Pamela Gyug
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December 18, 2025

Inuvialuit Water Board
P.O. Box 2531, 151 Mackenzie Road
2nd Floor, Mack Travel Building
Inuvik, NT X0E 0T0

Dear Bijaya Adhikari,

Project: Tuk Base Remediation Project
Re: Water Use Licence Number N5L8-1841

Imperial is providing the following annual report as per the requirements listed in Part B.2 for Water Licence Number N5L8-1841. The report was prepared by WSP Canada Inc. on behalf of Imperial Oil Resources (Imperial).

If you have any questions regarding the submission, please don't hesitate to contact me by email (pamela.h.gyug@exxonmobil.com).

Kind regards,

Pamela Gyug

Pamela Gyug
Project Manager

REPORT

Tuktoyaktuk Base Remediation 2025 Annual IWB Report

Former Tuktoyaktuk Exploration Logistics Base Camp Tuktoyaktuk, Northwest Territories

Submitted to:

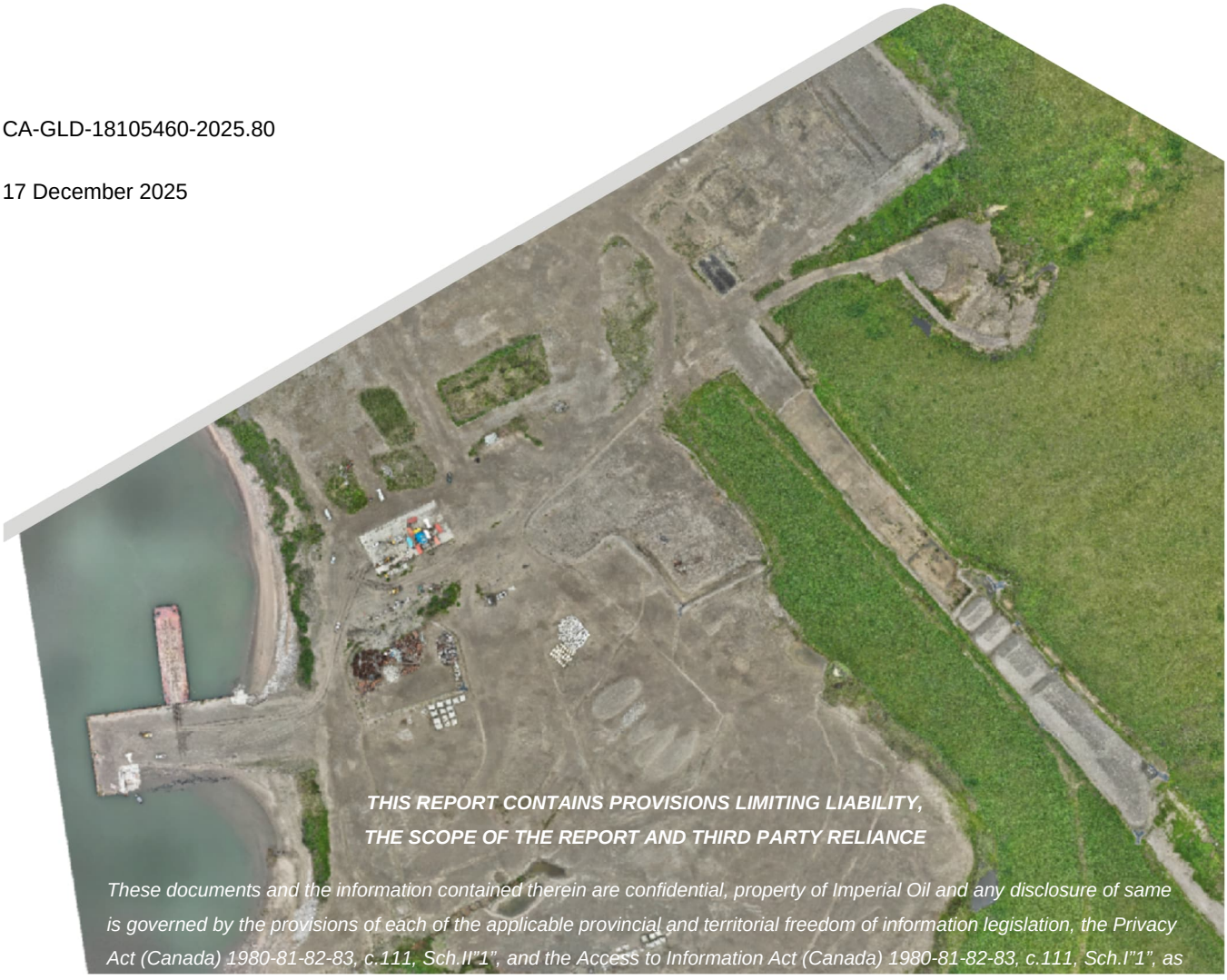
Imperial Limited

505 Quarry Park Boulevard SE, Calgary, Alberta, T2C 5N1

Submitted by:

WSP Canada Inc.

16820 107 Avenue, Edmonton, Alberta, T5P 4C3, Canada



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17 December 2025

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APPENDICES

LIST OF ABBREVIATIONS

°C	degrees Celsius
AMSRP	Abandoned Military Site Remediation Protocol
BTEX	benzene, toluene, ethylbenzene, xylenes
BVL	Bureau Veritas Laboratories
ESSA	Engineered Soil Storage Area
F1, F2, F3, F4	petroleum hydrocarbon fractions 1, 2, 3, 4
Golder	Golder Associates Ltd. (now WSP Canada Inc.)
Imperial	Imperial Oil Limited
IWB	Inuvialuit Water Board
m	metres
m^3	cubic metres
MDS	metal and debris stockpile
mbgs	metres below ground surface
MW	monitoring well
PHC	petroleum hydrocarbon
RAP	Remedial Action Plan
RTK	Real Time Kinematics
SNP	Surveillance Network Program
TPH	total petroleum hydrocarbon
TSS	total suspended solids
Tuk Base	Former Tuktoyaktuk Exploration Logistics Base Camp
WSP	WSP Canada Inc.

1.0 INTRODUCTION

The 2025 Annual Report provides the required information in fulfillment of Water Licence N5L8-1841 (the Licence) granted by the IWB to Imperial. The Licence is associated with the remediation and demolition activities (the Project) at the former Tuktoyaktuk Base Camp (Tuk Base) in Tuktoyaktuk, Northwest Territories (the Site). The site location is presented in Figure 1.

This report documents the methods and results of the on-site care and maintenance activities conducted from 30 July to 5 August 2025 (herein referred to as the 2025 summer field season), as per the requirements outlined in the IWB Water Licence N5L8-1841 Part B: General Conditions Section 2, items A through N. Works completed at the Site from 2019 to 2024 are documented in the Annual Reports submitted to the IWB on 31 March 2020, 26 March 2021, 10 March 2022, 8 February 2023, 13 March 2024 and 12 March 2025.

1.1 Summary of Work Completed in 2025

The purpose of the 2025 summer field season was to perform care and maintenance at the Site, which includes inspection and repairs to the water management systems and drainage features of the Site, including erosion, sump or decant features, and conducting environmental monitoring where required by the Licence.

The program commenced on 30 July 2025, with the mobilization of personnel by crew boat and equipment, materials and supplies by barge to the Site. Following site orientation, equipment and initial site inspections were performed. Site set-up activities were limited to areas with heavy equipment related activities and where care and maintenance works were performed according to the scope of work. Crew members' accommodation was provided at the Arctic Star camp located at the EGT Tuktoyaktuk yard dock, and the crew was transported to and from the Site daily by crew boat. Site photos are presented in Appendix A.

The following tasks were completed during the 2025 summer field season. The 2025 work areas are outlined in Figure 2.

- Conducted an initial inspection of the Site.
- Conducted aerial imagery survey using an unmanned drone.
- Removed dimensional lumber debris and fabric sandbags from the former South Dock area.
- Removed debris along the western shoreline of the Site.
- Removed surface debris from across the Site.
- Surveyed and documented recently frost-heaved wood and steel pilings.
- Surveyed visible wood pilings at former wood wharf.
- Repaired and maintained the lower terrace silt fencing, surface water management swales and sediment settling ponds.
- Removed and replaced silt fencing and erosion control measures at the former D1 remediation area.
- Repaired erosion control features at the south end of ESSA 1.
- Backfilled and rough graded subsidence in the east area of the Former Sewage Lagoon.

- Backfilled and rough graded subsidence near MW-E-01 (location shown on Figure 3).
- General surface maintenance (back-blading and tire-dragging) across the site to maintain positive drainage.
- Repaired berms and water management systems at the east and west areas of the South Landfill.
- Repaired and added water management berms and swales on the east and west areas of the metal debris storage (MDS) area.
- Collected surface water samples from active SNP stations.
- Collected thermistors readings (6 Thermistors) for permafrost monitoring.

1.2 Work to be Completed in a Future Program

The following tasks are proposed to be completed in a future program.

- Re-establish the barge-camp and the Site during future field programs.
- Continue required sampling and monitoring at the SNP stations.
- Re-establish water treatment facility and set up settling tanks, as required.
- Continue to operate the water treatment plant to ensure any discharge water meets the Licence criteria.
- Continue to operate the ESSAs.
- Complete the remaining excavation area at the excavation K in the South Landfill.
- Continue site surveying to support the excavation and site activities.
- Continue to operate the Soil Treatment Cell and complete the ex-situ bioremediation process.
- Backfill and grade completed excavation areas with soil that meets the applicable AMSRP guidelines for PHCs and metals.
- Stockpile soil with metal exceedances within the on-site ESSAs for disposal at an approved off-site disposal facility.
- Stockpile metal debris and other landfill/excavation debris for disposal at an approved off-site disposal facility.
- Cut and dispose of newly observed (2024-2025) frost-heaved wood and steel pilings in the upper terrace.
- Remove remaining piles at the former Wood Wharf discovered between 2020 and 2024.
- Continue to remove surface debris at the Site.
- Cut and salvage the southeast concrete slab on the upper terrace.
- Stockpile and contain any hazardous wastes encountered during the excavations for disposal at an approved off-site disposal facility.
- Construct an ice road for winter site access, as needed.

- Transport contaminated soil, debris and other wastes to approved off-site disposal facilities.
- Complete surface reclamation and revegetation activities.
- Produce reports in accordance with regulatory requirements.

1.3 Care and Maintenance Activities

Between 30 July and 5 August 2025, care and maintenance activities were conducted at the Site. On 3 August 2025, on site work at the Site was reduced to a half-day due to wildlife monitor availability. The half-day delay had no scope or schedule impact to the overall project. Table C summarizes the care and maintenance activities that were conducted at different areas of the Site (except at the drainage features) during the 2025 summer field season. The care and maintenance activities completed at the drainage features of the Site are presented in Section 10.4 in detail.

Table A: Summary of Care and Maintenance Activities Conducted During the 2025 Summer Field Season

Location	Dates	Care and Maintenance Activity
Former Wood Wharf	31 July, 1 August 2025	Surveyor set up RTK base station, surveyed visible wood pilings at low tide (Figure 2); wood and metal debris retrieval
South Landfill	31 July, 1, 2, 4 August, 2025	Repaired berms, swales and erosion control measures along the perimeter of the south landfill
Lower Terrace Settling Pond and Drainage Area	31 July, 1, 2, 3, 4 August 2025	Repaired silt fencing, swales and erosion control measures
Former Remediation Area D	1, 2 August 2025	Replaced erosion control measures
Area adjacent to MW-E-01	2, 3 August 2025	Backfilled subsided area and graded
ESSA 2	4 August 2025	Restored drainage and erosion control features at ESSA 2
MDS	2, 4 August 2025	Repaired berms and swales along the entrance to the MDS; backfilled and graded subsided areas.
Former Sewage Lagoon	4, 5 August 2025	Backfill subsided east area of the former sewage lagoon
Former Airstrip	4, 5 August 2025	Retrieved erosion control measures from the southeast end of the former airstrip

2.0 PART B – 2.A: FRESHWATER USAGE

The 2025 summer field season was of limited duration and personnel were accommodated off-site. Works completed at the Site included maintenance and care with very limited usage of heavy equipment. Freshwater, provided by EGT from the Hamlet of Tuktoyaktuk, was brought to the Site in the pressure washer/steam truck. Between 1 August and 2 August 2025, 0.2 m^3 of potable water was used to decontaminate heavy equipment prior to leaving the South Landfill.

