



REPORT

## 2025 Annual Report

*Inuvialuit Water Board Water Licence, N5L8-1837  
Panarctic F-68 Abandoned Wellsite  
Satellite Bay, Prince Patrick Island, Northwest Territories*

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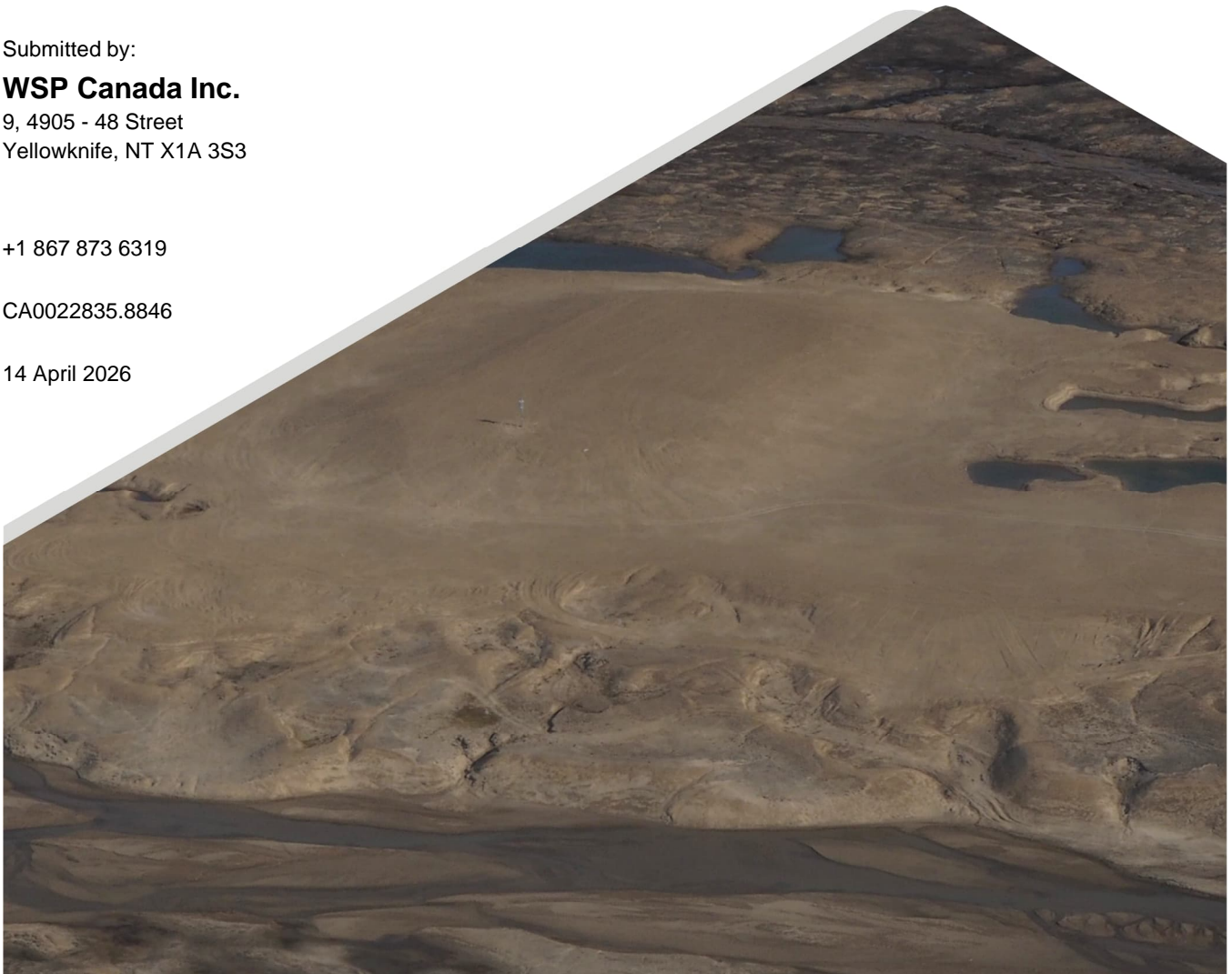
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## 1.0 INTRODUCTION

This 2025 Annual Report for the Inuvialuit Water Board (IWB) provides the required information in fulfillment of Water Licence N5L8-1837 (the Water Licence) issued by the IWB to Repsol Oil and Gas Canada Inc. (Repsol) on 24 August 2016 (with an effective date of 1 June 2017) and transferred to Peyto Exploration and Development Corp. (Peyto) on 19 December 2023. The Water Licence was issued for the Site Remediation, Panarctic F-68 Abandoned Well site, Satellite Bay – Prince Patrick Island, Northwest Territories (NWT; the Project), particularly the remediation activities and construction of an engineered Containment Structure including the Containment Cell (the Cell) at Panarctic Site F-68, on Prince Patrick Island, in the NWT (the Site). The site location is provided in Figure A1 (Appendix A), the location of the Containment Structure is illustrated in Figure A2 (Appendix A) and the location of Mould Bay (used as a temporary camp and fuel staging area) is provided in Figure A3 (Appendix A).

Peyto is the Licensee and WSP Canada Inc. (WSP) is the designer of record for the Containment Structure and completed all remediation, construction and borrow activities on behalf of Repsol.

This report addresses Part B, Condition 2 of the Water Licence.

### 1.1 Summary of Work Completed

Between 1 July and 14 August 2025, the following activities were completed as part of the 2025 field season:

- mobilized to Mould Bay and Satellite Bay to established camp operations;
- carried out equipment maintenance and moved the Mould Bay camp to new location at the weather station;
- completed the Year 6 Post-Construction Monitoring in accordance with the Water Licence, including a visual inspection of the Containment Structure and Borrow Area, and environmental sampling;
- re-opened the Borrow Area for additional borrow material extraction and subsequent grading, inspection and surveying;
- inspected and completed final grading and surveying of the Containment Structure;
- completed maintenance (i.e., battery replacement) of thermal monitoring system;
- demobilized equipment and waste from Satellite Bay to Mould Bay then to Yellowknife;
- sampled greywater pools at Satellite Bay and Mould Bay;
- demobilized heavy equipment from Satellite Bay to Mould Bay via heavy lift helicopter;
- demobilized field team and cargo from Satellite Bay to Mould Bay and then to Yellowknife; and
- winterized temporary camp at Mould Bay and demobilized crew and supplies.

Site photos are presented in Appendix B.

### 1.2 Summary of Work to be Completed

Based on work completed in 2025, there are no planned activities at Satellite Bay for 2026. The proposed work at Mould Bay for the summer of 2026 includes the following.

- Mobilize crew and supplies to Mould Bay.
- Establish camp operations at Mould Bay.
- Complete final demobilization of heavy equipment temporarily stored at the previous temporary camp location at Mould Bay.
- Complete final demobilization of temporary camp, waste and all associated equipment from Mould Bay to Inuvik or Yellowknife.
- Remove airstrip improvement tiles at Mould Bay.
- Complete demobilization of crew and supplies from Mould Bay.

If the full demobilization cannot be completed by 2026, some activities may be completed in 2027.

The Year 16 Post-Construction Monitoring is planned to be completed in 2033 (or if the Water Licence is extended in 2035), in accordance with the requirements of the Water Licence. Activities will include environmental sampling, thermal monitoring and visual inspection of the Containment Structure and Borrow Area. New regulatory approvals (if required) will be obtained at that time.

## 2.0 PART B – 2.A: FRESHWATER USE

Freshwater was obtained for use in the Satellite Bay and Mould Bay camps during the 2025 field season. The location of intake and summary of volumes withdrawn are provided in Table A.

The maximum daily withdrawal volume at Satellite Bay was 1.4 cubic metres (m<sup>3</sup>) with a daily average of 1.2 m<sup>3</sup> and, at Mould Bay, the maximum daily withdrawal volume was 1.8 m<sup>3</sup> with a daily average of 1.1 m<sup>3</sup>.

**Table A: Summary of Freshwater Volumes Obtained from Surface Water Sources.**

Site	Intake Location	Month (2025)	Monthly Volume (m <sup>3</sup> )	Annual Volume (m <sup>3</sup> )
Satellite Bay	77° 17.393'N 116° 54.589'W	July	34.1	42.3
		August	8.2	
Mould Bay	76° 14.624'N 119° 17.823'W	July	23.9	38.9
		August	15.0	

## 3.0 PART B – 2.B: SEWAGE AND GREYWATER DISCHARGE

### 3.1 Greywater

Greywater (kitchen, showers, washing) was stored in temporary greywater holding pools at the Site and at Mould Bay and tested prior to discharge as per the Water Licence Part F, Items 3 and 4. Greywater produced by the kitchen was filtered through grease traps to prevent oil and grease from entering the pools. It was tested for the following parameters in accordance with the Water Licence requirements prior to discharge:

- total suspended solids (TSS) less than 100 milligrams per litre (mg/L);
- total residual chlorine (TRC) less than 0.1 mg/L;

- pH between 6 and 9;
- no visible sheen of oil or grease; and
- no discharge of floating solids, garbage, grease, free oil or foam.

The analytical results were provided to the Water Resources Inspector (Inspector) (in compliance with Part F Item 5 of the Water Licence) and approval was obtained prior to discharge from holding pools to the terrestrial environment.

### **Mould Bay**

The greywater collection system at Mould Bay included a series of integrated filters, a grease trap and a plastic container adjacent to the kitchen tent. Greywater collected in the container was directed to one of two greywater holding pools.

Greywater samples were collected from the two holding pools (MB-POND#1N and MB-POND#2S) at Mould Bay on 14 July 2024, prior to demobilization for the 2024 season. No new greywater was introduced to these holding pools since the analyses was completed in 2024. Analytical results were reported in the 2024 Annual Report (WSP 2025a). An approval to discharge the greywater was provided by the Inspector on 2 June 2025. A total of 41 m<sup>3</sup> of greywater from the two holding pools at Mould Bay was discharged on 18 and 20 July 2025 (Table B).

The greywater was discharged to the ground just north of the airstrip at 76° 14.38' N, 119° 20.26' W, more than 100 metres (m) from Station Creek to the north. The discharge point was monitored for erosion. No erosion was noted during the discharge events.

Upon moving the camp to the new location further north (Figure 3), one greywater holding pool remains at the new camp location at Mould Bay. No discharge from this pool occurred in 2025 and greywater was left in the pool at the end of the 2025 field season to maintain weight in the pool.

### **Satellite Bay**

The greywater collection system at Satellite Bay included a series of integrated filters, a grease trap and a plastic container adjacent to the kitchen tent from where it was directed to the greywater holding pool.

A greywater sample was collected from the holding pool (SB-POND#1) at the Site on 14 July 2024, prior to demobilization for the 2024 season. No new greywater was introduced to this holding pool since the analyses was completed in 2024. Analytical results were reported in the 2024 Annual Report (WSP 2025a). The TSS value for the holding pond was 160 mg/L, above the discharge criteria of 100 mg/L. An approval to discharge the greywater with this elevated TSS value was provided by the Inspector on 2 June 2025. A total of 18.2 m<sup>3</sup> of greywater from the holding pool was discharged on 26 and 17 July 2025 (Table B).

Greywater produced at Satellite Bay in 2025 was passed through the filters and grease trap and discharged directly to the terrestrial environment as per the modification to greywater discharge for Satellite Bay approved by the Inspector on 2 June 2025. Approximately 1.4 m<sup>3</sup> of greywater was discharged daily from 3 July to 7 August 2025 for a total volume of 49 m<sup>3</sup> (Table B).

The greywater was discharged to a small depression in sandy soils just east of the camp at 77° 17.49' N, 116° 56.25' W, more than 30 m from the nearest water course. The discharge point was monitored for erosion. No erosion was noted during the discharge events.

**Table B: Summary of Greywater Discharge Laboratory Results and Volumes**

Date	Source	Discharge Location	Volume Discharged (m <sup>3</sup> )	Analytical Results <sup>1</sup>	Monthly Volume (m <sup>3</sup> )	Annual Volume (m <sup>3</sup> )
18 July 2025	Mould Bay MB-POND#1N	76° 14.38' N, 119° 20.26' W	20	TSS – 27 mg/L TRC – 0.090 mg/L pH – 7.97 No visible sheen of oil or grease No floating solids, garbage, grease, free oil or foam	41	41
20 July 2025	Mould Bay MB-POND#2S	76° 14.38' N, 119° 20.26' W	21	TSS – 89 mg/L TRC – 0.040 mg/L pH – 8.74 No visible sheen of oil or grease No floating solids, garbage, grease, free oil or foam		
26, 27 July 2025	Satellite Bay SB-POND#1	77° 17.49' N, 116° 56.25' W	18.2	TSS – 160 mg/L TRC – <0.10 mg/L pH – 7.03 No visible sheen of oil or grease No floating solids, garbage, grease, free oil or foam	57.4	67.2
3 to 31 July 2025	Satellite Bay Camp	77° 17.49' N, 116° 56.25' W	39.2	No analytical		
1 to 7 August 2025	Satellite Bay Camp	77° 17.49' N, 116° 56.25' W	9.8	No analytical	9.8	

**Note:**

<sup>1</sup>Greywater pool samples collected 14 July 2024.

## 3.2 Sewage

A total of 102 20 litre (L) pails of Pacto toilet waste (for a total of 2,040 L) from the camp toilets were disposed of off site at the Yellowknife Landfill in July and August 2025.

## 4.0 PART B – 2.C & D: WASTE REMOVAL

The project-specific Waste Management Plan (submitted to the Inuvialuit Water Board [IWB] on 1 March 2017) details all aspects of waste management and disposal for the Project.

The three main waste streams were:

- 1) camp waste;
- 2) remediation-derived non-hazardous waste; and
- 3) remediation-derived hazardous waste.

The handling and disposal of these waste streams are described in the following sections.

## 4.1 Camp Waste

Camp waste was generated through consumption; examples include paper, plastics, food waste, recyclables (bottles, cans, etc.). A summary of the camp generated waste removed from the Site and transported for final disposal at the Yellowknife Solid Waste Facility or the recycling depo is presented in Table C.

**Table C: Camp Waste Removed from the Site during the 2025 Field Season**

Type of Waste	Disposal Location	Month	Total (kg)	Annual (kg)
Camp garbage, food waste, recycling, cardboard	Yellowknife Solid Waste Facility or recycling depot	July 2025	2,147	3,045
		August 2025	898	

**Note:** kg – kilogram

## 4.2 Remediation-Derived Non-Hazardous Waste

Remediation-derived non-hazardous waste generated included scrap parts, greywater pools, geofabric, reinforcement tiles, satellite dish, rope, stove pipe, etc. A summary of the remediation-derived non-hazardous waste removed from the Site and transported for final disposal at the Yellowknife Solid Waste Facility or for reuse is presented in Table D.

**Table D: Remediation-Derived Non-Hazardous Waste Removed from the Site during the 2025 Field Season.**

Type of Waste	Disposal Location	Month	Total (kg)	Annual (kg)
Scrap parts, greywater pools, geofabric, unused reinforcement tiles, satellite dish, rope, stove pipe	Yellowknife Solid Waste Facility or reuse	July 2025	1,075	1,971
		August 2025	896	

## 4.3 Remediation-Derived Hazardous Waste

Remediation-derived hazardous waste generated included waste oil, oily water, ash, alum, batteries, liner, oily rags, scrap metal, granular activate carbon, etc. A summary of the remediation-derived hazardous waste removed from the Site and transported for final disposal at KBL Environmental Ltd. (KBL) in Yellowknife is presented in Table E.

**Table E: Remediation-Derived Hazardous Waste Removed from the Site during the 2025 Field Season**

Type of Waste	Disposal Location	Month	Total (kg)	Annual (kg)
Waste oil, oily water, ash, alum, batteries, liner, oily rags, scrap metal, granular activate carbon	KBL Yellowknife	July 2025	4,322	5,390
		August 2025	1,068	

## 5.0 PART B – 2.E: IMPACTED SOIL CONTAINED IN THE CONTAINMENT STRUCTURE

As outlined in the Pre-construction Design Report (submitted to the IWB on 1 March 2017), the design volume of contaminated soil and waste within the lined cell of the Containment Structure is 2,300 m<sup>3</sup>. The plan view of the Containment Cell is shown in Figure 2 (Appendix A).

Visual observations of the Containment Structure in 2025 indicated that all material within the Containment Structure remained under the liner/cover.

## 6.0 PART B – 2.F: WASTE STORED ON SITE

No waste materials were left at the Site in 2025. During the 2025 field season, waste was moved from the Site to Mould Bay, and some waste was left in temporary storage at Mould Bay in 2025, as summarized in Table F. This material is planned to be removed from Mould Bay during the summer of 2026 and will be transported for final disposal at the Yellowknife Solid Waste Facility (non-hazardous) or KBL Yellowknife (hazardous).

**Table F: Waste Temporarily Stored at Mould Bay in 2025**

Type of Waste	Total (kg)
Megabags of hydrocarbon-contaminated soil	635
Megabags of granular activated carbon	136
Scrap metal	218

## 7.0 PART B – 2.G: SURVEILLANCE NETWORK PROGRAM

The 2025 report on the Surveillance Network Program (SNP) including all information and data collected during the 2025 field season is provided in Section 16.0 (Annex I – D: Surveillance Network Program Report).

## 8.0 PART B – 2.H: UNAUTHORIZED DISCHARGES AND SPILLS

No reportable spills or releases (i.e., in accordance with the thresholds in the approved Spill Contingency Plan) occurred during the 2025 field season.

## 9.0 PART B – 2.I: SPILL TRAINING AND COMMUNICATIONS EXERCISES

As per the Spill Contingency Plan, all crew members participated in an on-site safety orientation and daily tailgate meetings. This included information on the Emergency Response Plan, Spill Contingency Plan, wildlife awareness, permit awareness and firearms security.

## 10.0 PART B – 2.J: ADDITIONAL STUDIES

There are currently no additional studies required by the IWB and no future studies are planned by Peyto.

## 11.0 PART B – 2.K: MONITORING PROGRAMS

### 11.1 Thermal Monitoring

The Containment Structure consists of a Cell of frozen contaminated soil excavated from the Site, covered with a geosynthetic cover system comprising a geomembrane liner and geotextile cushion layers, overlain by an

engineered thermal soil cover. A temperature instrument array (temperature monitoring system) was installed to monitor the performance of the Containment Structure relative to the requirement for the impacted soil under the liner to remain at below freezing temperatures. The temperature monitoring system measures, records and transmits temperature data from six active locations within and adjacent to the Cell below the 2.4 m thick thermal soil cover as well as a background monitoring location. Figure 4 (Appendix A) illustrates the Containment Structure and thermistor locations.

## Background

The temperature monitoring system consists of two installations: one within the Containment Structure to monitor its performance and one at a background station approximately 75 m south of the Containment Structure to monitor the natural soil thermal regime including the active layer. The locations of the thermistors in the Containment Structure are shown on Figure 4 (Appendix A). A total of 12 thermistors were installed in the Containment Structure; however, only six of these are connected to the datalogger (TM-01-01, TM-01-02, TM-01-03 and -04, TM-02-05 and TM-02-06). The remaining six thermistors (TM-03 and TM-04 series) were installed for back-up purposes. A set of six thermistors (TM-05-01 to TM-05-06) were installed approximately 75 m south of the Containment Structure to measure background temperature at various depths.

Temperatures are monitored at the following locations:

- **Anchor Trench (TM-01-01 and TM-01-04, active):** The anchor trench is a location representing the lateral limit of the Cell within the Containment Structure. Four thermistors (two active) were placed where the geomembrane liner and geotextile cushion layer tie into original grade at the outer limits of the Cell.
- **Original Ground (TM-02-05 and TM-02-06, active):** This location represents the lower limit of the Containment Cell, situated over the existing frozen waste/ground. Four thermistors (two active) were placed within the core area of the existing waste frozen within the original ground before commencement of the construction of the Cell.
- **Above Liner (TM-01-02 and TM-01-03, active):** These thermistor locations represent the upper vertical limit of the Cell within the Containment Structure, immediately above the liner covering the Cell and below the thermal cover.
- **Background Station (TM-05-01 through TM05-06):** This location represents the soil temperature conditions in an area removed from the effects of the Containment Structure and monitors changes in the active layer. Six thermistors are buried in a vertical borehole at depths of 0.27, 0.31, 0.61, 1.11, 1.61 and 2.11 m.
- **Air Temperature:** An ambient air temperature sensor is at the top of the instrumentation tower.

The temperature monitoring system also includes:

- a data collection system to retrieve and store data;
- a power supply and charging system including a solar panel, voltage regulator and battery; and
- a communications system that transmits data via a satellite uplink.

Construction of the temperature monitoring system was completed concurrently with the Containment Structure in 2017 and 2019. In 2022, WSP staff inspected the instrumentation tower and monitoring system and observed that

the tower showed no signs of wear, corrosion or wildlife interference. An inspection of the Containment Structure and monitoring system, including battery replacement, occurred in 2025.

## Monitoring Data Review

Data collected from the temperature monitoring system are sent via satellite to an online data service (Iridium RockBlock/Ground Control). Data are compiled by WSP in a Microsoft Excel™ spreadsheet and plotted, shown in Figures A, B and C, below. The spreadsheet contains the converted thermistor values used to assess the subsurface temperatures and includes system diagnostic data.

Data collected at the Site between September 2017 and December 2025 were processed and reviewed. The results of the data monitoring review are discussed further in the sections below.

## Thermistor, Air Temperature and Diagnostic Data

Temperature data from the thermistors installed within the Containment Cell and the background station are plotted along with air temperature in Figures A and B, respectively. Observations from the recent data review are as follows:

- The subsurface temperatures follow a similar trend to the air temperature, as expected. The shallowest thermistors (i.e., TM-01-01 and TM-01-04 immediately above the liner) exhibit the largest fluctuations, as expected.
- The Cell has remained below freezing since the fall of 2019. The warmest temperature in 2025 was approximately -2.59 degrees Celsius (°C) on 7 September at thermistor TM-01-02 immediately above the liner in the southwest part of the Cell.
- The warmest air temperature recorded to date (i.e., since 2017) was 15°C and occurred on 16 July 2018, and again on 31 July 2023. The overall temperatures during the warmest period (mid-June to late August) were higher in 2023 than in earlier years. In 2025, air temperatures remained slightly lower during the June to August period.
- Temperature trends within the Containment Structure and within the soil at the background station are similar, as expected.
- The temperatures between 1.1 and 1.6 metres below the ground surface at the background station indicate that the active layer is located between these two depths.
- Comparison of the temperature monitoring data from within the Containment Structure and the background station indicates that the Containment Structure is performing as expected.

## Power and Communications

The temperature monitoring system, including the data collection system, air temperature sensor, power supply and communication system, is working as designed. The voltage data indicate that the solar panel is successfully charging the battery when light is available. Significant increases and decreases in voltage typically occur in February and October, which coincide with seasonal changes in daylight.

Figure C provides an overview of annual battery performance. Battery voltage drops below 12 volts limit the ability of the system to transmit data via the communication system. Between 2017 and 2021, the voltage level of the battery remained between 12 and 15 volts, indicating that the battery was operating as expected.

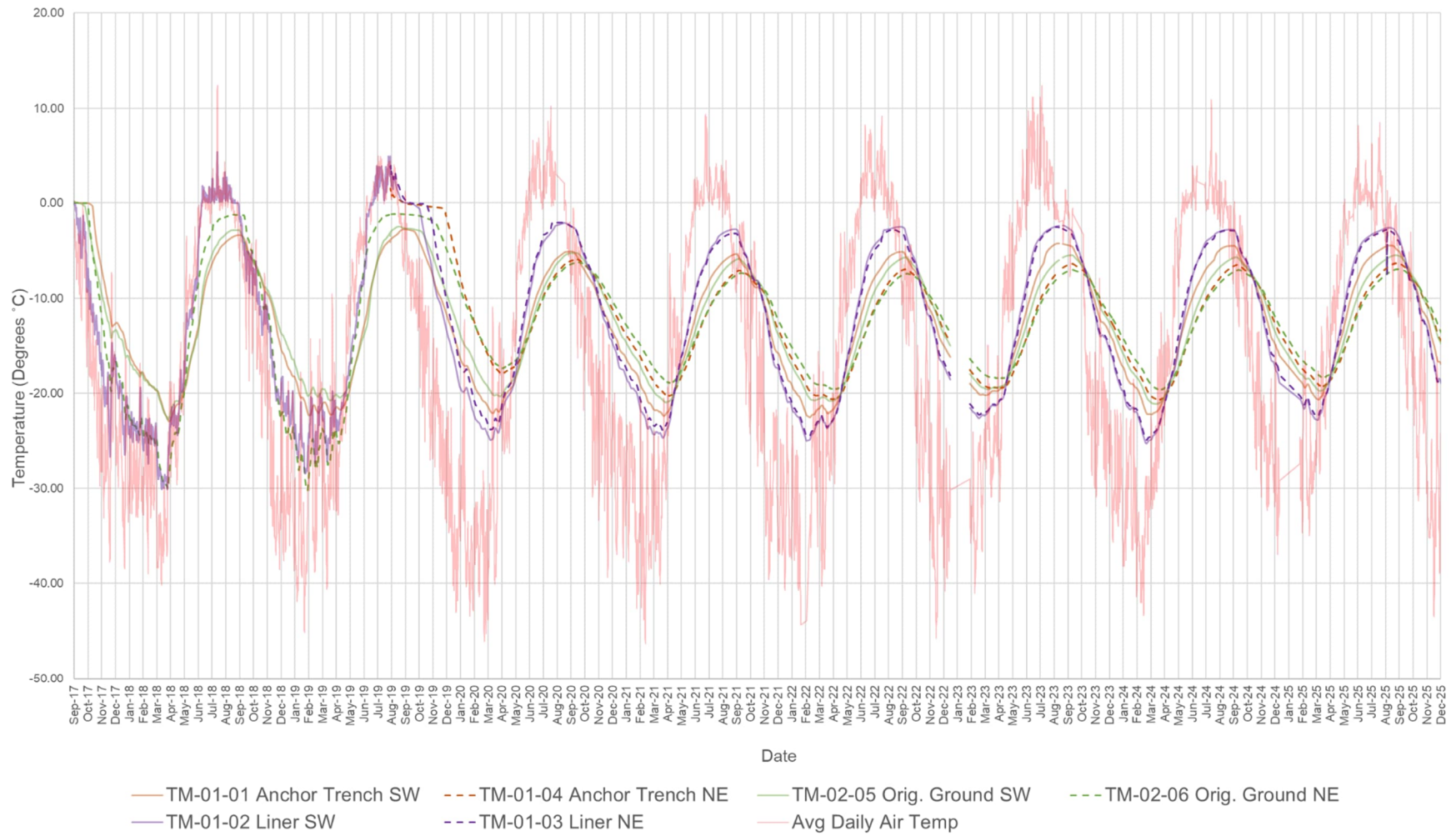
In December 2021, the voltage dropped below 12 volts, suggesting that the battery had begun to reach the end of its optimal service life. In the summer of 2022, the battery was replaced during a scheduled monitoring program. A subsequent voltage drop commencing in December 2022 was similar to that noted in 2021 and suggested the replacement battery was not operating as expected, and the battery was again replaced during the 2025 field season (on 16 July 2025). Data in 2025, prior to the battery replacement, indicated that some battery performance remained at functional levels, however, voltages remained lower than in the initial years of operation (more days with power below 12.5 volts) during low or no daylight periods. Following the 16 July 2025 battery replacement, voltages remained above 12 volts through to the end of 2025.

The data collection system is currently set to record every four hours. Since August 2017, the communication system has sent approximately 17,140 messages and 289 reattempts, which indicates that the uplink sends data on its first attempt over 98.3 percent (%) of the time. In 2025, data were not uploaded between 5 January and 20 February 2025 due to insufficient battery voltage.

### **Temperature Monitoring System Summary**

During the summer of 2025, temperatures recorded within the Containment Structure remained below freezing. The warmest temperature was approximately -2.59°C in September immediately above the liner in the southwest part of the Cell (TM-01-02). Temperature trends within the Cell and within the soil at the background station were similar, as expected.

The temperature monitoring system is working as designed. Battery voltages recovered following the battery replacement on 16 July 2025 and have remained functional to date. Despite the return to sub-optimal battery voltage between 2022 and July 2025, the system remained mostly operational throughout 2025, with the exception of 5 January to 20 February 2025 when battery voltages reduced below functional levels.



**Figure A: Containment Cell Temperatures**

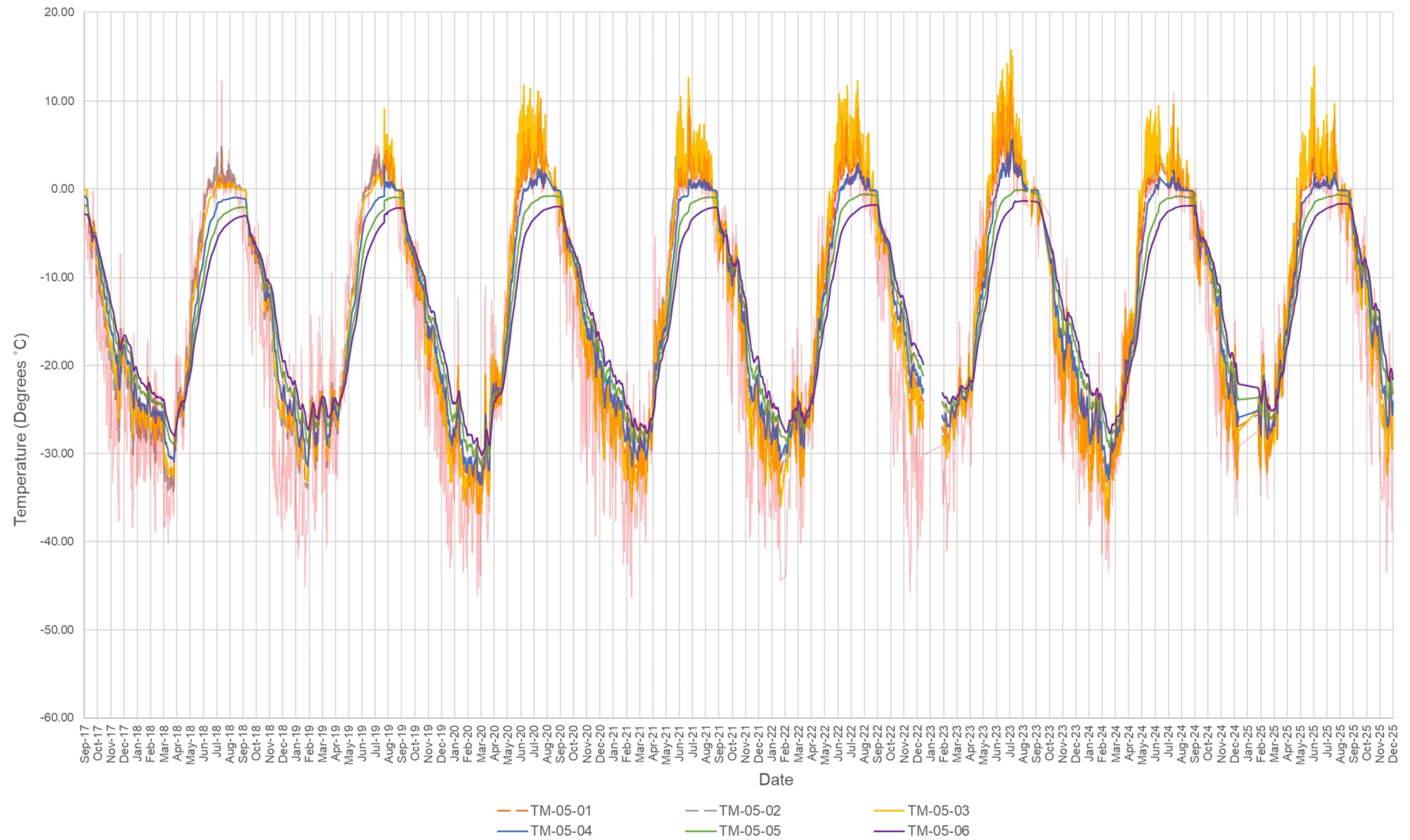
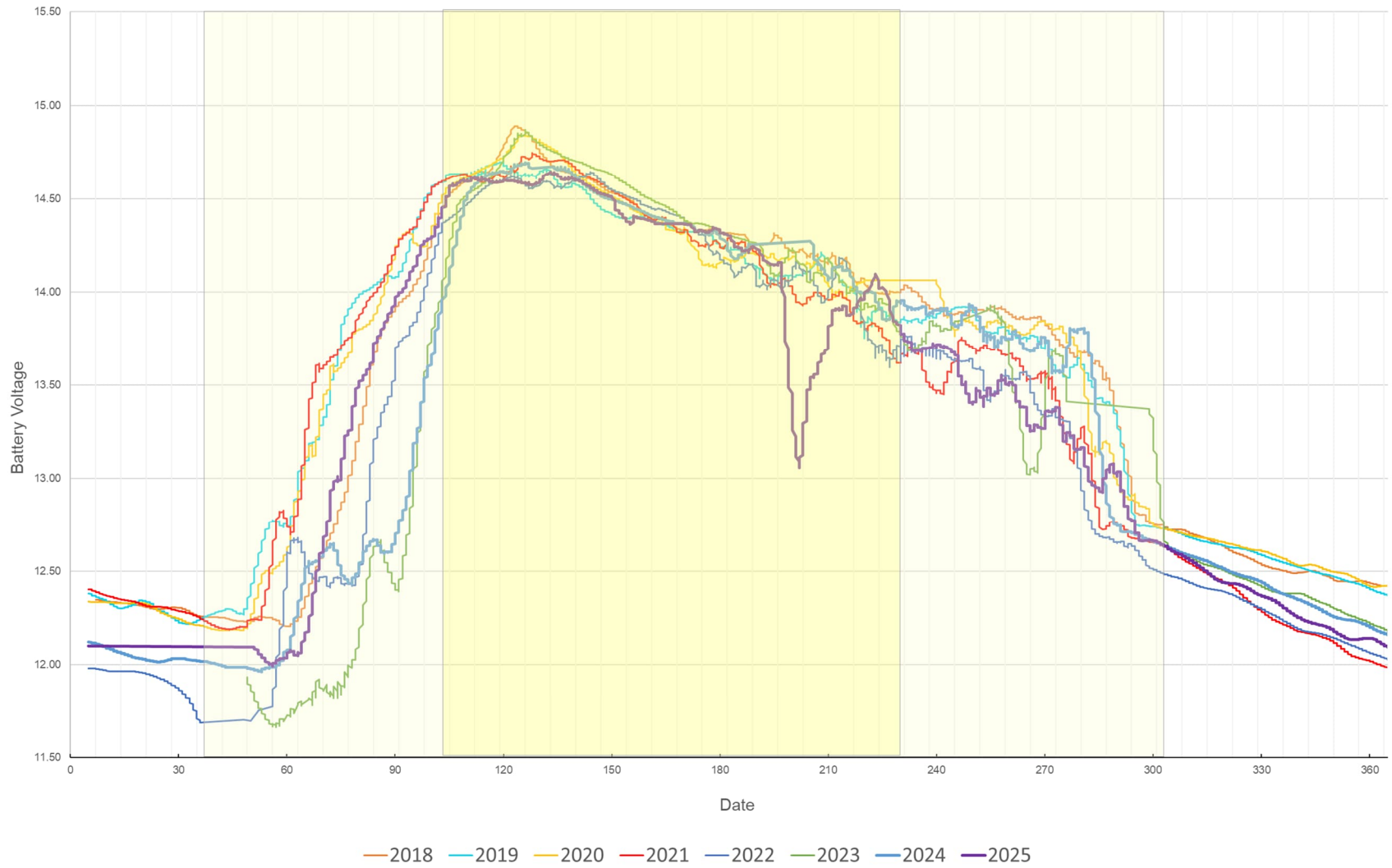


Figure B: Background Station Temperatures



**Figure C: Annual Battery Voltages**

**Note:** Yellow shading in Figure C indicates daylight hours, darker yellow indicates 24 hour daylight.

## 11.2 Wildlife Monitoring

Arctic Response Canada Ltd. provided wildlife monitoring (and medical) services for the 2025 field season. Six fully trained Wildlife Monitors were part of the crew. The 2025 field season was carried out from 1 July to 14 August 2025.

Wildlife monitoring was completed in accordance with the Wildlife Encounter Management Plan and the Emergency Response Plan. Wildlife monitoring included continuous observation, identification and assessment of local wildlife and sign of local wildlife. At both sites, a single Wildlife Monitor patrolled the camp during the day on foot or using an all-terrain vehicle (ATV), while a second Wildlife Monitor patrolled the area where the field team was working. At night, the camp was patrolled by a single Wildlife Monitor. Wildlife Monitors recorded all wildlife signs and sightings in daily observation forms.

Wildlife observations and sign of wildlife at Mould Bay and Satellite Bay are summarized in Table G. Wildlife deterrence (i.e., bear bangers) were used to deter a pack of wolves from entering the Mould Bay camp on 7 July 2025. No other deterrence (e.g., rubber pellets, beanbags or rubber slugs) or lethal force was used during the 2025 field season.

