3 2010/05

Maxxam Analytics International Corporation o/a Maxxam Analytics