3.0 PART B – 2.B: SEWAGE AND GREY WATER DISPOSAL

The 2025 summer field season was short in duration and personnel were accommodated off-site; therefore, no sewage or grey water was generated.

4.0 PART B – 2.C: NON-HAZARDOUS WASTE STORAGE AND REMOVAL

On-Site Storage of Non-Hazardous Waste

Non-hazardous waste from the 2025 field seasons was sorted and stored on the Site at designated areas. A summary of the 2025 non-hazardous waste stored at the Site and a disposal plan is presented in Table A.

Table B: Storage of 2025 Non-Hazardous Waste at the Site

Type	Quantity (m^3)	Source Location	Storage Location	Proposed Disposal Plan
Fabric sandbags and silt fence	3	Former Wood Wharf Area; Former Airstrip; Main drainage channel in the lower terrace; Shoreline along the West of site; Generally, across site	Metal Debris Storage 69° 25' 30.8" N 132° 57' 24.8" W	Off-site disposal

Removal of Non-Hazardous Waste

No non-hazardous waste from the Project was removed from the Site in the 2025 summer field season. Any non-hazardous waste prior to 2025 was accounted for in annual reports, and historical quantities are summarized in Appendix D.

5.0 PART B – 2.D: HAZARDOUS WASTE STORAGE AND REMOVAL

On-Site Storage of Hazardous Waste

Historical quantities of hazardous waste are summarized in Appendix D. No additional hazardous waste was generated on the Site during the 2025 summer field season.

Removal of Hazardous Waste

No hazardous waste was removed from the Site during the 2025 field season.

6.0 PART B – 2.F: CONTAMINATED SOIL REMOVAL

No contaminated soil was removed from the Site during the 2025 summer field season. There was no soil excavated and stockpiled on the Site during the 2025 care and maintenance program. Impacted soil stored on the Site in 2019, 2020 and 2021 is summarized in Appendix D.

7.0 PART B – 2.G: SOIL USED AS BACKFILL

During the 2025 summer field program, various areas onsite were backfilled and graded. A summary of 2025 soil used as backfill is presented in Table B.

Table C: Approximate Backfill Volumes

Backfill Destination	Placement Depth (mbgs)	Approximate Quantity (m^3)	Backfill Source
West and South perimeter of the SLF	0.0 - 0.5	19	Stockpile of Gravel Pit 312 soil
Area Adjacent to MW-E-01	0.0 - 0.5	51	Stockpile of Gravel Pit 312 soil
MDS Berm	0.0	6	Stockpile of Gravel Pit 312 soil
SW Settling Pond on Lower Terrace	0.0	33	Stockpile of South Dock soil
Former Sewage Lagoon	0.0 – 1.0	120	Stockpile of Gravel Pit 312 soil
Former Sewage Lagoon	0.0 – 1.0	30	Stockpile of treated soil located at former Maintenance Garage
Total estimated volume of soil used as backfill		259	

8.0 PART B – 2.H: SURVEILLANCE NETWORK PROGRAM

The SNP monitoring was designed and implemented as part of the Project to collect and analyze water quality samples as described in the Licence Terms and Conditions and Annex 1: Surveillance Network Program. The required parameters and guidelines are summarized in Appendix B.

The surface water samples were collected and submitted for laboratory analyses of BTEX, lead, TSS, hardness and TPH (location shown on Figure 3). The results were compared to the IWB Licence criteria. The applied Licence criteria and analytical results are presented in Appendices B and C. The concentrations of BTEX, lead, TSS and TPH were less than the Licence criteria in the collected surface water samples. No water was discharged from any of the sampling locations. The SNP at the Site is comprised of six sampling stations: SNP Station 1841-1 through 1841-6. The SNP Stations sampled in 2025 are described in the following sections and depicted in Figure 3.

8.1 SNP Data Collected

This section addresses Part D (Reports) 1.a and 1.b in Annex 1: Surveillance Network Program of the Licence.

Surface water samples were collected as grab samples in accordance with WSP's technical procedures for surface water sample collection, using plastic and glass bottles and/or vials, depending on the parameter or parameter groups being sampled. Surface water samples were preserved according to the laboratory prescribed requirements. Surface water samples were refrigerated or kept on ice until they arrived at BVL in Calgary, Alberta for laboratory analysis. Samples were submitted to BVL under established chain of custody. In addition to the laboratory analysis, field measurements for temperature, pH, dissolved oxygen and electrical conductivity of the surface water samples were monitored/collected for the selected SNP stations as per the Licence.

The laboratory analytical results for the samples associated with SNP Stations 1841 are presented in Appendix C. Laboratory Certificates of Analysis (CoAs) are presented in Appendix G.

Appendix F details the Quality Assurance and Quality Control (QA/QC) program executed to manage and quantify the quality of the laboratory results. The program included field procedures, laboratory procedures and the use of QC samples to quantify the results of the program. One field-duplicate surface water sample, one field blank and

one trip blank was submitted to BVL. All samples were placed in laboratory-supplied containers suitable for the analytes, and where applicable, the appropriate laboratory-supplied preservative was added to the samples.

Based on the results of the QA/QC program, the analytical results of the surface water samples collected by WSP field staff are considered representative of Site conditions at the time of sampling.

8.2 SNP Station 1841-1

The Former SNP Station 1841-1(Sewage Lagoon) was previously backfilled and dewatered during the 2022 summer field season and no further discharge occurred from this area in 2025. As a result, no sampling event occurred at SNP Station 1841-1.

8.3 SNP Station 1841-2

No water sample was collected from the water containment sump at SNP Station 1841-2 (Soil Treatment Cell) during the 2025 field season.

8.4 SNP Station 1841-3

SNP Station 1841-3 includes discharge from excavated areas of the Project (Figure 3). Due to design changes as per the Waste Management Plan amendment submitted in May 2020, surface water collected from the ESSA sumps during the 2025 field season is also included as part of SNP Station 1841-3. Water samples were collected from the ESSA 1 sump (SW25-02), the bermed area at the northwest of the ESSA 1 sump (SW25-01).

Table D below provides a summary of the SNP Station 1841-3 sampling locations and the discharge locations, if applicable. Sample locations associated with SNP Station 1841-3 are presented on Figure 3.

Table D: SNP Station 1841-3 Sample Locations

Sample ID	Sampling Date	Sample Location and Coordinates	Lab Reference ID	Parameters Analyzed	Discharge Location
SW25-02	31 July 2025	ESSA 1 sump 69°25'32.35"N 132°56'53.43"W	DQF350	BTEX, hardness, lead, TSS, TPH	None; water was left in ESSA 1 sump
SW25-01 (DUP A)	31 July 2025	Bermed area at the northwest of the ESSA 1 sump 69°25'32.72"N 132°56'54.37"W	DQF349 (DQF351)	BTEX, hardness, lead, TSS, TPH	

The analytical results from SNP Station 1841-3 are summarized in Tables C1 (Appendix C). The concentrations of BTEX, lead, TSS and TPH were less than the Licence criteria in the collected surface water samples. There are no Licence criteria for hardness. Furthermore, no water was discharged.

8.5 SNP Station 1841-4

No water samples were collected from the material processing areas.

8.6 SNP Station 1841-5

No water samples were collected from the former South Dock Removal area.

8.7 SNP Station 1841-6

No water samples were collected from the North Dock repairing area.

9.0 PART B – 2.I: RECLAMATION AND CLOSURE ACTIVITIES

No closure activities took place in 2025. Reclamation and closure activities detailed in the updated reclamation, closure and monitoring plan previously submitted to the IWB will commence after completion of remedial excavations and removal of waste is completed.

10.0 PART B – 2.J: MONITORING PROGRAMS

Monitoring programs conducted during the 2025 field season are described in Sections 10.1 to 10.5.

10.1 Groundwater Monitoring and Monitoring Well Repairs

No groundwater monitoring or monitoring well repairs were performed in the 2025 summer field season.

10.2 Permafrost Monitoring

Permafrost was monitored during the 2025 program by collecting field data from six thermistors installed on Site by Advisian in 2017. Each thermistor string has 11 temperature sensors positioned equidistantly at 0.75 vertical intervals starting at or near ground surface. The thermistor locations are shown in Figure 3. The monitoring program for permafrost integrity was based on the management strategies outlined in the 2019 Tuk Base Permafrost Monitoring Plan submitted as part of the IWB Water Licence application.

Inferred depth to the top of permafrost ranges from approximately 2.25mbgs to 2.7mbgs, as outlined in Table E. The depth of the active layer is considered as the depth at which ground temperatures have not remained consistently below 0 degrees (degree symbol) for a period of 2 or more consecutive years. The depth to permafrost as recorded by individual temperature sensors (Table E, second column) only provides a resolution of 0.75 m. The true depth to permafrost is between the sensor that records temperature below 0°C throughout the year and the next shallowest sensor. The depth of permafrost from thermistor location TM-N-01 in Table E was determined to be between 1.5 and 3.0 mbgs as there were no readings from the sensor installed at 2.25 mbgs. Based on historical data from Advisian, the TM-N-01 sensor installed at 2.25 mbgs has been malfunctioning intermittently since 2016. WSP attempted to troubleshoot but was unable to resolve the sensor malfunction. TM-N-01 and TM-L-01 stopped recording in March 2025 due to logger memory restrictions. In 2025, the memory settings on the TM-N-01 and TM-L-01 loggers were updated to allow for longer data logging. Hence, the six thermistors onsite are expected to continue collecting data through July 2026. Graphical presentation of the thermistor data is presented in Appendix E.

Table E: Inferred Depth to Permafrost

Thermistor	Top Sensor Depth (mbgs)	Bottom Sensor Depth (mbgs)	Depth of Sensor with Observed <0°C Condition (mbgs)	Date	Location
TM-D-01	0	7.50	2.25	15 June 2024 to 31 July 2025	Upper Terrace
TM-G-01	0	7.50	2.25	15 June 2024 to 31 July 2025	Upper Terrace

Thermistor	Top Sensor Depth (mbgs)	Bottom Sensor Depth (mbgs)	Depth of Sensor with Observed <0°C Condition (mbgs)	Date	Location
TM-K-01	Above ground	7.20	2.7	15 June 2024 to 31 July 2025	South Landfill-Lower Terrace
TM-L-01	Above ground	5.75	2.75	15 June 2024 to 7 March 2025	Lower Terrace
TM-N-01	0	7.50	between 1.5 and 3.0	15 June 2024 to 8 March 2025	Upper Terrace
TM-S-01	0	7.50	2.25	15 June 2024 to 31 July 2025	East of Lagoon

Permafrost monitoring at the six thermistors will continue during the next field season to assess possible changes in the depth to permafrost.

10.3 Vegetation Monitoring

The site vegetation in the well-drained areas of the site consists of low shrubs, cotton grass, moss and lichen assemblages. The site vegetation in the poorly drained areas consists of sedges, mosses and cotton grass.

No additional vegetation monitoring was completed in 2025.

10.4 Erosion and Sediment Monitoring

The erosion and sediment monitoring were based on the Erosion and Sediment Control Plan (and subsequent amendments) submitted as part of the Licence application. During the 2025 summer field season activities, the areas of the site where remediation activities had previously been conducted between2019 and 2024 were visually inspected to identify any runoff channels, potential erosion concerns and changed site conditions since work was last completed in 2024. Mitigation measures were put in place to protect surrounding vegetation and water bodies.

Descriptions of seven notable areas where care and maintenance activities were conducted during the 2025 summer field season are presented below.

10.4.1 Lower Terrace

From 31 July to 4 August 2025, care and maintenance activities were completed at the main drainage area in the lower terrace. On 31 July to 2 August 2025, the silt fence at the main drainage area in the lower terrace was refurbished, re-keyed (tied into surface soil) and eroded areas were backfilled. In addition, damaged straw wattles were replaced, and stakes and sandbags were added to provide additional structural support where necessary. On 3 and 4 August, the CAT 966K loader reconstructed the southwest settling pond berms for the swales extending from the Metal & Debris Stockpile, using a total of 33 m^3 from the on-site clean backfill pile. The existing 2” PVC overflow pipe was replaced with a 6” steel pipe, liner and rip rap installed on the inlet side, with a splash pad on the outlet site. The maintenance work at the lower terrace was completed on 4 August 2025 (see Photos 1, 8, 11, 17, 18, 19 and 20 in Appendix A).