**Table G: 2025 Wildlife Observation Details.**

Date (2025)	Site	Species	Observation Detail
1 July	Mould Bay	Peary caribou ( <i>Rangifer tarandus pearyi</i> ) Wolf ( <i>Canis lupus</i> )	One caribou and one wolf observed east of the Mould Bay camp. The wolf caught the caribou.
2 July	Mould Bay	Wolf Seals	Observed wolf close to the camp; however, it did not approach. Seals (of unidentified species) observed on the ocean ice.
	Satellite Bay	Wolves	Observed east of Satellite Bay camp
3 July	Mould Bay	Caribou Hares Arctic fox ( <i>Vulpes lagopus</i> )	Observed, no activity close to Site
	Satellite Bay	Wolf Eider duck ( <i>Somateria mollissima</i> )	One observed approximately 300 m northeast of camp, travelling to the southeast. Two observed flying east to west over the camp at approximately 50 m in elevation.
4 July	Mould Bay	Arctic fox	Observed arctic fox skirting around western edge of Mould Bay camp.
5 July	Mould Bay	Wolves	Observed around the caribou carcass but stayed away from Mould Bay camp.
	Satellite Bay	Peary caribou Glaucous gull ( <i>Larus hyperboreus</i> )	Two observed approximately 75 m north of the Borrow Area. One observed flying approximately 25 m above the camp travelling west towards the ocean.
6 July	Mould Bay	Peary caribou Hares Red-throated loon ( <i>Gavia stellata</i> )	Observed east of the airstrip at Mould Bay Observed Observed

Date (2025)	Site	Species	Observation Detail
7 July	Mould Bay	Peary caribou Wolves	Observed caribou herd moving into valley east of Mound Bay camp. Observed pack of wolves encroaching on camp; overnight wolves encroached on camp near airstrip ramp; Wildlife Monitor used bear bangers and wolf pack move away from camp.
	Satellite Bay	Peary caribou Bearded seals ( <i>Erignathus barbatus</i> ) Arctic bunting  Snowy owl ( <i>Bubo scandiacus</i> )	Observed two caribou near the Borrow Area Observed on bay ice  Two observed approximately 100 m east of the camp in a watering hole. One observed flying west towards the ocean.
8 July	Satellite Bay	Peary caribou Snow bunting ( <i>Plectrophenax nivalis</i> )	Observed two caribou near the airstrip. One observed flying west over camp towards the ocean
9 July	Satellite Bay	Seal	One observed on the ice, northwest of the runway approximately 1 km away.
10 July	Satellite Bay	Glaucous gull	One observed approximately 500 m north of camp flying northwest.
11 July	Satellite Bay	Snow bunting Sandpiper ( <i>Scolopacidae</i> ) Seal	Three observed flying southwest over the camp. One observed 60 m northwest of camp plying southwest. One observed approximately 600 m northwest of runway on the ice.
12 July	Satellite Bay	Seal  Glaucous gull	One observed approximately 750 m northwest of runway on the ice. One observed approximately 300 m northwest of runway on the ice.
13 July	Mould Bay	Hares	Observed
	Satellite Bay	Seals Brant geese ( <i>Branta bernicla</i> )	Five seals observed approximately 1 to 6 km northwest of the runway on the ice. Two observed walking on runway.
14 July	No wildlife observed		
15 July	Mould Bay	Arctic fox	Observed on causeway.
	Satellite Bay	Seals	Eight observed approximately 1 to 5 km northwest of the runway on the ice.
16 July	Satellite Bay	Seals	Four observed approximately 1 to 5 km northwest of the runway on the ice.
17 July	Satellite Bay	Seals	Three observed approximately 1 to 5 km northwest of the runway on the ice.
18 July	Satellite Bay	Seals	Two observed approximately 2 km northwest of the runway on the ice.
19 July	No wildlife observed		
20 July	Mould Bay	Arctic fox Wolf	Observed at old camp location. Wolf tracks observed at old camp location.

Date (2025)	Site	Species	Observation Detail
	Satellite Bay	Sandpiper	Two observed flying approximately 400 m southwest of camp.
21 July	Satellite Bay	Glaucous gull	One observed flying approximately 700 m west at the end of the runway.
22 July	Satellite Bay	Brant geese	Six observed walking north of camp, then flying southwest over camp towards the ocean.
23 July	Mould Bay	Wolf Hares	Observed near edge of camp. Observed around and in camp.
	Satellite Bay	Brant geese	Six observed approximately 800 m west of the runway, swimming in the ocean.
24 July	Satellite Bay	Brant geese	Six observed approximately 800 m west of the runway, swimming in the ocean.
25 July	Satellite Bay	Sandpiper	One observed approximately 450 m east of the runway feeding around water areas.
26 to 27 July	No wildlife observed		
28 July	Satellite Bay	Seal	One observed approximately 400 m west of the camp.
29 July	No wildlife observed		
30 July	Mould Bay	Arctic fox	Observed on runway.
31 July to 7 August	No wildlife observed		
8 August	Mould Bay	Wolves	Observed approximately 2 km northeast of camp.
9 August	Mould Bay	Wolves	Observed approximately 2 km northeast of camp.
10 August	No wildlife observed		
11 August	Mould Bay	Foxes	Observed on ramp and trying to get into camp.
12 to 14 August	No wildlife observed		

**Note:** km – kilometre

## 12.0 PART B – 2L: RECLAMATION AND CLOSURE ACTIVITIES COMPLETED

On 9 June 2023, Repsol submitted a request to the IWB (and other regulators) to defer the start of the Final Demobilization Phase of the Project to 2025, including final demobilization of equipment from Satellite Bay to Mould Bay in 2027 and demobilization from Mould Bay in 2028. Following the acquisition of the Project by Peyto, a site visit was completed in the summer of 2024 to permit Peyto's contractor to inspect the condition of the airstrip, camp access trails and equipment and to complete observation of the Containment Structure and Borrow Area to gather information for planning a revised Final Demobilization Phase schedule. Following the 2024 site visit, the demobilization of equipment from Satellite Bay to Mould Bay was re-scheduled and completed in 2025, along with the Year 6 Post-Construction Monitoring Program.

A summary of the activities completed during the 2025 field season are provided in Table H and the revised Final Demobilization Phase schedule is provided in Table I.

**Table H: Summary of Activities Completed During the 2025 Field Season**

Date (2025)	Site	Activities
1 July	Mould Bay	<ul style="list-style-type: none"> <li>Field teams arrived and established camp operations.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Field teams arrived and established camp operations.</li> <li>Field teams began equipment inspection and start-up.</li> </ul>
2 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued camp set-up and inspections.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued camp set-up and equipment inspections.</li> </ul>
3 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued camp set-up and inspections.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued camp set-up and equipment inspections.</li> <li>Sampled SNP 1837-5 at planned water course crossing.</li> </ul>
4 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued camp set-up and inspections.</li> <li>Reconnaissance of weather station for new camp location, began getting wood floors laid out.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued camp set-up and equipment inspections.</li> <li>Installed the water course crossing.</li> <li>Mobilized the loader, compactor and rock truck to the Borrow Area.</li> <li>Visual inspection of the Containment Structure.</li> </ul>
5 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued to place floors at the weather station for new camp location.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Loader and skid steer worked on building stockpiles at the Borrow Area, and loader and rock truck placed staged stockpiles at the Containment Structure for later placement.</li> </ul>
6 July	Mould Bay	<ul style="list-style-type: none"> <li>Finished placing floors at the weather station for new camp location.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Loaded, stockpiled, graded and compacted at the Containment Structure.</li> <li>Identified and staged surplus equipment that can be sent to Mould Bay camp for use (e.g., hot water heater, generator, tents) or sent to Yellowknife.</li> </ul>
7 July	Mould Bay	<ul style="list-style-type: none"> <li>Started tear down tents at the old camp location.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Hauled fill material from Borrow Area to Containment Structure. Loading, stockpiling, grading and compacting at the Soil Containment Structure.</li> <li>Mobilized surplus equipment to Mould Bay.</li> </ul>
8 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued to tear down office and kitchen tents at the old camp location.</li> <li>Moved and setup four tents at the new camp location at the weather station.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Groomed sideslope of transition zone to allow positive sheet drainage of the Containment Structure. Filled and graded the Borrow Area.</li> <li>Captured drone and ground imagery of the Containment Structure.</li> </ul>
9 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued tear down and setup of camp at the weather station.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued identification and staging of surplus equipment that can be sent to Mould Bay or Yellowknife.</li> <li>Mobilized surplus equipment and waste to Mould Bay.</li> </ul>

Date (2025)	Site	Activities
10, 11 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued setup of camp at the weather station.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Camp cleaning and maintenance.</li> </ul>
12 July	Mould Bay	<ul style="list-style-type: none"> <li>Reinforced anchoring on tents set up at new camp.</li> <li>Set up temporary pallet scale location.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Prepared and weighed items for mobilization to Mould Bay.</li> <li>Graded the access roads.</li> </ul>
13 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued setup of camp at the weather station.</li> <li>Identified surplus equipment for backhaul.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued preparing for equipment teardown and rigging operation.</li> <li>Prepared and weighed items for mobilization to Mould Bay.</li> </ul>
14 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued setup of camp at the weather station.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Department of Environmental and Climate Change Inspector toured the site.</li> <li>Mobilized items to Mould Bay.</li> </ul>
15 July	Mould Bay	<ul style="list-style-type: none"> <li>Equipment repair and inventory, continued camp setup at the weather station.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed topographic survey and inspection of Containment Structure.</li> </ul>
16 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued setup of camp at the weather station.</li> <li>Prepared and weighed items for mobilization out of Mould Bay.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed additional filling and grading along the southeast side of the Containment Structure to provide positive drainage.</li> <li>Resurveyed the area of filling and grading.</li> <li>Completed a battery replacement for the thermistors monitoring system at the Containment Structure.</li> </ul>
17 July	Mould Bay	<ul style="list-style-type: none"> <li>Mostly set up camp at the weather station, with all personnel moved to new site.</li> <li>Conducted runway testing.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Prepared and weighed items for mobilization to Mould Bay.</li> <li>Surveyed the Borrow Area and removed the water course crossing.</li> <li>Laid out the platforms for equipment teardown; built a load on one of the helicopter lifting frames.</li> </ul>
18 July	Mould Bay	<ul style="list-style-type: none"> <li>Began greywater discharge from one containment pool at old camp location.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued equipment teardown and packaging of surplus items. Built and rigged two helicopter lift frame loads.</li> </ul>
19 July	Mould Bay	<ul style="list-style-type: none"> <li>Final move and construction of tents at the weather station</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued equipment teardown and packaging of surplus items.</li> <li>Mobilized waste and surplus equipment to Mould Bay.</li> </ul>
20 July	Mould Bay	<ul style="list-style-type: none"> <li>Began burning surplus wood and completed discharge of greywater from containment pools at the old camp. Began preparing loads for upcoming flights.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued equipment teardown and packaging of surplus items.</li> </ul>

Date (2025)	Site	Activities
21 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued burning surplus wood and began dismantling greywater pools.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Continued equipment teardown and packaging of surplus items.</li> <li>Mobilized waste and surplus equipment to Mould Bay.</li> </ul>
22 July	Mould Bay	<ul style="list-style-type: none"> <li>Completed cutting up of old camp floors in preparation for burn</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed three heavy lift operations to Mould Bay.</li> <li>Mobilized waste and surplus equipment to Mould Bay.</li> </ul>
23 July	Mould Bay	<ul style="list-style-type: none"> <li>Completed cleaning out old fuel tent.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed two heavy lift operations to Mould Bay.</li> <li>Completed camp consolidation and staged teardown.</li> </ul>
24 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued burning surplus wood.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed camp consolidation and staged teardown.</li> <li>Mobilized waste and surplus equipment to Mould Bay.</li> </ul>
25 July	Mould Bay	<ul style="list-style-type: none"> <li>Constructed and weighed loads for mobilizing out of Mould Bay.</li> <li>Continued burning surplus wood.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed camp consolidation and staged teardown.</li> <li>Mobilized waste and surplus equipment to Mould Bay.</li> </ul>
26 July	Mould Bay	<ul style="list-style-type: none"> <li>Continued burning surplus wood and began dismantling greywater pools.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed two heavy lift operations to Mould Bay.</li> <li>Started draining greywater pool.</li> </ul>
27 July	Mould Bay	<ul style="list-style-type: none"> <li>Completed general cleaning/tidying of camp area and fuel area.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Cleaned and began tearing down the greywater pool. Camp staged teardown and consolidation.</li> </ul>
28 July	Satellite Bay	<ul style="list-style-type: none"> <li>Began tearing down the Satellite Bay greywater pool. Camp staged teardown and consolidation.</li> </ul>
29 July	Mould Bay	<ul style="list-style-type: none"> <li>Completed cleaning up of old camp site.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed four heavy lift operations to Mould Bay.</li> <li>Mobilized waste and surplus equipment to Mould Bay.</li> </ul>
30 July	Mould Bay	<ul style="list-style-type: none"> <li>General camp maintenance and cleanup.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed one heavy lift operation to Mould Bay.</li> <li>Completed camp staged teardown and consolidation.</li> <li>Prepared additional equipment rigging for lift operations.</li> <li>Completed soil sampling around the Containment Structure. Groundwater monitoring wells were dry so no sampled obtained.</li> </ul>
31 July	Mould Bay	<ul style="list-style-type: none"> <li>Prepared camp for influx of people from Satellite Bay.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>Completed final two heavy lift operation to Mould Bay.</li> <li>Completed camp staged teardown and consolidation.</li> <li>Mobilized waste and surplus equipment to Mould Bay.</li> </ul>
1 August	Both	<ul style="list-style-type: none"> <li>Limited activities completed due to high winds.</li> </ul>

Date (2025)	Site	Activities
2 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Began consolidating items for demobilization.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>■ Mobilized select personnel, camp equipment and waste to Mould Bay.</li> </ul>
3 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Continued work on assembling equipment.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>■ Burned rig mats and tent floors following established protocol.</li> <li>■ Staged camp teardown and mobilization of equipment and waste to Mould Bay.</li> </ul>
4 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Prepared equipment and waste for demobilization from Mould Bay.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>■ Continued burning tent floors following established protocol.</li> <li>■ Staged camp teardown and mobilization of equipment and waste to Mould Bay.</li> </ul>
5 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Continued staging items for demobilization.</li> <li>■ Finished re-assembling of heavy equipment for storage at Mould Bay.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>■ Continued burning tent floors.</li> <li>■ Staged camp teardown and mobilization of equipment and waste to Mould Bay.</li> </ul>
6, 7 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Continued staging items for demobilization.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>■ Continued burning tent floors at Satellite Bay.</li> <li>■ Staged camp teardown and mobilization of equipment and waste to Mould Bay.</li> </ul>
8 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Continued staging items for demobilization.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>■ Completed final demobilization of personnel, camp, equipment and waste to Mould Bay.</li> </ul>
9 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Demobilized equipment and waste to Yellowknife.</li> </ul>
10 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Demobilized select personnel to Yellowknife.</li> </ul>
	Satellite Bay	<ul style="list-style-type: none"> <li>■ Completed final inspection and aerial photography of Site and final removal of ash (for laboratory testing and final off-site disposal) and metal debris (nails/screws).</li> </ul>
11 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Demobilized select personnel, equipment and waste to Yellowknife.</li> <li>■ Completed camp and equipment maintenance, begin winterizing camp.</li> </ul>
12, 13 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Completed camp and equipment maintenance and winterizing.</li> </ul>
14 August	Mould Bay	<ul style="list-style-type: none"> <li>■ Closed camp and completed final demobilization of remaining field staff.</li> </ul>

**Table I: Revised Final Demobilization Phase Schedule**

Project Activity	Updated Project Schedule
Engagement and consultation	Ongoing
Logistics planning	Ongoing
<ul style="list-style-type: none"> <li>▪ Mobilize crew and supplies to Mould Bay.</li> <li>▪ Establish camp operations at Mould Bay.</li> <li>▪ Complete final demobilization of heavy equipment temporarily stored at the previous temporary camp location at Mould Bay.</li> <li>▪ Complete final demobilization of temporary camp, waste and all associated equipment from Mould Bay to Inuvik or Yellowknife.</li> <li>▪ Remove airstrip improvement tiles at Mould Bay.</li> <li>▪ Complete demobilization of crew and supplies from Mould Bay.</li> </ul>	June/July to August 2026

**Note:** As a contingency, an additional year (2027) may be required to complete the Final Demobilization Phase.

The Year 16 Post-Construction Monitoring is planned to be completed in 2033 (or is the Water Licence is extended in 2035), in accordance with the requirements of the Water Licence. Activities will include environmental sampling, thermal monitoring and visual inspection of the Containment Structure and Borrow Area.

## 12.1 Year 6 Post-Construction Monitoring Program

The Year 6 Post-Construction Monitoring activities as described in the Reclamation, Closure and Monitoring Plan (RC&MP; WSP 2025b) are summarized in Table J. These activities are discussed in detail in Sections 12.2 through Section 12.7. The Year 6 Post-Construction Monitoring activities and reporting follow the requirements outlined in IWB Water Licence N5L8-1837 - Part K, Condition 5.

**Table J: Year 6 Post-Construction Monitoring Activities (as per WSP 2025b)**

Year	Activities	Components / Parameters	Reporting
2025 (six years after construction)	Visual Inspection	Containment Structure and Borrow Area	Summary of monitoring activities carried out during site visit. Visual inspection of the performance of the Containment Structure based on comparison to baseline. Visual inspection of the Borrow Area.
	Groundwater Sampling	TSS, O&G, BTEX, hardness and total lead	Visual inspection of soil placement and regrading activities for the Containment Structure
	Soil Sampling	BTEX, PHC Fractions F1 to F4 and CCME Tier 1 metals	Description of all visual inspections using location, dimensions, geotechnical stability. Description and inclusion of all analytical results. Site photographs.

**Notes:**

BTEX – benzene, toluene, ethylbenzene, xylenes; CCME – Canadian Council of Ministers of the Environment; PHC – petroleum hydrocarbon

Peyto is the Licensee and WSP is the designer of record for the Containment Structure. Clifton Engineering Group Inc. (Clifton) managed the overall Project on behalf of Peyto, including management and oversight of the 2025 construction activities, surveying and environmental sampling. WSP was responsible for visual inspection

activities including the pre-grading and post-grading inspection of the Containment Structure, inspection of the Borrow Area before and after borrow activities, and monitoring during construction of the Containment Structure grading.

## 12.2 2025 Visual Inspection and Construction Activity Summary

The 2025 Visual Inspection program was developed based on the requirements outlined in the Remedial Action Plan (RAP; Golder 2017), the 2025 update of the Reclamation, Closure and Monitoring Plan (WSP 2025a) and the overall planned 2025 scope of work to complete the construction activities at the Site. Based on the required construction activities, the 2025 program included the following:

**Containment Structure and Borrow Area Pre-Grading Survey:** The Containment Structure and Borrow Area were photographed by means of drone prior to commencement of work at the Site.

**Containment Structure and Borrow Area Pre-Grading Visual Inspection:** The Containment Structure was visually assessed for signs of change from the as-built condition, the visual inspection completed as part of the 2022 Year 1 Post-Construction Monitoring activities and the 2024 visual observations. All observed features were outlined and photographed.

The condition of the licensed 2025 Borrow Area (i.e., the western portion of the Borrow Area) was visually assessed following borrow activities (i.e., sand extraction). The feature locations prior to borrow activities are based on 2024 ortho-photographs.

**Containment Structure Construction Oversight During Grading Activities:** Quality Assurance/Quality Control (QA/QC) monitoring during construction of the Containment Structure grading was carried out by Clifton, under remote guidance from WSP, to verify compliance with the Technical Specifications specified in the Grading Plan and the Drawings (Appendix C).

**Containment Structure and Borrow Area Post-Grading Visual Inspection:** The Containment Structure was visually inspected after grading operations to ensure the finished surface of the containment structure was graded smooth and to identify and document any remaining features on the Containment Structure and buffer area.

The Borrow Area was visually inspected after sand extraction activities to ensure the finished surface was graded smooth and to identify and document any remaining features in the 2025 Borrow Area.

These visual inspections were completed as part of the Year 6 Post-Construction Monitoring requirement.

**Containment Structure and Borrow Area Post-Grading Survey:** The Containment Structure and Borrow Area were surveyed (ground-based topographic survey) and photographed by means of drone following completion of construction activities in 2025. Ortho-photographs of the Containment Structure were also obtained following the 2025 grading. The ground based topographic surveys were used to provide an as-regraded final surface of the Containment Structure and close out survey for the Borrow Area to meet Water Licence and Quarrying Permit requirements.

**Thermistor Tower:** The condition of the tower was visually observed and photographed and the battery for the monitoring system was replaced with a new battery.

### 12.2.1 Visual Inspection Procedure

Prior to initiating the Containment Structure and buffer area grading work, it was intended to have WSP carry out a visual inspection of the Containment Structure and surrounding area to document the current conditions and

features as observed in the field. It was also intended to have the Clifton surveyor carry out a pre-construction topographic ground survey of the Containment Structure, prior to initiating construction activities. These tasks were not completed by the WSP representative and the Clifton surveyor due to flight disruptions preventing the WSP representative and the Clifton surveyor from traveling to the Site with the construction and project management crew.

Given the limited construction period to complete the work and ongoing weather-related delays to flights, Clifton staff at the Site completed a drone flight to collect aerial photos and conducted informal visual observations and collected photos, following which the planned grading work was completed based on discussions with WSP. Sand fill placement and regrading activities of the perimeter side slopes and buffer area of the Containment Structure were undertaken using visual and hand-measured estimates of fill and slope.

The WSP inspector and Clifton surveyor successfully travelled to the Site near the end of the process and completed a grade survey, following which comparisons to the design grades were undertaken by WSP. Adjustments to the final grading were completed on the buffer area, which ensured positive drainage outward from the toe of the structure and a final post-grading survey was completed. Drone ortho-photographs were also captured to record the overall condition of the Containment Structure and surroundings and WSP completed a post-grading visual inspection of the Containment Structure and Borrow Area representing the Year 6 post-construction conditions.

The features that were assessed at the Containment Structure and Borrow Area are listed in Table K.

**Table K: Visual Inspection Features**

Feature	Containment Structure	Borrow Area
Settlement	✓	✓
Erosion	✓	✓
Permafrost conditions	✓	✓
Lateral movement	✓	n/a
Frost action	✓	n/a
Sloughing	✓	n/a
Cracking	✓	n/a
Seepage or ponded water	✓	✓
Staining	✓	✓
Liner exposure	✓	n/a
Condition of thermistor tower	✓	n/a
Vegetation	✓	✓
Features of note / other observations	✓	✓

**Note:** n/a – not applicable

Visual inspection involved a consistently spaced traverse of the Containment Structure including the immediate surroundings (e.g., slopes, ponds), which could potentially influence future stability. The traverse was undertaken

at an approximately 5 m spacing. To minimize the potential for ground disturbance, access to the sites and the traverse was limited to foot travel only and no vehicular travel was allowed on the Containment Structure other than during grading activities.

The locations of known features were based on earlier reports by WSP in 2022 and two visual observations completed by KBM Resources (KBM) in 2024 and Clifton in 2025 (pre-grading). Photographic records of the general area and specific features were recorded to provide context to the length, depth, area, etc. of the features (Appendix D).

A Preliminary Stability Assessment was completed for each feature and a Severity Rating (Acceptable, Marginal, Significant or Unacceptable) assigned as well as Extent (Isolated, Occasional, Numerous or Extensive) and for key features, an overall Performance Rating (Acceptable, Marginal, Significant or Unacceptable) was provided. The Abandoned Military Site Remediation Protocol Volume II document (INAC 2008), reproduced in Table L below, provides a stability assessment matrix related to the visual inspection of landfills. It considers a severity rating and extent to determine the potential for failure and remedial follow-up activities.

**Table L: Landfill Visual Inspection Assessment Matrix (INAC 2008)**

Feature Severity Rating / Landfill Performance Rating	Description
Not Observed	This type of feature was not observed during the inspection.
Acceptable	Noted features are of low consequence. The Containment Structure 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 containment structure stability to date. The potential for failure is assessed as low or moderate.
Significant	Significant or potentially significant changes affecting containment structure 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 containment structure is compromised to the extent that ability to contain waste materials is compromised. Examples may include: <ul style="list-style-type: none"> <li>▪ Debris exposed in erosion channels or areas of differential settlement</li> <li>▪ Liner exposed</li> <li>▪ Slope failure</li> </ul>
Extent	Description
Isolated	Singular feature
Occasional	Features of note occurring at irregular intervals/locations
Numerous	Many features of note, impacting less than 50% of the surface area of the Containment Structure
Extensive	Impacting greater than 50% of the surface area of the Containment Structure

## 12.2.2 Visual Inspection Schedule

Borrow and grading activities commenced on 5 July 2025 and, as noted above, a pre-grading topographic survey was not completed for the Containment Structure and the buffer area.

Environmental soil sampling (soil at the monitoring well locations) was carried out by Clifton on 20 July 2025. Environmental groundwater sampling (groundwater at the monitoring well locations) was not completed due to frozen groundwater in the wells. Results of the environmental sampling are provided in Section 12.7. The timing of the environmental sampling activities was managed and implemented by Clifton.

Below is a summary of the visual inspection and activities completed in the summer of 2025 for the Containment Structure and the Borrow Area.

- **Containment Structure Visual Inspection:** The Containment Structure and buffer area were visually assessed for signs of change from the 2022 visual inspection as part of the Year 1 Post-Construction Monitoring and informal visual observations completed by KBM in 2024. Pre-grading features identified by WSP in the 2025 were photographed by Clifton personnel on 4 and 5 July 2025. Aerial imagery of the Containment Structure collected by drone in 2024 was also used to locate identified features. Regrading activities commenced on 5 July 2025 and were completed on 16 July 2025. WSP conducted a post-grading visual inspection on 15 July 2025 and Clifton completed a topographic ground survey and drone ortho-photography on 16 July 2025.
- **Borrow Area Visual Inspection:** The Borrow Area was not visually inspected in 2025 prior to borrow activities. Ortho-photographs collected of the Borrow Area in 2024 provide the conditions of the Borrow Area prior to 2025 construction activities. WSP conducted a post-grading visual inspection on 17 July 2025 and Clifton completed a final topographic ground survey of the restored Borrow Area on 17 July 2025. Note that WSP did not visually inspect the features in the formerly licenced Borrow Area (i.e., to the east of the 2025 Borrow Area) due to the soft ground conditions.

## 12.3 2025 Pre-Grading Inspection

### 12.3.1 Containment Structure

Clifton completed visual observations of the pre-grading condition of Containment Structure on 4 and 5 July 2025, which included collection of ground-level photographs and drone photographs.

The photographs and observations collected by Clifton were compared to the 2022 visual inspection completed as part of the Year 1 Post-Construction Monitoring activities (WSP 2023) and the 2024 visual observation and topographic drone surveying completed by KBM to assess changes to existing features and to identify any new features. The 2025 pre-grading Containment Structure features identified are shown on Drawing 3 (Appendix C).

Table M lists the features identified in the 2022 visual inspection as well as those noted during the 2024 visual observations. These features included minor settlement, ponding, drainage channel erosion, surface cracking, sloughing and animal burrows. No indications of instability were observed on the Containment Structure.

The condition and extent of some features identified in 2022 was observed to be similar in 2025, notably Features 1, 6, 7, 8a and 12. A number of the features, notably those caused by water erosion, appeared to be more pronounced, including Features 2, 3, 4, 5 and 9. A new feature caused by water erosion (Feature 13) was identified on the south side slope at the east end of the Containment Structure, connecting to Feature 10. Surface cracking (cracks independent of water erosion) including Feature 11 and new Feature 14, on the top of the

Containment Structure appeared to be more pronounced. Settlement or sloughing at Features 10, 8b and 8c were also more pronounced. It should be noted that the pre-grading photographs did not include measurement scales and therefore, direct comparison of the current features to those documented in 2022 is not possible.

Photographs of all features identified on the Containment Structure in 2025 as well as photographs of features identified in 2022 and/or 2024 (for comparison purposes) are provided in a Photographic Record in Appendix D.

- **Feature 1** – This feature consists of a localized area on the cover most likely resulting from incomplete grading or post-grading travel on the cover and appears similar to previous years.
- **Feature 2** – This surface water erosion channel feature appears to be wider and deeper than in earlier years, consistent with progressive development/erosion but is largely similar to 2022.
- **Feature 3** – This surface water erosion channel feature appears to be longer and deeper than in 2022 consistent with progressive change but is largely similar to 2022. Depressions within the channel appear to be related to preferential flow infiltration into the cover.
- **Feature 4** – This surface water erosion feature appears similar to earlier year. The length of the feature is longer than noted in 2022, extending from top of slope and then leading towards Pond Q consistent with progressive development/erosion.
- **Feature 5** – This surface water erosion feature is longer and deeper than noted in 2022 and has developed a second channel leading to Pond F. These changes are consistent with progressive development/erosion.
- **Feature 6** – This feature consists of a localized area of rough cover resulting from incomplete grading of equipment track marks and appears similar to previous years.
- **Feature 7** – This depression, in the area of the former lined pond, appears similar to previous years. There is no standing water.
- **Feature 8a** – This depression and erosion feature looks similar to earlier years. The depression is wetter than in earlier years and deposition/water flow features flowing towards the outlet of the feature are evident.
- **Feature 8b** – This depression feature looks similar to 2024 (not noted in earlier years).
- **Feature 8c** – This depression feature looks similar to 2024 (not noted in earlier years). The feature looks less developed than Features 8a and 8b.
- **Feature 9** – This surface water erosion feature appears notably deeper and wider than in earlier years, consistent with progressive development/erosion. It does not appear to extend further upstream/upslope to the Containment Structure.
- **Feature 10** – This feature appears similar to earlier years however it is noted that there is standing water in the depression and inspection of oblique photos indicates the depression drains to channels leading ultimately to Pond P.
- **Feature 11** – This feature is a longitudinal crack extending across the entire length of the upper flat part of the Containment Structure and appears to be more pronounced than in 2024 when first noted. The boot prints observed in the photographs are indicative of softer conditions on the top of the Containment Structure

- **Feature 12** – This feature is a longitudinal crack extending from Pond Q to Pond P, roughly following the top of slope of the low area containing Ponds P and Q. This feature was first noted in 2024.
- **Feature 13** – This feature was first identified in 2025, consisting of a 22 m long surface water drainage feature on the Containment Structure 6H:1V side slope.
- **Feature 14** – This feature was first identified in 2025 from drone photos and consists of a 10 m long crack on the top of the Containment Structure in the southwest.

The primary features noted during the inspections include (i) surface water runoff flow channels, (ii) cracking not associated with surface water, (iii) depressions or sloughing and (iv) wind erosion. The extent of these features is classified as occasional, based on the Indian and Northern Affairs Canada method.

A number of surface water flow features are extending from the top of the Containment Structure, including Features 2, 4, 5 and 13, which appear to be typically developed where sheetflow from the top or side of the structure results in focused flow. In some areas, small depressions are noted within the channels, which may represent localized areas of softer conditions or heightened erosion. Feature 9 within the east buffer area appears to originate on the access path. The increasing length, width, depth branching and depressions of these features are consistent with increased erosion as each seasonal flow event results in more removal of sediment. The observed features are not considered to represent long term issues relative to stability of the Containment Structure and are expected to redevelop following their removal through regrading.

Cracking consists primarily of two long features, the first extending along the entire axis of the Containment Structure and the second extending near the top of slope above the low area containing Ponds P and Q. The mechanism resulting in the development of these features is not known; however, their location and understanding of typical mechanisms, local physiography and climate related effects suggest they are influenced by freeze/thaw action typical of this area. In the case of Feature 11 on the Containment Structure, given that settlement on the side slopes was not noted and considering the observed soft nature of the sand fill, it is theorized that freeze/thaw mechanisms may be resulting in the development of cracking similar to that of the surrounding polygonal structures. In the case of Feature 12, given its location near the top of the low area containing Ponds P and Q, as well as the sloughing on the pond side slopes and settlement in the area of Feature 8a, it is theorized that this may be a tension crack influenced by settlement in the lower area. Whereas neither feature is currently considered to represent an issue with respect to stability of the Containment Structure, it is recommended that particular attention be given to inspection of these areas in the next monitoring period.

Settlement and sloughing were observed at Features 8a, 8b, 8c and 10. In the case of Feature 8a, surface water runoff appears to be contributing to the development of this feature. The mechanism of the development of these areas is not known; however, it is noted that ice was found at depth at MW19-02 and, therefore, it is theorized that melting of ice lenses under this area may result in localized settlement and sloughing. With respect to Feature 10, it is considered possible that this feature reflected post-construction settlement and it is noted that a small pond was filled in this area in 2017. These features are not considered to represent an issue with respect to stability of the Containment Structure; however, Features 8a, 8b and 10 were backfilled to locally stabilize the sloughing in these areas. It was not possible to backfill Feature 8c.

Overall, the Containment Structure was assessed to have an "Acceptable" performance as the majority of features were assigned an "Acceptable" severity rating and only two features (Feature 10 and 12) was rated as "Marginal" due to the potential to impact the toe of the slope. The Containment Structure is in a stable condition and there are no major impacts on its performance and integrity.

In addition to the above features, it is noted that the Containment Structure cover soils exhibit self-armouring (i.e., increased coarser-grained material at surface) as a result of wind-related winnowing of the finer sand particles from the uppermost portion of the Containment Structure. The fine-grained sand noted in some areas outside of the structure may represent deposition of the winnowed sand. Overall, however, the shape of the Containment Structure is largely unchanged from 2019, suggesting that it is relatively stable with respect to wind erosion.

**Table M: Summary of Soil Containment Structure 2025 Pre-Grading Features**

Checklist Item	Present (Y/N)	Feature ID (1, 2, etc.)	Location Description	Length (m)	Width (m)	Depth (m)	Description (Severity Rating)	Comparison to 2022 Inspection	Photos (Appendix D)
Settlement	Y	7	North toe	10	3	0.2	Acceptable	Feature similar to 2022	25 to 27
	Y	10	South toe, east end	3	3	0.02	Marginal	Feature similar to 2022	46 to 48
Erosion	Y	2	North slope, west end	27	0.15	0.15	Acceptable	Feature similar to 2022	7 to 9
	Y	3	Northwest side slope (central), crest to toe	18	0.2	0.1	Acceptable	Feature progressively larger than in 2022	10 to 13
	Y	4	Northwest slope, crest to toe	32	0.1	0.05	Acceptable	Feature progressively larger than in 2022	14 to 18
	Y	5	Southeast slope, crest to toe	65	0.1	0.05	Acceptable	Feature progressively larger than in 2022	19 to 21
	Y	6	Northeast slope, near toe of slope	3	4	0.05	Acceptable	Feature similar to 2022	22 to 24
	Y	8a	Pond Q, adjacent east toe	12	12	1.5	Acceptable	Feature similar to 2022	28 to 32
	Y	8b	Adjacent east toe	9	9	1.5	Acceptable	Feature not present in 2022	33 to 36
	Y	8c	Pond P, adjacent east toe	9	7	1.5	Acceptable	Feature not present in 2022	37 to 40
	Y	9	Pond P, adjacent southeast toe	15	1	0.5	Acceptable	Feature progressively larger than in 2022	41 to 45
	Y	13	South slope, east end	15	0.1	0.05	Acceptable	Feature not present in 2022	56 to 59
Lateral movement	N	-	-	-	-	-	-	-	-
Frost action	N	-	-	-	-	-	-	-	-
Sloughing	N	-	-	-	-	-	-	-	-
Cracking	Y	10	South toe, east end	3	3	0.02	Marginal	Feature similar to 2022	46 to 48
	Y	11	90	90	0.03 to 0.22	0.08 to 0.15	Acceptable	Feature not present in 2022	49 to 52
	Y	12	East slope, near toe, north to south	65	0.1	0.1	Marginal	Feature not present in 2022	53 to 55
	Y	14	Top of structure, northwest of communication antenna	10	0.1	0.1	Acceptable	Feature not present in 2022	60 to 61
Animal burrows	Y	11	Top of structure, west to east	0.1	0.1	0.3	Acceptable	Feature not present in 2022	49 to 52
	Y	3	Northwest side slope (central), crest to toe	0.1	0.1	0.3	Acceptable	Feature similar to 2022	10 to 11
Vegetation	N	-	-	-	-	-	-	-	-
Staining	N	-	-	-	-	-	-	-	-
Vegetation stress	N	-	-	-	-	-	-	-	-
Seepage or ponded water	N	-	-	-	-	-	-	-	-
Debris and/or liner exposed	N	-	-	-	-	-	-	-	-
Presence/Conditions of monitoring instruments	Y	Tower	-	-	-	-	-	-	64 to 66
	Y	Battery	-	-	-	-	-	-	64 to 66
Features of note / other observations	Y	1	Southwest slope, near crest	5	3	0.15	Acceptable	Feature similar to 2022	4 to 6
	Y	7	North toe	10	3	0.2	Acceptable	Feature similar to 2022	25 to 27

**Note:** - designates that item was not present, or photos were not collected

### 12.3.2 Borrow Area

A pre-grading visual inspection was not completed for the Borrow Area in 2025. The most recent visual inspection of the Borrow Area was completed during the 2022 Year 1 Post-construction Monitoring activities (WSP 2023). The drone ortho-photos collected by KBM in 2024 provide a detailed view of the entire Borrow Area. All Borrow Area features identified in 2022 were overlain on the 2024 drone ortho-photo in Drawing 4 (Appendix C).

The Borrow Areas features within close proximity to the 2025 licensed Borrow Area limit are shown in Photograph 73 in Appendix D. Feature 8 and the northern portion of Features 1 and 2 are the only features within the 2025 licenced Borrow Area limit. Feature 8 was identified as a shallow depression and Features 1 and 2 were identified as erosion channels in the 2022 visual inspection. Feature 8 was removed as part of the borrow operations in 2025; features 1 and 2 are on the edge of the excavation and have been addressed through the regrading of the 2025 Borrow Area.

## 12.4 2025 Construction Activities

The primary purpose of the 2025 final grading activities was to complete the grading of the Containment Structure buffer area to ensure positive drainage from the toe of the structure and, where required, to fill and trim the grades of the structure to match the 2019 as-built condition. The following design objectives were followed:

minimum 2.4 m of thermal soil cover over the geomembrane liner;

minimum 5% slope on the top of the Containment Structure;

perimeter sideslope of the Containment Structure to be no steeper than 6H:1V; and

minimum 4% outward grade in the 10 m wide buffer area (beyond the base of the 6H:1V side slope).

In addition to the above design objectives, the grading plan included repair of identified geotechnical features including areas of erosion, settlement, rutting, sloughing and surface cracking.

The 2025 Grading Plan prepared by WSP identified areas of the Containment Structure that required fill to reinstate the grades back to the 2019 as-built grades, based on a comparison of the 2024 drone survey grades and the 2019 as-built grades. Given the inherent inaccuracies of comparing a ground survey to a drone survey, the 2025 Grading Plan recommended a pre-grading ground survey for direct comparison to the 2019 as-built grades. As noted above, this pre-grading survey could not be completed and, therefore, Clifton proceeded with grading work based on the 2025 Grading Plan developed using the 2024 drone survey, initially using visual comparison to existing slopes and grades and hand measured elevations to estimate the fill and slopes. The grades in the buffer area were adjusted following arrival of the surveyor and WSP inspector at the Site.

The top of the Containment Structure exhibited soft ground conditions, and, as a result, it was agreed that no construction work would be undertaken on the top of the containment structure to protect the integrity of the thermal cover soil layer and prevent potential disturbance that could require additional work.

### 12.4.1 Construction Equipment

The following heavy construction equipment was used for the aggregate extraction, loading and hauling of fill material from the Borrow Area to the Containment Structure, fill placement, compaction and final grading. This equipment is the same as was used in 2019.

- Hydrema 926 rubber-tired backhoe/front end loader;

- one Cat 289D skid steer;
- one Dynapack 1300 packer (smooth drum roller); and
- two Hydrema 912DS haul trucks (articulated haul trucks).

### 12.4.2 Containment Structure

Construction activities for the Containment Structure were carried out from 5 to 16 July 2025. Most of the sand fill placement, compaction and grading work took place from 5 to 7 July 2025, with some additional grading work taking place on 16 July 2025. Clifton carried out the construction QA/QC inspection work starting on 5 July 2025 until WSP arrived on 14 July 2025.