10.4.2 South Landfill

On 31 July to 4 August 2025, maintenance activities were completed around the perimeter of the South Landfill, including reconstructing berms, redirecting swales and cleanout of erosion control features. On 31 July 2025, the CAT 349 excavator was used to rebuild and compact the berm along the east side of the South Landfill to limit water infiltration into the landfill. Drainage restoration and surface grading in the southeast corner of the South Landfill was completed to allow for positive drainage.

On 1 to 2 August 2025, the CAT 349 excavator worked on maintenance of the swales and berms along the west and south areas outside the South Landfill; The berm along the east side of the South Landfill was adjoined to the north berm to encompass remaining remediation areas and limit overland flow of water into the South Landfill during spring freshet. On 4 August 2025, coconut matting, driftwood and rip rap were installed at the water management swale in the southeast corner for erosion control. The maintenance work at the South Landfill was completed on 4 August 2025 (see Photos 2, 3, 9, 10, 12 and 16 in Appendix A).

10.4.3 Upper Terrace

On 2 and 3 August 2025, areas of observed erosion and subsidence around previous remediated areas were levelled and new erosion control materials were installed. A CAT 966K loader backfilled, compacted and levelled subsided areas with gravel from the on-site gravel stockpile. On 2 August 2025, installed silt fence and straw wattles at the D2 remediated area to reduce soil erosion. The deteriorated silt fence and wattles downslope of the D2 remediated area were removed. The maintenance work at the Upper Terrace was completed on 3 August 2025 (see photos 5, 14 and 15 in Appendix A).

10.4.4 ESSA 2

On 4 August 2025, the silt fence around the sump overflow swales at the two ESSA 2 stockpiles were repaired. The maintenance work at ESSA 2 was completed on 4 August 2025.

10.4.5 Metal & Debris Stockpile (MDS)

On 2 and 4 August 2025, the berms were reconstructed and swales cleaned out around the east and west sides of the MDS. On August 2 and 4, the CAT 349 excavator was used to reconstruct the berm using backfill from the on-site clean gravel stockpile. The swale at the east entrance to the MDS area was restored and low-lying areas were graded. The swale on the west side had sediment removed and positive drainage was re-established. The maintenance work at the MDS was completed on 4 August 2025 (see photos 7 and 13 in Appendix A).

10.4.6 Former Airstrip

On 4 and 5 August 2025, deteriorated sandbags, straw wattles and silt fence from the reclaimed back end of the former Airstrip were removed as they are no longer in use or required. The maintenance work at the former Airstrip was finished 5 August 2025.

10.4.7 Former Sewage Lagoon

On 4 and 5 August 2025 backfill and levelling were progressed in the subsidence and low-lying areas observed during the 2023 and 2024 seasons along the northeast side of the former Sewage Lagoon. The CAT 966K loader transported clean backfill stockpiled from the former northeast concrete pad on the upper terrace to the former Sewage Lagoon. Additional backfill from the on-site clean gravel stockpile was transported using the CAT 966K loader and placed for the CAT 349F excavator to distribute and fill remaining low-lying areas. The maintenance work at the former Sewage Lagoon was completed on 5 August 2025 (see photo 22, in Appendix A).

10.5 Wildlife Monitoring

This section provides a summary of wildlife observations and encounters. A trained Inuvialuit Wildlife Monitor was employed by WSP and Imperial as part of the 2025 summer season. No work was completed without a Wildlife Monitor present on the Site. Prior to starting any ground disturbance work, the proposed work areas were inspected by the Wildlife Monitor to ensure that no wildlife nests or dens would be disturbed. The Site was inspected by a Wildlife Monitor every morning prior to work starting to ensure no wildlife was present in the work areas.

If wildlife were present in the work area, the Wildlife Monitor would advise the Site Supervisor and work in the area was suspended until the wildlife was clear of the area. No work was suspended because of wildlife sightings in 2025.

Wildlife at the Site

No wildlife was encountered at the Site during the 2025 summer field season.

Species-at-Risk

No species-at-risk were observed during the 2025 summer field season.

11.0 PART B – 2.K: UNAUTHORIZED DISCHARGES

During the 2025 summer field season, no unauthorized discharge on the Site was reported by the field staff.

12.0 PART B – 2.L: SPILL TRAINING AND COMMUNICATIONS EXERCISES

During the site orientation, a summary of the Spill Contingency Plan was presented to all workers. This included the locations of fuel storage facilities and the spill response procedures and equipment. Throughout the duration of the field season, the fuel storage areas and spill response equipment were inspected daily. In addition, all the equipment and vehicles on the Site carried spill trays, spill response kits, first aid kits and fire extinguishers.

13.0 PART B – 2.M: MODIFICATIONS AND MAINTENANCE WORK RELATED TO THE PROJECT

During the 2025 summer field season, modifications and maintenance work was conducted to address site conditions observed during execution of the summer field program. Modifications and maintenance work has been described in Section 10.4.

14.0 PART B – 2.N: MODIFICATIONS TO PROPOSED PLANS

This section summarizes any changes that were made to the Management and Monitoring Plans in 2025 that were approved in their original version by the IWB on 11 July 2019, and subsequent versions approved by the IWB on 20 June 2025, as part of the Water Licence renewal (WSP 2025).

14.1 Spill Contingency Plan

No updates were made to the IWB-approved Spill Contingency Plan amended in 2025 (WSP 2025).

14.2 Waste Management Plan

No updates were made to the IWB-approved Waste Management Plan amended in 2025 (WSP 2025).

14.3 Erosion and Sediment Control Plan

No updates were made to the IWB-approved Erosion and Sediment Control Plan amended in 2025 (WSP 2025).

14.4 Remedial Action Plan

No updates were made to the IWB-approved RAP amended in 2025 (WSP 2025).

14.5 Permafrost Monitoring Plan

No updates were made to the IWB-approved Permafrost Monitoring Plan amended in 2025 (WSP 2025).

14.6 Dock Repair and Removal Modification Monitoring Plan

No updates were made to the IWB-approved Dock Repair and Removal Monitoring Plan amended in 2025 (WSP 2025).

14.7 Reclamation, Closure and Monitoring Plan

No updates were made to the IWB-approved Reclamation, Closure and Monitoring Plan amended in 2025 (WSP 2025).

14.8 Wildlife Encounter Management Plan

No updates were made to the IWB-approved Wildlife Encounter Management Plan amended in 2025 (WSP 2025).

14.9 Emergency Preparedness and Response Plan

No updates were made to the IWB-approved Emergency Preparedness and Response Plan amended in 2025 (WSP 2025).

15.0 REFERENCES

WSP. 2025. N5L8 – 1841 Tuk Base Plans Update Summary, Tuktoyaktuk Explorations Logistics Base Camp, Tuktoyaktuk, Northwest Territories. 25 March 2025.

16.0 LIMITATION OF LIABILITY, SCOPE OF REPORT, AND THIRD-PARTY RELIANCE

This report has been prepared and the work referred to in this report has been undertaken by WSP Canada Inc. for Imperial Oil Limited. It is intended for the sole and exclusive use of Imperial Oil Limited, its affiliated companies and partners and their respective insurers, agents, employees and advisors (collectively, “Imperial Oil”).

Any use, reliance on or decision made by any person other than Imperial Oil based on this report is the sole responsibility of such other person. Imperial Oil and WSP Canada Inc. make no representation or warranty to any other person with regard to this report and the work referred to in this report, and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred by any other person as a result of the use of, or reliance on, any decision made or any action taken based on this report or the work referred to in this report.

The investigation undertaken by WSP Canada Inc. with respect to this report and any conclusions or recommendations made in this report reflect WSP Canada Inc.’s judgement based on the site conditions observed at the time of the site inspection on the date(s) set out in this report, and on information available at the time of preparation of this report. This report has been prepared for specific application to this site and it is based, in part, upon visual observation of the site, subsurface investigation at discrete locations and depths, and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report.

Unless otherwise stated, the findings cannot be extended to previous or future site conditions, portions of the site which were unavailable for direct investigation, subsurface locations which were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site, substances addressed by the investigation may exist in areas of the site not investigated and concentrations of substances addressed which are different than those reported may exist in areas other than the locations from which samples were taken.

If site conditions or applicable standards change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

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Signature Page

WSP Canada Inc.

Peter Tan, BSc
Project Manager

Virginia Anderson, BSc
Project Manager

Punchalee Clair, PEng
Manager, Environmental Engineer

PT/VA/PC/sh

LEGEND

LEASE BOUNDARY

0 250 500 1,000

1:20,000 METRES

NOTE(S)

1. ALL UNITS ARE IN METRES UNLESS OTHERWISE NOTED.
2. COORDINATE SYSTEM IS UTM ZONE 8 NAD 83.

REFERENCE(S)

1. BASE MAP: VANTOR, SOURCES: ESRI, TOMTOM, GARMIN, FAO, NOAA, USGS, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
IMPERIAL OIL LIMITED

PROJECT
TUKTOYAKTUK BASE REMEDIATION
2025 ANNUAL IWB REPORT

TITLE
SITE LOCATION

CONSULTANT

YYYY-MM-DD	2025-11-13
DESIGNED	J.REDSTONE
PREPARED	J.REDSTONE
REVIEWED	P.CLAIR
APPROVED	L.HADERLEIN

PROJECT NO.	YEAR/DOC	REV.	FIGURE
CA-GLD-18105460	2025/IWB	0	1

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

0 25mm

PATH: S:\Clients\Imperial_Oil\Tuktoyaktuk\99_PRO\18105460_IOL_2025\40_PROD\0001_IWB\CA-GLD-18105460-2025-IWB-xxxx\CA-GLD-18105460-2025-IWB-xxxx.aprx PRINTED ON: AT: 8:14:35 AM

LEGEND

- 2025 WORK AREA
- LEASE BOUNDARY
- SURVEYED WOOD/STEEL PILING (GEOVERRA, 2025)

0 50 100 200

1:3,250 METRES

NOTE(S)

1. ALL UNITS ARE IN METRES UNLESS OTHERWISE NOTED.
2. COORDINATE SYSTEM IS UTM ZONE 8 NAD 83.

REFERENCE(S)

1. PRE-CONSTRUCTION SURVEY CONDUCTED BY INUKSHUK GEOMATICS INC. DATED: AUGUST 25-29, 2015.
2. RECORD SURVEY CONDUCTED BY INUKSHUK GEOMATICS INC., SUMMARIZING CONSTRUCTION ACTIVITIES UP TO AUGUST 10, 2022. PROVIDED BY GOLDER, RECEIVED: OCTOBER 13, 2022.
3. AERIAL IMAGERY SUPPLIED BY GEOVERRA AND COLLECTED ON JULY 31, 2025.

CLIENT
IMPERIAL OIL LIMITED

PROJECT
TUKTOYAKTUK BASE REMEDIATION
2025 ANNUAL IWB REPORT

TITLE
2025 WORK AREAS

CONSULTANT

YYYY-MM-DD	2025-11-13
DESIGNED	J.REDSTONE
PREPARED	J.REDSTONE
REVIEWED	P.CLAIR
APPROVED	L.HADERLEIN

PROJECT NO.	YEAR/DOC	REV.	FIGURE
CA-GLD-18105460	2025/IWB	0	2

SURVEILLANCE NETWORK PROGRAM	
SNP STATION	SAMPLE ID
1841-1	None
1841-2	None
1841-3	SW25-01
	SW25-02
1841-4	None
1841-5	None
1841-6	None

LEGEND

- REMEDIATION MANAGEMENT BERM
- EROSION CONTROL MAT
- CONTAINMENT SUMP
- WATER MANAGEMENT CATCH
- WATER MANAGEMENT POND
- LEASE BOUNDARY
- 2025 WORK AREA
- SITE DRAINAGE FEATURE
- OBSERVED HIGH WATER MARK (2022 SURVEY)
- SILT FENCE
- WATER MANAGEMENT SWALE
- REMOVED CULVERT
- EROSION CONTROL FEATURE
- GROUNDWATER MONITORING WELL LOCATION
- DESTROYED OR DECOMMISSIONED MONITORING WELL
- THERMISTOR
- WATER SAMPLE LOCATION (SNP: 1841-3)

0 50 100 200

1:3,250 METRES

NOTE(S)

1. ALL UNITS ARE IN METRES UNLESS OTHERWISE NOTED.
2. COORDINATE SYSTEM IS UTM ZONE 8 NAD 83.

REFERENCE(S)

1. PRE-CONSTRUCTION SURVEY CONDUCTED BY INUKSHUK GEOMATICS INC. DATED: AUGUST 25-29, 2015.
2. RECORD SURVEY CONDUCTED BY INUKSHUK GEOMATICS INC., SUMMARIZING CONSTRUCTION ACTIVITIES UP TO AUGUST 10, 2022. PROVIDED BY GOLDER, RECEIVED: OCTOBER 13, 2022.
3. AERIAL IMAGERY SUPPLIED BY GEOVERRA AND COLLECTED ON JULY 31, 2025.