The source of clean borrow material used to fill and fine grade the Containment Structure was obtained from the western portion of the licenced Borrow Area approximately 450 m east of the Containment Structure (Drawing 2, Appendix A). The sand fill material used was free of rocks over 75 millimetre (mm), frozen soil, refuse, organic matter, construction debris and other deleterious materials. Clifton excavated, loaded and hauled clean sand from the west side of the Borrow Area to the Containment Structure.

Clifton spread and fine graded sand fill material over the 6H:1V perimeter slopes and 10 m wide buffer area using a skid steer to the required grades. The sand fill was placed in maximum 300 mm thick compacted lifts. Each lift was compacted with a minimum of six one-way passes of the smooth drum roller, except for sand fill placed in low areas of Features 8a and 8b, which were track-packed using the skid steer.

The top of the Containment Structure was not filled and graded as planned due to the soft ground conditions on the top of the structure, as shown in Photograph 66 in Appendix D. Based on field observations of the ground conditions, it was decided to restrict construction equipment from accessing the top of the structure to avoid potential damage (e.g., over-compaction, rutting) to the thermal cover layer.

With respect to Features 1 to 14 that were identified during the pre-grading inspection (see Section 12.3.1 and Table M), all features except for Features 8c, 11 and 14, and parts of Features 2, 5, 9 and 12 were largely repaired as part of the grading work. Features 11 and 14, at the top of the Containment Structure was not repaired. The upper portions of some drainage features (Features 2 and 5) were not graded as they were on the top of the Containment Structure. Additionally, Feature 8c and portions of Features 9 and 12 were outside of the buffer area and in softer sloped areas preventing equipment access.

Once final grading and smoothing of the Containment Structure was completed, further equipment and all-terrain vehicle movement on and around the Containment Structure and buffer area was not allowed, to avoid leaving tracks and ruts.

### 12.4.3 Borrow Area

Sand extraction operations in the designated Borrow Area were carried out from 5 to 16 July 2025. Borrow sand was extracted from the western portion of the Borrow Area (i.e., the licensed 2025 Borrow Area) over an approximate area of 7,500 square metres (m<sup>2</sup>) as shown on Drawing 9 (Appendix A). An estimated total of 220 m<sup>3</sup> of clean borrow sand was obtained from the Borrow Area as determined through truck load count and estimated truck load volume. A comparison of the 2024 drone survey completed by KBM and the 2025 post-construction ground survey completed by Clifton indicate that approximately 180 m<sup>3</sup> of sand was obtained from the Borrow Area, demonstrating that sand borrow volumes obtained from truck load count and topographic survey are generally consistent.

Borrow sand was extracted by stripping the ground surface using a skid steer and hauled using Hydrema haul trucks. The Hydrema haul trucks accessed the Borrow Area using the existing haul road at the west end of the Borrow Area (Drawing 2, Appendix C). The Borrow Area was stripped to a maximum depth of 300 mm below existing ground.

Once sand extraction and hauling activities were completed, the western portion of the Borrow Area was graded using a skid steer and compacted smooth using a smooth drum roller. The limits of the borrow extraction area were blended into the surrounding area to promote positive sheet flow drainage to prevent areas of ponding.

Features 1, 2 and 8 that were identified during the visual inspection of the 2022 Year 1 Post-Construction Monitoring activities and within the 2025 licensed Borrow Area limit, all of Feature 8 and the northern part of Features 1 and 2 were fully remediated during the process of borrowing, regrading and compaction and are no longer present.

#### 12.4.4 Battery Replacement

The thermistor monitoring system consists of a tower, with solar panel and data logger/satellite connection modem in the chamber on the upper part of the tower, and a buried battery vault at the base of the tower. The battery vault contains the battery, battery management and cable connections. To extend the operating life of the thermistor monitoring system, the existing battery was replaced on 16 July 2025 with a new 12 volt battery. Prior to installation, the battery was tested to ensure that it was fully charged. After installation, data were remotely downloaded from the thermistor monitoring system to confirm that the battery was installed correctly, and the system was operating as designed. Photographs 67 to 69 in Appendix D illustrate the stages of the battery replacement procedure. Specifications of the replacement battery are provided in Table N.

**Table N: Battery Specifications Details**

Specifications	Details
<b>Battery Type</b>	Fullriver DC Series – Model DC115-12
<b>BCI Group</b>	BCI-GRP-31
<b>Capacity Ratings</b>	115AH, C230, 200RC, 25
<b>Weight</b>	33.16 kg
<b>Volume</b>	14 cubic feet
<b>Dimensions</b>	0.45 m (length) by 0.2 m (height) by 0.15 m (width)
<b>Dangerous Goods Class</b>	UN2800 – WET, NON-SPILLABLE, electric storage battery, Class 8
<b>Supplier</b>	Purchased from Total Battery in Vaughan, Ontario
<b>Battery Type</b>	Valve Regulated Lead Acid battery, sealed and non-spillable

## 12.5 2025 Post-Grading Inspection

Following final grading of the Containment Structure and buffer area, a post-grading visual inspection was carried out by WSP; post-grading topographic ground survey and drone ortho-photography were carried out by Clifton.

### 12.5.1 Containment Structure

A post-grading visual inspection of the Containment Structure was conducted by WSP on 15 July 2025. Photographs taken by WSP during the post-grading visual inspection are included in the Photographic Record in Appendix D. WSP traversed the Containment Structure and surrounding area by foot to inspect the final condition. Overall, the finished surface was smooth and compact/firm, except for the top (5% grade surface) of the Containment Structure, which was not altered during the regrading work and remained soft and generally smooth. Notably, this part of the structure retains the self-armouring resulting from winnowing of fine sand since the structure was completed in 2019. The features identified on the side slopes and buffer area during the pre-grading inspection were repaired and are no longer present. As noted in Section 12.4.2, the portion of features on the top of the Containment Structure and beyond the buffer area were not graded and remain. Table O lists the features identified in the 2025 post-grading inspection. All remaining features are not a concern with respect to stability or integrity of the structure, as discussed in Section 12.3.1.

**Table O: Summary of Soil Containment Structure 2025 Post-Grading Features**

Checklist Item	Present (Y/N)	Feature ID (1, 2, etc.)	Location Description	Length (m)	Width (m)	Depth (m)	Description (Severity Rating)	Photos (Appendix D)
Settlement	N	-	-	-	-	-	-	-
Erosion	Y	2	Top of structure, southwest corner	6	0.1	0.1	Acceptable	-
	Y	5	Southeast slope, crest to toe	15	0.1	0.05	Acceptable	21
	Y	8c	Pond P, adjacent east toe	9	7	1.5	Acceptable	37 to 40
	Y	9	Pond P, adjacent southeast toe	6	1	0.5	Acceptable	41 to 45
Lateral movement	N	-	-	-	-	-	-	-
Frost action	N	-	-	-	-	-	-	-
Sloughing	N	-	-	-	-	-	-	-
Cracking	Y	11	Top of structure, west to east	90	0.03 to 0.22	0.08 to 0.15	Acceptable	52
	Y	12	North end of east slope (9 m) and South end of east slope (6 m)	9 m (north) 6 m (south)	0.1	0.1	Acceptable	-
	Y	14	Top of structure, northwest of communication antenna	10	0.1	0.1	Acceptable	60 to 61
Animal burrows	Y	11	Top of structure, west to east	0.1	0.1	0.3	Acceptable	52
Vegetation	N	-	-	-	-	-	-	-
Staining	N	-	-	-	-	-	-	-
Vegetation stress	N	-	-	-	-	-	-	-
Seepage or ponded water	N	-	-	-	-	-	-	-
Debris and/or liner exposed	N	-	-	-	-	-	-	-
Presence/Conditions of monitoring instruments	N	-	-	-	-	-	-	-
Features of note / other observations	N	-	-	-	-	-	-	-

**Note:** - designates that item was not present, or photos were not collected

A final topographic ground survey of the re-graded Containment Structure was completed by Clifton on 16 July 2025 (Drawing 5, Appendix C). The topographic ground survey was carried out using pre-established benchmarks described in Table P below. The Clifton surveyor also obtained the coordinates of the four monitoring wells located at each end of the Containment Structure, described in Table Q.

**Table P: Benchmark Coordinates**

Control Point #	Northing	Easting	Elevation (Ground)	Location
1146	8579494.09	501515.17	18.739	North of Airstrip
1184	8579466.21	501542.99	18.920	North of Airstrip
1127	8579279.21	502232.27	13.703	Southwest of Containment Structure
Tower	8579396.62	502197.32	17.519	Base of Tower (top of southeast bolt)

**Table Q: Monitoring Well Coordinates**

Monitoring Well	Northing	Easting	Elevation (Ground)	Elevation (Top of Steel Casing)
			masl	masl
MW19-01	8579369.583	502267.186	14.893	15.369
MW19-02	8579457.906	502281.277	14.253	14.830
MW19-03	8579378.995	502175.836	14.256	14.879
MW19-04	8579459.437	502193.411	14.334	14.829

**Note:** masl – metres above mean sea level

A final drone flight of the Containment Structure was completed by Clifton on 16 July 2025. During the drone flight, persistent high winds presented significant challenges, affecting a few sections of the photo orthomosaic (shown as blank areas on Drawings 5 and 9 in Appendix C). A final aerial photo (taken from a plane) of the Containment Structure is shown in Insert A below.



**Insert A: Aerial photo of Containment Structure after grading (Photo looking northeast, 9 August 2025)**

The final 2025 post-grading survey of the Containment Structure is provided in Drawing 5 (Appendix C). This survey was compared to the 2019 as-built survey to verify conformance with the 2019 as-built grades and design objectives. Drawing 8 (Appendix C) shows a comparison of the 2025 post-grading survey to the 2019 as-built survey. A surface analysis using a color-coded system was applied to display the elevation difference between the two surveys. The final contours of the Containment Structure match the contours of the 2019 as-built survey, within survey tolerance, and meet the design objectives stated in Section 12.4, except for the following locations:

- 1) A few localized areas throughout the top surface and side slopes of the Containment Structure (primarily where the soil cover was slightly less than 2.4 m thick (i.e., between 2.2 and 2.4 m thick). This small/localized variation from the design thickness is considered acceptable.

The top surface (i.e., crown) of the Containment Structures has a slope ranging from 2.6 to 2.9%. Whereas the 5% design target on the top of the Containment Structure was not achieved, the slope is sufficient to prevent ponding of surface water and to direct surface water off the crown of the Containment Structure and is considered acceptable.

A minimum 2.6% outward slope was achieved in the 10 m wide buffer area (slope ranges from approximately 2.6% to 16%). Whereas the 4% design target was not achieved at all locations in the buffer area, a positive slope was achieved away from the Containment Structure over all areas of the buffer and ponding of surface water is not expected within the buffer area. Positive drainage was achieved and surface water flow away from the structure is acceptable.

Overall, the final regraded surface of the Containment Structure (including repair of identified features and regrading the thermal cover soil layer and buffer area) meets the design objectives specified in the Grading Plan and is considered acceptable.

## 12.5.2 Borrow Area

A post-grading visual inspection of the Borrow Area was conducted by WSP on 17 July 2025. Photographs taken by WSP during the post-grading visual inspection are included in the Photographic Record in Appendix D (Photographs 74 to 82). WSP traversed the western portion of the Borrow Area and surrounding areas by foot to inspect the final condition. The final surface was moderately smooth and compact/firm with some minor to moderate ruts remaining on the ground surface from the edges of the smooth drum roller. Given the partially saturated ground conditions over some areas of the Borrow Area, these features were expected. The limits of the material extraction area were blended into the surrounding ground to eliminate abrupt changes in grade. Features identified within the 2025 licenced Borrow Area limit (Feature 8 and the northern part of Features 1 and 2) were eliminated during the process of borrowing, regrading and compaction.

A final topographic ground survey of the restored Borrow Area was completed by Clifton on 17 July 2025 (Drawing 9, Appendix C). A review of the contoured survey indicates there is positive drainage towards the west, consistent with the surrounding grade. The restoration of the Borrow Area following material extraction has been completed in a manner that supports site drainage and minimizes water ponding.

A drone flight of the Borrow Area was also attempted; however, due to unfavourable weather conditions including sustained high winds, a drone flight was not possible. Aerial photographs of the Borrow Area were taken on 9 August 2025 from a plane, as shown in Insert B.



**Insert B: Aerial photo of Borrow Area graded following use in 2025  
(Photo looking southwest, 9 August 2025)**

## 12.6 Conclusions

Overall, findings from the visual inspections carried out as part of the Year 6 Post-Construction Monitoring activities indicate that the Containment Structure is in a stable condition and there are no major impacts on its physical performance and integrity. Final grading of the Containment Structure mound and buffer area was carried out to match the 2019 as-built condition and to ensure positive drainage from the toe of the structure. In general, the design objectives for the Containment Structure were achieved, with the exception of several minor deviations related to thermal soil cover thickness and sloping of the top surface and buffer area of the Containment Structure. These minor deviations are not expected to have an impact on the integrity or performance of the structure. The final regraded surface of the Containment Structure (including repair of identified features and regrading the thermal cover soil layer and buffer area) meets the design objectives and is considered acceptable.

A total of approximately 220 m<sup>3</sup> of sand was extracted from the Borrow Area to complete the Containment Structure regrading work. Following material extraction, the Borrow Area was regraded and compacted smooth to promote positive sheet flow drainage to the west, consistent with the surrounding grade. The limits of the Borrow Area were blended into the surrounding ground to eliminate abrupt changes in grade. Overall, the Borrow Area was restored in a manner that supports drainage and minimizes water ponding.

## 12.7 2025 Environmental Sampling

The environmental monitoring program for the Containment Structure in 2025 included soil and groundwater monitoring. The groundwater monitoring wells and soil sampling locations are illustrated in Figure 4.

### 12.7.1 Groundwater Monitoring

Groundwater monitoring on 30 July 2025 indicated that there was no standing water at the four groundwater monitoring wells and therefore no groundwater samples were collected. Based on visual inspection of the tip of the water level probe, there was frozen water present in each of the wells. The 2025 groundwater monitoring data are summarized in Table R.

**Table R: 2025 Monitoring Well Details and Water Levels**

Monitoring Well	Elevation (ground)	Elevation (top of casing)	Stick-up	Total Depth	Water Level 30 July 2025		
	masl	masl	m	mbgs	mbtoc	mbgs	masl
MW19-01	14.89	15.37	0.48	2.22	1.06	0.58	14.31
MW19-02	14.25	14.83	0.58	2.19	1.21	0.63	13.62
MW19-03	14.26	14.88	0.62	2.12	1.1	0.48	13.78
MW19-04	14.33	14.83	0.50	2.13	1.16	0.66	13.67

**Notes:** mbgs – metres below ground surface; mbtoc – metres below top of casing

### 12.7.2 Soil Sampling and Results

Soil sampling was completed within approximately 3.0 m of each of the four monitoring wells; sampling locations are shown on Figure 4 and a photograph is provided in Insert C below. These locations are separated from those where the baseline soil samples were collected in 2019 and Year 1 samples collected in 2022.

The typical permafrost depth at the Site is approximately 0.70 to 0.80 m. Two samples, a shallow (between 0.10 and 0.2 m) and deep (between 0.50 and 0.60 m), were collected as grab samples within a hole excavated with a shovel. The holes were then backfilled with native material and the location relative to the monitoring well recorded.

The soil samples were collected using industry standard protocols including decontamination of the sampling shovel with soap and water, methyl hydrate and rinsing with distilled water before each use. The soil was collected by hand with single-use disposable nitrile gloves and placed in clean 125 millilitre soil sample jars and TerraCore™ samplers provided by the laboratory.

The sample containers were labelled with the project name, sample date, location identifier and depth. The samples were stored and transported to a certified laboratory (ALS Environmental) under chain-of custody protocols and analyzed for BTEX, PHC Fractions F1 to F4 and metals.



**Insert C: Photo of Soil Sampling at MW19-03SS (30 July 2025)**

Analytical results of the soil samples were compared to the CCME agricultural soil standards for coarse grained soil (CCME 2008, 2026) and the results are summarized in Table E1 (Appendix E). The laboratory certificates of analyses for the soil samples are provided in Appendix F.

Concentrations of BTEX, PHC Fractions F1 to F4 and metals were less than the applicable standards in the analyzed soil samples (Table E1, Appendix E).

### 12.7.3 Quality Assurance/Quality Control

The following QC samples were collected:

#### Field Blank Water Samples:

- No field blank water samples were submitted to the laboratory because no groundwater samples were collected in 2025.

#### Travel Blank Sample:

- No travel blank water samples were submitted to the laboratory because no groundwater samples were collected in 2025.

#### Duplicate Soil Sample:

- Two duplicate soil samples (19-05SS1 and 19-05SS2) were collected in 2025 at MW19-03.
- Two jar/container sets with the location sample control number and appropriate duplicate sample control number were prepared and filled from sample material.

The results of the laboratory QA/QC analysis are presented in the laboratory certificates of analyses in Appendix F. The analysis included method blanks, laboratory duplicates, laboratory control samples, surrogate recovery and matrix spikes. There were no QA/QC issues identified by the laboratory.

The analytical results for the soil duplicate samples collected in 2025 and a comparison of the results using relative percent difference (RPD) are provided in Table E2 (Appendix E). Upon receipt of the analytical results, RPD values between the original samples and their field duplicates were calculated as follows:

$$RPD\% = \frac{|S - D|}{\frac{1}{2}(S + D)} \times 100$$

Where: S = sample value; and  
D = blind field duplicate or replicate value.

Since analytical error increases near the reportable detection limit (RDL), an RPD was only calculated where the concentrations of both the original and blind field duplicate samples were greater than five times the RDL. The calculated RPDs were then compared to parameter specific alert limits. The calculated RPD for the duplicate soil samples did not exceed the alert limits (Table E2, Appendix E).

Based on the review of the laboratory and field QA/QC results, no field or laboratory QA/QC issues were identified. The soil results reported are considered reliable.

## 13.0 PART B – 2.M: MODIFICATIONS AND/OR MAJOR MAINTENANCE

No modifications and/or major maintenance work was completed as part of the 2025 field season (as described in Section 1.1).

## 14.0 PART B – 2.N: UPDATES AND/OR REVISIONS TO MANAGEMENT AND MONITORING PLANS

This section summarizes changes that were made to the Management and Monitoring Plans that were approved in their original version by the IWB on 18 May 2017.

### 14.1 Spill Contingency Plan

No changes were made to the IWB-approved Spill Contingency Plan.

### 14.2 Waste Management Plan

No changes were made to the IWB-approved Waste Management Plan.

### 14.3 Quality Assurance/Quality Control Plan

No changes were made to the IWB-approved QA/QC Control Plan.

### 14.4 Reclamation, Closure and Monitoring Plan

The Reclamation, Closure and Monitoring Plan was updated and submitted to the IWB in March 2025. No additional changes were made to the Reclamation, Closure and Monitoring Plan in 2025. A summary of the revisions made is provided in Table S.

**Table S: Summary of the Revisions to the Reclamation, Closure and Monitoring Plan**

Revision Date	Description	Section	Page
March 2025	Revised dates	Cover page and headers	n/a
	Revised Repsol to Peyto	Throughout	n/a
	Revised Golder Associates Ltd. to WSP	Throughout	n/a
	Revised permits in Table 1	2.2	6
	Revised dates	3.1.3	8
	Revised dates	4.3	19
	Revised dates	4.4	20
	Revised dates	4.6.1	22
	Revised work completed	4.9.6, 4.9.7	25, 26
	Revised dates and work to be completed	4.9.8, 4.9.9	26, 27
	Revised dates	5.2	28
	Revised dates in Table 5	5.4	33

Note: n/a – not applicable

### 14.5 Remedial Action Plan

No changes were made to the IWB-approved RAP.

## **14.6 Surveillance Network Monitoring Plan**

No changes were made to the IWB-approved Surveillance Network Monitoring Plan.

## **15.0 PART B – 2.O: 2025 FIELD REPORT**

### **15.1 Summary of 2025 Work**

A summary of the 2025 field season is provided in Sections 1.1 and 12.0.

### **15.2 Summary of Planned 2026 Work**

The Containment Structure has been completed including the placement of all impacted soils identified in the 2017, 2018 and 2019 construction phases, and including installation of the liner and thermal protection layer over the Cell, installation of base and background thermistor equipment, and the associated tower and satellite transmission equipment. The Containment Structure has been graded to the approved design slope and compacted. As a result of deteriorating weather conditions in late August 2019, final grading and trimming was completed in 2025.

An overview of the planned 2026 field season is provided in Section 1.2 and the forecasted schedule is provided in Table I (Section 12.0).

The primary Project tasks to be executed in 2026 include the following.

- Mobilize crew and supplies to Mould Bay.
- Establish camp operations at Mould Bay.
- Complete final demobilization of heavy equipment temporarily stored at the previous temporary camp location at Mould Bay.
- Complete final demobilization of temporary camp, waste and all associated equipment from Mould Bay to Inuvik or Yellowknife.
- Remove airstrip improvement tiles at Mould Bay.
- Complete demobilization of crew and supplies from Mould Bay.

If the full demobilization cannot be completed by 2026, some activities may be completed in 2027.

## **16.0 ANNEX I – D: SURVEILLANCE NETWORK PROGRAM REPORT**

### **16.1 Introduction**

The SNP monitoring was designed and implemented as part of the Project to collect and analyze water quality samples as described in the Water Licence Terms and Conditions and Annex 1: Surveillance Network Program. In fulfilling the requirement of Part B – 2.G, this section details the findings of the SNP.

The SNP is comprised of five sampling stations. Details of each station are provided in Table T.

**Table T: Inuvialuit Water Board Water Licence N5L8-1837 Surveillance Network Program Summary**

Station Number	Station Description	Sampling Frequency	Parameters Sampled	Water Quality Requirement as per Water Licence
1837-1	Discharge of greywater holding tank prior to disposal to the environment	Prior to discharge to the environment	TSS	100 mg/L <sup>(a)</sup>
			Visible sheen of oil and grease	Concentration not specified, text reads “no visible sheen”
			TRC	0.1 mg/L <sup>(a)</sup>
			pH	6.0 to 9.0 <sup>(a)</sup>
			Other	There should be no discharge of floating solids, garbage, grease, free oil or foam
1837-2	Discharge from the Containment Structure prior to disposal to the environment	Prior to discharge to the environment	TSS	15 mg/L
			Oil and grease <sup>(b)</sup>	5 mg/L and “no visible sheen”
			Benzene	0.37 mg/L
			Toluene	0.002 mg/L
			Ethylbenzene	0.09 mg/L
			Total lead	0.001 to 0.007 <sup>(c,d)</sup>
1837-3	Discharge to land from Borrow Source – Area 1	Per discharge event	TSS	50 to 100 mg/L <sup>(e)</sup>
			TPH	3 to 5 mg/L <sup>(f)</sup>
			pH	6.0 to 9.0
1837-4	Discharge to land from Borrow Source – Area 2	Per discharge event	TSS	50 to 100 mg/L <sup>(e)</sup>
			TPH	3 to 5 mg/L <sup>(f)</sup>
			pH	6.0 to 9.0
1837-5	50 m upstream and 100 m downstream from water course crossing	Daily	TSS	10 mg/L or 10% increase at downstream station <sup>(g)</sup>

**Notes:** TPH – total petroleum hydrocarbons comprising BTEX and PHC Fractions F2 to F4

<sup>(a)</sup> Water Licence specifies ‘average’ concentration, which is interpreted as a composite sample from the tank to sample the average whole-tank concentrations.

<sup>(b)</sup> Oil and grease is the total oil and grease concentration.

<sup>(c)</sup> When hardness is  $\leq 60$  mg/L calcium carbonate ( $\text{CaCO}_3$ ), maximum lead concentration is 0.001 mg/L. When hardness is  $>60$  mg/L and  $<180$  mg/L  $\text{CaCO}_3$ , maximum lead concentration is  $e^{(1.273[\ln(\text{hardness})] - 0.475)}$ . When hardness is  $>180$  mg/L  $\text{CaCO}_3$ , maximum lead concentration is 0.007 mg/L.

<sup>(d)</sup> When hardness is unknown, maximum lead concentration is 0.001 mg/L.

<sup>(e)</sup> Maximum average concentration = 50 mg/L; maximum concentration of any grab sample is 100 mg/L.

<sup>(f)</sup> Maximum average concentration = 3 mg/L; maximum concentration of any grab sample is 5 mg/L.

<sup>(g)</sup> Downstream increase of TSS = 10 mg/L if Upstream TSS  $\leq 100$  mg/L; downstream increase of TSS = 10% if Upstream TSS  $>100$  mg/L.

## 16.2 Surveillance Network Program Data Collected

A water course crossing was installed at the Site on 4 July 2025 and was removed on 17 July 2025. Surface water samples were collected daily from 3 to 18 July 2025, at 50 m upstream (1837-5a) and 100 m downstream (1837-5b) from the water course crossing as part of SNP Station 1837-5. The laboratory analytical results are summarized in Table E3 (Appendix E), and the laboratory certificates of analysis are provided in Appendix F. Parameter concentrations were less than the Water Licence water quality criteria.

## 16.3 Water Intake and Greywater Discharge

No water intake occurred in 2025, and greywater discharges were summarized in Section 3.1.

## 16.4 Surveillance Network Program Data Not Collected

Greywater samples from the greywater pools at the Site and Mould Bay camps were collected on 14 July 2024, as summarized in Section 3.1, and no new greywater samples were collected from SNP Station 1837-1 prior to discharge in 2025.

No discharge from the Containment Structure was observed in 2024 and, as a result, no samples were collected from SNP Station 1837-2.

No discharge was observed from the Borrow Area in 2024 and, as a result, no samples were collected from SNP Stations 1837-3 and 1837-4.

No other SNP sampling stations were established in 2025.

## 16.5 Quality Assurance/Quality Control

A QA/QC program for the SNP sampling was implemented to reduce and quantify potential issues introduced during sample collection, handling, shipping and analysis. The program included, but was not limited to, using dedicated sampling equipment, sample specific identification and labelling procedures and chain-of-custody records.

The results of the laboratory QA/QC analyses are presented in the laboratory certificates of analysis in Appendix F. The analysis included method blanks, laboratory duplicates and laboratory control samples. The surface water samples submitted to the laboratory for SNP Station 1837-5 exceeded the hold time for TSS. The analytical results were well below the Water Licence water quality criteria for SNP Station 1837-5, and, under these circumstances, the TSS data reported can be considered reliable.

No field QA/QC sampling was completed as part of the 2025 SNP.

## 16.6 Interpretations and Calculations

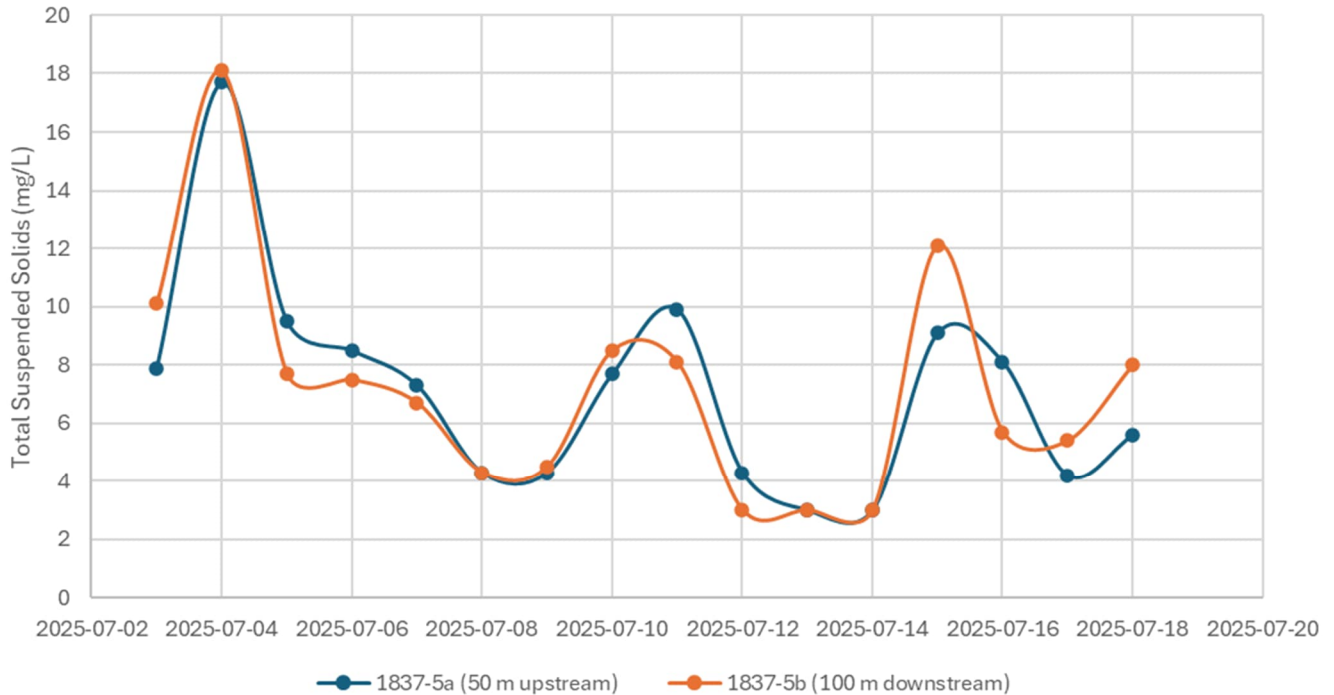
No interpretations or calculations were completed with the 2025 SNP analytical results.

## 16.7 Identification of Anomalies and Trends

No anomalies were identified with the 2025 SNP analytical results.

The TSS concentrations in the surface water samples collected from SNP Station 1837-5 are presented in Figure D. The Water Licence specifies that the downstream TSS concentration cannot be more than 10 mg/L higher than the upstream TSS concentration, if the upstream concentration is less than 100 mg/L (Table T). The downstream TSS concentration (1837-5b) did not exceed this criterion in 2025. Both the upstream and

downstream TSS concentration were higher on the day the water course crossing was installed; however, both TSS concentrations decreased back to the pre-installation TSS concentrations within one day.



**Figure D: TSS Concentrations in the Surface Water Samples Collected from SNP Station 1837-5 in 2025**

No other trends were identified in the analytical results from the SNP Stations in 2025.

### 16.8 Summary of SNP Stations

No samples were collected from SNP Station 1837-1 to 1837-4. The surface water samples were collected from the upstream and downstream of the water course crossing from SNP Station 1837-5a and 1837-5b, respectively. The TSS concentration did not exceed the Water Licence water quality criteria in 2025.

### 17.0 REFERENCES

CCME (Canadian Council of Ministers of the Environment) 2008. Canada-Wide Standards for PHCs in Soil. January 2008.

CCME. 2026. Soil Standards for Metals and VOCs. Available at: <https://ccme.ca/en/summary-table>. Accessed 27 March 2026.

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WSP (WSP Canada Inc.). 2023. Panarctic F-68 Wellsite 2022 Visual Inspection Report, Satellite Bay Prince Patrick Island, NWT. March 2023.

WSP 2025a. 2024 Annual Report, Inuvialuit Water Board Water Licence, N5L8-1837, Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island, Northwest Territories. 14 March 2025.

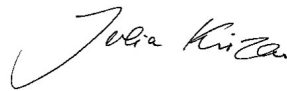
WSP 2025b. Reclamation, Closure and Monitoring Plan. Inuvialuit Water Board Water Licence, N5L8-1837, Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island, Northwest Territories. March 2025.

## Signature Page

**WSP Canada Inc.**



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*Senior Principal Biologist*



Joe Hyrich, BSc, MCPM  
*Senior Project Manager*

SV/JK/JH/sh

**APPENDIX A**

**Figures**

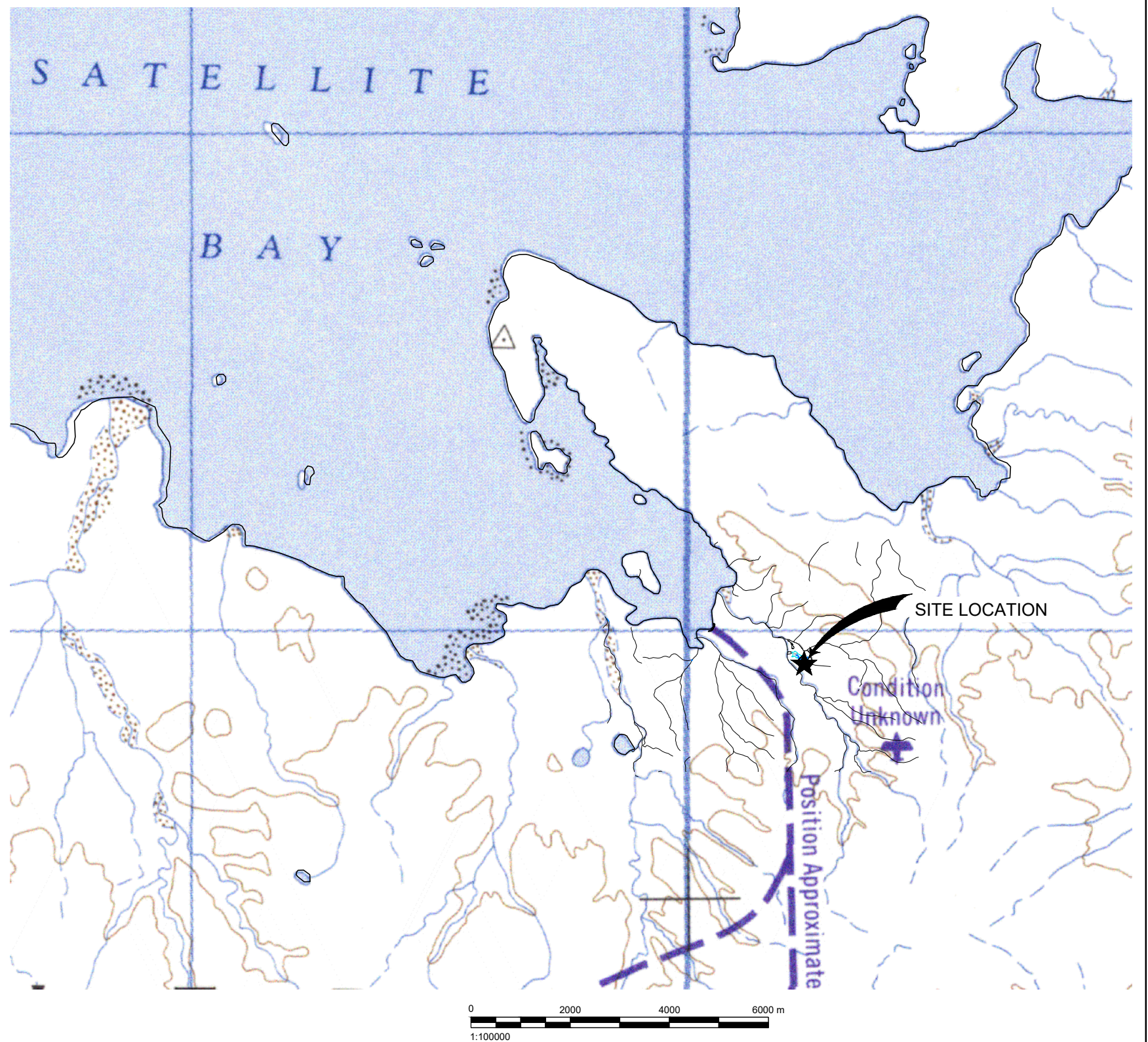
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KEY PLAN  
NOT TO SCALE

REFERENCE

1. BASEMAP: NORTHWEST TERRITORIES CENTRE FOR GEOMATICS. WEBSITE: [HTTP://WWW.GNWTGEOMATICS.NT.CA](http://www.gnwtgeomatics.nt.ca)



CLIENT  
PEYTO EXPLORATION AND DEVELOPMENT CORP.

PROJECT  
PANARCTIC F-68 ABANDONED WELLSITE  
SATELLITE BAY  
PRINCE PATRICK ISLAND, NORTHWEST TERRITORIES

CONSULTANT



YYYY-MM-DD 2026-04-13  
DESIGNED S.VILLENEUVE  
PREPARED Y.WANG  
REVIEWED J.KRIZAN  
APPROVED J.HYRICH

TITLE  
**REGIONAL KEY PLAN**

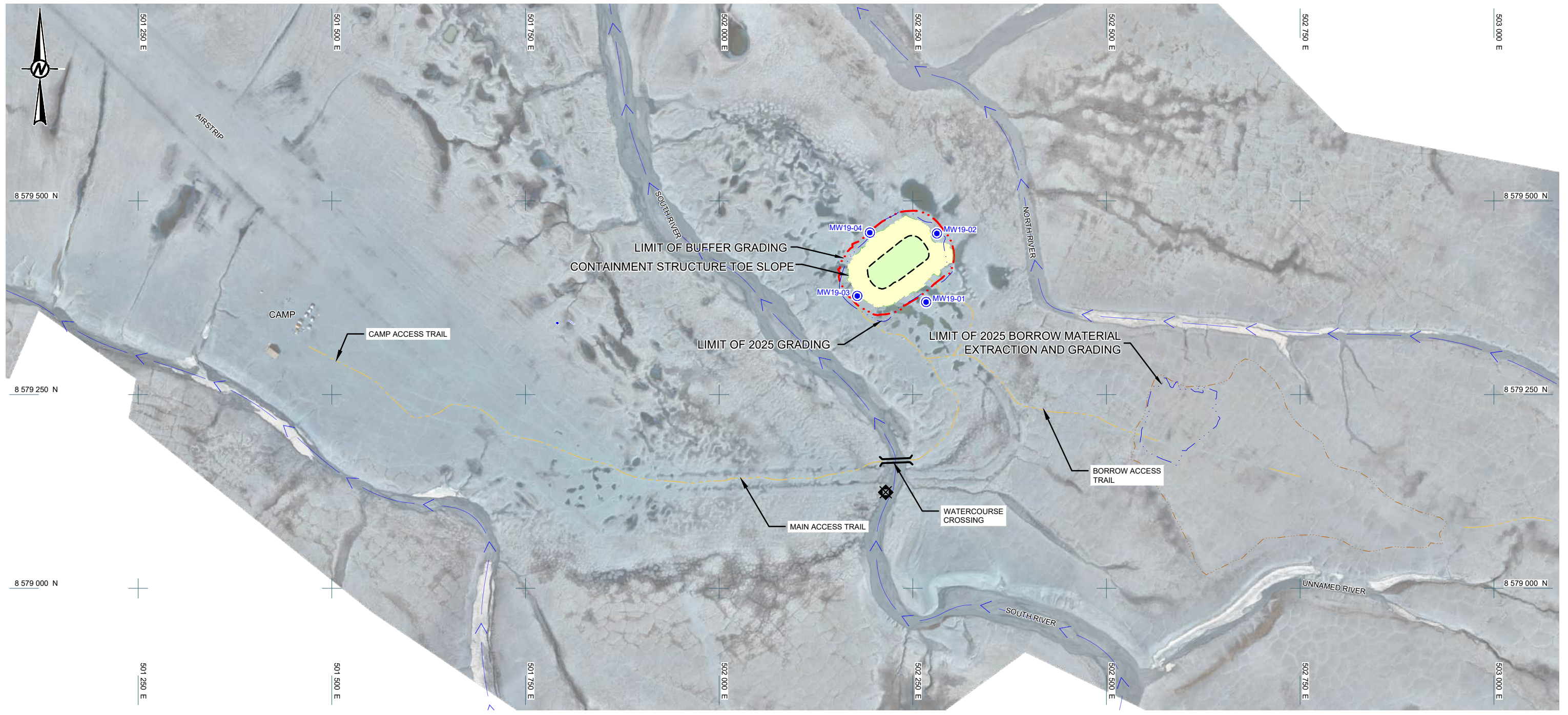
PROJECT NO. CA0022835.8846 PHASE-TASK 4000.2

REV. 0

FIGURE A1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A1S1B

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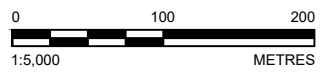


- LEGEND**
- MONITORING WELL
  - FRESHWATER INTAKE
  - EXISTING ACCESS TRAILS
  - FLOW DIRECTION
  - CONTAINMENT CELL
  - CONTAINMENT STRUCTURE TOE OF SLOPE
  - LIMIT OF BUFFER GRADING
  - LIMIT OF 2025 GRADING
  - BORROW AREA

- NOTES**
- DIMENSIONS, ELEVATIONS AND STATIONS ARE IN METRES UNLESS NOTED OTHERWISE.
  - DATUM REFERENCE NAD UTM ZONE 11 WGS84

- REFERENCE**
- BASEMAP: NORTHWEST TERRITORIES CENTRE FOR GEOMATICS. WEBSITE: [HTTP://WWW.GNWTGEOMATICS.NT.CA](http://www.gnwtgeomatics.nt.ca)


Borrow Area Co-ordinates		
	Latitude	Longitude
SE	77d 17' 21"	116d 52' 50"
SW	77d 17' 20"	116d 53' 34"
NE	77d 17' 25"	116d 53' 48"
NW	77d 17' 29"	116d 53' 26"



CLIENT  
PEYTO EXPLORATION AND DEVELOPMENT CORP.

CONSULTANT

YYYY-MM-DD	2026-04-13
DESIGNED	S.VILLENEUVE
PREPARED	Y.WANG
REVIEWED	J.KRIZAN
APPROVED	J.HYRICH



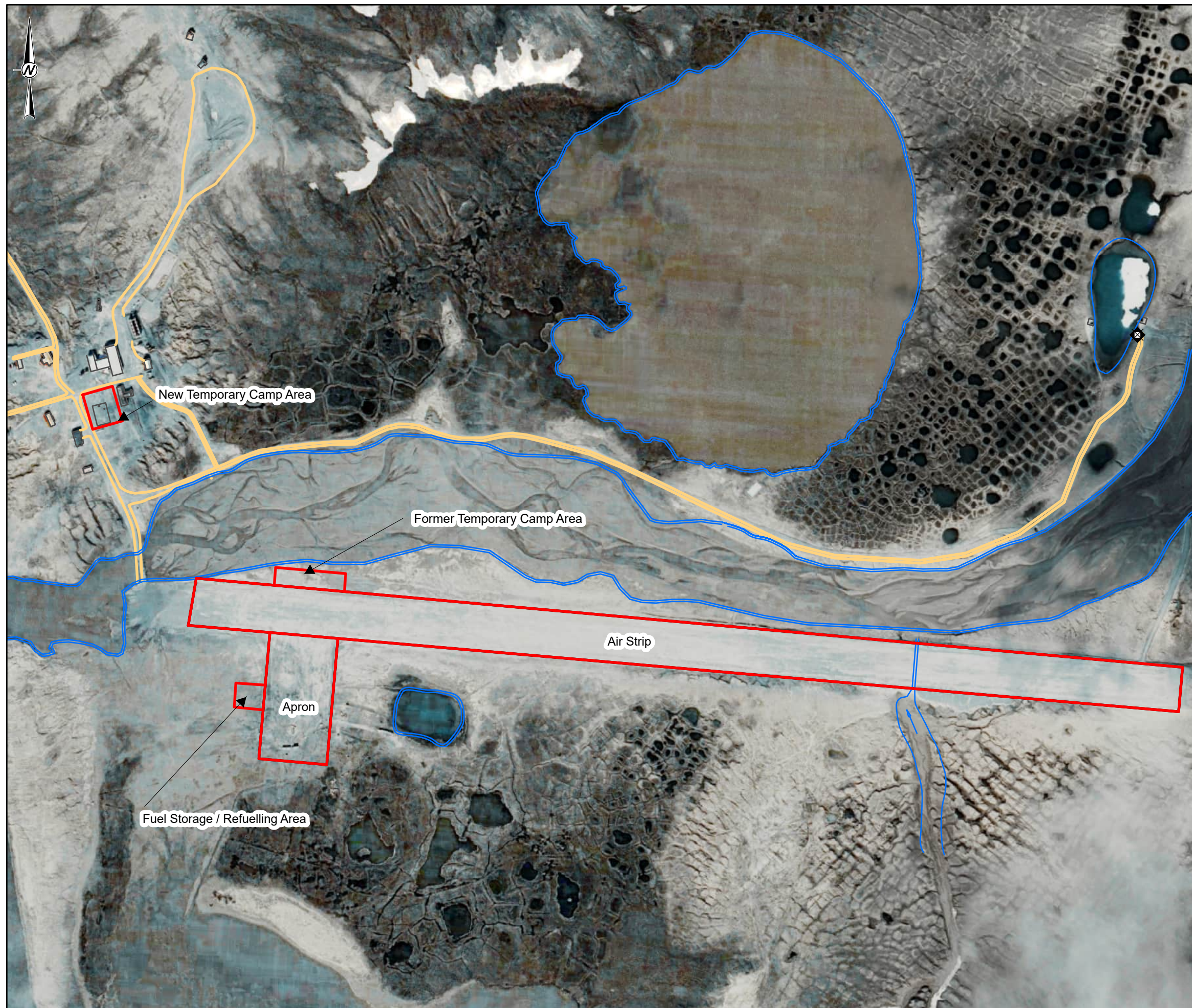
PROJECT  
PANARCTIC F-68 ABANDONED WELLSITE  
SATELLITE BAY  
PRINCE PATRICK ISLAND, NORTHWEST TERRITORIES

TITLE  
**PROJECT SITE OVERVIEW**





PROJECT NO.	PHASE-TASK	REV.	FIGURE
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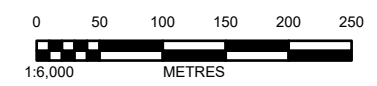
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**LEGEND**

-  FRESHWATER INTAKE
-  ACCESS TRAILS
-  WATER BODIES
-  DIRECTION OF STREAM FLOW



Coordinate System: NAD 1983 UTM Zone 11N



**REFERENCE(S)**

1. SERVICE LAYER CREDITS: SOURCES: ESRI, GEBCO, NOAA, NATIONAL GEOGRAPHIC, GARMIN, HERE, GEONAMES.ORG, AND OTHER CONTRIBUTORS
- ESRI, GARMIN, GEBCO, NOAA NGDC, AND OTHER CONTRIBUTORS
2. SITE IMAGERY ACQUISITION PERFORMED BY GOLDER ASSOCIATES LTD. USING AN UNMANNED AERIAL VEHICLE, 2015.
3. HORIZONTAL DATUM: WGS84 PROJECTION: UTM ZONE 11N  
ELEVATIONS REFERENCED TO ORTHOMETRIC PROJECTION  
CGVD 28 VERTICAL DATUM, HT 2.0 GEOID

**CLIENT**


PEYTO EXPLORATION AND DEVELOPMENT CORP.

**PROJECT**

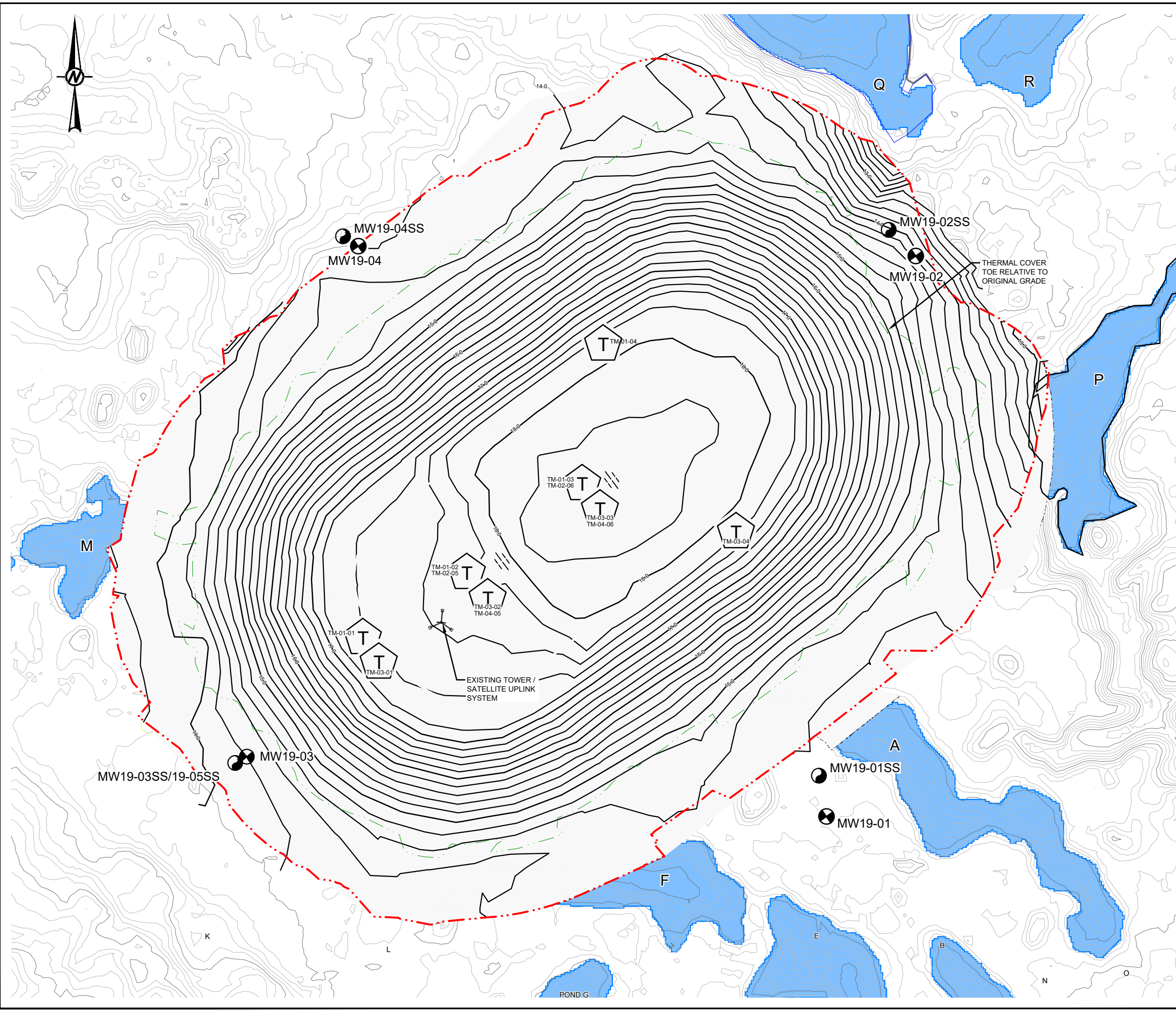
PANARCTIC F-68 ABANDONED WELLSITE  
SATELLITE BAY  
PRINCE PATRICK ISLAND, NORTHWEST TERRITORIES

**TITLE**

**MOULD BAY SITE PLAN**

CONSULTANT	YYYY-MM-DD	2026-04-13
	DESIGNED	S.VILLENEUVE
	PREPARED	C.MEDINA
	REVIEWED	J.KRIZAN
	APPROVED	J.HYRICH

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**LEGEND**

- EXISTING TOPOGRAPHY (0.2m MINOR, 1m MAJOR) (SEE REFERENCE 1)
- CONTAINMENT STRUCTURE DESIGN TOPOGRAPHY (0.2m MINOR, 1m MAJOR)
- EXISTING PONDED AREA
- CONTAINMENT STRUCTURE (LIMIT OF CAP FILL)
- BUFFER ZONE (10 m OFFSET FROM COVER)
- THERMISTOR INSTALLATION
- GROUNDWATER MONITORING WELL
- SOIL SAMPLE LOCATION

- NOTES**
1. DIMENSIONS, ELEVATIONS AND STATIONS ARE IN METRES UNLESS NOTED OTHERWISE.
  2. PONDS A, F, M, AND Q PARTIALLY FILLED AT 4H:1V FROM EDGE OF BUFFER.
  3. POND P FILLED AND GRADED FROM EDGE OF BUFFER ZONE FOR POSITIVE DRAINAGE.

- REFERENCE**
1. TOPOGRAPHY OUTSIDE LIMITS OF AS-BUILT SURVEYS COMPILED USING UAV AND GROUND SURVEY INCLUDING BATHYMETRY PERFORMED BY GOLDER ASSOCIATES LTD., 2015. AND PRE-CONSTRUCTION SURVEYS OLLERHEAD LTD.
  2. FINAL GRADES AS PER POST-CONSTRUCTION SURVEY COMPLETED AUGUST 29TH 2019 BY OLLERHEAD ASSOCIATES LTD. LINED STORAGE POND REMOVED TO REFLECT END OF SEASON FEATURES.
  3. COORDINATES REFERENCE UTM ZONE 11 WGS84. ELEVATIONS ARE ORTHOMETRIC PROJECTION CGVD 28 VERTICAL DATUM, HT 2.0 GEOID.

ID	NORTH(Y)	EAST(X)
MW19-01	8579369.583	502267.186
MW19-02	8579457.906	502281.277
MW19-03	8579378.995	502175.836
MW19-04	8579459.437	502193.411
MW19-01SS	8579376	502266
MW19-02SS	8579462	502277
MW19-03SS/19-05SS	8579378	502174
MW19-04SS	8579461	502191



CLIENT  
PEYTO EXPLORATION AND DEVELOPMENT CORP.

PROJECT  
PANARCTIC F-68 ABANDONED WELLSITE  
SATELLITE BAY  
PRINCE PATRICK ISLAND, NORTHWEST TERRITORIES

TITLE  
**CONTAINMENT STRUCTURE  
MONITORING LOCATIONS**

CONSULTANT	YYYY-MM-DD	2026-04-13
	DESIGNED	S.VILLENEUVE
	PREPARED	Y.WANG
	REVIEWED	J.KRIZAN
	APPROVED	J.HYRICH

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4/B5

**APPENDIX B**

**Site Photographs**



Photo 1 – Satellite Bay camp (1 July 2025).



Photo 2 – Water course crossing installed at Satellite Bay (4 July 2025).

CLIENT  
**Peyto Exploration and Development Corp.**

CONSULTANT



DATE April 2026

PREPARED SV

REVIEWED JK

PROJECT  
**Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island, Northwest Territories**

TITLE  
**Site Photographs**

PROJECT NO CA0022835.8846



Photo 3 – Setting up camp at new location, Mould Bay weather station (8 July 2025).



Photo 4 – Equipment load prepared on helicopter lift frame (18 July 2025).

CLIENT  
**Peyto Exploration and Development Corp.**

CONSULTANT



DATE April 2026

PREPARED SV

REVIEWED JK

PROJECT  
**Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island, Northwest Territories**

TITLE  
**Site Photographs**

PROJECT NO CA0022835.8846



Photo 5 – New camp setup at the Mould Bay weather station (20 July 2025).



Photo 6 – Helicopter lift arriving in Mound Bay (26 July 2025).

CLIENT

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CONSULTANT



DATE April 2026

PREPARED SV

REVIEWED JK

PROJECT

**Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island, Northwest Territories**

TITLE

**Site Photographs**

PROJECT NO CA0022835.8846



Photo 7 – Helicopter lift with seacan arriving in Mound Bay (30 July 2025).



Photo 8 – Items staged for demobilization from Mound Bay (4 August 2025).

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CONSULTANT



DATE April 2026

PREPARED SV

REVIEWED JK

PROJECT

**Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island, Northwest Territories**

TITLE

**Site Photographs**

PROJECT NO CA0022835.8846



Photo 9 – Fully assembled heavy equipment in storage configuration at Mound Bay (5 August 2025).



Photo 10 – Location of former camp at Mound Bay (10 August 2025).

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**Peyto Exploration and Development Corp.**

CONSULTANT



DATE April 2026

PREPARED SV

REVIEWED JK

PROJECT

**Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island, Northwest Territories**

TITLE

**Site Photographs**

PROJECT NO CA0022835.8846

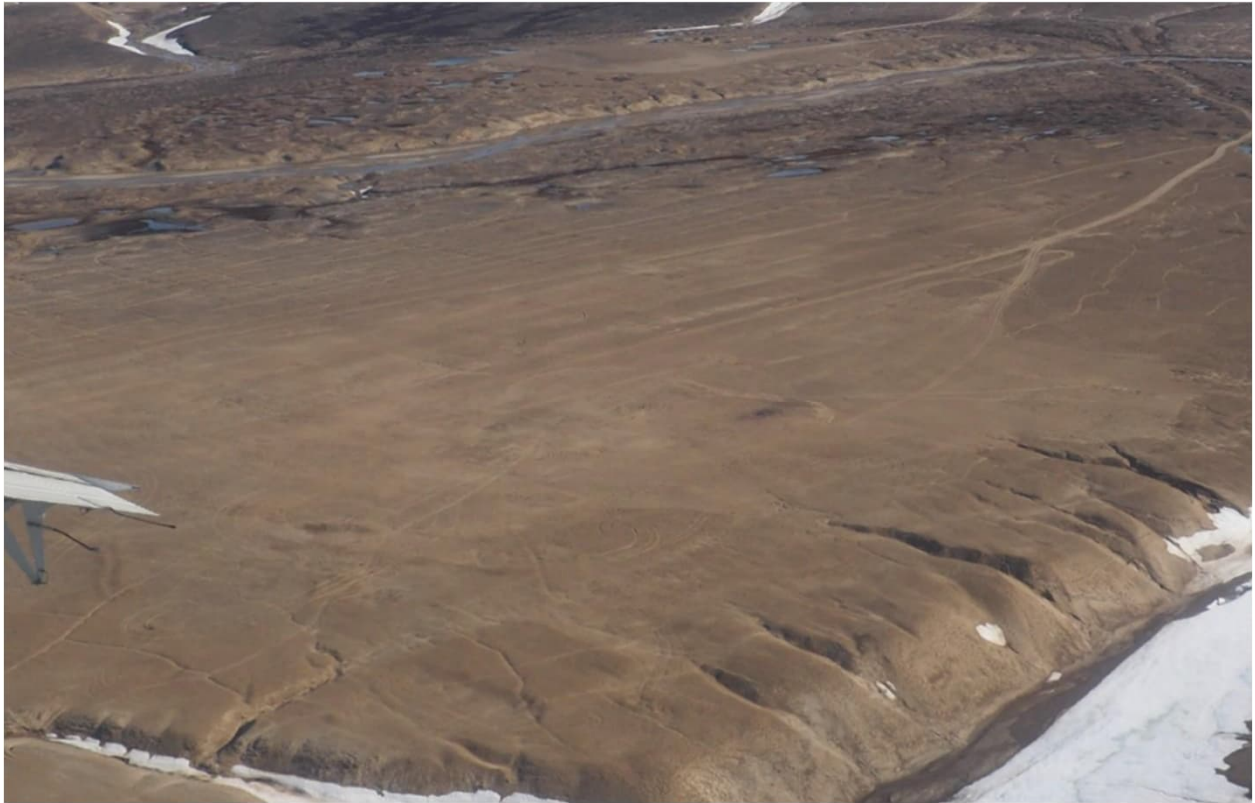


Photo 11 – Location of the former Satellite Bay camp (10 August 2025).

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CONSULTANT



DATE April 2026

PREPARED SV

REVIEWED JK

PROJECT

**Panarctic F-68 Abandoned Wellsite, Satellite Bay, Prince Patrick Island,  
Northwest Territories**

TITLE

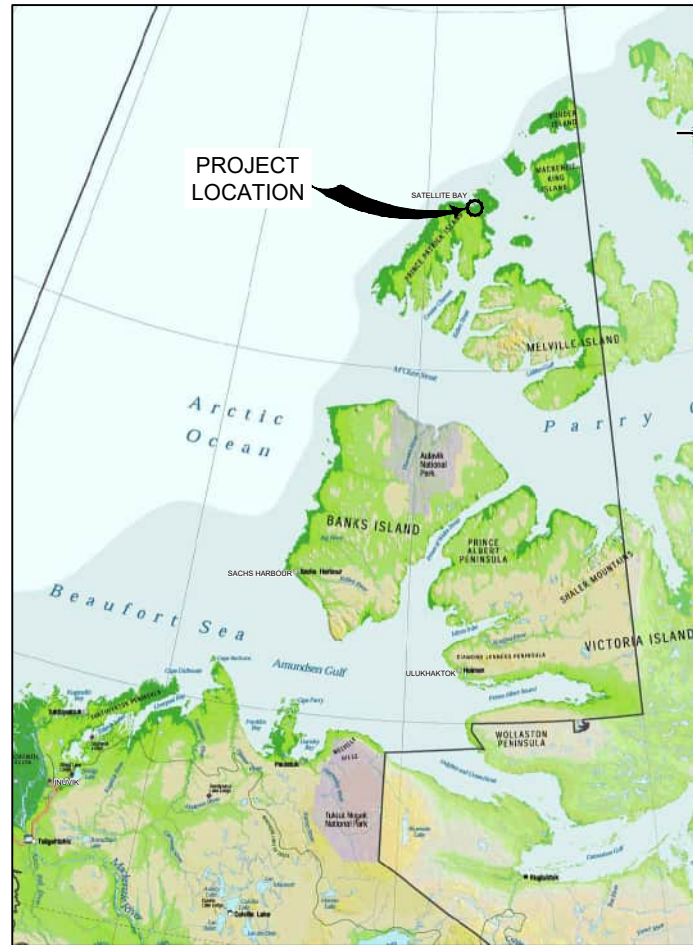
**Site Photographs**

PROJECT NO CA0022835.8846

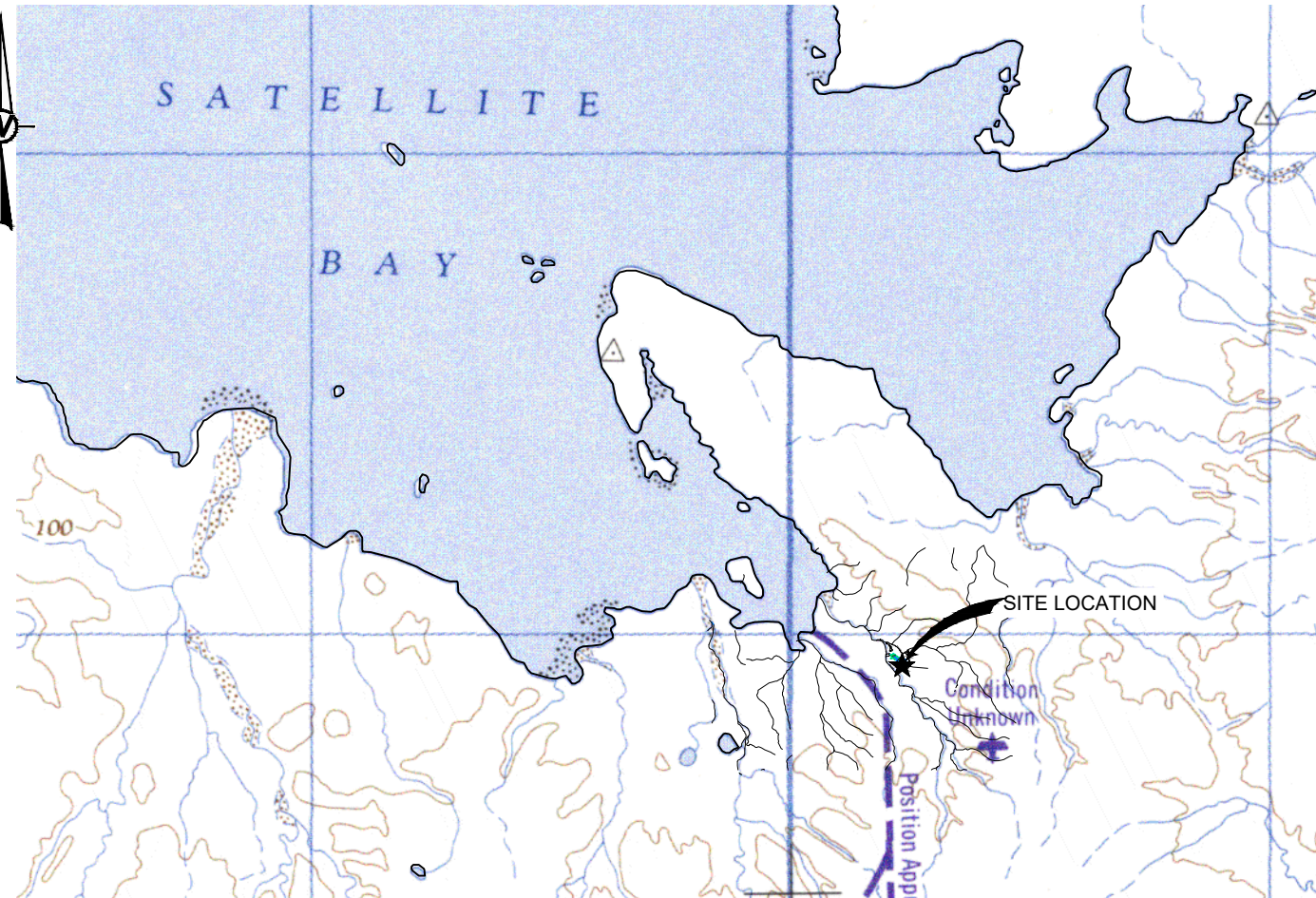
**APPENDIX C**

**2025 As-Regraded Drawings**

# PEYTO EXPLORATION AND DEVELOPMENT CORP. PANARCTIC F-68 WASTE CONTAINMENT STRUCTURE REGRADING SATELLITE BAY, PRINCE PATRICK ISLAND, NWT



KEY PLAN  
NOT TO SCALE



SITE LOCATION PLAN

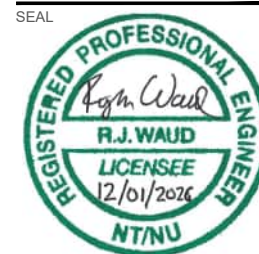


Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET AND DRAWING INDEX
2	2025 WORK AREA
3	2025 PRE-GRADING CONTAINMENT STRUCTURE FEATURES
4	BORROW AREA FEATURES PRIOR TO 2025 REGRADING
5	2025 CONTAINMENT STRUCTURE REGRADED SURFACE
6	CROSS-SECTIONS A-A' & B-B'
7	CROSS-SECTIONS C-C' & D-D'
8	COMPARISON OF 2025 REGRADED SURFACE AND 2019 AS-BUILT SURFACE
9	2025 CONTAINMENT STRUCTURE FEATURES AFTER REGRADING
10	2025 BORROW AREA REGRADED SURFACE

**REFERENCE**

- BASEMAP: NORTHWEST TERRITORIES CENTRE FOR GEOMATICS. WEBSITE: <http://www.gnwtgeomatics.nt.ca>

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
F	2026-01-12	2025 REGRADED SURFACE	RW	JPR	PJD	RW
E	2019-11-27	AS-BUILT				GOLDER ASSOCIATES
D	2018-02-16	2018 DESIGN EXPANSION				GOLDER ASSOCIATES
C	2017-11-11	REGULATORY APPROVAL FINAL				GOLDER ASSOCIATES
B	2016-01-20	REGULATORY APPROVAL DRAFT				GOLDER ASSOCIATES
A	2015-01-06	ISSUED FOR 30% DESIGN				GOLDER ASSOCIATES



CLIENT  
PEYTO EXPLORATION & DEVELOPMENT CORP.

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MISSISSAUGA OFFICE  
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MISSISSAUGA, ONTARIO  
CANADA  
1(905) 567-6100  
www.golder.com

REGRADED SURFACE

PROJECT  
PANARCTIC F-68 ABANDONED WELLSITE  
2025 INSPECTION AND REGRADING  
SATELLITE BAY, PRINCE PATRICK ISLAND, NWT

TITLE  
**COVER SHEET AND DRAWING INDEX**

PROJECT NO. CA0022835 CONTROL 0004 REV. F 1 of 10 DRAWING 1

Path: \\vpcr-pkshen\net\CAD\CAD\MS30\CTX\_Data\SI\MC\clients\p\prince\_patrick\09\_PRC\CA0022835\40\_PRC\0004-2025-AS-Built.dwg | User: jpr | Date: 2025-11-06 12:51:43 PM | Printed By: gld\_jpr | Date: 2025-11-06 12:51:30 PM

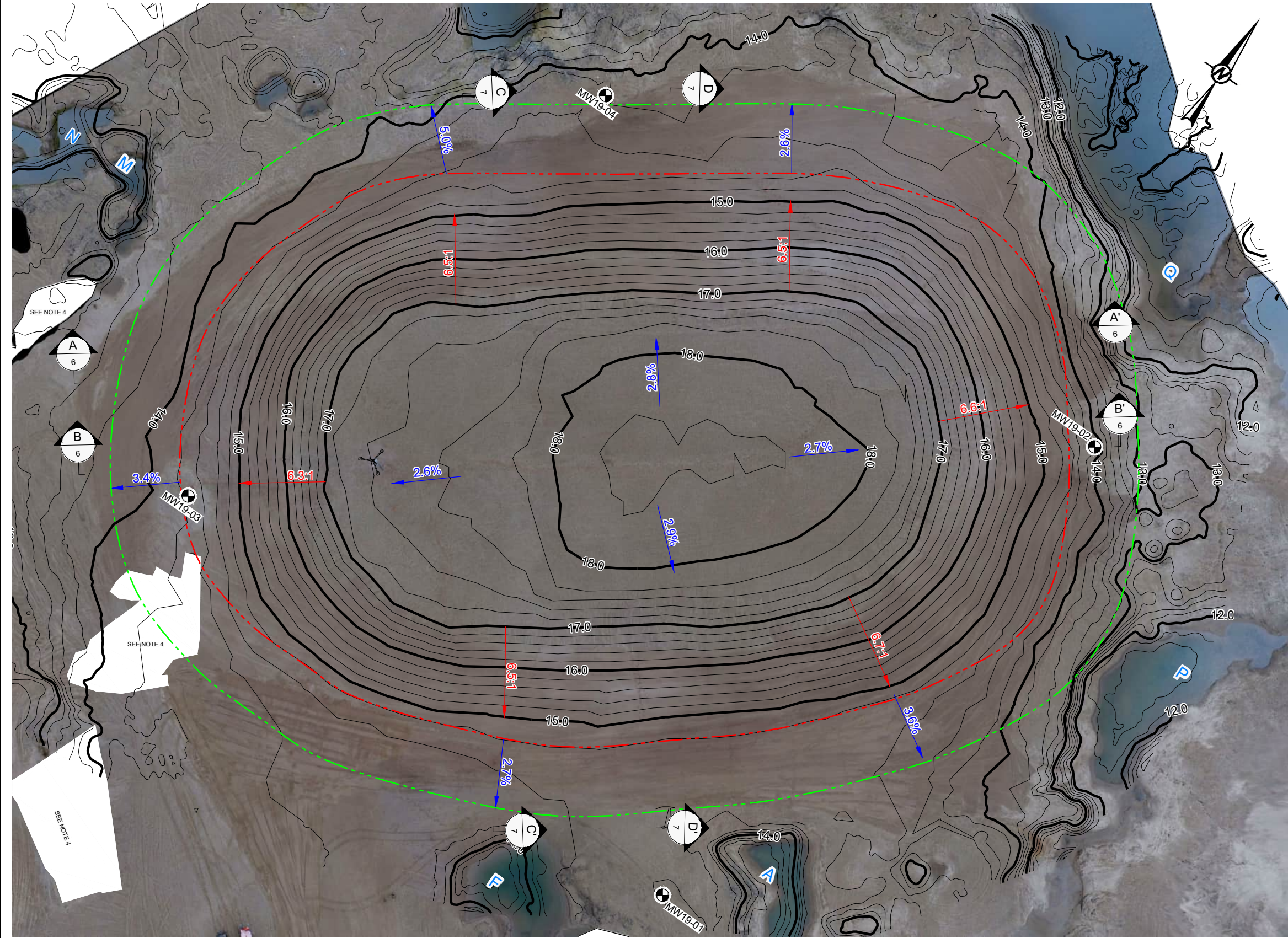
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIB 28 mm







Path: \\user\pshwin\ref\CA\CA\MS\30\CTK\_Data\BIM\Clients\Payto\Prince\_Patrick\09\_PROD\004-2025-AS\Bull\1 File Name: CA0022835-004-CH-0005.dwg | Last Edited By: gld\_jagler Date: 2025-11-05 Time: 12:28:52 PM | Printed By: gld\_jagler Date: 2025-11-05 Time: 12:30:28 PM

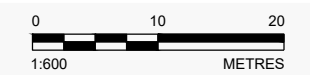


**LEGEND**

	2025 POST-REGRADED CONTOUR (0.2m MINOR, 1m MAJOR) (NOTE 3)
	EXISTING PONDED AREA (NOTE 4)
	2025 AS-BUILT TOE OF CONTAINMENT STRUCTURE
	BUFFER ZONE (10 m OFFSET FROM TOE OF CONTAINMENT STRUCTURE)
	6.5:1 CONTAINMENT CAP SLOPE RATIO (H:V)
	2.6% BUFFER ZONE GRADE FROM TOE OF CONTAINMENT STRUCTURE (%)

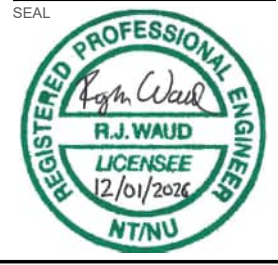
- NOTES**
- DIMENSIONS, ELEVATIONS AND STATIONS ARE IN METRES UNLESS NOTED OTHERWISE.
  - CONSTRUCTION WORKS IN 2025 CONSISTED OF GRADING CONTAINMENT STRUCTURE BUFFER AREAS TO IMPROVE POSITIVE DRAINAGE AND RESTORE AREAS OF SUBSIDENCE TO DESIGN GRADE.
  - GRADE CONTOURS OUTSIDE FOOTPRINT OF 2025 SURVEY ARE FROM 2024 DRONE DEM TOPOLOGY ADJUSTED 4.2 m VERTICAL DATUM NAD 28 TO NAD 2013 GEOID.
  - 2025 DRONE IMAGERY, JULY 2025. IMAGERY IS SUBJECT TO ARTIFACTS AND DATA GAPS SKEWING FEATURES AWAY FROM POINTS OF ALIGNMENT DUE POOR CONDITIONS (HIGH WINDS) AT TIME OF COLLECTION.

- REFERENCES**
- TOPOGRAPHIC GROUND SURVEY DATED JULY 16, 2025 PROVIDED BY CLIFTON
  - BASE ORTHOIMAGE COLLECTED BY DRONE, DATED JULY 16 2025 PROVIDED BY CLIFTON
  - COORDINATES REFERENCE UTM ZONE 11 WGS84. ELEVATIONS ARE ORTHOMETRIC PROJECTION CGVD2013 VERTICAL DATUM, HT 2.0 GEOID.
  - BATHYMETRY AND DEM TOPOGRAPHY GOLDER ASSOCIATES, INC. PROJECT NO. 1531921.
  - 2019 SEASON SURVEY GOLDER ASSOCIATES, INC. PROJECT NO. 1780495.



## REGRADED SURFACE

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
F	2026-01-12	2025 REGRADED SURFACE	RW	JPR	PJD	RW
E	2019-11-27	AS-BUILT				GOLDER ASSOCIATES
D	2018-02-16	2018 DESIGN EXPANSION				GOLDER ASSOCIATES
C	2017-11-11	REGULATORY APPROVAL FINAL				GOLDER ASSOCIATES
B	2016-01-20	REGULATORY APPROVAL DRAFT				GOLDER ASSOCIATES
A	2015-01-06	ISSUED FOR 30% DESIGN				GOLDER ASSOCIATES



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CANADA  
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www.golder.com

PROJECT  
PANARCTIC F-68 ABANDONED WELLSITE  
2025 INSPECTION AND REGRADED  
SATELLITE BAY, PRINCE PATRICK ISLAND, NWT

TITLE  
**2025 CONTAINMENT STRUCTURE  
REGRADED SURFACE**

PROJECT NO. CA0022835	CONTROL 0004	REV. F	5 of 10	DRAWING 5
--------------------------	-----------------	-----------	---------	--------------

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANS B 28 mm











**APPENDIX D**

**Photographic Record**

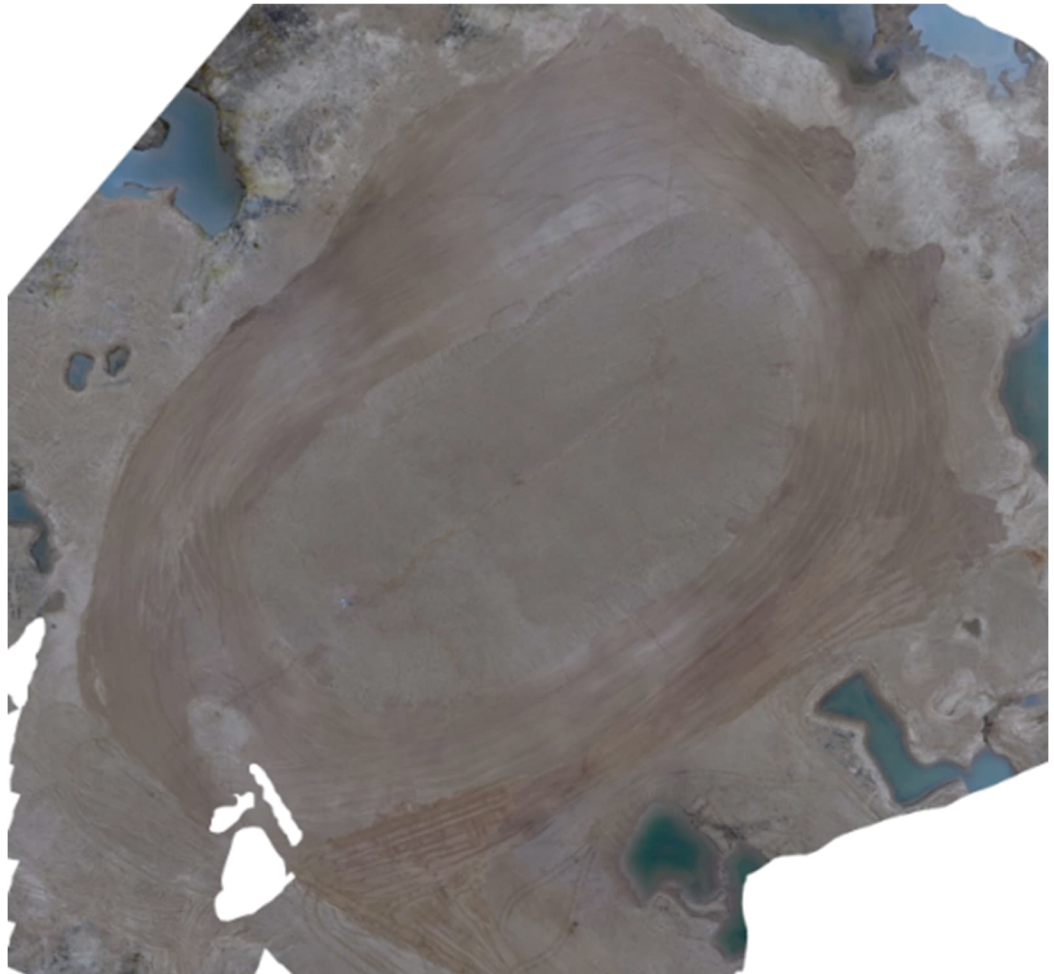
### Containment Structure Photo Log

**Photograph 1:**

**2025 Post-Grading**

Drone ortho-photo of the Containment Structure.