CLIENT
IMPERIAL OIL LIMITED

PROJECT
TUKTOYAKTUK BASE REMEDIATION
2025 ANNUAL IWB REPORT

TITLE
2025 WATER MANAGEMENT DETAILS AND PERMAFROST MONITORING LOCATIONS

CONSULTANT

YYYY-MM-DD	2025-11-13
DESIGNED	J.REDSTONE
PREPARED	J.REDSTONE
REVIEWED	P.CLAIR
APPROVED	L.HADERLEIN

PROJECT NO.	YEAR/DOC	REV.	FIGURE
CA-GLD-18105460	2025/IWB	0	3

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

0 25mm

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APPENDIX A

2025 Site Photographs

Photo 1 – Sedimentation before repairs were completed at the Lower Terrace main water management swale (30 July 2025).

Photo 2 – Erosion from a swale requiring redirection along the east side of the South Landfill (30 July 2025).

CLIENT
Imperial Oil Limited

CONSULTANT

PROJECT
Tuktoyaktuk Base Remediation, Northwest Territories

TITLE
Photographs of 2025 Summer Field Season

DATE	December 2025
PREPARED	LS
REVIEWED	PT

PROJECT NO CA-GLD-18105460

Photo 3 – Berm deterioration around the South Landfill (30 July 2025).

Photo 4 – Sump at ESSA 1 (30 July 2025).

CLIENT	**Imperial Oil Limited**
CONSULTANT	
PROJECT	**Tuktoyaktuk Base Remediation, Northwest Territories**
TITLE	**Photographs of 2025 Summer Field Season**
DATE	December 2025
PREPARED	LS
REVIEWED	PT
PROJECT NO	CA-GLD-18105460

Photo 5 – Slope slumping in area of previously remediated D2 on Upper Terrace (30 July 2025).

Photo 6 – Exposed wood pilings at the former wood wharf (31 July 2025).

CLIENT	**Imperial Oil Limited**
CONSULTANT	
PROJECT	**Tuktoyaktuk Base Remediation, Northwest Territories**
TITLE	**Photographs of 2025 Summer Field Season**
DATE	December 2025
PREPARED	LS
REVIEWED	PT
PROJECT NO	CA-GLD-18105460

Photo 7 – Sedimentation within swales at Metal & Debris Stockpile (31 July 2025).

Photo 8 – Repaired silt fence in the Lower Terrace main water management swale (31 July 2025).

CLIENT	**Imperial Oil Limited**
CONSULTANT	
PROJECT	**Tuktoyaktuk Base Remediation, Northwest Territories**
TITLE	**Photographs of 2025 Summer Field Season**
DATE	December 2025
PREPARED	LS
REVIEWED	PT
PROJECT NO	CA-GLD-18105460

Photo 9 – Repaired berm along the east side of the South Landfill (1 August 2025).

Photo 10 – Restored water management swale at the southeast corner of the South Landfill (1 August 2025).

CLIENT
Imperial Oil Limited

CONSULTANT

PROJECT
Tuktoyaktuk Base Remediation, Northwest Territories

TITLE
Photographs of 2025 Summer Field Season

DATE	December 2025
PREPARED	LS
REVIEWED	PT

PROJECT NO CA-GLD-18105460

Photo 11 – Completed straw-wattle replacement and minor repairs on the Lower Terrace main water management swale (2 August 2025).

Photo 12 – CAT 349 excavator completing sloping away from the swale outside of the southeast corner of the South Landfill (2 August 2025).

CLIENT
Imperial Oil Limited

CONSULTANT

PROJECT
Tuktoyaktuk Base Remediation, Northwest Territories

TITLE
Photographs of 2025 Summer Field Season

DATE	December 2025
PREPARED	LS
REVIEWED	PT

PROJECT NO CA-GLD-18105460

Photo 13 – CAT 349 excavator repairing swales and berms at the north entrance to the Metal & Debris stockpile (2 August 2025).

Photo 14 – New silt fence and wattles installed on each side of the ephemeral draw through former remediated excavation D2 (2 August 2025).

CLIENT
Imperial Oil Limited

CONSULTANT

PROJECT
Tuktoyaktuk Base Remediation, Northwest Territories

TITLE
Photographs of 2025 Summer Field Season

DATE	December 2025
PREPARED	LS
REVIEWED	PT

PROJECT NO CA-GLD-18105460

Photo 15 – Repaired soil subsidence on the Upper Terrace adjacent to a former remediated excavation (2 August 2025).

Photo 16 – Repaired swale along the west side of the South Landfill (2 August 2025).

CLIENT	**Imperial Oil Limited**
CONSULTANT	
PROJECT	**Tuktoyaktuk Base Remediation, Northwest Territories**
TITLE	**Photographs of 2025 Summer Field Season**
DATE	December 2025
PREPARED	LS
REVIEWED	PT
PROJECT NO	CA-GLD-18105460

Photo 17 – Rebuilding berm surrounding the southwest settling pond for swales at the Metal & Debris Stockpile (3 August 2025).

Photo 18 – Completed berm repairs with overflow pipe and splash pad for the southwest settling pond for swales from Metal & Debris Stockpile (3 August 2025).

Photo 19 – Additional rip rap added to splash pad of overflow pipe from the main secondary settling pond (3 August 2025).

Photo 20 – Extended berm of the southwest settling pond for the swales originating at the Metal & Debris Stockpile (4 August 2025).

CLIENT	**Imperial Oil Limited**
CONSULTANT	
PROJECT	**Tuktoyaktuk Base Remediation, Northwest Territories**
TITLE	**Photographs of 2025 Summer Field Season**
DATE	December 2025
PREPARED	LS
REVIEWED	PT
PROJECT NO	CA-GLD-18105460

Photo 21 – Constructed erosion control coconut matting and driftwood within the water management swale at the southeast corner outside the South Landfill (4 August 2025).

Photo 22 – Backfilled and graded to natural ground elevation at the Former Sewage Lagoon (5 August 2025).

CLIENT	**Imperial Oil Limited**
CONSULTANT	wsp
PROJECT	**Tuktoyaktuk Base Remediation, Northwest Territories**
TITLE	**Photographs of 2025 Summer Field Season**
DATE	December 2025
PREPARED	LS
REVIEWED	PT
PROJECT NO	CA-GLD-18105460

APPENDIX B

Surveillance Network Program Summary

Table B1 – Inuvialuit Water Board Licence N5L8-1841 Surveillance Network Program Requirements Summary

Station Number	Station Description	Sampling Frequency	Parameters Sampled	Water Quality Requirements as per Water Licence
1841-1	Discharge from the Former Sewage Lagoon	Sampled prior and during decanting event	TSS	70 mg/L
			BOD_5	80 mg/L
			TRC	0.1 mg/L
			Faecal coliforms	1 x10^4 CFU/100 mL
			Oil and grease	5 mg/L
			pH	Between 6 and 9
			Mercury	0.000026 mg/L
			Total chromium	0.001 mg/L
			Total iron	0.3 mg/L
			Total zinc	0.007 mg/L
			Total copper	When the water hardness is 0 to <82 mg/L, the CWQG is 0.002 mg/L. At hardness ≥82 to ≤180 mg/L, the CWQG is calculated using the following equation: CWQG *(mg/L) = 0.0002 * $e^{\{0.8545[ln(hardness)]-1.465\}}$* At hardness >180 mg/L, the CWQG is 0.004 mg/L. If the hardness is unknown, the CWQG is 0.002 mg/L.
			Total nickel	When the water hardness is 0 to ≤60 mg/L, the CWQG is 0.025 mg/L. At hardness >60 to ≤180 mg/L the CWQG is calculated using the following equation: CWQG *(mg/L) = 0.001 * $e^{\{0.76[ln(hardness)]+1.06\}}$* At hardness >180 mg/L, the CWQG is 0.15 mg/L. If the hardness is unknown, the CWQG is 0.025 mg/L.
			Total cadmium	0.00009 mg/L
			Total lead	When the water hardness is 0 to ≤60 mg/L, the CWQG is 0.001 mg/L. At hardness >60 to ≤180 mg/L, the CWQG is calculated using the following equation: CWQG *(mg/L)= 0.001 * $e^{\{1.273[ln(hardness)]-4.705\}}$* At hardness >180 mg/L, the CWQG is 0.007 mg/L. If the hardness is unknown, the CWQG is 0.001 mg/L.
			Benzene	0.37 mg/L
			Toluene	0.002 mg/L
			Ethylbenzene	0.09 mg/L
			Xylenes	0.03 mg/L
			Total phenols	0.004 mg/L
			Hardness	No guideline

Table B1 – Inuvialuit Water Board Licence N5L8-1841 Surveillance Network Program Requirements Summary

Station Number	Station Description	Sampling Frequency	Parameters Sampled	Water Quality Requirements as per Water Licence
1841-2	Discharge from soil treatment cell	Per discharge event	TSS	15 mg/L
1841-3	Discharge from excavated areas		TPH	5 mg/L and no visible sheen
1841-4	Discharge from Material Processing Area		Benzene	0.11 mg/L
			Toluene	0.002 mg/L
			Ethylbenzene	0.025 mg/L
			Xylene	0.03 mg/L
			Total Lead	When the hardness is 0 to ≤60 mg/L ($CaCO_3$), the maximum concentration is 0.001 mg/L. At hardness > 60 to ≤180 mg/L, the maximum concentration is calculated using equation (mg/L): 0.001 * e^{1.273[ln(hardness)]-4.705} At hardness >180 mg/L ($CaCO_3$), the maximum concentration is 0.007 mg/L. If the hardness is unknown, the maximum concentration is 0.001 mg/L.
			Hardness	No guideline
1841-5	Discharge to receiving waters as described in the Tuk Base Dock Repair and Monitoring Plan – at 50 m from the dock to be removed	Sampled daily during the dock removal	TSS	Maximum average concentration: 50 mg/L Maximum concentration of any grab sample: 100 mg/L
1841-6	Discharge to receiving waters as described in the Tuk Base Dock Repair and Monitoring Plan – at 50 m from the dock to be repaired	Sampled daily during the dock repair	TSS	Maximum average concentration: 50 mg/L Maximum concentration of any grab sample: 100 mg/L

Notes: BOD_5 – biological oxygen demand; $CaCO_3$ – calcium carbonate; CFU – colony forming units; CWQG – Canadian Water Quality Guidelines; m – metres; mg/L – milligrams per litre; mL – millilitre; TPH – total petroleum hydrocarbon; TRC – total residual chlorine; TSS – total suspended solids; > – greater than; ≥ – greater than or equal to; < – less than; ≤ – less than or equal to

APPENDIX C

Surveillance Network Program Analytical Results

Table C1
Summary of Surface Water Analytical Results - SNP Stations 1841-3
Tuktoyaktuk Base Remediation, Northwest Territories
Imperial Oil Limited

			Sample Location	SNP: 1841-3 ESSA 1		
			Sample ID	SW25-01	SW25-DUPA	SW25-02
			BVL Sample ID	DQF349	DQF351	DQF350
			BVL Job Number	C567422	C567422	C567422
			Sample Date	31-Jul-25	31-Jul-25	31-Jul-25
Parameters	**Units**	**RDL**	**Criteria[a]**			
Hardness	mg/L	0.50	n/g	380	380	310
Total Suspended Solids	mg/L	1.0	15	4.5	4.3	2.7
Total Lead	mg/L	0.00020	0.007[b]	0.00028	0.00028	0.0047
Benzene	mg/L	0.00040	0.11	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.00040	0.002	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.00040	0.025	<0.00040	<0.00040	<0.00040
Xylenes	mg/L	0.00089	0.03	<0.00089	<0.00089	<0.00089
Total Petroleum Hydrocarbons	mg/L	2.0	5.0	5.0	4.0	4.0

Notes:

[a] Effluent quality standards indicated on Water Licence N5L8-1841 (SNP Station 1841-3)

[b] Guideline is based on a hardness of >180 mg/L

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

Table C2
Summary of Surface Water Analytical Results - SNP Stations 1841-3
Tuktoyaktuk Base Remediation, Northwest Territories
Imperial Oil Limited