Blank spots at the southwest are due to the instability of the drone from the high winds during the survey flight.



**Photograph 2:**

**2025 Post-Grading**

Aerial (drone) photo of Containment Structure looking south.

Communication tower visible on southwest (right centre) in photo.

Ponds A and F visible to south (top centre part of photo)



**Photograph 3:**

**2025 Post-Grading**

Aerial (drone) photo of Containment Structure looking east.

Communication tower visible on southwest (centre) in photo.

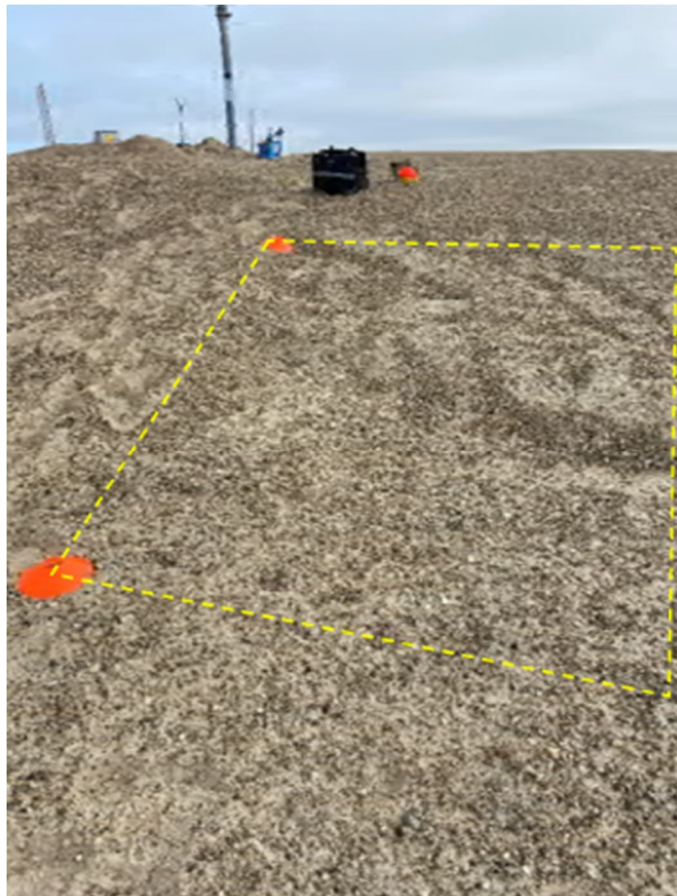
Ponds Q, R, P visible to east (top part of photo).



**Photograph 4:**

**Feature 1 – 2022 Visual Inspection**

Localized rough cover on southwest slope.



**Photograph 5:**

**Feature 1 – 2025  
Pre-Grading  
Inspection**

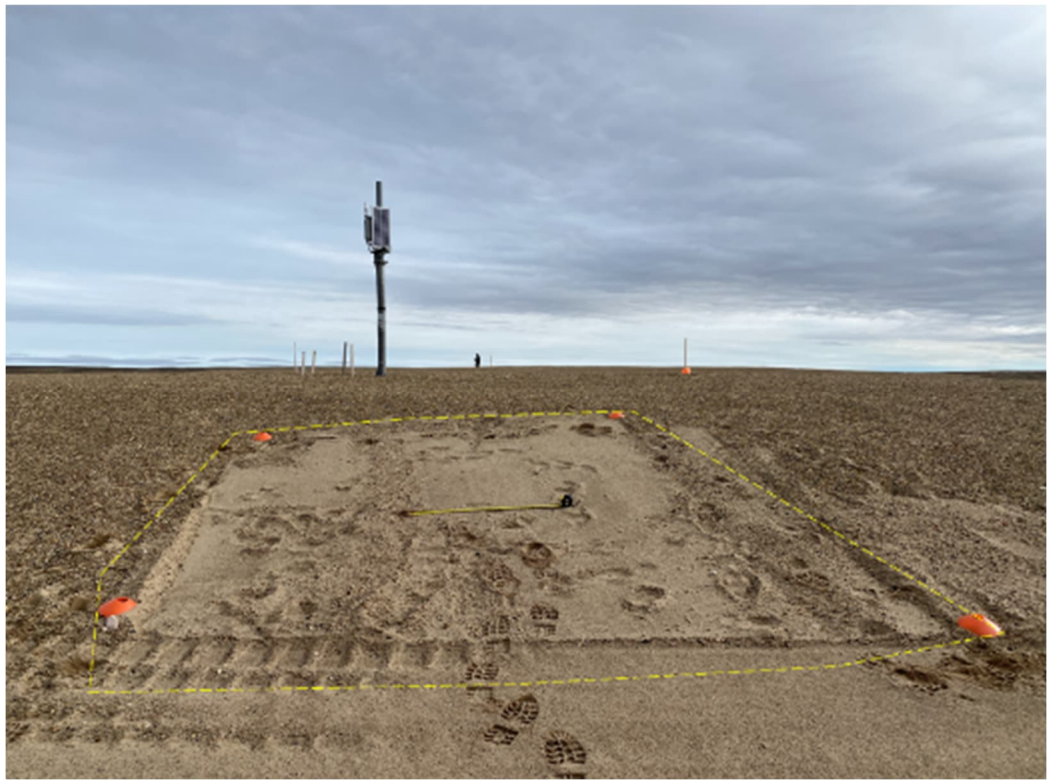
Similar to 2022.



**Photograph 6:**

**Feature 1 – 2025  
Post-Grading  
Inspection**

Feature removed by  
regrading.



**Photograph 7:**  
**Feature 2 – 2022**  
**Visual Inspection**

Sideslope erosion  
channel



**Photograph 8:**

**Feature 2 – 2025**  
**Pre-Grading**  
**Inspection**

Similar to 2022 but  
deeper and more  
defined.



**Photograph 9:**

**Feature 2 – 2025  
Post-Grading  
Inspection**

Feature removed by  
grading.



**Photograph 10:**

**Feature 3 – 2022  
Visual Inspection**

Minor drainage  
erosion channel,  
possible animal  
burrow on upper  
part of northwest  
(central) sideslope.

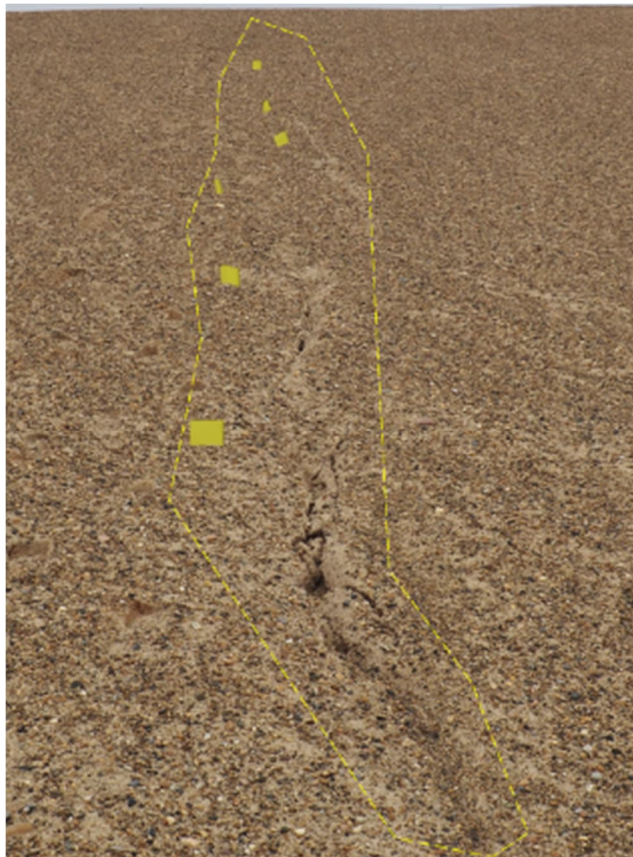


**Photograph 11:**

**Feature 3 – 2025  
Pre-Grading  
Inspection**

Drainage channel  
leading down north  
sideslope.

Noted depressions  
within the channel  
similar to earlier  
animal burrow  
feature.



**Photograph 12:**

**Feature 3 – 2025  
Pre-Grading  
Inspection**

Feature size  
illustrated by  
30 centimetre  
carpenter's square.



**Photograph 13:**

**Feature 3 – 2025  
Post-Grading  
Inspection**

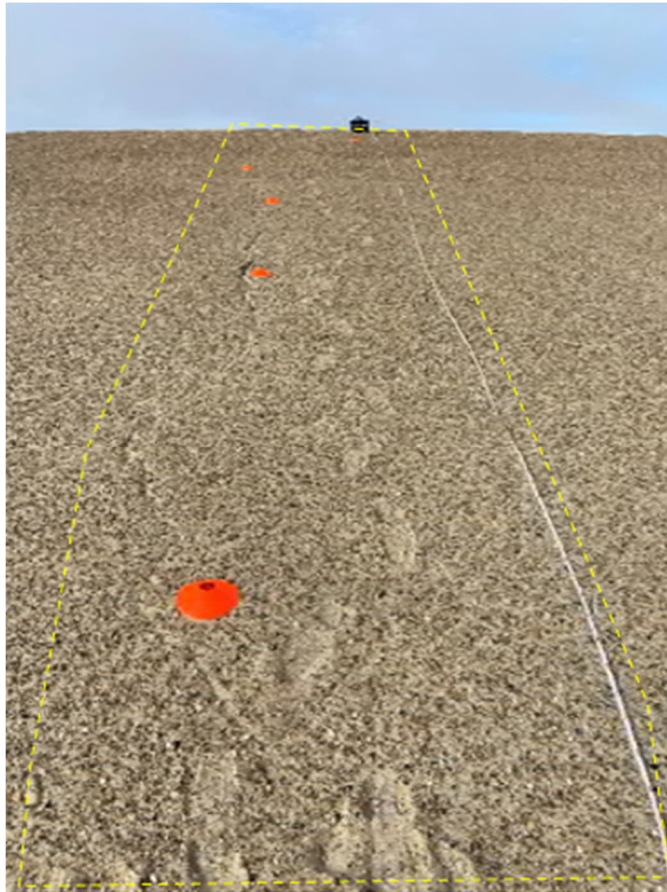
Feature removed by  
grading.



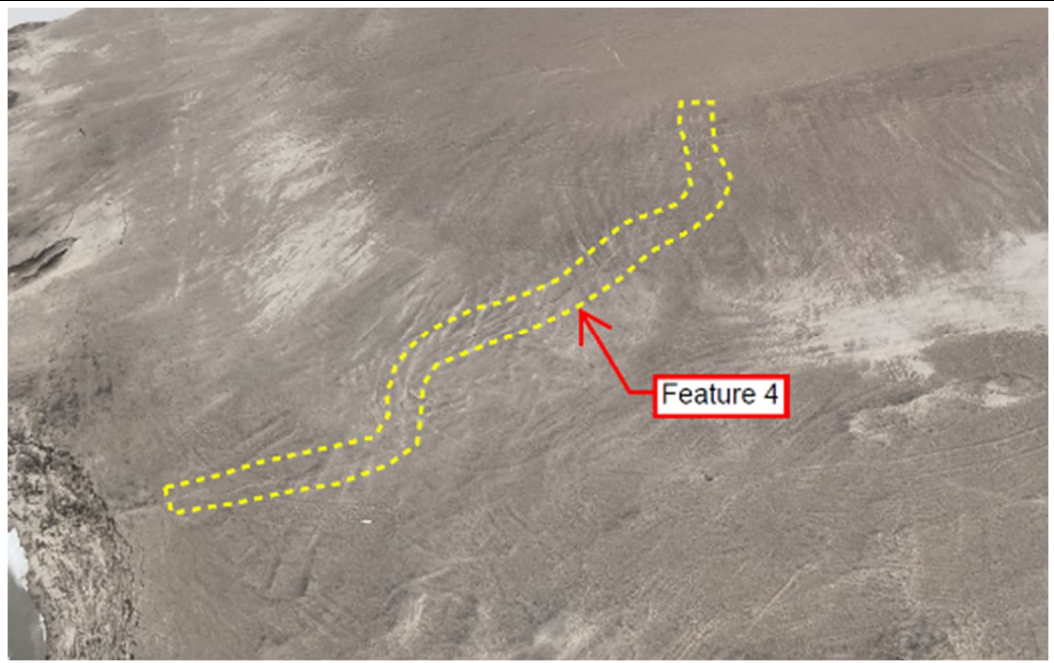
**Photograph 14:**

**Feature 4 – 2022  
Visual Inspection**

Minor drainage  
erosion channel on  
north corner of  
sideslope.

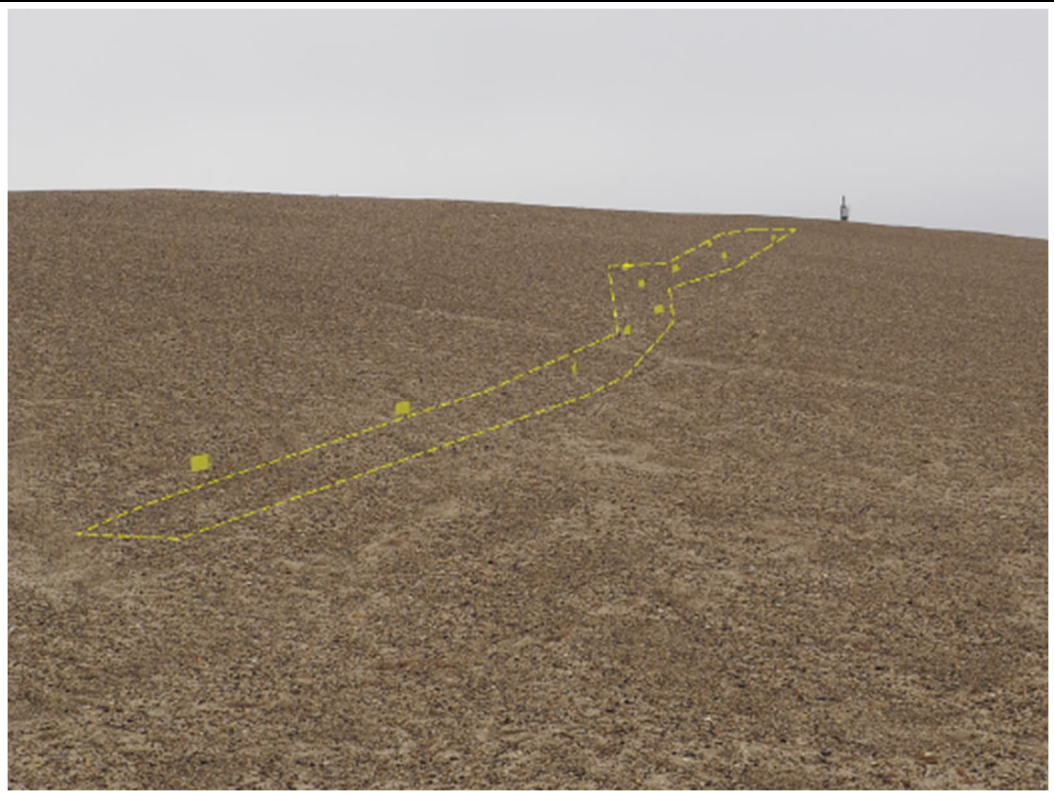


**Photograph 15:**  
**Feature 4 – 2024**  
**Site Visit**



**Photograph 16:**  
**Feature 4 – 2025**  
**Pre-Grading**  
**Inspection**

Drainage channel  
appears longer than  
in 2022.



**Photograph 17:**

**Feature 4 – 2025  
Pre-Grading  
Inspection**



**Photograph 18:**

**Feature 4 – 2025  
Post-Grading  
Inspection**

Feature removed by  
regrading.



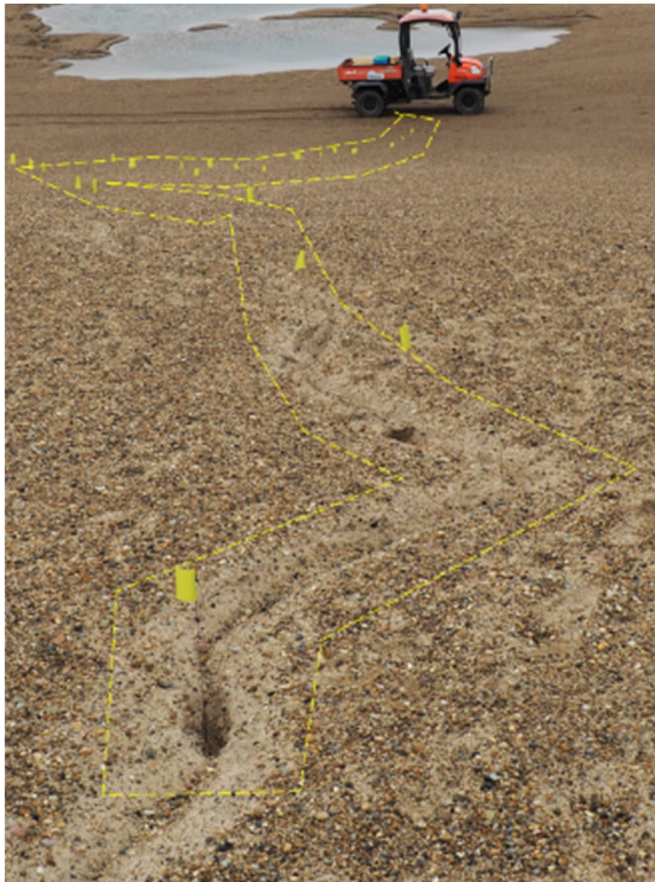
**Photograph 19:**  
**Feature 5 – 2022**  
**Visual Inspection**  
Drainage erosion channel on south corner sideslope (looking upslope).



**Photograph 20:**

**Feature 5 – 2025  
Pre-Grading  
Inspection**

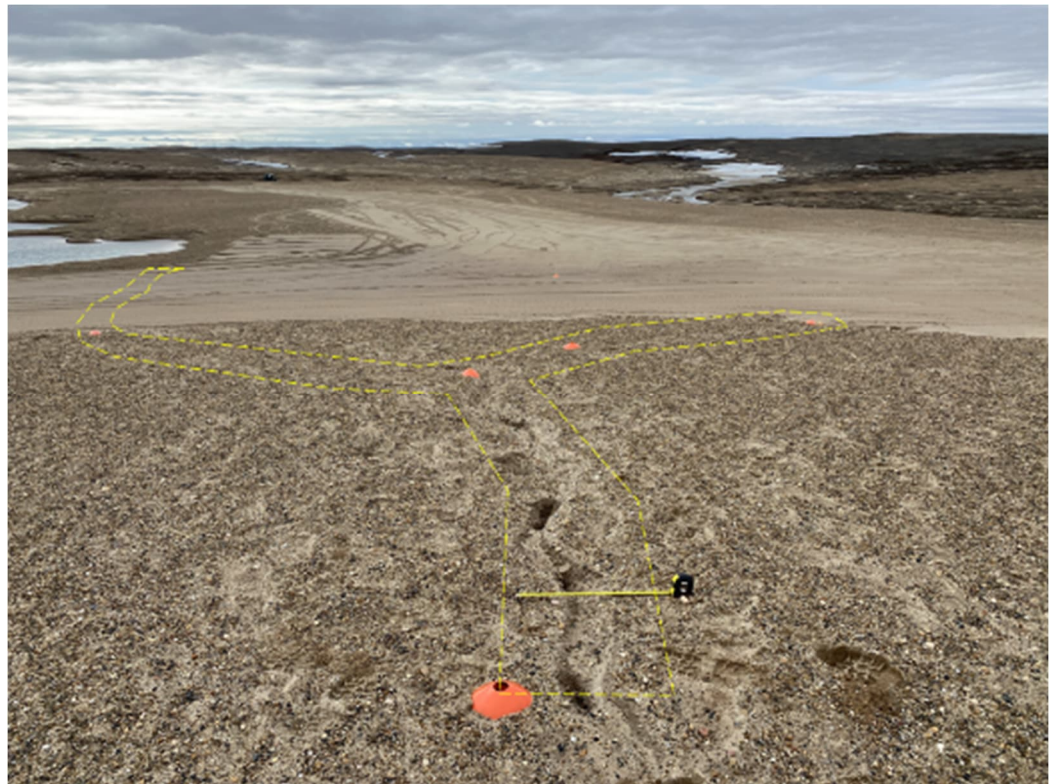
View of new channel on southeast slope, leading to Pond F (looking downslope, pond in background top of photo).



**Photograph 21:**

**Feature 5 – 2025  
Post-Grading  
Inspection**

Most of feature graded out other than portion on top of Containment Structure



**Photograph 22:**

**Feature 6 – 2022  
Visual Inspection**

Rough cover (skid-  
steer marks) on  
west slope.



**Photograph 23:**

**Feature 6 – 2025  
Pre-Grading  
Inspection**

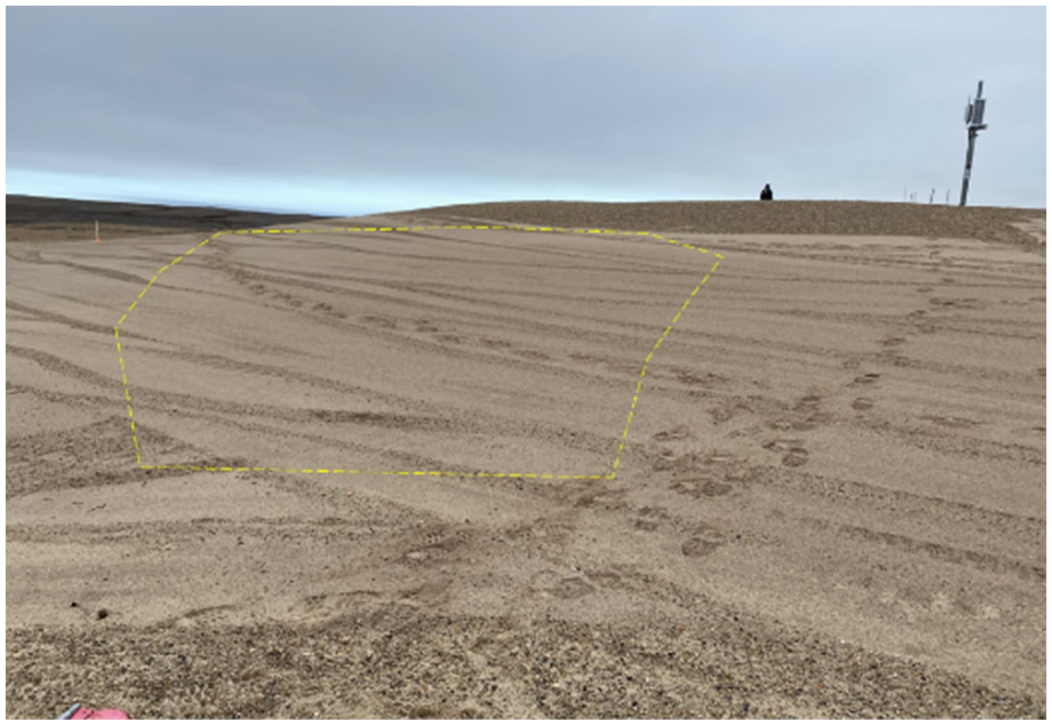
Similar to 2022.



**Photograph 24:**

**Feature 6 – 2025  
Post-Grading  
Inspection**

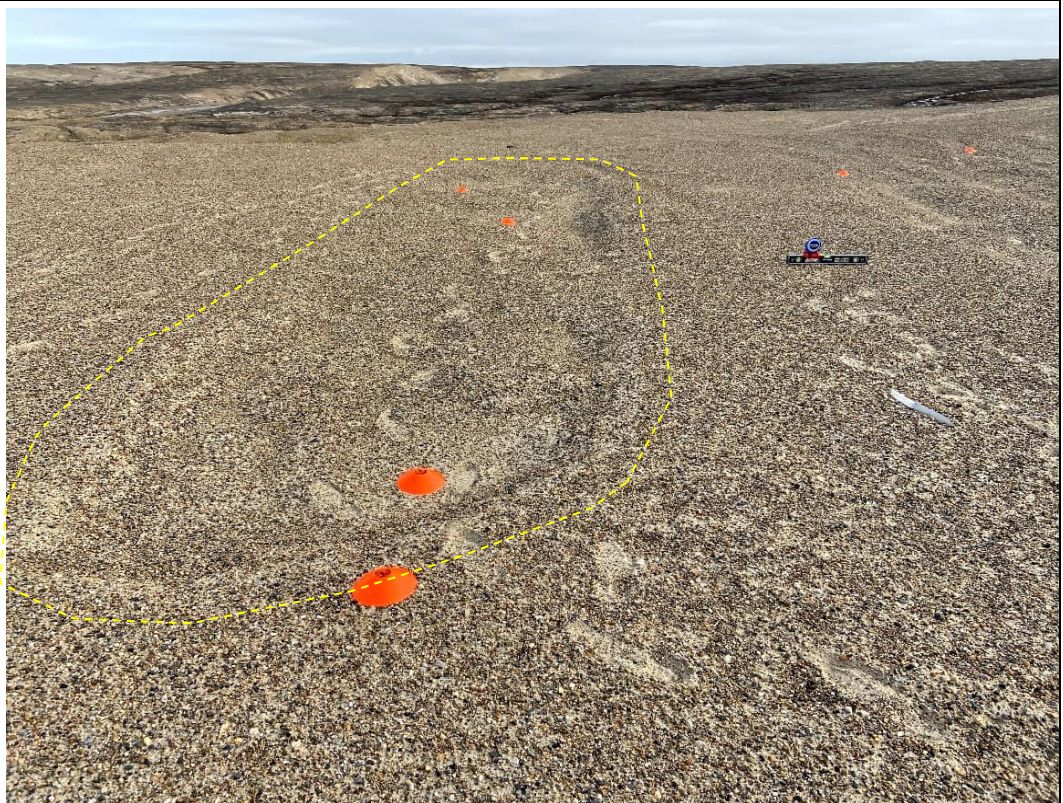
Feature removed by  
grading.



**Photograph 25:**

**Feature 7 – 2022  
Visual Inspection**

Rough grading  
beyond the toe on the  
northwest side of the  
Containment Structure  
where a temporary lined  
pond was removed and  
regraded in 2019 during  
partially frozen conditions.

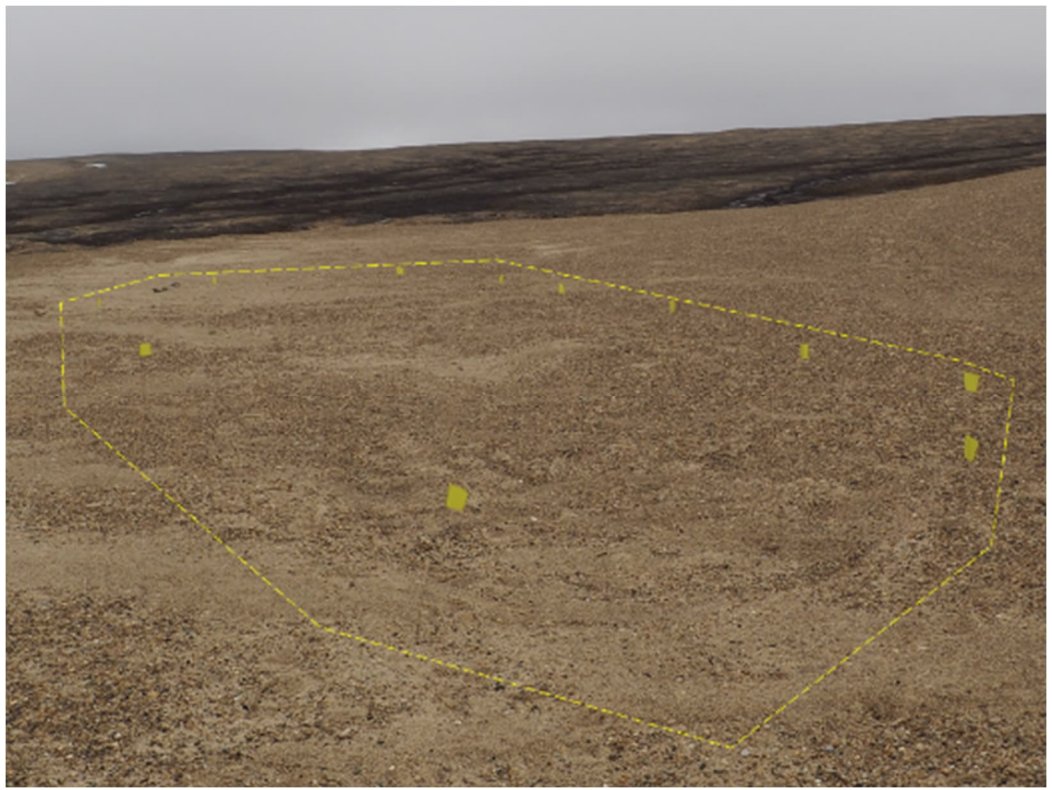


**Photograph 26:**

**Feature 7 – 2025  
Pre-Grading  
Inspection**

Similar conditions as observed in 2022.

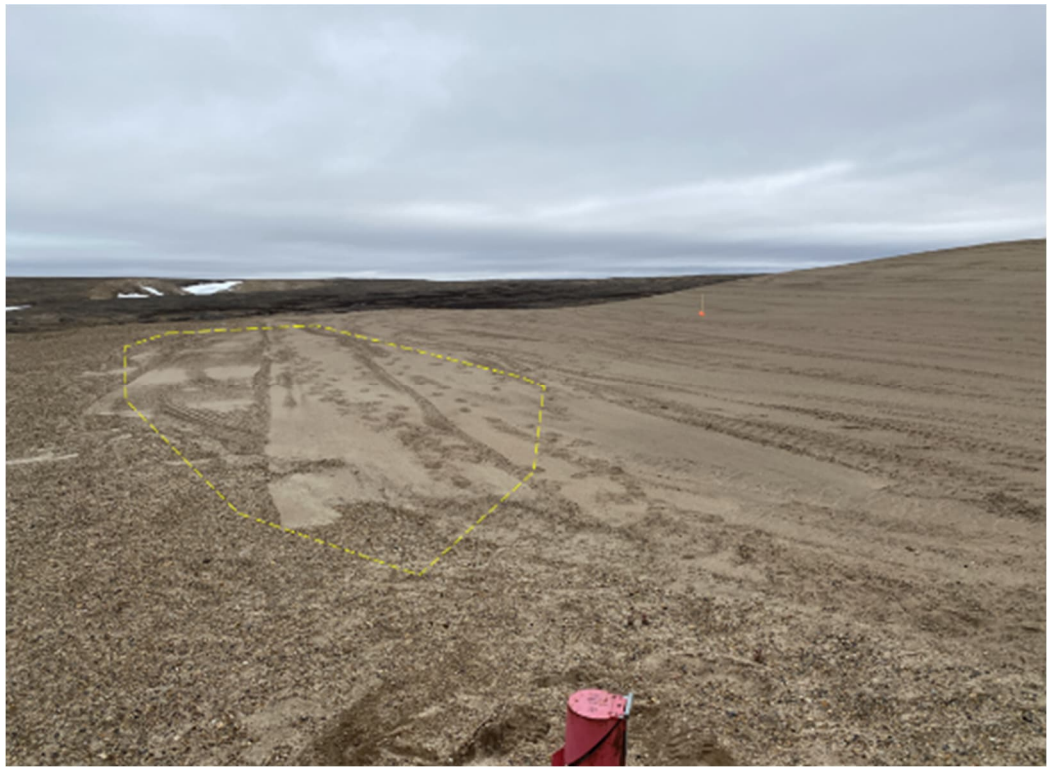
Some infilling of the area by fine (light colored) sand within self armoured surface.



**Photograph 27:**

**Feature 7 – 2025  
Post-Grading  
Inspection**

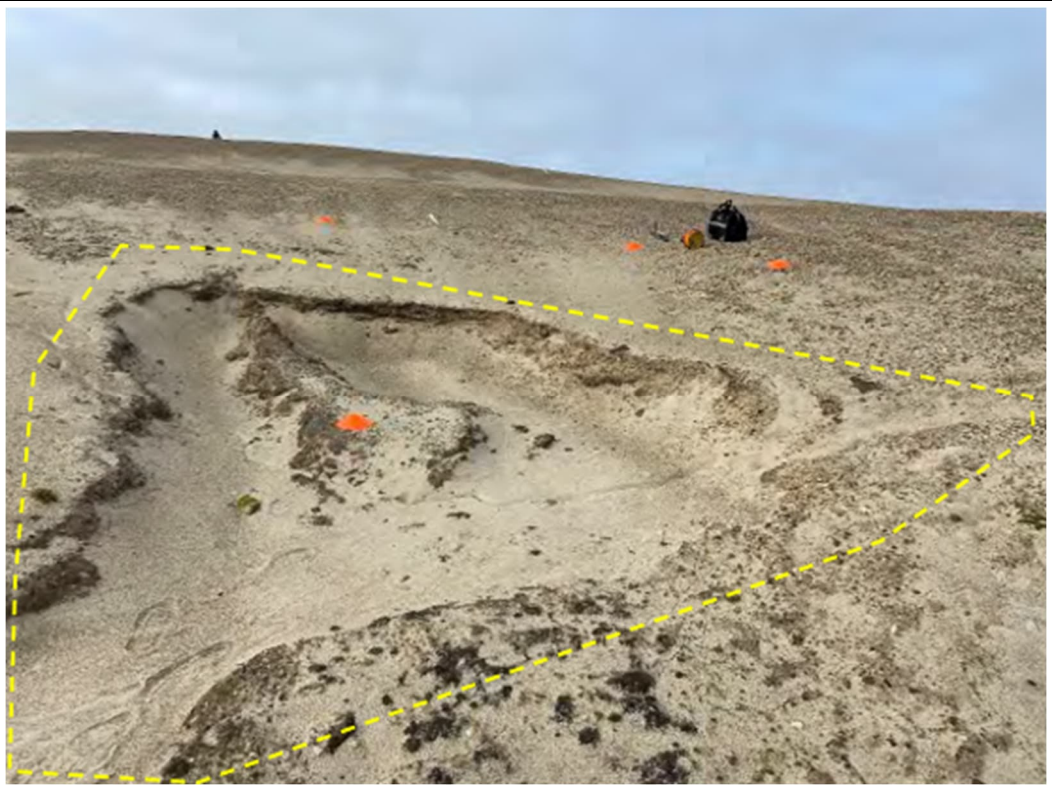
Feature removed and positive outward slope developed as part of regrading operations.



**Photograph 28:**

**Feature 8a – 2022  
Visual Inspection**

Depression on slope and slumping of depression sideslopes noted below sparsely vegetated upper soil.



**Photograph 29:**

**Feature 8a – 2024  
Site Visit**

Darker colour in the area of Feature 8a and leading to Pond Q represent drainage of shallow groundwater to pond.



**Photograph 30:**

**Feature 8a – 2025  
Pre-Grading  
Inspection**

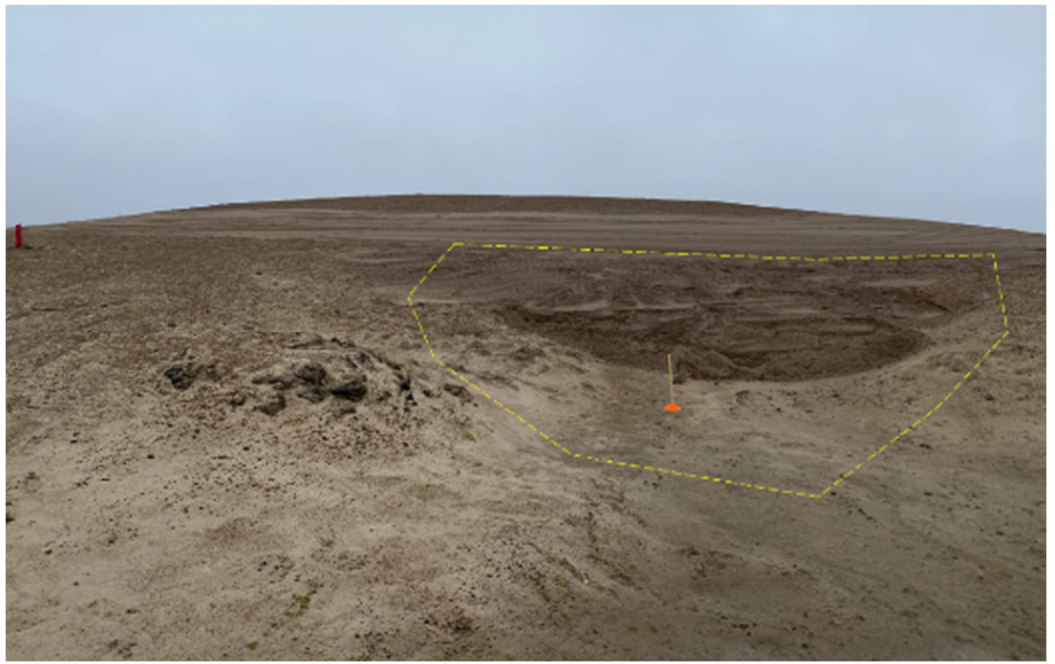
Similar to 2022.  
Drainage from low  
area to discharge  
point (bottom of  
photo) evident.