			Sample Location	QA/QC	
			Sample ID	FB25-01	TRIP BLANK
			BVL Sample ID	DQF345	DQF346
			BVL Job Number	C567420	C567420
			Sample Date	31-Jul-25	31-Jul-25
Parameters	**Units**	**RDL**	**Criteria[a]**		
Hardness	mg/L	0.50	n/g	140	<0.50
Total Suspended Solids	mg/L	1.0	15	<1.0	<1.0
Total Lead	mg/L	0.00020	0.005[b]	<0.00020	<0.00020
Benzene	mg/L	0.00040	0.11	<0.00040	<0.00040
Toluene	mg/L	0.00040	0.002	<0.00040	<0.00040
Ethylbenzene	mg/L	0.00040	0.025	<0.00040	<0.00040
Xylenes	mg/L	0.00089	0.03	<0.00089	<0.00089
Total Petroleum Hydrocarbons	mg/L	2.0	5	<2.0	<2.0

Notes:

[a] Effluent quality standards indicated on Water Licence N5L8-1841 (SNP Station 1841-3)

[b] Guideline is based on a hardness of 140 mg/L

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/g - no guideline

QAQC - quality assurance / quality control

RDL - reportable detection limit

< - less than

APPENDIX D

Waste Storage and Removal

Table D1: Non-Hazardous Materials Storage and Removal

Type	Year	Source Location	Storage Location	Approximate Quantity Generated (m^3)	Approximate Amount Removed From Site (m^3)	Approximate Cumulative Amount Stored On-Site (m^3)	Disposal Location or Proposed Disposal Plan
Concrete Pads	2020	Various Across Site	-	168	168	-	Hamlet of Tuktoyaktuk (For Re-Use)
	2021	Northeast Slab, Northwest Slab, South Dock	Lower Terrace 69° 25' 29.7" N 132° 57' 22.7" W	95	-	95	Hamlet of Tuktoyaktuk (For Re-Use)
Concrete Pillow Mattresses	2021	South Dock	Metal Debris Storage 69° 25' 30.5" N 132° 57' 25.6" W	20	-	20	Off-Site Disposal
Gel-Chem	2019	Excavation K	Lower Terrace - South end	147	-	147	Off-Site Disposal
	2020		n/a	-	147	-	Tervita Northern Rockies Facility
Incinerator Ash	2019	Upper Terrace – Incinerator	Incineration Ash Crate 69° 25' 32.2" N 132° 57' 23.5" W	2	-	2	Off-Site Disposal
	2020			2.7	-	4.7	Off-Site Disposal
	2021			1.3	-	6.0	Off-Site Disposal
	2022			0.3	-	6.3	Off-Site Disposal
Insulation	2019	Former Tank Gravel Pad	-	180	180	-	Inuvik Landfill
	2020	Former Tank Gravel Pad	Lower Terrace NE corner 69° 25' 31.4" N 132° 57' 14.9" W	65	-	65	Off-Site Disposal
	2021	Northeast Slab	Lower Terrace 69° 25' 31.2" N 132° 57' 15.8" W	173	64	109	Hamlet of Tuktoyaktuk (For Re-Use) and Off-Site Disposal
Liner	2020	Former Tank Gravel Pad	Lower Terrace – NW corner 69° 25' 30.9" N 132° 57' 22.2" W	4	-	4	Off-Site Disposal

Type	Year	Source Location	Storage Location	Approximate Quantity Generated (m^3)	Approximate Amount Removed From Site (m^3)	Approximate Cumulative Amount Stored On-Site (m^3)	Disposal Location or Proposed Disposal Plan
Oil Boom	2021	Former South Dock	Metal Debris Storage 69° 25' 30.8" N 132° 57' 24.8" W	3	-	3	Off-Site Disposal
Scrap Steel and Debris	2019	Remedial Excavations	Metal Debris Storage 69° 25' 30.8" N 132° 57' 24.8" W	5,954	-	5,954	Off-Site Disposal
	2020	Remedial Excavations		1,360	5,954	1,360	Inuvik Landfill and Off-Site Disposal
	2021	Remedial Excavation, South Dock, North Dock, Northeast Slab		8	-	1,368	Off-Site Disposal
	2022	South Dock	Scrap steel pile	159.3	-	1,527.3	Off-Site Disposal
	2024	South Dock	Metal Debris Storage 69° 25' 30.8" N 132° 57' 24.8" W	17	-	1544.3	Off-Site Disposal
Waste Diesel Fuel, Oils, Antifreeze	2020	Site Equipment	-	1.87	1.87	-	E. Gruben's Transport Waste Oil Disposal Facility
	2021	Site Equipment	-	0.01	0.01	-	E. Gruben's Transport Waste Oil Disposal Facility
Wooden Piles	2019	Former Wooden Wharf	Upper Terrace 69˚25'34.58" N 132˚57'25.42" W	40	-	40	Off-Site Disposal
	2024	South Dock	Wood Debris Stockpile 69˚25'34.58" N 132˚57'25.42" W	3	-	43	Off-Site Disposal

Notes: m^3 – cubic metres; n/a – not applicable; - – not available

Table D2: Hazardous Materials Storage and Removal

Type	Year	Source Location	Storage Location	Approximate Quantity Generated (Total Number)	Approximate Amount Removed From Site (Total Number)	Approximate Cumulative Amount Stored On-Site (Total Number)	Proposed Disposal Plan
Batteries	2019	Excavation K	Upper Terrace concrete pad at the NE corner of the lease 69˚25'43.58" N 132˚57'05.70" W	15	-	15	Off-Site Disposal
	2022		Hazardous material storage 69° 25' 32" N 132° 57' 20" W	1	-	16	Off-Site Disposal
Compressed Cylinders	2019	Excavation K	Upper Terrace concrete pad at the NE corner of the lease 69˚25'43.58" N 132˚57'05.70" W	21	-	21	Off-Site Disposal
	2020			1	-	22	Off-Site Disposal
	2022		Hazardous material storage 69° 25' 32" N 132° 57' 20" W	1	-	23	Off-Site Disposal
Lead Leachable Painted Steel	2019	Excavations D1 and D2	Upper Terrace in contained metal waste bin 69° 25' 34.7" N 132° 57' 27.5 " W	15 Linear Metres	-	15 Linear Metres	Off-Site Disposal
	2020	Excavation K		10 Linear Metres	-	25 Linear Metres	Off-Site Disposal

Note: - – not available

Table D3: Metals Impacted Soil Storage and Removal

Type	Year	Source Location	Storage Location	Approximate Quantity Generated (m^3)	Approximate Amount Removed From Site (m^3)	Approximate Cumulative Amount Stored On-Site (m^3)	Disposal Location or Proposed Disposal Plan
Metal Impacted Soil	2019	Remedial Excavations	Lower Terrace – South End (Soil Bags) 69˚25'25.73" N 132˚56'59.05" W	1,950	0	1,950	Off-Site Disposal
			Lower Terrace – Central (Stockpiled) 69˚25'29.00" N 132˚57'10.98" W	1,030	0	1,030	Off-Site Disposal
	2020		ESSA 1 69° 25' 31.7" N 132° 56' 53.3" W	6,720	1,525	8,175	Tervita Northern Rockies Facility and Off-Site Disposal
	2021		ESSA 1 69° 25' 31.7" N 132° 56' 53.3" W	590	0	8,765	Off-Site Disposal