**Photograph 31:**

**Feature 8a – 2025  
Post-Grading  
Inspection**

Feature backfilled  
with minimal  
compaction.



**Photograph 32:**

**Feature 8a – 2025 Post-Grading Inspection**

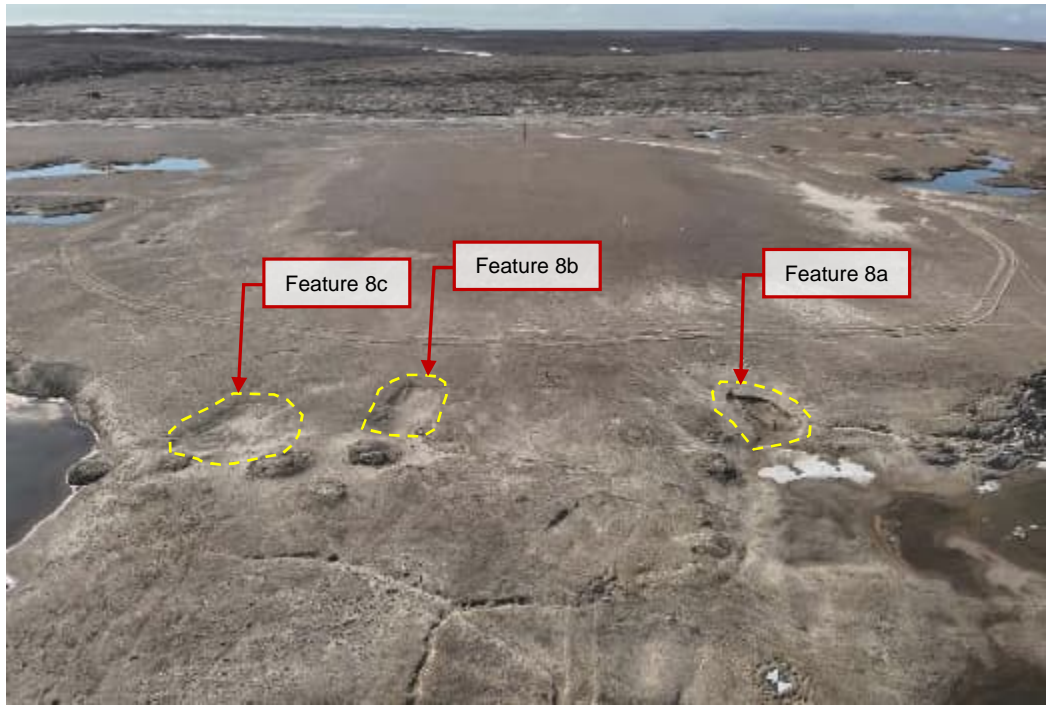
Aerial view of feature area illustrating location relative to Pond Q (right side of photo) and containment structure (upper left part of photo).



**Photograph 33:**

**Feature 8b – 2024 Site Visit**

Feature not identified in 2022 but noted in oblique air photo and ground photos completed in 2024.



**Photograph 34:**

**Feature 8b – 2025  
Pre-Grading  
Inspection**

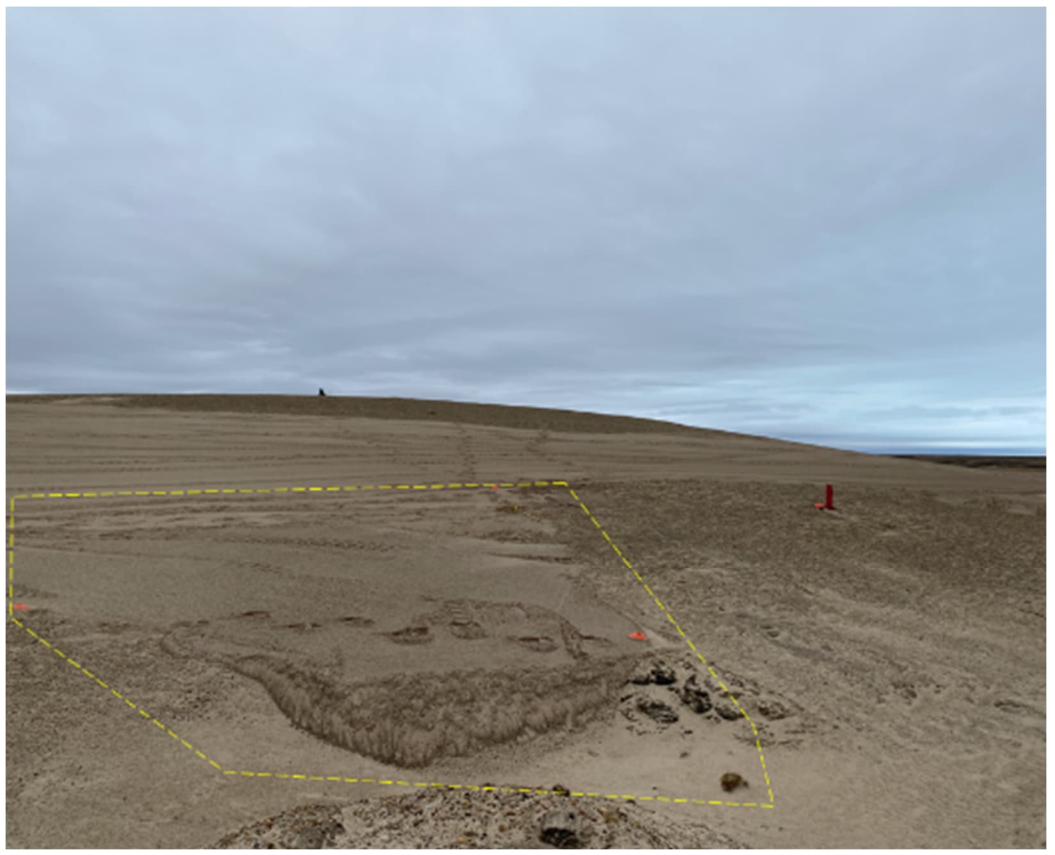
Similar to observed  
in 2024.



**Photograph 35:**

**Feature 8b – 2025  
Post-Grading  
Inspection**

Feature backfilled  
with minimal  
compaction.



**Photograph 36:**

**Feature 8b – 2025  
Post-Grading  
Inspection**

Aerial view of feature area illustrating location relative to Pond Q (upper right corner of photo).



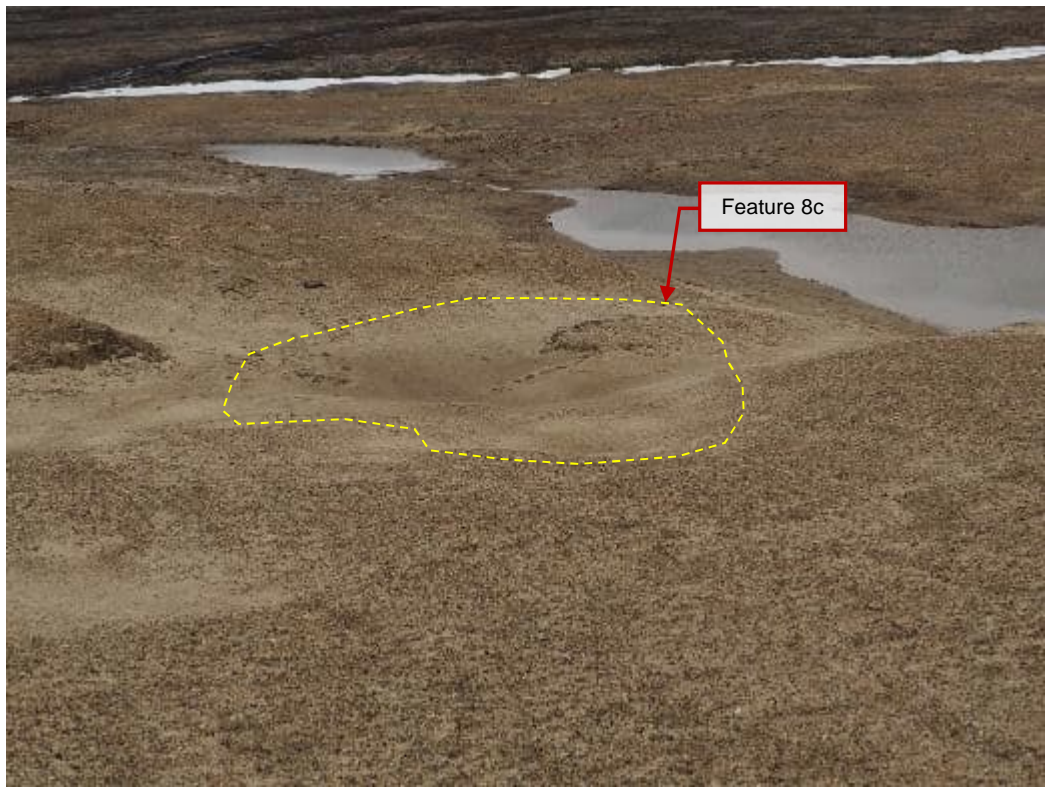
**Photograph 37:**

**Feature 8c – 2024  
Site Visit**



**Photograph 38:**

**Feature 8c – 2025  
Pre-Grading  
Inspection**



**Photograph 39:**

**Feature 8c – 2025  
Post-Grading  
Inspection**

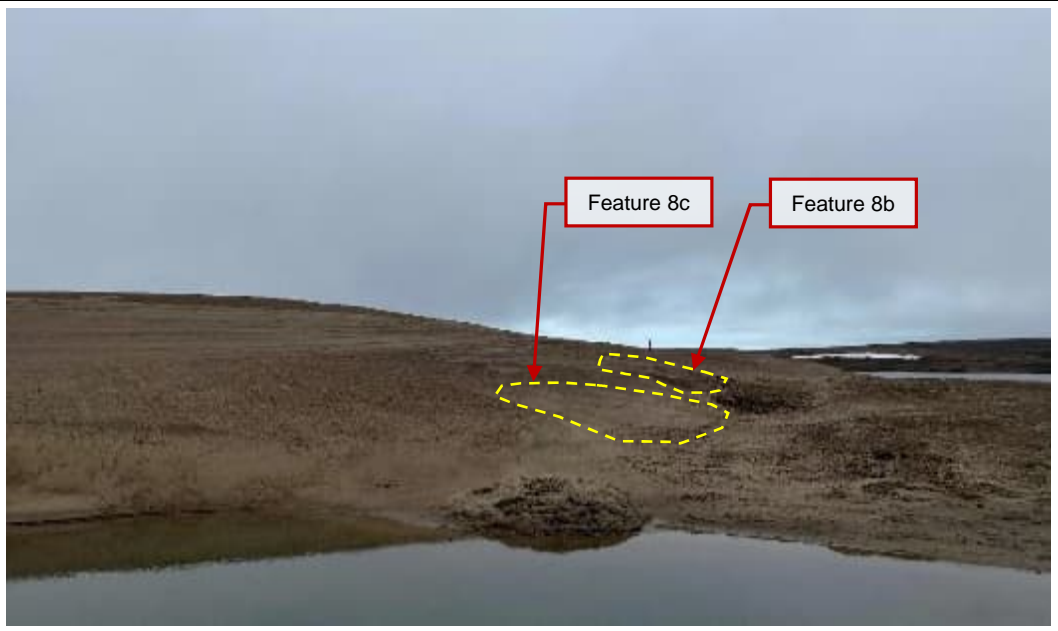
Photo looking east showing Feature 8c remaining post-grading due to the feature being outside of the buffer area and due to soft ground conditions in the area of Feature 8c.



**Photograph 40:**

**Feature 8c – 2025  
Post-Grading  
Inspection**

Photo looking west showing Feature 8c remaining post-grading due to the feature being outside of the buffer area and due to soft ground conditions in the area of Feature 8c.



**Photograph 41:**

**Feature 9 – 2022  
Visual Inspection**

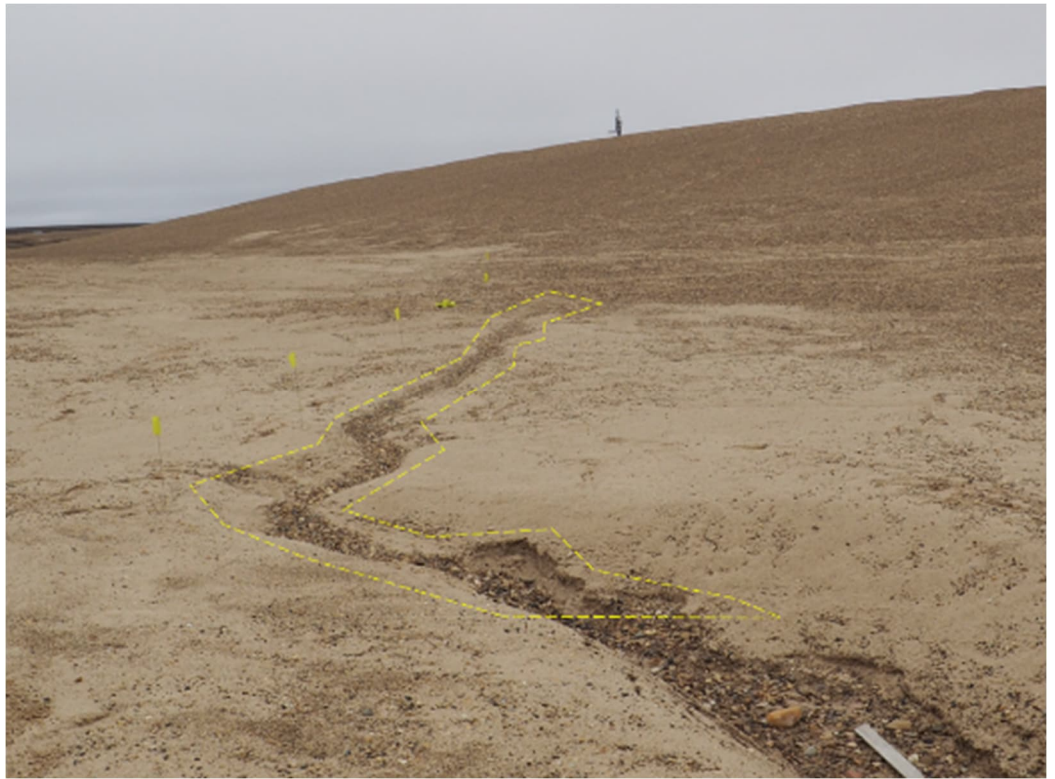
The feature is noted upstream to the access trail surrounding the Containment Structure and widens towards Pond P.



**Photograph 42:**

**Feature 9 – 2025  
Pre-Grading  
Inspection**

Erosion channel  
deeper and wider  
than in 2022.



**Photograph 43:**

**Feature 9 – 2025  
Pre-Grading  
Inspection**

Close up of  
Feature 9 looking  
towards Pond P.  
This section of  
Feature 9 was not  
repaired post-  
grading as this area  
is outside of the  
buffer area.



**Photograph 44:**

**Feature 9 – 2025  
Post-Grading  
Inspection**

Area from toe of slope to just beyond buffer area repaired by regrading.

Portion in far east leading to Pond P not filled.



**Photograph 45:**

**Feature 9 – 2025  
Post-Grading  
Inspection**

Ungraded area to east leading to Pond P outlined in red.



**Photograph 46:**

**Feature 10 – 2022  
Visual Inspection**

Settlement area with a diameter of approximately 3 metres (m), maximum depth of approximately 0.02 m.

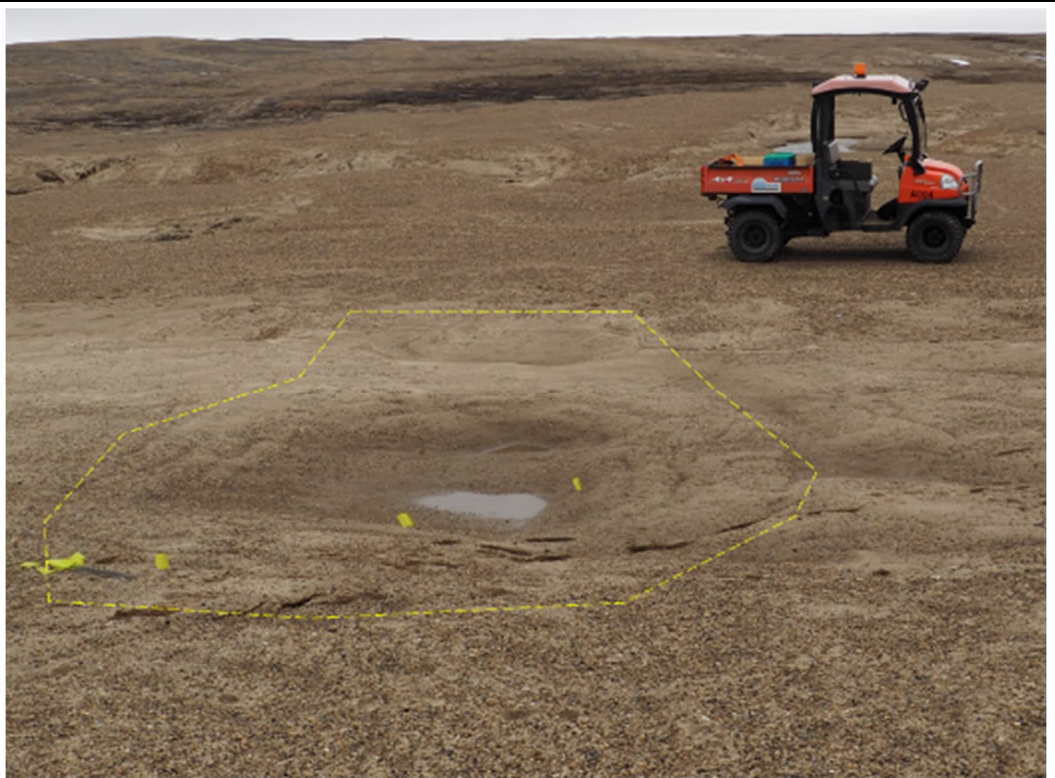


**Photograph 47:**

**Feature 10 – 2025  
Pre-Grading  
Inspection**

Settlement area and wet area within central portion. Settlement appears larger and deeper than in 2022.

New Feature 13 leading from sideslope to low area of Feature 10.



**Photograph 48:**

**Feature 10 – 2025  
Post-Grading  
Inspection**

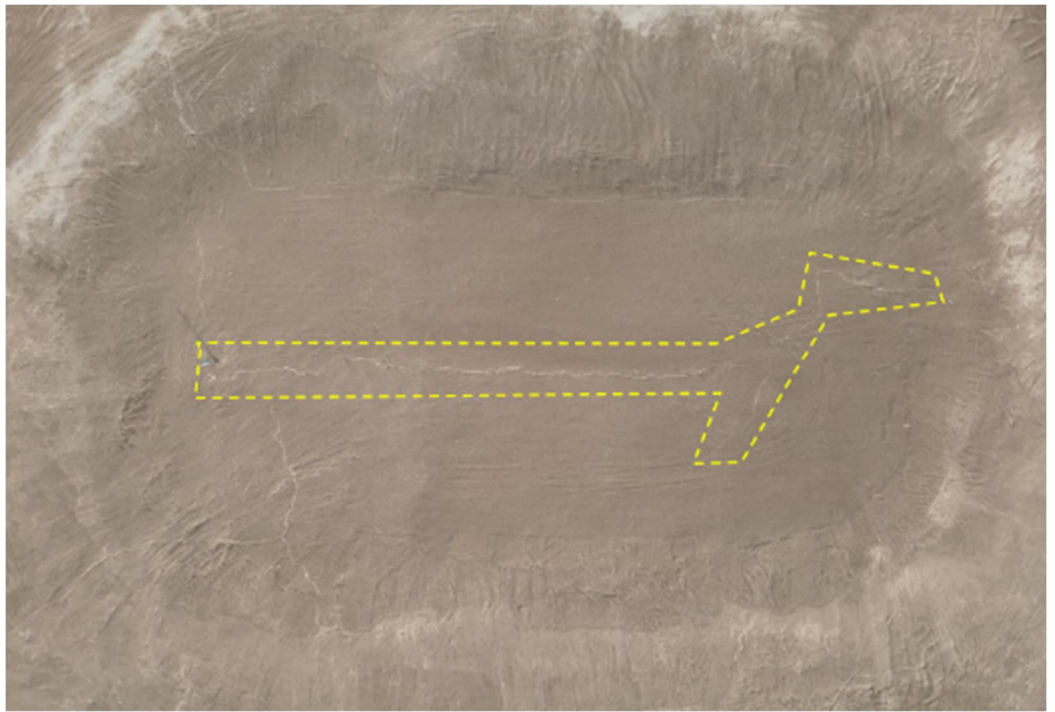
Settlement feature removed through filling and regrading.



**Photograph 49:**

**Feature 11 – 2024  
Site Visit**

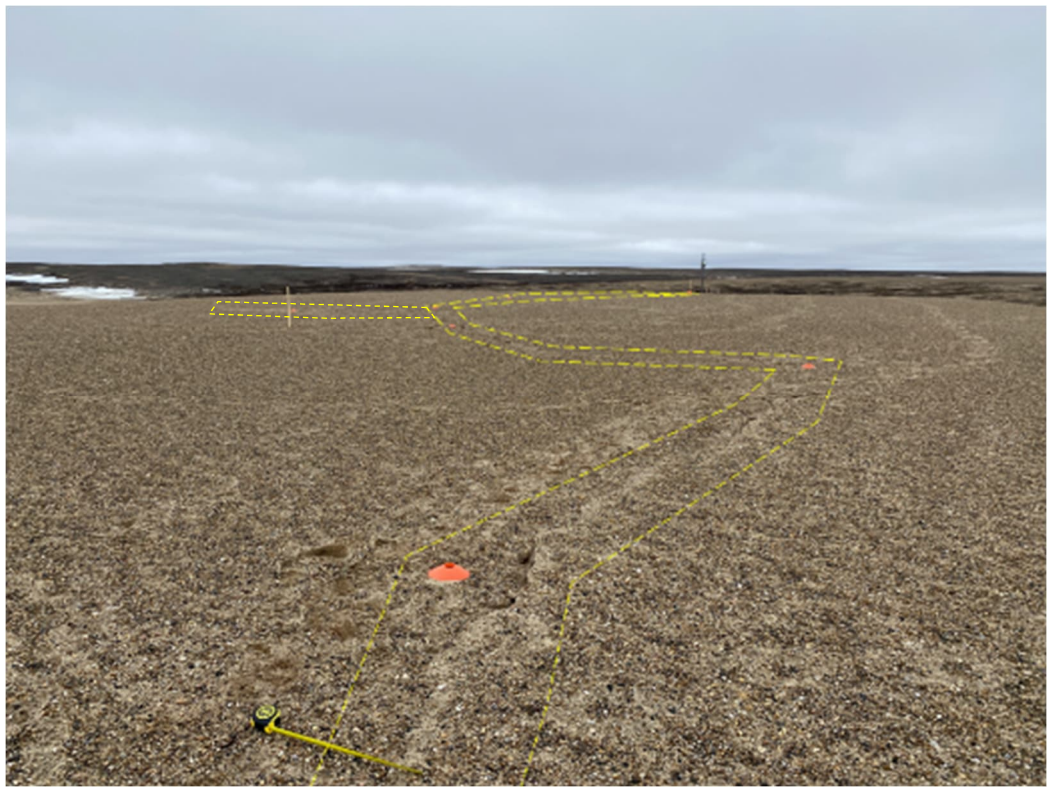
Crack extending across axis of the Containment Structure. Not clearly visible in 2022 Visual Inspection; however, closer examination of aerial photo indicates this feature was likely present.



**Photograph 50:**

**Feature 11 – 2025  
Visual Inspection**

Feature similar to but appears more pronounced than in 2024.



**Photograph 51:**

**Feature 11 – 2025  
Visual Inspection**



**Photograph 52:**

**Feature 11 – 2025  
Post-Grading  
Inspection.**

Feature was  
smoothened and  
tamped down by  
foot.

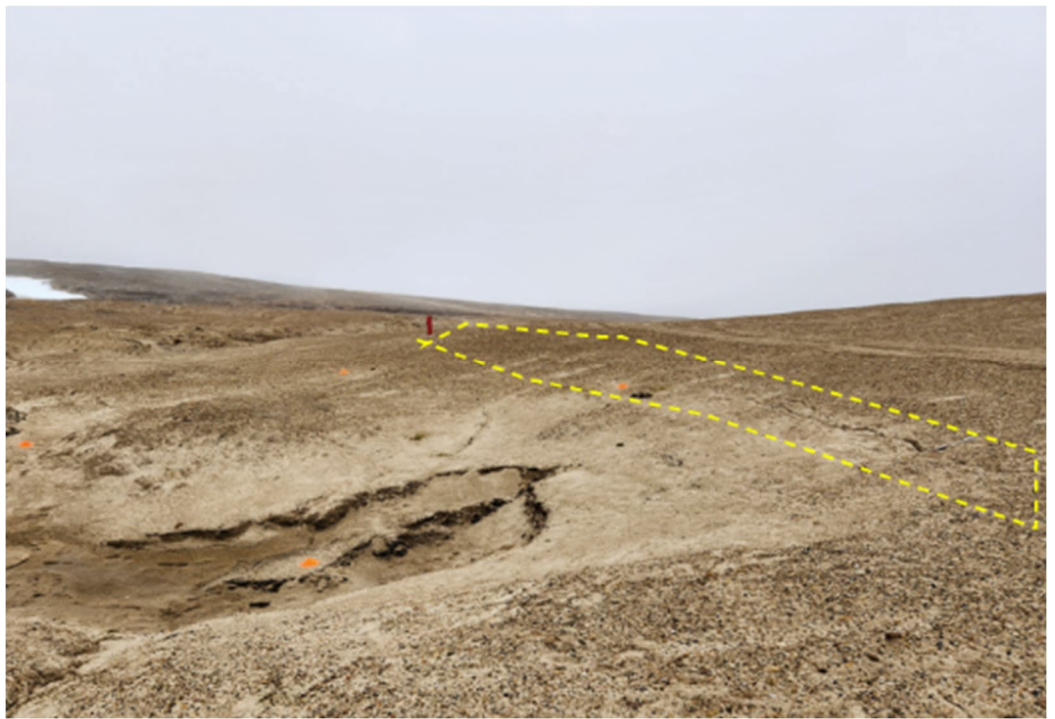


**Photograph 53:**

**Feature 12 – 2024  
Visual Inspection**

Linear feature  
extending between  
the Containment  
Structure and  
Ponds Q and P.

Feature not  
observed in 2022.



**Photograph 54:**

**Feature 12 – 2025  
Pre-Grading  
Inspection**

Extent and  
size/depth similar to  
2024.



**Photograph 55:**

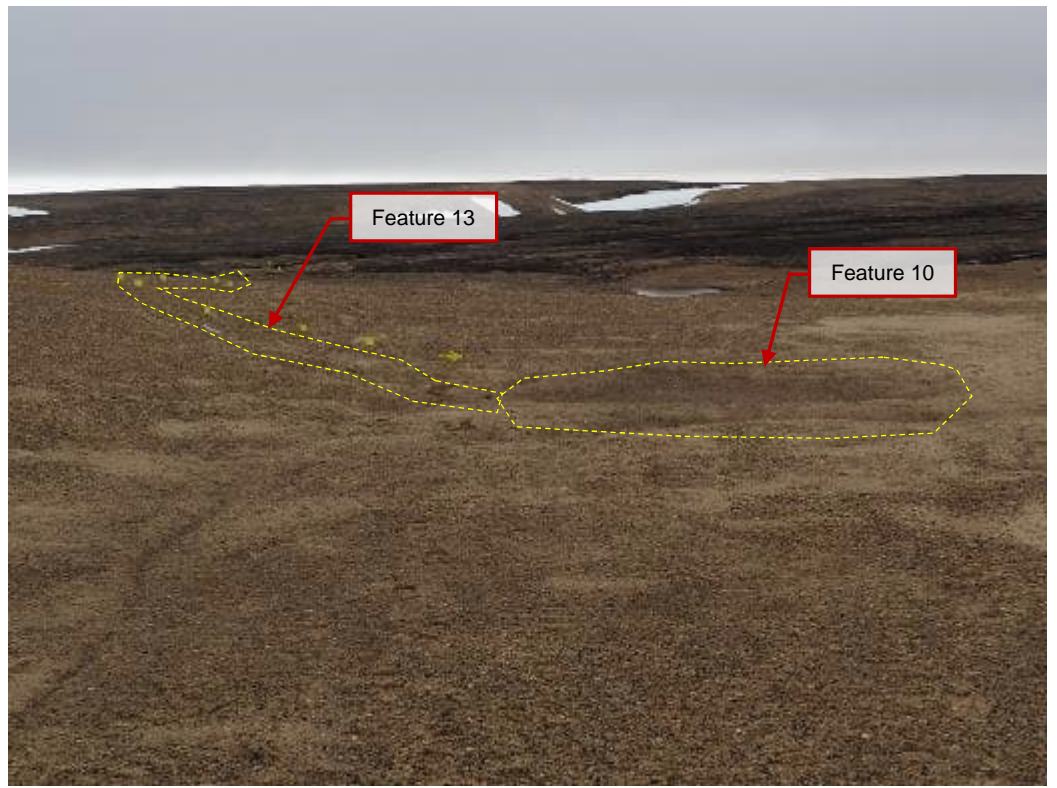
**Feature 12 – 2025  
Post-Grading  
Inspection**

Feature largely  
removed as part of  
regrading. The ends  
of the features  
outside of the  
regrading limits  
remain.



**Photograph 56:**

**Feature 13 – 2025  
Pre-Grading  
Inspection**

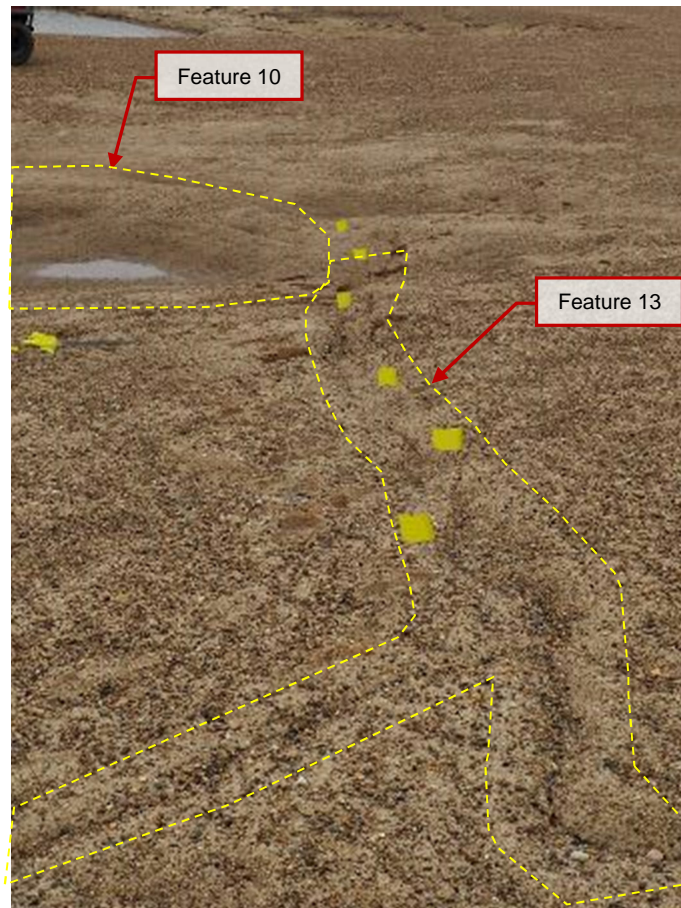


**Photograph 57:**

**Feature 13 – 2025  
Pre-Grading  
Inspection**



**Photograph 58:**  
**Feature 13 – 2025**  
**Pre-Grading**  
**Inspection**



**Photograph 59:**  
**Feature 13 – 2025**  
**Post-Grading**  
**Inspection**

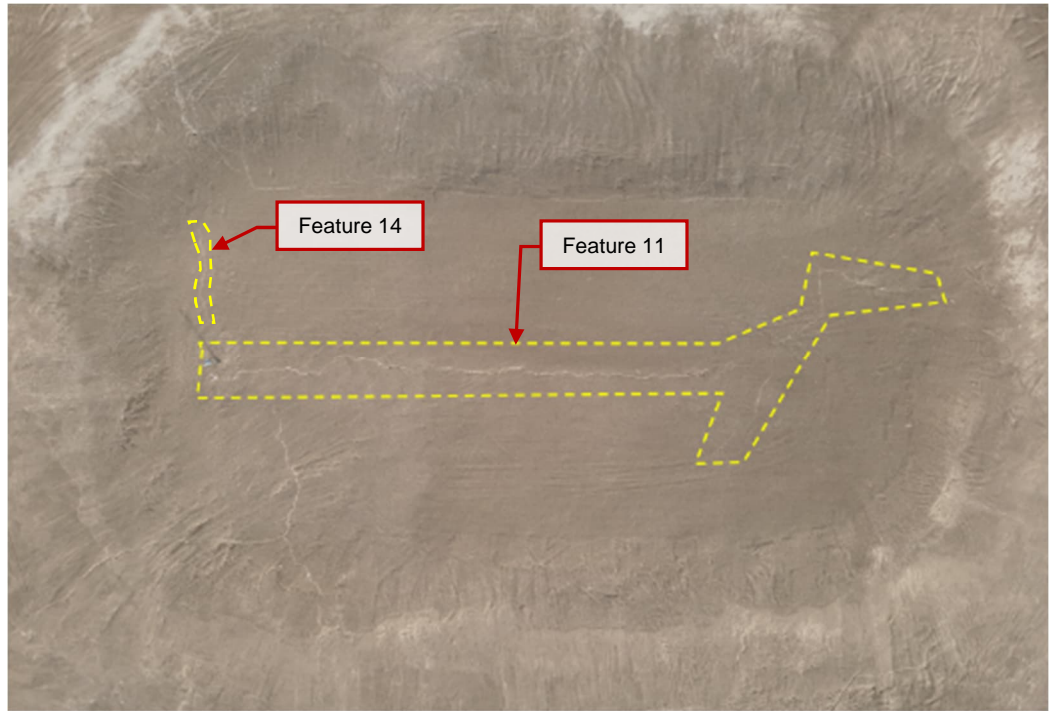
Feature removed as part of regrading.



**Photograph 60:**

**Feature 14 – 2024 Site Visit**

Crack present on the crest of the Containment Structure. Not visible in 2022 Visual Inspection; however, was visible on the 2024 air photos.



**Photograph 61:**

**Feature 14 – 2025 Visual Inspection**

The Feature 14 crack was left as-is and was not filled in or smoothed post-grading.



**Photograph 62:**

**2024 Site Visit**

Oblique drone photo looking at the north side of Containment Structure showing some of the features identified in 2024.



**Photograph 63:**

**2024 Site Visit**

Oblique drone photo looking at the east side of Containment Structure showing some of the features identified in 2024.



**Photograph 64:**

**2025 Visual Inspection**

Benchmark #1146

Survey Benchmark north of landing strip.

Benchmark is a 2 inch by 2 inch wood stake driven approximately 0.6 m into the ground (to permafrost) and flush with grade.

Iron bar driven in ground is a visual indicator for where the benchmark is located.



**Photograph 65:**

Benchmark #1146



**Photograph 66:**

**2025 Visual Inspection**

Soft soil conditions on top of Containment Structure. Photo shows a 100 millimetre deep footprint indentation.



**Photograph 67:**

**2025 Site Visit**

Battery Vault excavated.



**Photograph 68:**

**2025 Site Visit**

New battery placed in vault.



**Photograph 69:**

**2025 Site Visit**

Battery Vault backfilled.



**Photograph 70:**

**2025 Re-Grading**

Soil hauled from Borrow Area to Containment Structure using Hydrema trucks.



**Photograph 71:**

**2025 Post-Grading**

Location of Communication Tower Benchmark – Base plate bolt. See next photograph for detail.

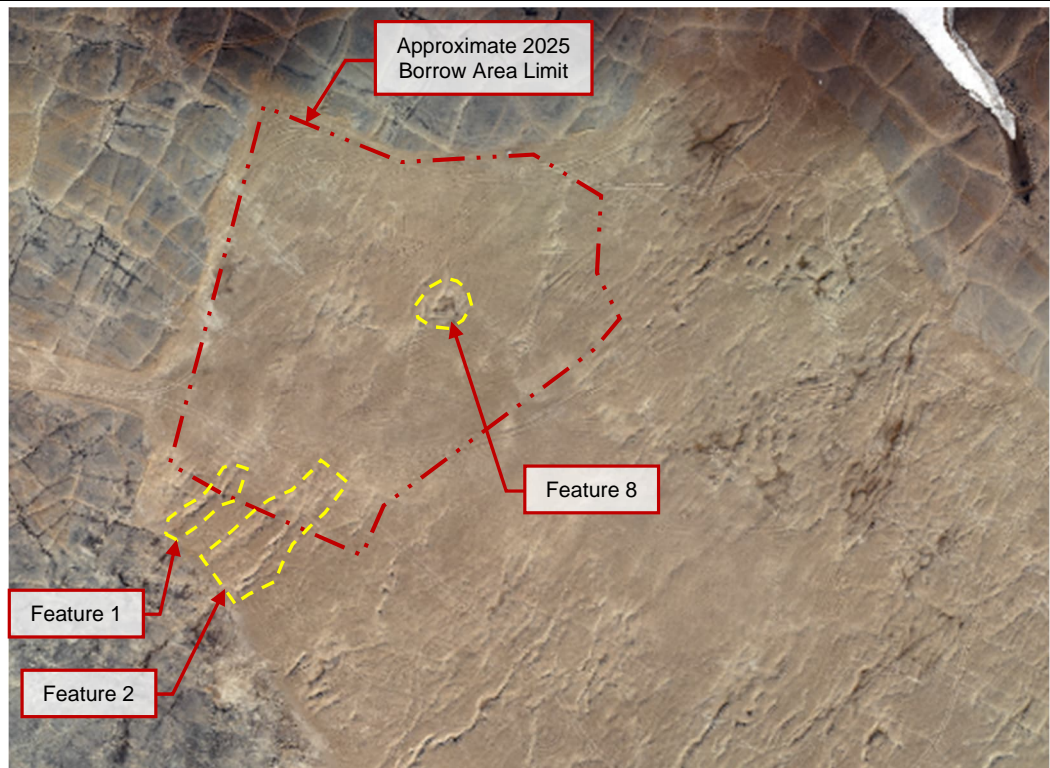


**Photograph 72:**  
**2025 Post-Grading**  
Location of  
Communication  
Tower Benchmark –  
Base plate bolt.



**BORROW AREA PHOTO LOG**

**Photograph 73:**  
**2024 Site Visit**  
Ortho-photo taken  
during the 2024 site  
visit showing the  
condition of the  
2025 Borrow Area.