Note: m^3 – cubic metres

APPENDIX E

Thermistor Data

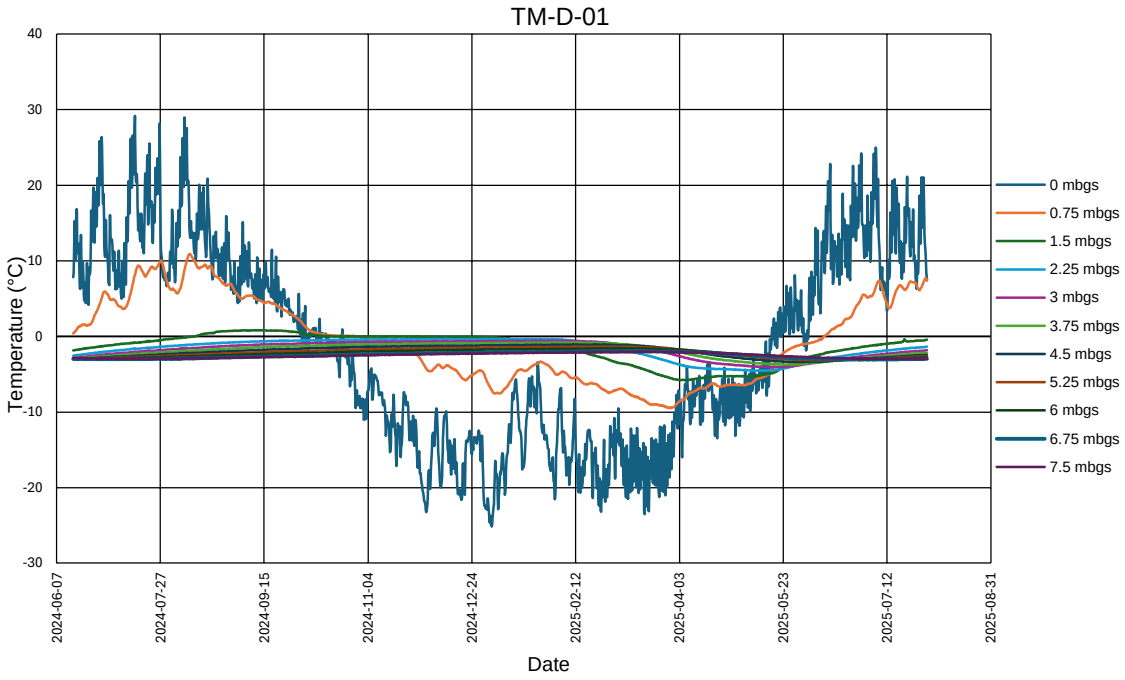

Figure E1: TM-D-01 temperature readings between 15 June 2024 and 31 July 2025

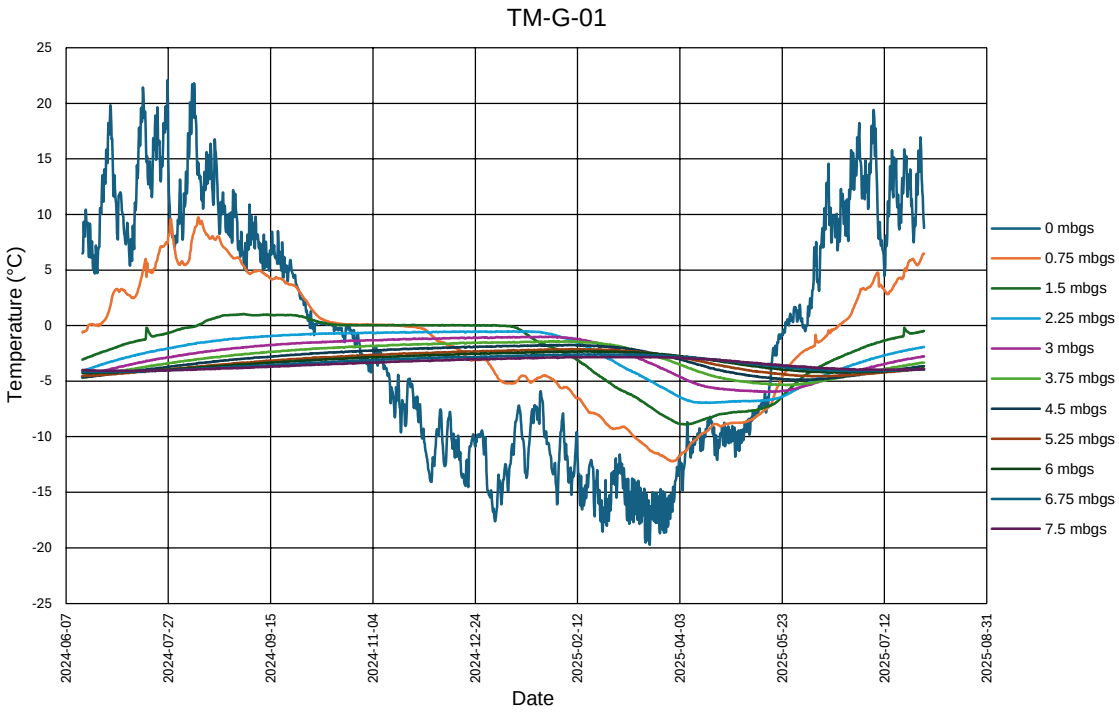

Figure E2: TM-G-01 temperature readings between 15 June 2024 and 31 July 2025

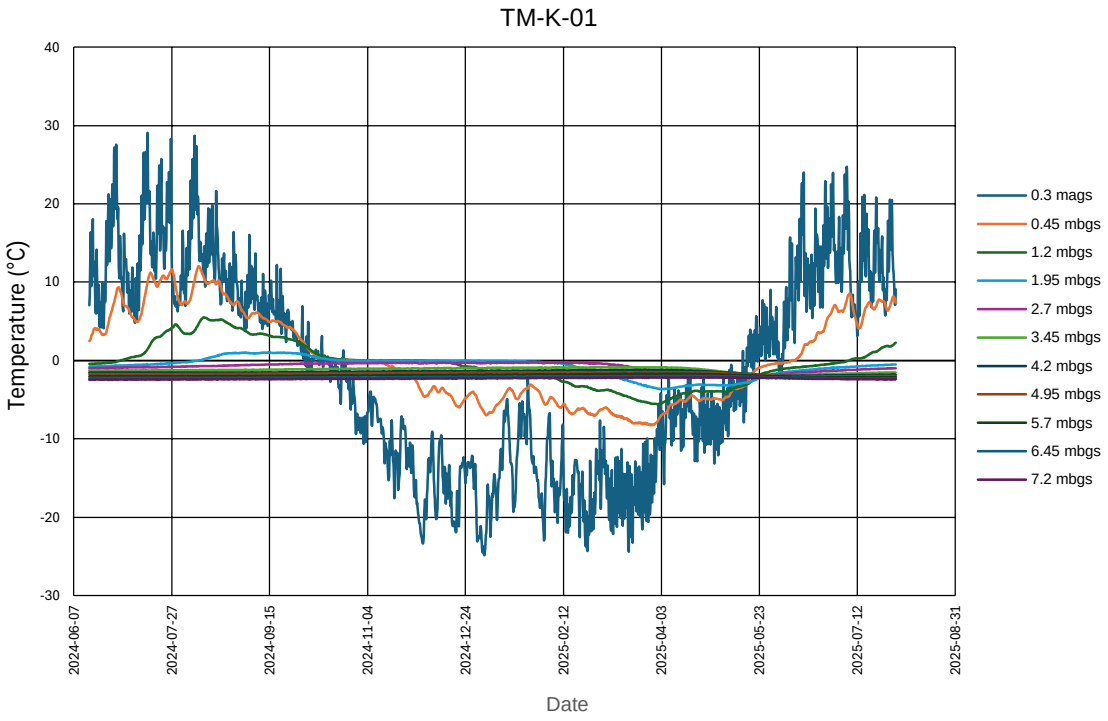

Figure E3: TM-K-01 temperature readings between 15 June 2024 and 31 July 2025

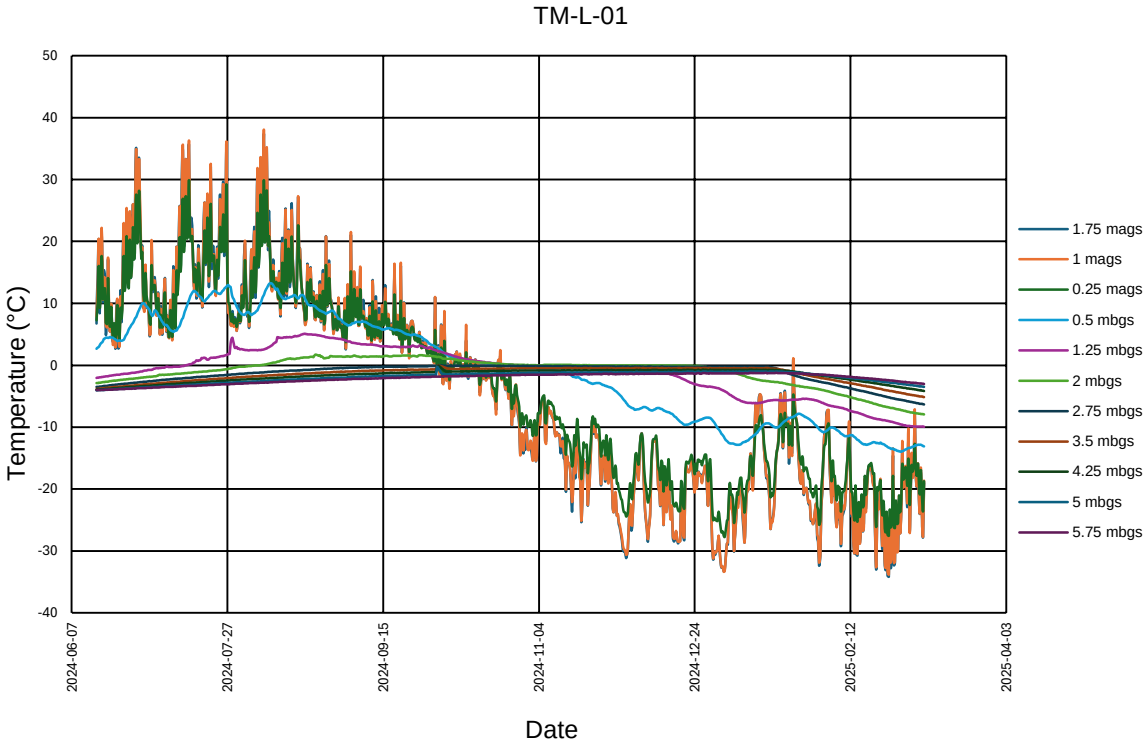

Figure E4: TM-L-01 temperature readings between 15 June 2024 and 7 March 2025

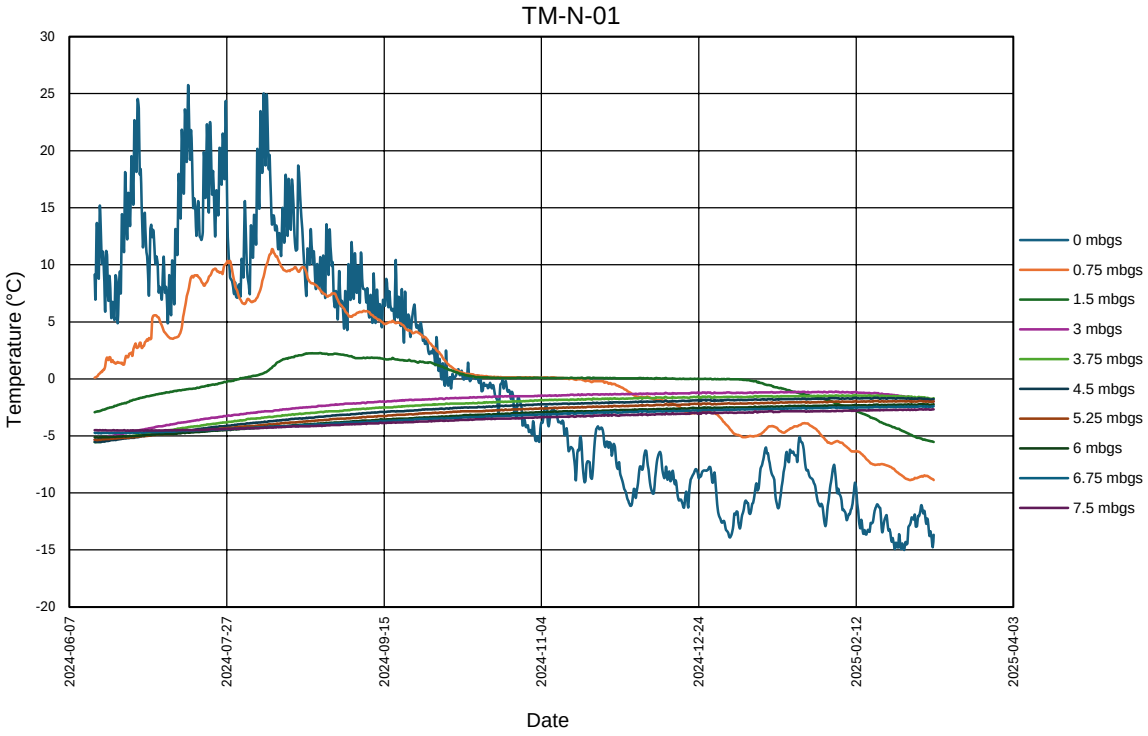

Figure E5: TM-N-01 temperature readings between 15 June 2024 and 8 March 2025

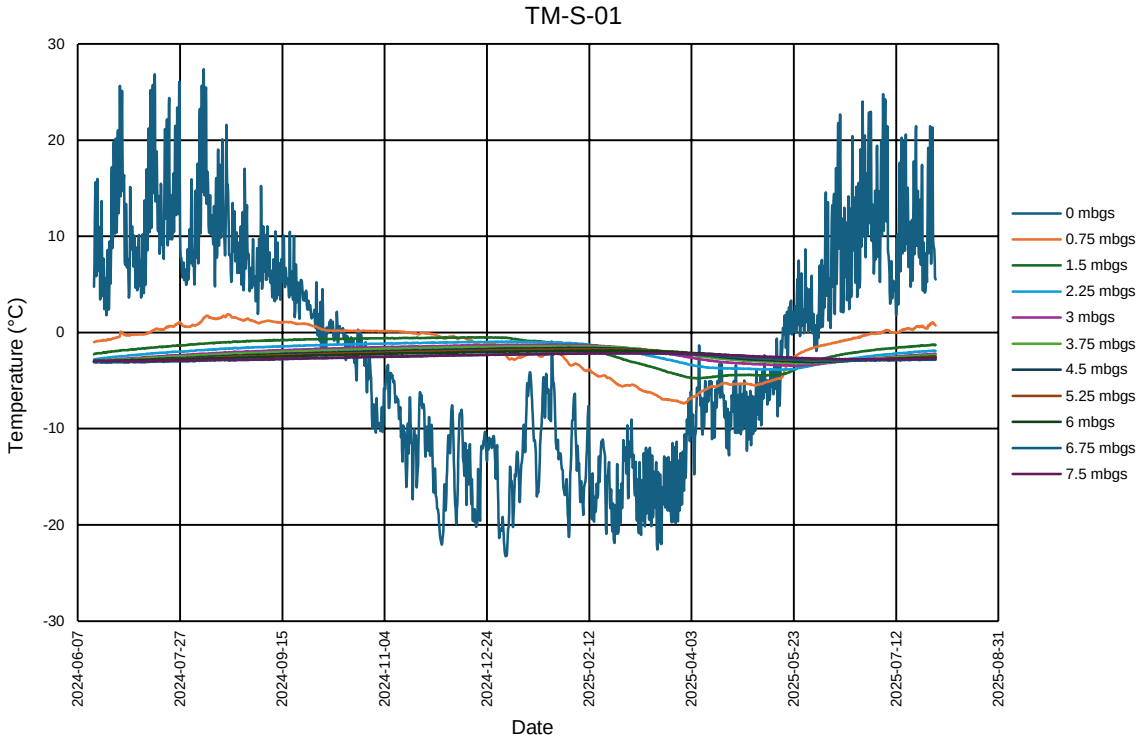

Figure E6: TM-S-01 temperature readings between 15 June 2024 and 31 July 2025

APPENDIX F

Quality Assurance & Quality Control

QUALITY ASSURANCE/QUALITY CONTROL

In conjunction with the field investigations completed to date, a quality assurance/quality control (QA/QC) program was implemented to ensure the integrity of the surface water sampling and analytical testing results.

1.0 FIELD PROGRAM

Sampling activities were completed in accordance with WSP Canada Inc.'s (WSP's) Technical Field Procedures by trained WSP personnel. Field activities were documented in field notes and results were recorded on standard field forms. Reusable field equipment involved in the sampling and monitoring of surface water was decontaminated between sampling locations in accordance with WSP's Technical Procedures. Surface water samples were collected using appropriate handling protocols and were placed in dedicated sample containers provided by Bureau Veritas Laboratories (BVL).

All samples were not directly contacted by hand. To help prevent cross-contamination, non-dedicated sampling equipment was decontaminated using non-phosphate-based detergent (Liquinox) and Deionised (DI) water and a new pair of clean nitrile gloves were used for the collection of each sample.

Surface water samples were placed in laboratory-supplied containers suitable for the analytes, and where applicable, the appropriate laboratory-supplied preservative was added to the samples.