**Photograph 74:**

**2025 Post-Grading**

Aerial photo of Borrow Area looking southwest, following 2025 borrow operations and regrading.

Entry/exit to Borrow Area visible on west (central part of photo, extending to top).

South river visible in background (top of photo).

Polygonal ground structure consistent with natural permafrost features visible, notably in right part of photo.



**Photograph 75:**

**2025 Post-Grading**

Aerial photo of Borrow Area looking south.

Polygonal ground structure consistent with natural permafrost features visible, notably in bottom part of photo.



**Photograph 76:**

**2025 Post-Grading**

General view of Borrow Area.

Photo taken from access road, looking east.



**Photograph 77:**

**2025 Post-Grading**

General view of Borrow Area.

Photo taken from opposite corner, looking northwest.



**Photograph 78:**  
**2025 Post-Grading**  
General view of Borrow Area.  
Photo taken from opposite corner, looking west.



**Photograph 79:**  
**2025 Post-Grading**  
General view of Borrow Area.  
Photo taken looking east in area where borrow was active in 2019 Borrow Site.



**Photograph 80:**

**2025 Post-Grading**

General view of Borrow Area.

Photo taken from opposite corner, looking southwest towards access road to Borrow Site.



**Photograph 81:**

**2025 Post-Grading**

General view of Borrow Area.

Photo taken northern corner, looking southeast.



**Photograph 82:**

**2025 Post-Grading**

General view of Borrow Area.

Photo taken northern corner, looking south, towards access road to Borrow Area.



**APPENDIX E**

**Soil and Surveillance Network  
Program Analytical Results**

**Table E1  
Soil Sampling Analytical Results  
Satellite Bay, Prince Patrick Island, Northwest Territories  
Peyto Exploration and Development Corp.**

Sample Identification				19-01SS1	19-01SS2	19-02SS1	19-02SS2	19-03SS1	19-05SS1 (DUP of 19-03SS1)	19-03SS2	19-05SS2 (DUP of 19-03SS2)	19-04SS1	19-04SS2
Date Sampled				30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025
Sample Depth (mbgs)				0.1 - 0.2	0.5 - 0.6	0.1 - 0.2	0.5 - 0.6	0.1 - 0.2	0.1 - 0.2	0.5 - 0.6	0.5 - 0.6	0.1 - 0.2	0.5 - 0.6
ALS Sample Identification				YL2500723-001	YL2500723-002	YL2500723-003	YL2500723-004	YL2500723-005	YL2500723-009	YL2500723-006	YL2500723-010	YL2500723-007	YL2500723-008
Analyte	CCME Agricultural Soil	RDL	Units										
<b>Physical Tests</b>													
Moisture	n/s	0.25	%	4.22	9.57	5.14	11.4	3.36	3.39	2.83	3.55	6.08	6.83
pH (1:2 soil:water)	n/s	0.10	pH units	5.84	6.21	8.16	8.28	5.93	5.74	6.3	6.31	7.74	7.81
<b>Metals<sup>1</sup></b>													
Aluminum	n/s	50	mg/kg	488	734	1450	975	477	428	371	403	635	642
Antimony	20	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Arsenic	12	0.10	mg/kg	1.16	1.74	2.3	2.31	1.32	1.34	0.94	1.68	1.4	1.48
Barium	750	0.50	mg/kg	16.7	40.5	99.8	117	29.8	20.7	11.1	16.5	33.7	30.4
Beryllium	4	0.10	mg/kg	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bismuth	n/s	0.20	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Boron	2	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cadmium	1.4	0.020	mg/kg	<0.020	<0.020	0.032	0.025	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Calcium	n/s	50	mg/kg	<50	52	350	208	56	<50	<50	<50	160	219
Chromium	64	0.50	mg/kg	1.02	1.41	3.59	2.55	1.03	0.99	0.78	1.01	1.47	1.5
Cobalt	40	0.10	mg/kg	0.48	0.75	1.44	1.22	0.59	0.55	0.39	0.88	0.84	0.65
Copper	63	0.50	mg/kg	<0.50	0.54	2.09	1.56	0.52	<0.50	<0.50	<0.50	0.58	0.72
Iron	n/s	50	mg/kg	1,520	2,030	3,280	2,720	1,370	1,540	1,000	1,680	1,560	1,430
Lead	70	0.50	mg/kg	1.63	2.58	2.4	3.46	1.74	1.6	1.05	2.27	2.27	1.76
Lithium	n/s	2.0	mg/kg	<2.0	<2.0	2.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Magnesium	n/s	20	mg/kg	53	94	335	205	55	49	56	52	114	81
Manganese	n/s	1.0	mg/kg	6.5	19.1	23.3	19.4	9.1	7.3	5.6	10	22.5	13.6
Mercury	6.6	0.0050	mg/kg	<0.0050	<0.0050	0.0068	0.0053	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum	5	0.10	mg/kg	0.14	0.14	0.37	0.28	0.12	0.12	0.12	0.17	0.21	0.19
Nickel	45	0.50	mg/kg	1.12	1.52	3.02	2.65	1.08	1.06	0.89	1.59	1.37	1.3
Phosphorus	n/s	50	mg/kg	63	87	103	106	56	<50	<50	54	<50	110
Potassium	n/s	100	mg/kg	<100	110	290	180	<100	<100	<100	<100	100	120
Selenium	1	0.20	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Silver	20	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	n/s	50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Strontium	n/s	0.50	mg/kg	3.42	5.65	11.1	10.7	4.21	3.78	3.48	4.89	6.2	6.9
Sulphur	n/s	1,000	mg/kg	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Thallium	1	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tin	5	2.0	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	n/s	1.0	mg/kg	12.8	16.7	49.1	33.2	14.1	14.6	10.4	9.2	13.1	19.7
Tungsten	n/s	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	23	0.050	mg/kg	0.076	0.082	0.291	0.235	0.068	0.061	0.079	0.088	0.12	0.099
Vanadium	130	0.20	mg/kg	4.34	5.38	8.73	6.72	3.91	4.16	2.75	4.38	4.17	5.13
Zinc	250	2.0	mg/kg	2.4	4.1	9.6	7	2.8	2.6	<2.0	3.4	3.4	2.9
Zirconium	n/s	1.0	mg/kg	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

**Table E1  
Soil Sampling Analytical Results  
Satellite Bay, Prince Patrick Island, Northwest Territories  
Peyto Exploration and Development Corp.**

Sample Identification				19-01SS1	19-01SS2	19-02SS1	19-02SS2	19-03SS1	19-05SS1 (DUP of 19-03SS1)	19-03SS2	19-05SS2 (DUP of 19-03SS2)	19-04SS1	19-04SS2
Date Sampled				30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025
Sample Depth (mbgs)				0.1 - 0.2	0.5 - 0.6	0.1 - 0.2	0.5 - 0.6	0.1 - 0.2	0.1 - 0.2	0.5 - 0.6	0.5 - 0.6	0.1 - 0.2	0.5 - 0.6
ALS Sample Identification				YL2500723-001	YL2500723-002	YL2500723-003	YL2500723-004	YL2500723-005	YL2500723-009	YL2500723-006	YL2500723-010	YL2500723-007	YL2500723-008
Analyte	CCME Agricultural Soil	RDL	Units										
<b>VOCs<sup>1</sup></b>													
Benzene	0.030	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	0.082	0.015	mg/kg	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Toluene	0.37	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, m+p-	n/s	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, o-	n/s	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Xylenes, total	11	0.075	mg/kg	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075
BTEX, total	n/s	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<b>Hydrocarbons<sup>2</sup></b>													
F1 (C6-C10)	30	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	n/s	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10-C16)	150	25	mg/kg	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F3 (C16-C34)	300	50	mg/kg	<50	<50	101	<50	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	2,800	50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Hydrocarbons, total (C6-C50)	n/s	80	mg/kg	<80	<80	101	<80	<80	<80	<80	<80	<80	<80
Chromatogram to baseline at nC50				YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

**Notes:**

- value exceeds applied guideline, standard or criteria

<sup>1</sup>CCME Soil Standards for Metals and Volatile Organic Compounds (VOCs): CCME, accessed 27 March 2026 (CCME 2026)

<sup>2</sup>CCME Soil Standards for Petroleum Hydrocarbons (PHC): CCME, Canada-Wide Standards for PHCs in Soil (CCME 2008).

ALS - ALS Environmental

BTEX - benzene, toluene, ethylbenzene, xylenes

CCME - Canadian Council of Ministers of the Environment

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3, 4

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/s - no standard

RDL - reportable detection limit

< - less than

% - percent

**Table E2**  
**Soil Sampling Analytical Results - Duplicates**  
**Satellite Bay, Prince Patrick Island, Northwest Territories**  
**Peyto Exploration and Development Corp.**

Sample Identification				19-03SS1	19-05SS1 (DUP of 19-03SS1)	RPD %	19-03SS2	19-05SS2 (DUP of 19-03SS2)	RPD %
Date Sampled				30-Jul-2025	30-Jul-2025		30-Jul-2025	30-Jul-2025	
Sample Depth (mbgs)				0.1 - 0.2	0.1 - 0.2		0.5 - 0.6	0.5 - 0.6	
ALS Sample Identification				YL2500723-005	YL2500723-009		YL2500723-006	YL2500723-010	
Analyte	RDL	Units	Alert Limit						
<b>Physical Tests</b>									
Moisture	0.25	%	n/a	3.36	3.39	n/c	2.83	3.55	n/c
pH (1:2 soil:water)	0.1	pH units	n/a	5.93	5.74	n/c	6.3	6.31	n/c
<b>Metals</b>									
Aluminum	50	mg/kg	>100%	477	428		371	403	
Antimony	0.1	mg/kg	>100%	<0.10	<0.10	n/c	<0.10	<0.10	n/c
Arsenic	0.1	mg/kg	>100%	1.32	1.34	2	0.94	1.68	56
Barium	0.5	mg/kg	>100%	29.8	20.7	36	11.1	16.5	39
Beryllium	0.1	mg/kg	>100%	<0.10	<0.10	n/c	<0.10	<0.10	n/c
Bismuth	0.2	mg/kg	>100%	<0.20	<0.20	n/c	<0.20	<0.20	n/c
Boron	5	mg/kg	>100%	<5.0	<5.0	n/c	<5.0	<5.0	n/c
Cadmium	0.02	mg/kg	>100%	<0.020	<0.020	n/c	<0.020	<0.020	n/c
Calcium	50	mg/kg	>100%	56	<50	n/c	<50	<50	n/c
Chromium	0.5	mg/kg	>100%	1.03	0.99	n/c	0.78	1.01	n/c
Cobalt	0.1	mg/kg	>100%	0.59	0.55	7	0.39	0.88	n/c
Copper	0.5	mg/kg	>100%	0.52	<0.50	n/c	<0.50	<0.50	n/c
Iron	50	mg/kg	>100%	1,370	1,540	12	1,000	1,680	51
Lead	0.5	mg/kg	>100%	1.74	1.6	n/c	1.05	2.27	n/c
Lithium	2	mg/kg	>100%	<2.0	<2.0	n/c	<2.0	<2.0	n/c
Magnesium	20	mg/kg	>100%	55	49	n/c	56	52	n/c
Manganese	1	mg/kg	>100%	9.1	7.3	22	5.6	10	56
Mercury	0.005	mg/kg	>100%	<0.0050	<0.0050	n/c	<0.0050	<0.0050	n/c
Molybdenum	0.1	mg/kg	>100%	0.12	0.12	n/c	0.12	0.17	n/c
Nickel	0.5	mg/kg	>100%	1.08	1.06	n/c	0.89	1.59	n/c
Phosphorus	50	mg/kg	>100%	56	<50	n/c	<50	54	n/c
Potassium	100	mg/kg	>100%	<100	<100	n/c	<100	<100	n/c
Selenium	0.2	mg/kg	>100%	<0.20	<0.20	n/c	<0.20	<0.20	n/c
Silver	0.1	mg/kg	>100%	<0.10	<0.10	n/c	<0.10	<0.10	n/c
Sodium	50	mg/kg	>100%	<50	<50	n/c	<50	<50	n/c
Strontium	0.5	mg/kg	>100%	4.21	3.78	11	3.48	4.89	34
Sulphur	1,000	mg/kg	>100%	<1,000	<1,000	n/c	<1,000	<1,000	n/c
Thallium	0.05	mg/kg	>100%	<0.050	<0.050	n/c	<0.050	<0.050	n/c
Tin	2	mg/kg	>100%	<2.0	<2.0	n/c	<2.0	<2.0	n/c
Titanium	1	mg/kg	>100%	14.1	14.6	3	10.4	9.2	12
Tungsten	0.5	mg/kg	>100%	<0.50	<0.50	n/c	<0.50	<0.50	n/c
Uranium	0.05	mg/kg	>100%	0.068	0.061	n/c	0.079	0.088	n/c
Vanadium	0.2	mg/kg	>100%	3.91	4.16	6	2.75	4.38	46
Zinc	2	mg/kg	>100%	2.8	2.6	n/c	<2.0	3.4	n/c
Zirconium	1	mg/kg	>100%	<1.0	<1.0	n/c	<1.0	<1.0	n/c

**Table E2**  
**Soil Sampling Analytical Results - Duplicates**  
**Satellite Bay, Prince Patrick Island, Northwest Territories**  
**Peyto Exploration and Development Corp.**

Sample Identification				19-03SS1	19-05SS1 (DUP of 19-03SS1)	RPD %	19-03SS2	19-05SS2 (DUP of 19-03SS2)	RPD %
Date Sampled				30-Jul-2025	30-Jul-2025		30-Jul-2025	30-Jul-2025	
Sample Depth (mbgs)				0.1 - 0.2	0.1 - 0.2		0.5 - 0.6	0.5 - 0.6	
ALS Sample Identification				YL2500723-005	YL2500723-009		YL2500723-006	YL2500723-010	
Analyte	RDL	Units	Alert Limit						
<b>Volatile Organic Compounds</b>									
Benzene	0.005	mg/kg	>100%	<0.0050	<0.0050	n/c	<0.0050	<0.0050	n/c
Ethylbenzene	0.015	mg/kg	>100%	<0.015	<0.015	n/c	<0.015	<0.015	n/c
Toluene	0.05	mg/kg	>100%	<0.050	<0.050	n/c	<0.050	<0.050	n/c
Xylene, m+p-	0.05	mg/kg	n/a	<0.050	<0.050	n/c	<0.050	<0.050	n/c
Xylene, o-	0.05	mg/kg	n/a	<0.050	<0.050	n/c	<0.050	<0.050	n/c
Xylenes, total	0.075	mg/kg	>100%	<0.075	<0.075	n/c	<0.075	<0.075	n/c
BTEX, total	0.1	mg/kg	n/a	<0.10	<0.10	n/c	<0.10	<0.10	n/c
<b>Hydrocarbons</b>									
F1 (C <sub>6</sub> -C <sub>10</sub> )	5	mg/kg	>100%	<5.0	<5.0	n/c	<5.0	<5.0	n/c
F1-BTEX	5	mg/kg	n/a	<5.0	<5.0	n/c	<5.0	<5.0	n/c
F2 (C <sub>10</sub> -C <sub>16</sub> )	25	mg/kg	>100%	<25	<25	n/c	<25	<25	n/c
F3 (C <sub>16</sub> -C <sub>34</sub> )	50	mg/kg	>100%	<50	<50	n/c	<50	<50	n/c
F4 (C <sub>34</sub> -C <sub>50</sub> )	50	mg/kg	>100%	<50	<50	n/c	<50	<50	n/c
Hydrocarbons, total (C <sub>6</sub> -C <sub>50</sub> )	80	mg/kg	n/a	<80	<80	n/c	<80	<80	n/c
Chromatogram to baseline at nC50			n/a	YES	YES	n/c	YES	YES	n/c

**Notes:**

**Bold**

- ALS - ALS Environmental
- BTEX - benzene, toluene, ethylbenzene, xylenes
- F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3, 4
- mbgs - metres below ground surface
- mg/kg - milligrams per kilogram
- n/a - not applicable
- n/c - not calculated
- RDL - reportable detection limit
- RPD - relative percent difference
- > - greater than
- < - less than
- % - percent
- RPD is not calculated if either the original or field duplicate sample has a result less than 5X the RDL

**Table E3  
Surveillance Network Program Analytical Results  
Satellite Bay, Prince Patrick Island, Northwest Territories  
Peyto Exploration and Development Corp.**

SNP Station #			1837-5									
Sample Identification			1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b		
Sample Date			03-Jul-2025	03-Jul-2025	04-Jul-2025	04-Jul-2025	05-Jul-2025	05-Jul-2025	06-Jul-2025	06-Jul-2025	07-Jul-2025	07-Jul-2025
ALS Sample Identification			YL2500616-001	YL2500616-002	YL2500616-003	YL2500616-004	YL2500616-005	YL2500616-006	YL2500616-007	YL2500616-008	YL2500616-009	YL2500616-010
Sample Location			50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream
Analyte	RDL	Units										
TSS <sup>[1]</sup>	3.0	mg/L	7.9	10.1	17.7	18.1	9.5	7.7	8.5	7.5	7.3	6.7
pH	0.10	pH units	6.49	6.55	6.44	6.52	6.53	6.57	6.59	6.59	6.65	6.64

SNP Station #			1837-5									
Sample Identification			1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b
Sample Date			08-Jul-2025	08-Jul-2025	09-Jul-2025	09-Jul-2025	10-Jul-2025	10-Jul-2025	11-Jul-2025	11-Jul-2025	12-Jul-2025	12-Jul-2025
ALS Sample Identification			YL2500616-011	YL2500616-012	YL2500616-013	YL2500616-014	YL2500616-015	YL2500616-016	YL2500616-017	YL2500616-018	YL2500616-019	YL2500616-020
Sample Location			50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream
Analyte	RDL	Units										
TSS <sup>[1]</sup>	3.0	mg/L	4.3	4.3	4.3	4.5	7.7	8.5	9.9	8.1	4.3	<3
pH	0.10	pH units	6.64	6.62	6.68	6.69	6.7	6.61	6.59	6.61	6.65	6.65

SNP Station #			1837-5									
Sample Identification			1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b	1837-5a	1837-5b
Sample Date			13-Jul-2025	13-Jul-2025	14-Jul-2025	14-Jul-2025	15-Jul-2025	15-Jul-2025	16-Jul-2025	16-Jul-2025	17-Jul-2025	17-Jul-2025
ALS Sample Identification			YL2500616-021	YL2500616-022	YL2500616-023	YL2500616-024	YL2500616-025	YL2500616-026	YL2500616-027	YL2500616-028	YL2500616-029	YL2500616-030
Sample Location			50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream	50 m upstream	100 m downstream
Analyte	RDL	Units										
TSS <sup>[1]</sup>	3.0	mg/L	<3	<3	<3	<3	9.1	12.1	8.1	5.7	4.2	5.4
pH	0.10	pH units	6.69	6.68	6.68	6.68	6.53	6.54	6.54	6.55	6.65	6.65

SNP Station #			1837-5	
Sample Identification			1837-5a	1837-5b
Sample Date			18-Jul-2025	18-Jul-2025
ALS Sample Identification			YL2500616-031	YL2500616-032
Sample Location			50 m upstream	100 m downstream
Analyte	RDL	Units		
TSS <sup>[1]</sup>	3.0	mg/L	5.6	8
pH	0.10	pH units	6.65	6.64

**Notes:**

- Bold** - value exceeds applied guideline, standard or criteria
- [1] Downstream increase of TSS = 10 mg/L if Upstream TSS ≤ 100 mg/L; downstream increase of TSS = 10% if Upstream TSS >100 mg/L (IWB 2017).
- ALS - ALS Environmental
- m - metres
- mg/L - milligrams per litre
- n/a - not applicable
- SNP - Surveillance Network Program
- TSS - total suspended solids
- > - greater than
- < - less than
- ≤ - less than or equal to

**APPENDIX F**

**Laboratory Certificates of Analysis**



**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>YL2500616</b>		
<b>Client</b>	: <b>Clifton Engineering Group Inc.</b>	<b>Laboratory</b>	: ALS Environmental - Yellowknife
<b>Contact</b>	: David Pritchard	<b>Account Manager</b>	: Oliver Gregg
<b>Address</b>	: 10509 - 46 Street SE Calgary Alberta Canada T2C 5C2	<b>Address</b>	: 102-487 Range Lake Road Yellowknife NT Canada X1A 3R9
<b>Telephone</b>	: 403 826 0395	<b>E-mail</b>	: oliver.gregg@ALSGlobal.com
<b>Project</b>	: CG2793B	<b>Telephone</b>	: 1 867 445 7143
<b>PO</b>	: ----	<b>Date Samples Received</b>	: 21-Jul-2025 09:30
<b>C-O-C number</b>	: ----	<b>Date Analysis Commenced</b>	: 23-Jul-2025
<b>Sampler</b>	: ----	<b>Issue Date</b>	: 25-Jul-2025 15:26
<b>Site</b>	: ----		
<b>Quote number</b>	: YL25-CLAL100-001		
<b>No. of samples received</b>	: 32		
<b>No. of samples analysed</b>	: 32		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

**Signatories**

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Monica Ko		Inorganics, Burnaby, British Columbia



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.  
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
mg/L	milligrams per litre
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.



### Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1837-5a ----	1837-5b ----	1837-5a ----	1837-5b ----	1837-5a ----
					Client sampling date / time	03-Jul-2025 00:00	03-Jul-2025 00:00	04-Jul-2025 00:00	04-Jul-2025 00:00	05-Jul-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500616-001	YL2500616-002	YL2500616-003	YL2500616-004	YL2500616-005	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
pH	----	E108/VA	0.10	pH units	6.49	6.55	6.44	6.52	6.53	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	7.9	10.1	17.7	18.1	9.5	

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1837-5b ----	1837-5a ----	1837-5b ----	1837-5a ----	1837-5b ----
					Client sampling date / time	05-Jul-2025 00:00	06-Jul-2025 00:00	06-Jul-2025 00:00	07-Jul-2025 00:00	07-Jul-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500616-006	YL2500616-007	YL2500616-008	YL2500616-009	YL2500616-010	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
pH	----	E108/VA	0.10	pH units	6.57	6.59	6.59	6.65	6.64	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	7.7	8.5	7.5	7.3	6.7	

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1837-5a ----	1837-5b ----	1837-5a ----	1837-5b ----	1837-5a ----
					Client sampling date / time	08-Jul-2025 00:00	08-Jul-2025 00:00	09-Jul-2025 00:00	09-Jul-2025 00:00	10-Jul-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500616-011	YL2500616-012	YL2500616-013	YL2500616-014	YL2500616-015	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
pH	----	E108/VA	0.10	pH units	6.64	6.62	6.68	6.69	6.70	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	4.3	4.3	4.3	4.5	7.7	

Please refer to the General Comments section for an explanation of any qualifiers detected.



### Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1837-5b ----	1837-5a ----	1837-5b ----	1837-5a ----	1837-5b ----
					Client sampling date / time	10-Jul-2025 00:00	11-Jul-2025 00:00	11-Jul-2025 00:00	12-Jul-2025 00:00	12-Jul-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500616-016	YL2500616-017	YL2500616-018	YL2500616-019	YL2500616-020	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
pH	----	E108/VA	0.10	pH units	6.61	6.59	6.61	6.65	6.65	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	8.5	9.9	8.1	4.3	<3.0	

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1837-5a ----	1837-5b ----	1837-5a ----	1837-5b ----	1837-5a ----
					Client sampling date / time	13-Jul-2025 00:00	13-Jul-2025 00:00	14-Jul-2025 00:00	14-Jul-2025 00:00	15-Jul-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500616-021	YL2500616-022	YL2500616-023	YL2500616-024	YL2500616-025	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
pH	----	E108/VA	0.10	pH units	6.69	6.68	6.68	6.68	6.53	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	<3.0	<3.0	9.1	

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	1837-5b ----	1837-5a ----	1837-5b ----	1837-5a ----	1837-5b ----
					Client sampling date / time	15-Jul-2025 00:00	16-Jul-2025 00:00	16-Jul-2025 00:00	17-Jul-2025 00:00	17-Jul-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500616-026	YL2500616-027	YL2500616-028	YL2500616-029	YL2500616-030	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
pH	----	E108/VA	0.10	pH units	6.54	6.54	6.55	6.65	6.65	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	12.1	8.1	5.7	4.2	5.4	

Please refer to the General Comments section for an explanation of any qualifiers detected.



**Analytical Results**

**Sub-Matrix: Water**  
**(Matrix: Water)**

					Client sample ID		1837-5a	1837-5b	----	----	----
					Client sampling date / time		18-Jul-2025 00:00	18-Jul-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500616-031	YL2500616-032	----	----	----	----	----
					Result	Result	----	----	----	----	----
<b>Physical Tests</b>											
pH	----	E108/VA	0.10	pH units	6.65	6.64	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	5.6	8.0	----	----	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>YL2500616</b></p> <p><b>Client</b> : <b>Clifton Engineering Group Inc.</b></p> <p><b>Contact</b> : David Pritchard</p> <p><b>Address</b> : 10509 - 46 Street SE Calgary AB Canada T2C 5C2</p> <p><b>Telephone</b> : 403 826 0395</p> <p><b>Project</b> : CG2793B</p> <p><b>PO</b> :</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : YL25-CLAL100-001</p> <p><b>No. of samples received</b> : 32</p> <p><b>No. of samples analysed</b> : 32</p>	<p><b>Page</b> : 1 of 12</p> <p><b>Laboratory</b> : ALS Environmental - Yellowknife</p> <p><b>Account Manager</b> : Oliver Gregg</p> <p><b>Address</b> : 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9</p> <p><b>Telephone</b> : 1 867 445 7143</p> <p><b>Date Samples Received</b> : 21-Jul-2025 09:30</p> <p><b>Issue Date</b> : 25-Jul-2025 15:26</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

#### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- Analysis Holding Time Outliers exist - please see following pages for full details.

## ***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
Rec	Actual	Rec		Actual							
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	18-Jul-2025	24-Jul-2025	0.25 hrs	154 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	154 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	18-Jul-2025	24-Jul-2025	0.25 hrs	154 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	154 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	17-Jul-2025	24-Jul-2025	0.25 hrs	178 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	178 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	17-Jul-2025	24-Jul-2025	0.25 hrs	178 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	178 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	16-Jul-2025	24-Jul-2025	0.25 hrs	202 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	202 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	16-Jul-2025	24-Jul-2025	0.25 hrs	202 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	202 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	15-Jul-2025	24-Jul-2025	0.25 hrs	226 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	226 hrs	* EHTR-FM	



Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	15-Jul-2025	24-Jul-2025	0.25 hrs	226 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	226 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	14-Jul-2025	24-Jul-2025	0.25 hrs	250 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	250 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	14-Jul-2025	24-Jul-2025	0.25 hrs	250 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	250 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	13-Jul-2025	24-Jul-2025	0.25 hrs	274 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	274 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	13-Jul-2025	24-Jul-2025	0.25 hrs	274 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	274 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	12-Jul-2025	24-Jul-2025	0.25 hrs	298 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	298 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	12-Jul-2025	24-Jul-2025	0.25 hrs	298 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	298 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	11-Jul-2025	24-Jul-2025	0.25 hrs	322 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	322 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	11-Jul-2025	24-Jul-2025	0.25 hrs	322 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	322 hrs	* EHTR-FM	



Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	10-Jul-2025	24-Jul-2025	0.25 hrs	346 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	346 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	10-Jul-2025	24-Jul-2025	0.25 hrs	346 hrs	* EHTR-FM	24-Jul-2025	0.25 hrs	346 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	09-Jul-2025	23-Jul-2025	0.25 hrs	352 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	352 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	09-Jul-2025	23-Jul-2025	0.25 hrs	352 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	352 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	08-Jul-2025	23-Jul-2025	0.25 hrs	376 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	376 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	08-Jul-2025	23-Jul-2025	0.25 hrs	376 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	376 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	07-Jul-2025	23-Jul-2025	0.25 hrs	400 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	400 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	07-Jul-2025	23-Jul-2025	0.25 hrs	400 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	400 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	06-Jul-2025	23-Jul-2025	0.25 hrs	424 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	424 hrs	* EHTR-FM	



Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	06-Jul-2025	23-Jul-2025	0.25 hrs	424 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	424 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	05-Jul-2025	23-Jul-2025	0.25 hrs	448 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	448 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	05-Jul-2025	23-Jul-2025	0.25 hrs	448 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	448 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	04-Jul-2025	23-Jul-2025	0.25 hrs	472 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	472 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	04-Jul-2025	23-Jul-2025	0.25 hrs	472 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	472 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5a	E108	03-Jul-2025	23-Jul-2025	0.25 hrs	496 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	496 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE 1837-5b	E108	03-Jul-2025	23-Jul-2025	0.25 hrs	496 hrs	* EHTR-FM	23-Jul-2025	0.25 hrs	496 hrs	* EHTR-FM	
<b>Physical Tests : TSS by Gravimetry</b>											
HDPE 1837-5a	E160	14-Jul-2025	----	----	----		24-Jul-2025	7 days	10 days	* EHTL	
<b>Physical Tests : TSS by Gravimetry</b>											
HDPE 1837-5b	E160	14-Jul-2025	----	----	----		24-Jul-2025	7 days	10 days	* EHTL	



Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	13-Jul-2025	----	----	----		24-Jul-2025	7 days	11 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	13-Jul-2025	----	----	----		24-Jul-2025	7 days	11 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	12-Jul-2025	----	----	----		24-Jul-2025	7 days	12 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	12-Jul-2025	----	----	----		24-Jul-2025	7 days	12 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	11-Jul-2025	----	----	----		24-Jul-2025	7 days	13 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	11-Jul-2025	----	----	----		24-Jul-2025	7 days	13 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	10-Jul-2025	----	----	----		24-Jul-2025	7 days	14 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	10-Jul-2025	----	----	----		24-Jul-2025	7 days	14 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	09-Jul-2025	----	----	----		24-Jul-2025	7 days	15 days	* EHTR



Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	09-Jul-2025	----	----	----		24-Jul-2025	7 days	15 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	08-Jul-2025	----	----	----		24-Jul-2025	7 days	16 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	08-Jul-2025	----	----	----		24-Jul-2025	7 days	16 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	07-Jul-2025	----	----	----		24-Jul-2025	7 days	17 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	07-Jul-2025	----	----	----		24-Jul-2025	7 days	17 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	06-Jul-2025	----	----	----		24-Jul-2025	7 days	18 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	06-Jul-2025	----	----	----		24-Jul-2025	7 days	18 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	05-Jul-2025	----	----	----		24-Jul-2025	7 days	19 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	05-Jul-2025	----	----	----		24-Jul-2025	7 days	19 days	* EHTR



Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	04-Jul-2025	----	----	----		24-Jul-2025	7 days	20 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	04-Jul-2025	----	----	----		24-Jul-2025	7 days	20 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	03-Jul-2025	----	----	----		24-Jul-2025	7 days	21 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	03-Jul-2025	----	----	----		24-Jul-2025	7 days	21 days	* EHTR
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	18-Jul-2025	----	----	----		23-Jul-2025	7 days	6 days	✓
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	18-Jul-2025	----	----	----		23-Jul-2025	7 days	6 days	✓
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	17-Jul-2025	----	----	----		23-Jul-2025	7 days	7 days	✓
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	17-Jul-2025	----	----	----		23-Jul-2025	7 days	7 days	✓
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	16-Jul-2025	----	----	----		24-Jul-2025	7 days	8 days	* EHT



Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5a	E160	15-Jul-2025	----	----	----		24-Jul-2025	7 days	9 days	* EHT
<b>Physical Tests : TSS by Gravimetry</b>										
HDPE 1837-5b	E160	15-Jul-2025	----	----	----		24-Jul-2025	7 days	9 days	* EHT
HDPE 1837-5b	E160	16-Jul-2025	----	----	----		25-Jul-2025	7 days	9 days	* EHT

**Legend & Qualifier Definitions**

- EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended
- EHTR: Exceeded ALS recommended hold time prior to sample receipt.
- EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
- EHT: Exceeded ALS recommended hold time prior to analysis.
- Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Laboratory Duplicates (DUP)</b>							
pH by Meter	E108	2123140	2	40	5.0	5.0	✔
TSS by Gravimetry	E160	2123475	3	58	5.1	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
pH by Meter	E108	2123140	2	40	5.0	5.0	✔
TSS by Gravimetry	E160	2123475	3	58	5.1	5.0	✔
<b>Method Blanks (MB)</b>							
TSS by Gravimetry	E160	2123475	3	58	5.1	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter	E108 ALS Environmental - Vancouver	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally $20 \pm 5^\circ\text{C}$ ). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$ , with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.

## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: YL2500616</b>	<b>Page</b>	: 1 of 3
<b>Client</b>	: Clifton Engineering Group Inc.	<b>Laboratory</b>	: ALS Environmental - Yellowknife
<b>Contact</b>	: David Pritchard	<b>Account Manager</b>	: Oliver Gregg
<b>Address</b>	: 10509 - 46 Street SE Calgary AB Canada T2C 5C2	<b>Address</b>	: 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9
<b>Telephone</b>	: 403 826 0395	<b>Telephone</b>	: 1 867 445 7143
<b>Project</b>	: CG2793B	<b>Date Samples Received</b>	: 21-Jul-2025 09:30
<b>PO</b>	:	<b>Date Analysis Commenced</b>	: 23-Jul-2025
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 25-Jul-2025 15:26
<b>Sampler</b>	: ----		
<b>Site</b>	: ----		
<b>Quote number</b>	: YL25-CLAL100-001		
<b>No. of samples received</b>	: 32		
<b>No. of samples analysed</b>	: 32		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Monica Ko	Supervisor - Inorganic	Vancouver Inorganics, Burnaby, British Columbia



## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

- Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO = Data Quality Objective.
- LOR = Limit of Reporting (detection limit).
- RPD = Relative Percent Difference
- # = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

## Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 2123140)</b>											
VA25B7560-002	Anonymous	pH	----	E108	0.10	pH units	7.01	6.94	1.00%	4%	----
<b>Physical Tests (QC Lot: 2123475)</b>											
KS2502834-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	129	150	15.3%	20%	----
<b>Physical Tests (QC Lot: 2124296)</b>											
VA25B7793-001	Anonymous	pH	----	E108	0.10	pH units	9.03	9.00	0.333%	4%	----
<b>Physical Tests (QC Lot: 2124886)</b>											
VA25B7802-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
<b>Physical Tests (QC Lot: 2124887)</b>											
YL2500616-009	1837-5a	Solids, total suspended [TSS]	----	E160	3.0	mg/L	7.3	7.9	0.6	Diff <2x LOR	----



### Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 2123475)</b>						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---
<b>Physical Tests (QCLot: 2124886)</b>						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---
<b>Physical Tests (QCLot: 2124887)</b>						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---

### Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				Qualifier
					Spike Target Concentration	Recovery (%) LCS	Recovery Limits (%) Low High		
<b>Physical Tests (QCLot: 2123140)</b>									
pH	---	E108	---	pH units	7 pH units	100	98.0	102	---
<b>Physical Tests (QCLot: 2123475)</b>									
Solids, total suspended [TSS]	---	E160	3	mg/L	150 mg/L	98.7	85.0	115	---
<b>Physical Tests (QCLot: 2124296)</b>									
pH	---	E108	---	pH units	7 pH units	100	98.0	102	---
<b>Physical Tests (QCLot: 2124886)</b>									
Solids, total suspended [TSS]	---	E160	3	mg/L	150 mg/L	91.8	85.0	115	---
<b>Physical Tests (QCLot: 2124887)</b>									
Solids, total suspended [TSS]	---	E160	3	mg/L	150 mg/L	108	85.0	115	---



**CHAIN OF CUSTODY**  
ALS Laboratory

RELINQUISHED BY:	RECEIVED BY: <i>me</i>	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME: <i>July 26/25 4:30</i>	DATE/TIME:	DATE/TIME:

CLIENT: Clifton Engineering Group Inc.	TURNAROUND REQUIREMENTS : <input checked="" type="checkbox"/> Standard TAT (List due date): 30-Jul-25 Non Standard or urgent TAT (List due date):
PROJECT: CG2793B	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics)
SITE: Satellite Bay Water Crossing	
PURCHASE ORDER NO.: CG2793B.230.235	ALS QUOTE NC YL25-CLAL100-001
PROJECT MANAGER: Dave Pritchard CONTACT PH: 403-463-7004	
SAMPLER: Dave Pritchard SAMPLER MOBILE: 403-463-7004	
EMAIL REPORTS TO: <a href="mailto:david_pritchard@clifton.ca">david_pritchard@clifton.ca</a>	EMAIL INVOICE TO: <a href="mailto:vendor@clifton.ca">vendor@clifton.ca</a>

FOR LABORATORY USE ONLY (Circle)		
Custody Seal Intact?	Yes	No N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No N/A
Random Sample Temperature on Receipt:	<i>0.8</i> °C	
Other comments:		

SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS	MATRIX:	CONTAINER INFORMATION			ANALYSIS REQUIRED	Additional Information
			MATRIX	TOTAL CONTAINERS	Item 6 - Stream Water Crossing Sampling		
	Solid(S) Water(W)						
SAMPLE	Sample Identification (This description will appear on the report)	DATE / TIME (dd-mm-yyyy)	MATRIX	TOTAL CONTAINERS	Item 6 - Stream Water Crossing Sampling		Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
<i>1</i>	1837-5a	3-Jul-24	Water	1	x		
<i>2</i>	1837-5b	3-Jul-24	Water	1	x		
<i>3</i>	1837-5a	4-Jul-25	Water	1	x		
<i>4</i>	1837-5b	4-Jul-25	Water	1	x		
<i>5</i>	1837-5a	5-Jul-25	Water	1	x		
<i>6</i>	1837-5b	5-Jul-25	Water	1	x		
<i>7</i>	1837-5a	6-Jul-25	Water	1	x		
<i>8</i>	1837-5b	6-Jul-25	Water	1	x		
<i>9</i>	1837-5a	7-Jul-25	Water	1	x		
<i>10</i>	1837-5b	7-Jul-25	Water	1	x		
<i>11</i>	1837-5a	8-Jul-25	Water	1	x		
<i>12</i>	1837-5b	8-Jul-25	Water	1	x		
<i>13</i>	1837-5a	9-Jul-25	Water	1	x		
<i>14</i>	1837-5b	9-Jul-25	Water	1	x		
			TOTAL	14	14		

Environmental Division  
Yellowknife  
Work Order Reference  
**YL2500616**



Telephone : + 1 867 673 5593





**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>YL2500723</b>	<b>Laboratory</b>	: ALS Environmental - Yellowknife
<b>Client</b>	: <b>Clifton Engineering Group Inc.</b>	<b>Account Manager</b>	: Oliver Gregg
<b>Contact</b>	: David Pritchard	<b>Address</b>	: 102-487 Range Lake Road Yellowknife NT Canada X1A 3R9
<b>Address</b>	: 10509 - 46 Street SE Calgary Alberta Canada T2C 5C2	<b>E-mail</b>	: oliver.gregg@ALSGlobal.com
<b>Telephone</b>	: 403 826 0395	<b>Telephone</b>	: 1 867 445 7143
<b>Project</b>	: CG2793B	<b>Date Samples Received</b>	: 05-Aug-2025 09:15
<b>PO</b>	: ----	<b>Date Analysis Commenced</b>	: 11-Aug-2025
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 12-Aug-2025 16:48
<b>Sampler</b>	: ----		
<b>Site</b>	: ----		
<b>Quote number</b>	: YL25-CLAL100-001		
<b>No. of samples received</b>	: 10		
<b>No. of samples analysed</b>	: 10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

**Signatories**

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Harpreet Chawla		Metals, Calgary, Alberta
Jigneshkumar Patel		Inorganics, Calgary, Alberta
Joshua Stessun		Organics, Calgary, Alberta
Jyotsnarani Devi		Organics, Calgary, Alberta
Nguyen Tran		Organics, Calgary, Alberta
Shirley Li		Metals, Calgary, Alberta
Sorina Motea		Organics, Calgary, Alberta



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.  
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
%	percent
mg/kg	milligrams per kilogram
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.