Surface water samples were given unique identification numbers and the sampling containers were preserved in ice-filled coolers to maintain temperatures below 10 degrees Celsius (^{o}C). Samples were logged onto formal chain-of-custody documents and transported to BVL for chemical analysis. BVL is accredited by the Standards Council of Canada.

One field duplicate surface water sample was submitted for analysis.

2.0 LABORATORY PROGRAM

The laboratory QA/QC program included adherence to laboratory sampling and analysis protocols (e.g., hold times, sample containers, preservatives, detection limits and approved methodology) and the analysis of laboratory method blanks, laboratory control sample (blank spike), laboratory sample duplicates, surrogate recovery and matrix spikes.

Laboratory method blank samples are free of the target analytes and are analyzed through the same analytical method as the test samples. Method blank results are used to detect interferences or impurities introduced by the laboratory equipment, reagents or solvents.

Laboratory control samples are fortified with a known concentration of the select target analytes and then analyzed through the same analytical method than the test samples. Laboratory control samples are used to monitor the analyte recovery and validate the calibration of the instrumentation.

For laboratory duplicate samples, a second aliquot from a randomly selected sample within an analytical batch is processed through the same analytical method. Laboratory duplicate sample results are used to evaluate the reproducibility of the analytical method.

Surrogate recovery is analyzed for organics parameters by spiking samples with known quantities of surrogate chemicals which have similar chemical properties to the parameters being analyzed. The reported recovery provides an indication of the analytical method accuracy for that sample.

Matrix spikes were conducted by adding known concentrations of the analyte of interest to a sample to evaluate the effects of the sample matrix on the analytical method.

3.0 DATA RECEPTION

Once laboratory analytical results were received, WSP completed a review of field and laboratory quality. This included review of laboratory QC performance to confirm results are within acceptance criteria, as well as evaluation of field duplicate and blank results to confirm they were within alert limits. Upon receipt of the analytical results, relative percent difference (RPD) values between the original samples and their blind field duplicates were calculated as follows:

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

Where: RPD = relative percent difference

S = sample value

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.

Exceedances of the QC acceptance or alert criteria were investigated with the laboratory and, if warranted, a corrective action report was requested from the laboratory.

4.0 DATA QUALITY REVIEW RESULTS

The results of the data quality review are summarized in Table F1. The RPD calculations and QC results are presented in Tables F2 and F3. As part of this program, one field duplicate surface water sample was collected and submitted to the laboratory for analysis during the 2025 sampling event. One trip blank and one field blank, water sample was collected and submitted during the 2025 sampling event. The number and type of samples and analytes considered in this program are summarized in the table below:

Sampling Event in 2025	Number of Samples	Analytes
Surface water field duplicates	1	BTEX, Hardness, Total Suspended Solids, Total Lead, Total Petroleum Hydrocarbons
Field Blank	1	BTEX, Hardness, Total Suspended Solids, Total Lead, Total Petroleum Hydrocarbons
Trip Blank	1	BTEX, Hardness, Total Suspended Solids, Total Lead, Total Petroleum Hydrocarbons

Based on the data quality reviews, 1 data quality issue was identified for the 2025 sampling event:

- BVL job number C567420: Field blank sample (DQF345) exceeded alert limits for total calcium, total magnesium and total hardness. The field blank sample was prepared using standard distilled water provided by the laboratory. This matrix is not filtered for specific metal/inorganic parameters. Therefore, the concentrations are likely naturally occurring within the field blank sample. Under these circumstances, the total calcium, total magnesium and total hardness data reported can be considered reliable.

5.0 SUMMARY OF RESULTS

Based on the review of the laboratory and field QA/QC results, no field or laboratory QA/QC issues were identified that would affect the overall conclusions presented in this report. The results reported are considered reliable for the purposes of this report.

Table F1
Summary of Quality Control Sample Results
Former Imperial Tuk Base, Tuktoyaktuk, Northwest Territories
Imperial Oil Limited

BVL Job Number	Matrix	BVL Sample ID Affected	Test Affected	Data Quality Issue	Comments
C567420	Field Blank (Water)	DQF345	Total Calcium (Ca), Total Magnesium (Mg) and Total Hardness ($CaCO_3$)	Field blank sample exceeded alert limits for total calcium, total magnesium and total hardness.	The field blank sample was prepared using standard distilled water. This matrix is not filtered for specific metal/inorganic parameters. Therefore, the concentrations are likely naturally occuring within the field blank sample. Under these circumstances, the total calcium, total magnesium and total hardness data reported can be considered reliable.
C567422	Water	n/a	n/a	No data quality issues were identified.	The data are considered reliable.

Notes:
BVL - Bureau Veritas Laboratories
n/a - not applicable

Table F2
Surface Water Sample Duplicate Results
Former Imperial Tuk Base, Tuktoyaktuk, Northwest Territories
Imperial Oil Limited

Sample Location	Units	Alert Limit	RDL	5X RDL	Are the results >5X RDL	SW25-01	SW25-DUP A	RPD %
Sample Collection Date						31-Jul-25	31-Jul-25	
BVL Sample ID						DQF349	DQF351	
Hydrocarbons								
Benzene	mg/L	>80%	0.0004	0.002	no	<0.00040	<0.00040	n/c
Toluene	mg/L	>80%	0.0004	0.002	no	<0.00040	<0.00040	n/c
Ethylbenzene	mg/L	>80%	0.0004	0.002	no	<0.00040	<0.00040	n/c
Xylenes (Total)	mg/L	>80%	0.00089	0.00445	no	<0.00089	<0.00089	n/c
Metals								
Total Calcium (Ca)	mg/L	>50%	0.3	1.5	yes	47	47	0
Total Magnesium (Mg)	mg/L	>50%	0.2	1	yes	65	65	0
Total Lead (Pb)	mg/L	>50%	0.0002	0.001	no	0.00028	0.00028	n/c
Misc. Inorganics								
Total Hardness ($CaCO_3$)	mg/L	>50%	0.5	2.5	yes	380	380	0
Total Suspended Solids	mg/L	>50%	1	5	no	4.5	4.3	n/c
Misc. Organics								
Extractable (n-Hex.) Total Petroleum Hydrocarbon	mg/L	>80%	2	10	no	5	4	n/c

Notes:

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/c - not calculated

RDL - reportable detection limit

RPD - relative percent difference

> - greater than

< - less than

RPD is not calculated if either the original or field duplicate sample has a result less than 5X the RDL

Table F3
Summary of Field Blank and Trip Blank Sample Results
Former Imperial Tuk Base, Tuktoyaktuk, Northwest Territories
Imperial Oil Limited

Sample Location	Units	RDL	FB25-01	Alert Limit	Do the results exceed the Alert Limit?	TRIP BLANK	Alert Limit	Do the results exceed the Alert Limit?
Sample Collection Date			**31-Jul-25**			**31-Jul-25**		
BVL Sample ID			**DQF345**			**DQF346**		
Hydrocarbons								
Benzene	mg/L	0.0004	<0.00040	>5X RDL	no	<0.00040	>5X RDL	no
Toluene	mg/L	0.0004	<0.00040	>5X RDL	no	<0.00040	>5X RDL	no
Ethylbenzene	mg/L	0.0004	<0.00040	>5X RDL	no	<0.00040	>5X RDL	no
Xylenes (Total)	mg/L	0.00089	<0.00089	>5X RDL	no	<0.00089	>5X RDL	no
Metals								
Total Calcium (Ca)	mg/L	0.3	37	>5X RDL	**yes**	<0.30	>5X RDL	no
Total Magnesium (Mg)	mg/L	0.2	12	>5X RDL	**yes**	<0.20	>5X RDL	no
Total Lead (Pb)	mg/L	0.0002	<0.00020	>5X RDL	no	<0.00020	>5X RDL	no
Misc. Inorganics								
Total Hardness ($CaCO_3$)	mg/L	0.5	140	>5X RDL	**yes**	<0.50	>5X RDL	no
Total Suspended Solids	mg/L	1	<1.0	>5X RDL	no	<1.0	>5X RDL	no
Misc. Organics								
Extractable (n-Hex.) Total Petroleum Hydrocarbon	mg/L	2	<2.0	>5X RDL	no	<2.0	>5X RDL	no

Notes:

Bold/Underlined - RPD exceeds alert limit

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/c - not calculated

RDL - reportable detection limit

RPD - relative percent difference

> - greater than

< - less than

RPD is not calculated if either the original or field duplicate sample has a result less than 5X the RDL

APPENDIX G

Laboratory Certificates of Analysis and Data Quality Review Checklists

Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460
Your C.O.C. #: 761597-02-01

Attention: Virginia Anderson

WSP Canada Inc.
16820-107 Ave
Edmonton, AB
Canada T5P 4C3

Report Date: 2025/08/12
Report #: R3697635
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C567420
Received: 2025/08/04, 06:30

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS/FID	2	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	2		Auto Calc
Hardness Total (calculated as CaCO3) (1)	2	BBY WI-00033	Auto Calc
Elements by ICP - Total	2	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Lead (Total)	2	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
TPH (Gravimetric, n-Hexane)	2	AB SOP-00092	SM 24 5520B/5520F m
Total Suspended Solids (NFR)	2	AB SOP-00061	SM 24 2540 D m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard. All samples were analyzed within hold time unless otherwise flagged.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460
Your C.O.C. #: 761597-02-01

Attention: Virginia Anderson

WSP Canada Inc.
16820-107 Ave
Edmonton, AB
Canada T5P 4C3

Report Date: 2025/08/12
Report #: R3697635
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C567420
Received: 2025/08/04, 06:30

Encryption Key

Mary (Xiaohong) Xu
Customer Solutions Representative
12 Aug 2025 17:07:14

Please direct all questions regarding this Certificate of Analysis to:
Alejandro Escobar-Lopez, B.Sc. Molecular Genetics, Customer Service Representative
Email: alejandro.escobar-lopez@bureauveritas.com
Phone# (587)930-7749

==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567420
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQF345	DQF346		
Sampling Date		2025/07/31 18:30	2025/07/31 18:35		
COC Number		761597-02-01	761597-02-01		
	UNITS	**FB25-01**	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	140	<0.50	0.50	C039223
Misc. Inorganics					
Total Suspended Solids	mg/L	<1.0	<1.0	1.0	C039897
Misc. Organics					
Extractable (n-Hex.) Total Petroleum Hydrocarbon	mg/L	<2.0	<2.0	2.0	C039636
RDL = Reportable Detection Limit					

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Bureau Veritas Job #: C567420
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQF345	DQF346		
Sampling Date		2025/07/31 18:30	2025/07/31 18:35		
COC Number		761597-02-01	761597-02-01		
	UNITS	**FB25-01**	**TRIP BLANK**	**RDL**	**QC Batch**
Elements					
Total Calcium (Ca)	mg/L	37	<0.30	0.30	C042452
Total Magnesium (Mg)	mg/L	12	<0.20	0.20	C042452
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	C042451
RDL = Reportable Detection Limit					

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Bureau Veritas Job #: C567420
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

VOLATILE ORGANICS BY GC-MS (WATER)

Bureau Veritas ID		DQF345	DQF346		
Sampling Date		2025/07/31 18:30	2025/07/31 18:35		
COC Number		761597-02-01	761597-02-01		
	UNITS	**FB25-01**	**TRIP BLANK**	**RDL**	**QC Batch**
Volatiles					
Benzene	mg/L	<0.00040	<0.00040	0.00040	C039963
Toluene	mg/L	<0.00040	<0.00040	0.00040	C039963
Ethylbenzene	mg/L	<0.00040	<0.00040	0.00040	C039963
m & p-Xylene	mg/L	<0.00080	<0.00080	0.00080	C039963
o-Xylene	mg/L	<0.00040	<0.00040	0.00040	C039963
Xylenes (Total)	mg/L	<0.00089	<0.00089	0.00089	C039248
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	0.10	C039248
F1 (C6-C10)	mg/L	<0.10	<0.10	0.10	C039963
Instrument Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	103	105		C039963
4-Bromofluorobenzene (sur.)	%	95	96		C039963
D4-1,2-Dichloroethane (sur.)	%	105	105		C039963
RDL = Reportable Detection Limit					

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Bureau Veritas Job #: C567420
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

TEST SUMMARY

Bureau Veritas ID: DQF345
Sample ID: FB25-01
Matrix: Water

Collected: 2025/07/31
Relinquished: 2025/08/02
Received: 2025/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
BTEX/F1 in Water by HS GC/MS/FID	HSGC/MS	C039963	N/A	2025/08/09	Kevin Santiago
F1-BTEX	CALC/MS	C039248	N/A	2025/08/10	Automated Statchk
Hardness Total (calculated as CaCO3)	CALC	C039223	N/A	2025/08/08	Automated Statchk
Elements by ICP - Total	ICPA	C042452	2025/08/08	2025/08/08	Vincy Scaria
Lead (Total)	ICPM	C042451	2025/08/08	2025/08/08	Kevin Huang
TPH (Gravimetric, n-Hexane)	CALC	C039636	2025/08/06	2025/08/07	May Liang
Total Suspended Solids (NFR)	BAL	C039897	2025/08/06	2025/08/06	Haydee Estilong

Bureau Veritas ID: DQF346
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2025/07/31
Relinquished: 2025/08/02
Received: 2025/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
BTEX/F1 in Water by HS GC/MS/FID	HSGC/MS	C039963	N/A	2025/08/09	Kevin Santiago
F1-BTEX	CALC/MS	C039248	N/A	2025/08/10	Automated Statchk
Hardness Total (calculated as CaCO3)	CALC	C039223	N/A	2025/08/08	Automated Statchk
Elements by ICP - Total	ICPA	C042452	2025/08/08	2025/08/08	Vincy Scaria
Lead (Total)	ICPM	C042451	2025/08/08	2025/08/08	Kevin Huang
TPH (Gravimetric, n-Hexane)	CALC	C039636	2025/08/06	2025/08/07	May Liang
Total Suspended Solids (NFR)	BAL	C039897	2025/08/06	2025/08/06	Haydee Estilong

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567420
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

GENERAL COMMENTS

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

Package 1	3.3°C

Note: C of C information incomplete. The following information was not provided on chain of custody: regulatory criteria, # jars used and not submitted and task order. Proceeded and client was notified via email.