## Analytical Results

Sub-Matrix: Soil/Solid  
 (Matrix: Soil/Solid)

					Client sample ID	19-01SS1	19-01SS2	19-02SS1	19-02SS2	19-03SS1
					Client sampling date / time	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00
					YL2500723-001	YL2500723-002	YL2500723-003	YL2500723-004	YL2500723-005	
					Result	Result	Result	Result	Result	Result
<b>Physical Tests</b>										
Moisture	----	E144/CG	0.25	%	4.22	9.57	5.14	11.4	3.36	
pH (1:2 soil:water)	----	E108/CG	0.10	pH units	5.84	6.21	8.16	8.28	5.93	
<b>Metals</b>										
Aluminum	7429-90-5	E440/CG	50	mg/kg	488	734	1450	975	477	
Antimony	7440-36-0	E440/CG	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	
Arsenic	7440-38-2	E440/CG	0.10	mg/kg	1.16	1.74	2.30	2.31	1.32	
Barium	7440-39-3	E440/CG	0.50	mg/kg	16.7	40.5	99.8	117	29.8	
Beryllium	7440-41-7	E440/CG	0.10	mg/kg	<0.10	<0.10	0.11	<0.10	<0.10	
Bismuth	7440-69-9	E440/CG	0.20	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	
Boron	7440-42-8	E440/CG	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	
Cadmium	7440-43-9	E440/CG	0.020	mg/kg	<0.020	<0.020	0.032	0.025	<0.020	
Calcium	7440-70-2	E440/CG	50	mg/kg	<50	52	350	208	56	
Chromium	7440-47-3	E440/CG	0.50	mg/kg	1.02	1.41	3.59	2.55	1.03	
Cobalt	7440-48-4	E440/CG	0.10	mg/kg	0.48	0.75	1.44	1.22	0.59	
Copper	7440-50-8	E440/CG	0.50	mg/kg	<0.50	0.54	2.09	1.56	0.52	
Iron	7439-89-6	E440/CG	50	mg/kg	1520	2030	3280	2720	1370	
Lead	7439-92-1	E440/CG	0.50	mg/kg	1.63	2.58	2.40	3.46	1.74	
Lithium	7439-93-2	E440/CG	2.0	mg/kg	<2.0	<2.0	2.2	<2.0	<2.0	
Magnesium	7439-95-4	E440/CG	20	mg/kg	53	94	335	205	55	
Manganese	7439-96-5	E440/CG	1.0	mg/kg	6.5	19.1	23.3	19.4	9.1	
Mercury	7439-97-6	E510/CG	0.0050	mg/kg	<0.0050	<0.0050	0.0068	0.0053	<0.0050	



### Analytical Results

Sub-Matrix: Soil/Solid  
 (Matrix: Soil/Solid)

					Client sample ID	19-01SS1	19-01SS2	19-02SS1	19-02SS2	19-03SS1
					Client sampling date / time	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00
					YL2500723-001	YL2500723-002	YL2500723-003	YL2500723-004	YL2500723-005	
					Result	Result	Result	Result	Result	Result
<b>Metals</b>										
Molybdenum	7439-98-7	E440/CG	0.10	mg/kg	0.14	0.14	0.37	0.28	0.12	
Nickel	7440-02-0	E440/CG	0.50	mg/kg	1.12	1.52	3.02	2.65	1.08	
Phosphorus	7723-14-0	E440/CG	50	mg/kg	63	87	103	106	56	
Potassium	7440-09-7	E440/CG	100	mg/kg	<100	110	290	180	<100	
Selenium	7782-49-2	E440/CG	0.20	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	
Silver	7440-22-4	E440/CG	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	
Sodium	7440-23-5	E440/CG	50	mg/kg	<50	<50	<50	<50	<50	
Strontium	7440-24-6	E440/CG	0.50	mg/kg	3.42	5.65	11.1	10.7	4.21	
Sulfur	7704-34-9	E440/CG	1000	mg/kg	<1000	<1000	<1000	<1000	<1000	
Thallium	7440-28-0	E440/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	
Tin	7440-31-5	E440/CG	2.0	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	
Titanium	7440-32-6	E440/CG	1.0	mg/kg	12.8	16.7	49.1	33.2	14.1	
Tungsten	7440-33-7	E440/CG	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	
Uranium	7440-61-1	E440/CG	0.050	mg/kg	0.076	0.082	0.291	0.235	0.068	
Vanadium	7440-62-2	E440/CG	0.20	mg/kg	4.34	5.38	8.73	6.72	3.91	
Zinc	7440-66-6	E440/CG	2.0	mg/kg	2.4	4.1	9.6	7.0	2.8	
Zirconium	7440-67-7	E440/CG	1.0	mg/kg	<1.0	<1.0	1.7	<1.0	<1.0	
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>										
Benzene	71-43-2	E611A/CG	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Ethylbenzene	100-41-4	E611A/CG	0.015	mg/kg	<0.015	<0.015	<0.015	<0.015	<0.015	
Toluene	108-88-3	E611A/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	



## Analytical Results

Sub-Matrix: Soil/Solid  
 (Matrix: Soil/Solid)

					Client sample ID	19-01SS1	19-01SS2	19-02SS1	19-02SS2	19-03SS1
					Client sampling date / time	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00
					YL2500723-001	YL2500723-002	YL2500723-003	YL2500723-004	YL2500723-005	YL2500723-005
					Result	Result	Result	Result	Result	Result
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>										
Xylene, m+p-	179601-23-1	E611A/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, o-	95-47-6	E611A/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Xylenes, total	1330-20-7	E611A/CG	0.075	mg/kg	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075
BTEX, total	----	E611A/CG	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<b>Hydrocarbons</b>										
F1 (C6-C10)	----	E581.F1/CG	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	----	EC580/CG	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10-C16)	----	E601.SG/CG	25	mg/kg	<25	<25	<25	<25	<25	<25
F3 (C16-C34)	----	E601.SG/CG	50	mg/kg	<50	<50	101	<50	<50	<50
F4 (C34-C50)	----	E601.SG/CG	50	mg/kg	<50	<50	<50	<50	<50	<50
Chromatogram to baseline at nC50	n/a	E601.SG/CG	-	-	YES	YES	YES	YES	YES	YES
Hydrocarbons, total (C6-C50)	n/a	EC581/CG	80	mg/kg	<80	<80	101	<80	<80	<80
<b>Hydrocarbons Surrogates</b>										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG/CG	1.0	%	72.3	71.8	64.4	71.6	78.6	78.6
Dichlorotoluene, 3,4-	95-75-0	E581.F1/CG	1.0	%	95.5	96.7	85.5	97.5	93.1	93.1
<b>Volatile Organic Compounds Surrogates</b>										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	0.10	%	98.6	80.5	79.8	79.6	83.2	83.2
Difluorobenzene, 1,4-	540-36-3	E611A/CG	0.10	%	90.3	83.6	88.6	85.7	90.8	90.8

Please refer to the General Comments section for an explanation of any qualifiers detected.



## Analytical Results

Sub-Matrix: Soil/Solid  
 (Matrix: Soil/Solid)

					Client sample ID	19-03SS2	19-04SS1	19-04SS2	19-05SS1	19-05SS2
					Client sampling date / time	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2500723-006	YL2500723-007	YL2500723-008	YL2500723-009	YL2500723-010	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
Moisture	----	E144/CG	0.25	%	2.83	6.08	6.83	3.39	3.55	
pH (1:2 soil:water)	----	E108/CG	0.10	pH units	6.30	7.74	7.81	5.74	6.31	
<b>Metals</b>										
Aluminum	7429-90-5	E440/CG	50	mg/kg	371	635	642	428	403	
Antimony	7440-36-0	E440/CG	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	
Arsenic	7440-38-2	E440/CG	0.10	mg/kg	0.94	1.40	1.48	1.34	1.68	
Barium	7440-39-3	E440/CG	0.50	mg/kg	11.1	33.7	30.4	20.7	16.5	
Beryllium	7440-41-7	E440/CG	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	
Bismuth	7440-69-9	E440/CG	0.20	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	
Boron	7440-42-8	E440/CG	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	
Cadmium	7440-43-9	E440/CG	0.020	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	
Calcium	7440-70-2	E440/CG	50	mg/kg	<50	160	219	<50	<50	
Chromium	7440-47-3	E440/CG	0.50	mg/kg	0.78	1.47	1.50	0.99	1.01	
Cobalt	7440-48-4	E440/CG	0.10	mg/kg	0.39	0.84	0.65	0.55	0.88	
Copper	7440-50-8	E440/CG	0.50	mg/kg	<0.50	0.58	0.72	<0.50	<0.50	
Iron	7439-89-6	E440/CG	50	mg/kg	1000	1560	1430	1540	1680	
Lead	7439-92-1	E440/CG	0.50	mg/kg	1.05	2.27	1.76	1.60	2.27	
Lithium	7439-93-2	E440/CG	2.0	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	
Magnesium	7439-95-4	E440/CG	20	mg/kg	56	114	81	49	52	
Manganese	7439-96-5	E440/CG	1.0	mg/kg	5.6	22.5	13.6	7.3	10.0	
Mercury	7439-97-6	E510/CG	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	



## Analytical Results

Sub-Matrix: Soil/Solid  
 (Matrix: Soil/Solid)

					Client sample ID	19-03SS2	19-04SS1	19-04SS2	19-05SS1	19-05SS2
					Client sampling date / time	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00
					YL2500723-006	YL2500723-007	YL2500723-008	YL2500723-009	YL2500723-010	YL2500723-010
					Result	Result	Result	Result	Result	Result
<b>Metals</b>										
Molybdenum	7439-98-7	E440/CG	0.10	mg/kg	0.12	0.21	0.19	0.12	0.17	
Nickel	7440-02-0	E440/CG	0.50	mg/kg	0.89	1.37	1.30	1.06	1.59	
Phosphorus	7723-14-0	E440/CG	50	mg/kg	<50	<50	110	<50	54	
Potassium	7440-09-7	E440/CG	100	mg/kg	<100	100	120	<100	<100	
Selenium	7782-49-2	E440/CG	0.20	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	
Silver	7440-22-4	E440/CG	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	
Sodium	7440-23-5	E440/CG	50	mg/kg	<50	<50	<50	<50	<50	
Strontium	7440-24-6	E440/CG	0.50	mg/kg	3.48	6.20	6.90	3.78	4.89	
Sulfur	7704-34-9	E440/CG	1000	mg/kg	<1000	<1000	<1000	<1000	<1000	
Thallium	7440-28-0	E440/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	
Tin	7440-31-5	E440/CG	2.0	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	
Titanium	7440-32-6	E440/CG	1.0	mg/kg	10.4	13.1	19.7	14.6	9.2	
Tungsten	7440-33-7	E440/CG	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	
Uranium	7440-61-1	E440/CG	0.050	mg/kg	0.079	0.120	0.099	0.061	0.088	
Vanadium	7440-62-2	E440/CG	0.20	mg/kg	2.75	4.17	5.13	4.16	4.38	
Zinc	7440-66-6	E440/CG	2.0	mg/kg	<2.0	3.4	2.9	2.6	3.4	
Zirconium	7440-67-7	E440/CG	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>										
Benzene	71-43-2	E611A/CG	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Ethylbenzene	100-41-4	E611A/CG	0.015	mg/kg	<0.015	<0.015	<0.015	<0.015	<0.015	
Toluene	108-88-3	E611A/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	



## Analytical Results

Sub-Matrix: Soil/Solid  
 (Matrix: Soil/Solid)

					Client sample ID	19-03SS2	19-04SS1	19-04SS2	19-05SS1	19-05SS2
					Client sampling date / time	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00	30-Jul-2025 00:00
					YL2500723-006	YL2500723-007	YL2500723-008	YL2500723-009	YL2500723-010	YL2500723-010
					Result	Result	Result	Result	Result	Result
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>										
Xylene, m+p-	179601-23-1	E611A/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, o-	95-47-6	E611A/CG	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Xylenes, total	1330-20-7	E611A/CG	0.075	mg/kg	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075
BTEX, total	----	E611A/CG	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<b>Hydrocarbons</b>										
F1 (C6-C10)	----	E581.F1/CG	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	----	EC580/CG	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10-C16)	----	E601.SG/CG	25	mg/kg	<25	<25	<25	<25	<25	<25
F3 (C16-C34)	----	E601.SG/CG	50	mg/kg	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	----	E601.SG/CG	50	mg/kg	<50	<50	<50	<50	<50	<50
Chromatogram to baseline at nC50	n/a	E601.SG/CG	-	-	YES	YES	YES	YES	YES	YES
Hydrocarbons, total (C6-C50)	n/a	EC581/CG	80	mg/kg	<80	<80	<80	<80	<80	<80
<b>Hydrocarbons Surrogates</b>										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG/CG	1.0	%	71.2	64.1	68.4	69.4	77.3	
Dichlorotoluene, 3,4-	95-75-0	E581.F1/CG	1.0	%	83.2	92.5	95.6	105	101	
<b>Volatile Organic Compounds Surrogates</b>										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	0.10	%	82.6	84.9	82.2	96.0	87.6	
Difluorobenzene, 1,4-	540-36-3	E611A/CG	0.10	%	92.2	93.1	89.7	107	95.1	

Please refer to the General Comments section for an explanation of any qualifiers detected.

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>YL2500723</b></p> <p><b>Client</b> : <b>Clifton Engineering Group Inc.</b></p> <p><b>Contact</b> : David Pritchard</p> <p><b>Address</b> : 10509 - 46 Street SE Calgary AB Canada T2C 5C2</p> <p><b>Telephone</b> : 403 826 0395</p> <p><b>Project</b> : CG2793B</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : YL25-CLAL100-001</p> <p><b>No. of samples received</b> : 10</p> <p><b>No. of samples analysed</b> : 10</p>	<p><b>Page</b> : 1 of 14</p> <p><b>Laboratory</b> : ALS Environmental - Yellowknife</p> <p><b>Account Manager</b> : Oliver Gregg</p> <p><b>Address</b> : 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9</p> <p><b>Telephone</b> : 1 867 445 7143</p> <p><b>Date Samples Received</b> : 05-Aug-2025 09:15</p> <p><b>Issue Date</b> : 12-Aug-2025 16:48</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-01SS1	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-01SS2	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-02SS1	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-02SS2	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-03SS1	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-03SS2	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-04SS1	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-04SS2	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-05SS1	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>										
Glass soil methanol vial 19-05SS2	E581.F1	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-01SS1	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-01SS2	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-02SS1	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-02SS2	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-03SS1	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-03SS2	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-04SS1	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-04SS2	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-05SS1	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID</b>										
Glass soil jar/Teflon lined cap 19-05SS2	E601.SG	30-Jul-2025	11-Aug-2025	14 days	13 days	✔	11-Aug-2025	40 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-01SS1	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-01SS2	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-02SS1	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-02SS2	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-03SS1	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-03SS2	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-04SS1	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-04SS2	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-05SS1	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
LDPE bag 19-05SS2	E510	30-Jul-2025	12-Aug-2025	28 days	13 days	✔	12-Aug-2025	28 days	0 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
LDPE bag 19-01SS1	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
LDPE bag 19-01SS2	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
LDPE bag 19-02SS1	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
LDPE bag 19-02SS2	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
LDPE bag 19-03SS1	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
LDPE bag 19-03SS2	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
LDPE bag 19-04SS1	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
LDPE bag 19-04SS2	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
LDPE bag 19-05SS1	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
LDPE bag 19-05SS2	E440	30-Jul-2025	12-Aug-2025	180 days	13 days	✔	12-Aug-2025	180 days	13 days	✔	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-01SS1	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-01SS2	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-02SS1	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-02SS2	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-03SS1	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-03SS2	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-04SS1	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-04SS2	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-05SS1	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 19-05SS2	E144	30-Jul-2025	----	----	----		11-Aug-2025	----	----		
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
Glass soil jar/Teflon lined cap 19-01SS1	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
Glass soil jar/Teflon lined cap 19-01SS2	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-02SS1	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-02SS2	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-03SS1	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-03SS2	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-04SS1	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-04SS2	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-05SS1	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
Glass soil jar/Teflon lined cap 19-05SS2	E108	30-Jul-2025	12-Aug-2025	30 days	14 days	✔	12-Aug-2025	30 days	14 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-01SS1	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-01SS2	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-02SS1	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-02SS2	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-03SS1	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-03SS2	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-04SS1	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-04SS2	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-05SS1	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial 19-05SS2	E611A	30-Jul-2025	11-Aug-2025	40 days	13 days	✔	11-Aug-2025	40 days	13 days	✔

[Legend & Qualifier Definitions](#)

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Work Order : YL2500723  
Client : Clifton Engineering Group Inc.  
Project : CG2793B

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Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
pH by Meter (1:2 Soil:Water Extraction)	E108	2155923	2	40	5.0	5.0	✔
Moisture Content by Gravimetry	E144	2153635	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2153895	1	20	5.0	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	2153894	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	2153637	1	20	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID	E601.SG	2153632	1	12	8.3	5.0	✔
BTEX by Headspace GC-MS	E611A	2153636	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
pH by Meter (1:2 Soil:Water Extraction)	E108	2155923	4	40	10.0	10.0	✔
Moisture Content by Gravimetry	E144	2153635	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2153895	2	20	10.0	10.0	✔
Mercury in Soil/Solid by CVAAS	E510	2153894	2	20	10.0	10.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	2153637	1	20	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID	E601.SG	2153632	1	12	8.3	5.0	✔
BTEX by Headspace GC-MS	E611A	2153636	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Moisture Content by Gravimetry	E144	2153635	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2153895	1	20	5.0	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	2153894	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	2153637	1	20	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID	E601.SG	2153632	1	12	8.3	5.0	✔
BTEX by Headspace GC-MS	E611A	2153636	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
CCME PHCs - F2-F4 by GC-FID	E601.SG	2153632	1	12	8.3	5.0	✔
BTEX by Headspace GC-MS	E611A	2153636	1	20	5.0	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:Water Extraction)	E108 ALS Environmental - Calgary	Soil/Solid	BC Lab Manual	pH is determined by potentiometric measurement with a pH electrode at ambient laboratory temperature (normally $20 \pm 5^\circ\text{C}$ ), and is carried out in accordance with procedures described in the BC Lab Manual (prescriptive method). The procedure involves mixing the dried (at $<60^\circ\text{C}$ ) and sieved (10mesh/2mm) sample with ultra pure water at a 1:2 ratio of sediment to water. The pH is then measured by a standard pH probe.
Moisture Content by Gravimetry	E144 ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at $105^\circ\text{C}$ . Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS	E440 ALS Environmental - Calgary	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with $\text{HNO}_3$ and $\text{HCl}$ .  Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.  Analysis is by Collision/Reaction Cell ICPMS.
Mercury in Soil/Solid by CVAAS	E510 ALS Environmental - Calgary	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with $\text{HNO}_3$ and $\text{HCl}$ , followed by CVAAS analysis.
CCME PHC - F1 by Headspace GC-FID	E581.F1 ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.  Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHCs - F2-F4 by GC-FID	E601.SG ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).  Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BTEX by Headspace GC-MS	E611A ALS Environmental - Calgary	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
F1-BTEX	EC580 ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil:Water for pH/EC	EP108 ALS Environmental - Calgary	Soil/Solid	BC WLAP METHOD: PH, ELECTROMETRIC, SOIL	The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water.
Digestion for Metals and Mercury	EP440 ALS Environmental - Calgary	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl. This method is intended to liberate metals that may be environmentally available.
VOCs Methanol Extraction for Headspace Analysis	EP581 ALS Environmental - Calgary	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>YL2500723</b></p> <p>Client : Clifton Engineering Group Inc.</p> <p>Contact : David Pritchard</p> <p>Address : 10509 - 46 Street SE Calgary AB Canada T2C 5C2</p> <p>Telephone : 403 826 0395</p> <p>Project : CG2793B</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : ----</p> <p>Quote number : YL25-CLAL100-001</p> <p>No. of samples received : 10</p> <p>No. of samples analysed : 10</p>	<p>Page : 1 of 11</p> <p>Laboratory : ALS Environmental - Yellowknife</p> <p>Account Manager : Oliver Gregg</p> <p>Address : 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9</p> <p>Telephone : 1 867 445 7143</p> <p>Date Samples Received : 05-Aug-2025 09:15</p> <p>Date Analysis Commenced : 11-Aug-2025</p> <p>Issue Date : 12-Aug-2025 16:48</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Harpreet Chawla	Team Leader - Inorganics	Calgary Metals, Calgary, Alberta
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Joshua Stessun	Laboratory Analyst	Calgary Organics, Calgary, Alberta
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Shirley Li	Team Leader - Inorganics	Calgary Metals, Calgary, Alberta
Sorina Motea	Team Leader - Organics	Calgary Organics, Calgary, Alberta

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Work Order : YL2500723  
Client : Clifton Engineering Group Inc.  
Project : CG2793B



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.  
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.  
DQO = Data Quality Objective.  
LOR = Limit of Reporting (detection limit).  
RPD = Relative Percent Difference  
# = Indicates a QC result that did not meet the ALS DQO.

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## Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 2153635)</b>											
YL2500723-001	19-01SS1	Moisture	----	E144	0.25	%	4.22	5.02	17.2%	20%	----
<b>Physical Tests (QC Lot: 2155922)</b>											
CG2510842-001	Anonymous	pH (1:2 soil:water)	----	E108	0.10	pH units	8.63	8.62	0.116%	5%	----
<b>Physical Tests (QC Lot: 2155923)</b>											
YL2500723-009	19-05SS1	pH (1:2 soil:water)	----	E108	0.10	pH units	5.74	5.72	0.349%	5%	----
<b>Metals (QC Lot: 2153894)</b>											
YL2500723-001	19-01SS1	Mercury	7439-97-6	E510	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
<b>Metals (QC Lot: 2153895)</b>											
YL2500723-001	19-01SS1	Aluminum	7429-90-5	E440	50	mg/kg	488	487	0.197%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	1.16	1.18	1.75%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	16.7	16.8	0.224%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Boron	7440-42-8	E440	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Calcium	7440-70-2	E440	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		Chromium	7440-47-3	E440	0.50	mg/kg	1.02	1.02	0.004	Diff <2x LOR	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	0.48	0.47	0.010	Diff <2x LOR	----
		Copper	7440-50-8	E440	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Iron	7439-89-6	E440	50	mg/kg	1520	1510	0.557%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	1.63	1.68	0.05	Diff <2x LOR	----
		Lithium	7439-93-2	E440	2.0	mg/kg	<2.0	<2.0	0	Diff <2x LOR	----
		Magnesium	7439-95-4	E440	20	mg/kg	53	52	0.7	Diff <2x LOR	----
		Manganese	7439-96-5	E440	1.0	mg/kg	6.5	6.6	0.09	Diff <2x LOR	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	0.14	0.14	0.0008	Diff <2x LOR	----
		Nickel	7440-02-0	E440	0.50	mg/kg	1.12	1.11	0.010	Diff <2x LOR	----
		Phosphorus	7723-14-0	E440	50	mg/kg	63	52	11	Diff <2x LOR	----
		Potassium	7440-09-7	E440	100	mg/kg	<100	<100	0	Diff <2x LOR	----
		Selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Metals (QC Lot: 2153895) - continued</b>											
YL2500723-001	19-01SS1	Silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Sodium	7440-23-5	E440	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		Strontium	7440-24-6	E440	0.50	mg/kg	3.42	3.52	2.81%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	<1000	<1000	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	<2.0	<2.0	0	Diff <2x LOR	----
		Titanium	7440-32-6	E440	1.0	mg/kg	12.8	12.8	0.733%	40%	----
		Tungsten	7440-33-7	E440	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Uranium	7440-61-1	E440	0.050	mg/kg	0.076	0.080	0.004	Diff <2x LOR	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	4.34	4.33	0.122%	30%	----
Zinc	7440-66-6	E440	2.0	mg/kg	2.4	2.5	0.06	Diff <2x LOR	----		
Zirconium	7440-67-7	E440	1.0	mg/kg	<1.0	<1.0	0	Diff <2x LOR	----		
<b>Volatile Organic Compounds (QC Lot: 2153636)</b>											
CG2511136-040	Anonymous	Benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		Toluene	108-88-3	E611A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 2153632)</b>											
YL2500731-004	Anonymous	F2 (C10-C16)	----	E601.SG	25	mg/kg	4230	4260	0.824%	40%	----
		F3 (C16-C34)	----	E601.SG	50	mg/kg	373	387	3.65%	40%	----
		F4 (C34-C50)	----	E601.SG	50	mg/kg	<50	<50	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 2153637)</b>											
CG2511136-040	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 2153635)</b>						
Moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 2153894)</b>						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
<b>Metals (QCLot: 2153895)</b>						
Aluminum	7429-90-5	E440	50	mg/kg	<50	---
Antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
Arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
Barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
Beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
Bismuth	7440-69-9	E440	0.2	mg/kg	<0.20	---
Boron	7440-42-8	E440	5	mg/kg	<5.0	---
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
Calcium	7440-70-2	E440	50	mg/kg	<50	---
Chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
Cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
Copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
Iron	7439-89-6	E440	50	mg/kg	<50	---
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
Lithium	7439-93-2	E440	2	mg/kg	<2.0	---
Magnesium	7439-95-4	E440	20	mg/kg	<20	---
Manganese	7439-96-5	E440	1	mg/kg	<1.0	---
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
Phosphorus	7723-14-0	E440	50	mg/kg	<50	---
Potassium	7440-09-7	E440	100	mg/kg	<100	---
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
Sodium	7440-23-5	E440	50	mg/kg	<50	---
Strontium	7440-24-6	E440	0.5	mg/kg	<0.50	---
Sulfur	7704-34-9	E440	1000	mg/kg	<1000	---
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
Tin	7440-31-5	E440	2	mg/kg	<2.0	---



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Metals (QCLot: 2153895) - continued</b>						
Titanium	7440-32-6	E440	1	mg/kg	<1.0	----
Tungsten	7440-33-7	E440	0.5	mg/kg	<0.50	----
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	----
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440	2	mg/kg	<2.0	----
Zirconium	7440-67-7	E440	1	mg/kg	<1.0	----
<b>Volatile Organic Compounds (QCLot: 2153636)</b>						
Benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	----
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----
Toluene	108-88-3	E611A	0.05	mg/kg	<0.050	----
Xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611A	0.03	mg/kg	<0.030	----
<b>Hydrocarbons (QCLot: 2153632)</b>						
F2 (C10-C16)	---	E601.SG	25	mg/kg	<25	----
F3 (C16-C34)	---	E601.SG	50	mg/kg	<50	----
F4 (C34-C50)	---	E601.SG	50	mg/kg	<50	----
<b>Hydrocarbons (QCLot: 2153637)</b>						
F1 (C6-C10)	---	E581.F1	5	mg/kg	<5.0	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 2153635)</b>									
Moisture	---	E144	0.25	%	50 %	98.0	90.0	110	---
<b>Physical Tests (QCLot: 2155922)</b>									
pH (1:2 soil:water)	---	E108	---	pH units	7 pH units	101	97.0	103	---
<b>Physical Tests (QCLot: 2155923)</b>									
pH (1:2 soil:water)	---	E108	---	pH units	7 pH units	101	97.0	103	---
<b>Metals (QCLot: 2153894)</b>									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	101	80.0	120	---
<b>Metals (QCLot: 2153895)</b>									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	93.4	80.0	120	---
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	102	80.0	120	---
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	98.1	80.0	120	---
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	94.1	80.0	120	---
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	90.9	80.0	120	---
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	94.0	80.0	120	---
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	97.1	80.0	120	---
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	94.2	80.0	120	---
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	94.2	80.0	120	---
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	94.5	80.0	120	---
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	94.6	80.0	120	---
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	92.6	80.0	120	---
Iron	7439-89-6	E440	50	mg/kg	100 mg/kg	96.4	80.0	120	---
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	100	80.0	120	---
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	90.0	80.0	120	---
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	94.5	80.0	120	---
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	93.1	80.0	120	---
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	98.4	80.0	120	---
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	93.6	80.0	120	---
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	94.5	80.0	120	---
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	98.9	80.0	120	---
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	95.7	80.0	120	---
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	96.2	80.0	120	---
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	95.0	80.0	120	---



Sub-Matrix: Soil/Solid

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike		Recovery (%)		Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High			
<b>Metals (QCLot: 2153895) - continued</b>											
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	101	80.0	120	----		
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	101	80.0	120	----		
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	98.4	80.0	120	----		
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	92.9	80.0	120	----		
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	86.3	80.0	120	----		
Tungsten	7440-33-7	E440	0.5	mg/kg	10 mg/kg	94.0	80.0	120	----		
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	93.6	80.0	120	----		
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	96.2	80.0	120	----		
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	93.2	80.0	120	----		
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	95.5	80.0	120	----		
<b>Volatile Organic Compounds (QCLot: 2153636)</b>											
Benzene	71-43-2	E611A	0.005	mg/kg	2.5 mg/kg	99.0	70.0	130	----		
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	2.5 mg/kg	82.6	70.0	130	----		
Toluene	108-88-3	E611A	0.05	mg/kg	2.5 mg/kg	82.6	70.0	130	----		
Xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	5 mg/kg	100	70.0	130	----		
Xylene, o-	95-47-6	E611A	0.03	mg/kg	2.5 mg/kg	103	70.0	130	----		
<b>Hydrocarbons (QCLot: 2153632)</b>											
F2 (C10-C16)	----	E601.SG	25	mg/kg	569 mg/kg	95.6	70.0	130	----		
F3 (C16-C34)	----	E601.SG	50	mg/kg	1220 mg/kg	89.2	70.0	130	----		
F4 (C34-C50)	----	E601.SG	50	mg/kg	731 mg/kg	84.6	70.0	130	----		
<b>Hydrocarbons (QCLot: 2153637)</b>											
F1 (C6-C10)	----	E581.F1	5	mg/kg	75.3 mg/kg	79.3	70.0	130	----		



## Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level  $\geq$  1x spike level.

Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 2153636)</b>										
CG2511136-040	Anonymous	Benzene	71-43-2	E611A	3.12 mg/kg	3.09 mg/kg	101	60.0	140	----
		Ethylbenzene	100-41-4	E611A	2.17 mg/kg	3.09 mg/kg	70.1	60.0	140	----
		Toluene	108-88-3	E611A	2.15 mg/kg	3.09 mg/kg	69.4	60.0	140	----
		Xylene, m+p-	179601-23-1	E611A	5.61 mg/kg	6.18 mg/kg	90.8	60.0	140	----
		Xylene, o-	95-47-6	E611A	2.67 mg/kg	3.09 mg/kg	86.4	60.0	140	----
<b>Hydrocarbons (QCLot: 2153632)</b>										
YL2500731-004	Anonymous	F2 (C10-C16)	----	E601.SG	ND mg/kg	----	ND	60.0	140	----
		F3 (C16-C34)	----	E601.SG	716 mg/kg	911 mg/kg	78.6	60.0	140	----
		F4 (C34-C50)	----	E601.SG	395 mg/kg	547 mg/kg	72.2	60.0	140	----



## Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Physical Tests (QCLot: 2155922)</b>									
QC-2155922-002	RM	pH (1:2 soil:water)	----	E108	7.8 pH units	102	96.0	104	----
<b>Physical Tests (QCLot: 2155923)</b>									
QC-2155923-002	RM	pH (1:2 soil:water)	----	E108	7.8 pH units	102	96.0	104	----
<b>Metals (QCLot: 2153894)</b>									
QC-2153894-003	RM	Mercury	7439-97-6	E510	0.068 mg/kg	92.3	70.0	130	----
<b>Metals (QCLot: 2153895)</b>									
QC-2153895-003	RM	Aluminum	7429-90-5	E440	22500 mg/kg	94.9	70.0	130	----
QC-2153895-003	RM	Antimony	7440-36-0	E440	24.8 mg/kg	92.6	70.0	130	----
QC-2153895-003	RM	Arsenic	7440-38-2	E440	21.2 mg/kg	92.8	70.0	130	----
QC-2153895-003	RM	Barium	7440-39-3	E440	788 mg/kg	94.0	70.0	130	----
QC-2153895-003	RM	Beryllium	7440-41-7	E440	1.82 mg/kg	93.3	70.0	130	----
QC-2153895-003	RM	Bismuth	7440-69-9	E440	1.78 mg/kg	83.7	70.0	130	----
QC-2153895-003	RM	Cadmium	7440-43-9	E440	2.15 mg/kg	94.5	70.0	130	----
QC-2153895-003	RM	Calcium	7440-70-2	E440	4900 mg/kg	95.4	70.0	130	----
QC-2153895-003	RM	Chromium	7440-47-3	E440	56.9 mg/kg	93.6	70.0	130	----
QC-2153895-003	RM	Cobalt	7440-48-4	E440	32 mg/kg	93.9	70.0	130	----
QC-2153895-003	RM	Copper	7440-50-8	E440	969 mg/kg	94.1	70.0	130	----
QC-2153895-003	RM	Iron	7439-89-6	E440	32700 mg/kg	97.9	70.0	130	----
QC-2153895-003	RM	Lead	7439-92-1	E440	919 mg/kg	95.8	70.0	130	----
QC-2153895-003	RM	Lithium	7439-93-2	E440	47.3 mg/kg	97.3	70.0	130	----
QC-2153895-003	RM	Magnesium	7439-95-4	E440	7780 mg/kg	96.5	70.0	130	----
QC-2153895-003	RM	Manganese	7439-96-5	E440	8640 mg/kg	91.8	70.0	130	----
QC-2153895-003	RM	Molybdenum	7439-98-7	E440	25.1 mg/kg	94.2	70.0	130	----
QC-2153895-003	RM	Nickel	7440-02-0	E440	1000 mg/kg	92.2	70.0	130	----
QC-2153895-003	RM	Phosphorus	7723-14-0	E440	660 mg/kg	98.5	70.0	130	----
QC-2153895-003	RM	Potassium	7440-09-7	E440	10800 mg/kg	95.6	70.0	130	----
QC-2153895-003	RM	Selenium	7782-49-2	E440	1.04 mg/kg	93.5	60.0	140	----
QC-2153895-003	RM	Silver	7440-22-4	E440	8.98 mg/kg	97.6	70.0	130	----
QC-2153895-003	RM	Sodium	7440-23-5	E440	1770 mg/kg	95.0	70.0	130	----
QC-2153895-003	RM	Strontium	7440-24-6	E440	41 mg/kg	99.3	70.0	130	----
QC-2153895-003	RM	Sulfur	7704-34-9	E440	3940 mg/kg	104	50.0	150	----
QC-2153895-003	RM	Thallium	7440-28-0	E440	0.907 mg/kg	119	70.0	130	----
QC-2153895-003	RM	Tin	7440-31-5	E440	3.79 mg/kg	94.8	40.0	160	----



Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 2153895) - continued</b>									
QC-2153895-003	RM	Titanium	7440-32-6	E440	2790 mg/kg	90.5	70.0	130	----
QC-2153895-003	RM	Tungsten	7440-33-7	E440	6.99 mg/kg	110	70.0	130	----
QC-2153895-003	RM	Uranium	7440-61-1	E440	3.97 mg/kg	94.8	70.0	130	----
QC-2153895-003	RM	Vanadium	7440-62-2	E440	66.2 mg/kg	94.2	70.0	130	----
QC-2153895-003	RM	Zinc	7440-66-6	E440	828 mg/kg	93.6	70.0	130	----
QC-2153895-003	RM	Zirconium	7440-67-7	E440	6.91 mg/kg	102	70.0	130	----



**CHAIN OF CUSTODY**  
ALS Laboratory

RELINQUISHED BY: *[Signature]*  
DATE/TIME: 1 Aug 25

RECEIVED BY: *[Signature]*  
DATE/TIME: Aug 5/25 9:15

RELINQUISHED BY:  
DATE/TIME:

RECEIVED BY:  
DATE/TIME:

CLIENT: Clifton Engineering Group Inc.  
PROJECT: CG2793B  
SITE: Soil Containment Structure  
PURCHASE ORDER NO.: CG2793B.230.235  
PROJECT MANAGER: Dave Pritchard  
SAMPLER: Dave Pritchard  
EMAIL REPORTS TO: david\_pritchard@clifton.ca

TURNAROUND REQUIREMENTS :  
(Standard TAT may be longer for some tests e.g. Ultra Trace Organics)

Standard TAT (List due date): 15-Aug-25  
Non Standard or urgent TAT (List due date):

ALS QUOTE NC YL25-CLAL100-001

CONTACT PH: 403-463-7004  
SAMPLER MOBILE: 403-463-7004

EMAIL INVOICE TO: vendor@clifton.ca

**FOR LABORATORY USE ONLY (Circle)**  
Custody Seal intact? Yes No N/A  
Free ice / frozen ice bricks present upon receipt? Yes No N/A  
Random Sample Temperature on Receipt: 6.8 C  
Other comments:

SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS	MATRIX:	CONTAINER INFORMATION	ANALYSIS REQUIRED										Additional Information			
	Solid(S) Water(W)																
SAMPLE	Sample identification (This description will appear on the report)	DATE / TIME (dd-mm-yyyy)	MATRIX	TOTAL CONTAINERS	Item 2: Soil Sampling												Comments on likely contaminant levels, dilutions, or samples requiring specific GC analysis etc.
	19-01SS1	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-01SS2	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-02SS1	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-02SS2	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-03SS1	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-03SS2	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-04SS1	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-04SS2	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-05SS1	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
	19-05SS2	30-Jul-25	Soil	5	x												2 vials, 2 jars and 1 bag.
				TOTAL	50	10											

Environmental Division  
Yellowknife  
Work Order Reference  
**YL2500723**



Telephone : +1 867 873 5593

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