Results relate only to the items tested.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567420
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
C039636	YML	Method Blank	Extractable (n-Hex.) Total Petroleum Hydrocarb	2025/08/07	<2.0		mg/L	
C039897	HE1	Method Blank	Total Suspended Solids	2025/08/06	<1.0		mg/L	
C039963	KSN	Method Blank	1,4-Difluorobenzene (sur.)	2025/08/09		101	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/08/09		89	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/08/09		99	%	50 - 140
			Benzene	2025/08/09	<0.00040		mg/L	
			Toluene	2025/08/09	<0.00040		mg/L	
			Ethylbenzene	2025/08/09	<0.00040		mg/L	
			m & p-Xylene	2025/08/09	<0.00080		mg/L	
			o-Xylene	2025/08/09	<0.00040		mg/L	
			F1 (C6-C10)	2025/08/09	<0.10		mg/L	
C042451	KH2	Method Blank	Total Lead (Pb)	2025/08/08	<0.00020		mg/L	
C042452	VSC	Method Blank	Total Magnesium (Mg)	2025/08/08	<0.20		mg/L	
			Total Calcium (Ca)	2025/08/08	<0.30		mg/L	
C039636	YML	Matrix Spike [DQF345-03]	Extractable (n-Hex.) Total Petroleum Hydrocarb	2025/08/07		95	%	70 - 130
C042451	KH2	Matrix Spike [DQF346-02]	Total Lead (Pb)	2025/08/08		102	%	80 - 120
C042452	VSC	Matrix Spike [DQF345-02]	Total Magnesium (Mg)	2025/08/08		92	%	80 - 120
			Total Calcium (Ca)	2025/08/08		89	%	80 - 120
C039636	YML	LCS	Extractable (n-Hex.) Total Petroleum Hydrocarb	2025/08/07		110	%	70 - 130
C039897	HE1	LCS	Total Suspended Solids	2025/08/06		97	%	80 - 120
C039963	KSN	LCS	1,4-Difluorobenzene (sur.)	2025/08/09		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/08/09		105	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/08/09		99	%	50 - 140
			Benzene	2025/08/09		102	%	60 - 130
			Toluene	2025/08/09		105	%	60 - 130
			Ethylbenzene	2025/08/09		111	%	60 - 130
			m & p-Xylene	2025/08/09		112	%	60 - 130
			o-Xylene	2025/08/09		107	%	60 - 130
			F1 (C6-C10)	2025/08/09		99	%	60 - 140
C042451	KH2	LCS	Total Lead (Pb)	2025/08/08		101	%	80 - 120
C042452	VSC	LCS	Total Magnesium (Mg)	2025/08/08		91	%	80 - 120
			Total Calcium (Ca)	2025/08/08		89	%	80 - 120

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

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

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

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

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567420
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Sandy Yuan, M.Sc., QP, Scientific Specialist

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

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Custody Tracking Form

eCOC Number
761597-02-01

Please use this form for custody tracking when submitting the work instructions via eCOC (electronic Chain of Custody). Please ensure your form **has a barcode or a Bureau Veritas eCOC confirmation number** in the top right hand side. This number links your electronic submission to your samples. This form should be **placed in the cooler with your samples.**

Relinquished By				Received By			
Sean Fitzgerald	[signature]	Date	2025/08/01	ATRAVERLEIN	[signature]	Date	2025/08/04
		Time (24 HR)	1300			Time (24 HR)	06:30
		Date				Date	
		Time (24 HR)				Time (24 HR)	
		Date				Date	
		Time (24 HR)				Time (24 HR)	

Unless otherwise agreed to, submissions and use of services are governed by Bureau Veritas' standard terms and conditions which can be found at www.bvna.com.

Triage Information

Sampled By (Print)	# of Coolers/Pkgs			
Sean Fitzgerald	1/1	Rush ☐	Immediate Test ☐	Food Residue ☐
		Micro ☐		Food Chemistry ☐

***** Laboratory Use Only *****

Received At	mcal	Lab Comments:
Labeled By		
Verified By		

Custody Seal		Cooling Media	Temperature °C		
Present (Y/N)	Intact (Y/N)	Present (Y/N)	1	2	3
Y	Y	Y	3	3	4

Drinking Water Metals Preservation Check Done (circle) YES NO

C567420
2025/08/04 06:30

COR FCD-00340 /5
PAGE 1 of 1

C567420
2025/08/04 06:30

4000 19st N.E
Calgary, Alberta T2E 6P8
www.bvna.com

Phone: (403) 291-3077
Fax: (403) 291-9468
Toll Free: 800-563-6266

EXXONMOBIL/IMPERIAL OIL - BUREAU VERITAS
CHAIN-OF-CUSTODY RECORD
ANALYSIS REQUESTED

Page 1 of 1
C of C # 761597-02-01

761597

INVOICE INFORMATION	REPORT INFORMATION
Company Name: Imperial Oil Ltd. - WSP Canada Inc.	Company Name: WSP Canada Inc.
Contact Name: Canada Accounts Payable	Contact Name: Virginia Anderson
Address: 2800, 700 - 2nd Street SW, Calgary AB T2P 2W2	Address: 16820-107 Ave, Edmonton AB T5P 4C3
Email: CAPayablesInvoice@wsp.com	Email: virginia.anderson@wsp.com
Phone: (403) 299-5600	Phone: (780) 465-9032
Sampler Name (Print): Sean Fitzgerald	Consultant Project #: CA-GLD-19105460

	FIELD SAMPLE ID	MATRIX: GROUND WATER	MATRIX: SURFACE WATER	MATRIX: SOIL	MATRIX: OTHER	# CONTAINERS	SAMPLING: DATE (YYYY/MM/DD)	SAMPLING: TIME (24 HR)	FIELD FILTERED & PRESERVED	LAB FILTRATION REQUIRED	BTEX/F1 in Water by HS GC/MS/FID	TPH (Gravimetric, n-Hexane)	Total Suspended Solids (NFR)	Lead (Total)	Total Hardness in Water
1	FB25-01		X			7	2025/07/31	1830			X	X	X	X	X
2	Trip Blank		X			7	2025/07/31	1835			X	X	X	X	X
3															
4															
5															
6															
7															
8															
9															
10															

MCAL-2025-08-175
1/1

IOL SITE LOCATION: Tuk Base

IOL PROJECT # (if applicable): N/A

BUREAU VERITAS TASK ORDER # OR SERVICE ORDER # + LINE ITEM: -

REGULATORY CRITERIA / DETECTION LIMITS:
- ☐ Alberta Tier I ______
- ☐ CDWG
- ☐ SEQG (SK)
- ☐ NcSC (SK)
- ☐ CCME
- ☐ Other

SPECIAL INSTRUCTIONS:

JARS USED AND NOT SUBMITTED Enter N/A for Water

TURNAROUND TIME:
- Standard (5 days) ☐
- Rush (3 days) ☐
- (2 days) ☐
- (1 day) ☐
- (same day) ☐

Date Required

	YES	NO	COOLER ID: mcal		
SEAL PRESENT	✓		TEMP °C	3	3	4
SEAL INTACT	✓				
COOLING MEDIA PRESENT	✓				

	YES	NO	COOLER ID:		
SEAL PRESENT			TEMP °C	1	2	3
SEAL INTACT					
COOLING MEDIA PRESENT					

	YES	NO	COOLER ID:		
SEAL PRESENT			TEMP °C	1	2	3
SEAL INTACT					
COOLING MEDIA PRESENT					

* RELINQUISHED BY:		DATE:	TIME (24 HR)	RECEIVED BY:		DATE:	TIME (24 HR)
1. Sean F. [signature]	Sean Fitzgerald	2025/08/02	1800	1. [signature]	ATRAJ [illegible]	2025/08/04	06:30
2.				2.			
3.				3.			

COC – 1010 (2016) IOL – AB   White: Bureau Veritas   Yellow: Client

DATA QUALITY REVIEW CHECKLIST - IMPERIAL OIL PROJECTS

Consultant: WSP Canada Inc.

Sampling Date: July 31, 2025

Location: Tuk Base, Tuktoyaktuk, NT

Laboratory: Bureau Veritas Calgary

Consultant Project Number: CA-GLD-18105460

Sample Submission Number: C567420

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Instrument Surrogate Recovery	X			All laboratory QC results are within
Extraction Surrogate Recovery			X	acceptance criteria.
Method Blank Concentration	X			
Matrix Duplicate RPD			X	
Matrix Spike Recovery	X			
Lab Control Sample Recovery	X			

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration		X		Field blank sample exceeded alert limits for total
Trip Blank Concentration	X			calcium, total magnesium and total hardness. All
Field Duplicate RPD			X	remaining field QC samples are within alert limits.

Has CoA been signed off (Yes/No)?:	Yes
Has lab warranted all tests were in statistical control in CoA (Yes/No)?:	Yes
Has lab warranted all tests were analyzed following SOP's in CoA (Yes/No)?:	Yes
Were all samples analyzed within hold times (Yes/No)?:	Yes
All volatiles samples methanol extracted (if required) within 24 hours (Yes/No)?:	n/a
Is Chain of Custody completed and signed (Yes/No)?:	Yes
Were sample temperatures acceptable when they reached lab (Yes/No)?:	Yes

Is data considered to be reliable (Yes/No/Suspect)?: Yes

If answer is "No", describe and provide rationale:

Data Reviewed by (Print): Carlo Truong

Data Reviewed by (Signature): 

Date: August 14, 2025

Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460
Your C.O.C. #: 761597-01-01

Attention: Virginia Anderson

WSP Canada Inc.
16820-107 Ave
Edmonton, AB
Canada T5P 4C3

Report Date: 2025/08/12
Report #: R3697706
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C567422
Received: 2025/08/04, 06:30

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Laboratory Method	Analytical Method
BTEX/F1 in Water by HS GC/MS/FID	3	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	3		Auto Calc
Hardness Total (calculated as CaCO3) (1)	3	BBY WI-00033	Auto Calc
Elements by ICP - Total	3	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Lead (Total)	3	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
TPH (Gravimetric, n-Hexane)	3	AB SOP-00092	SM 24 5520B/5520F m
Total Suspended Solids (NFR)	3	AB SOP-00061	SM 24 2540 D m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard. All samples were analyzed within hold time unless otherwise flagged.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460
Your C.O.C. #: 761597-01-01

Attention: Virginia Anderson

WSP Canada Inc.
16820-107 Ave
Edmonton, AB
Canada T5P 4C3

Report Date: 2025/08/12
Report #: R3697706
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C567422
Received: 2025/08/04, 06:30

Encryption Key

Mary (Xiaohong) Xu
Customer Solutions Representative
12 Aug 2025 16:58:33

Please direct all questions regarding this Certificate of Analysis to:
Alejandro Escobar-Lopez, B.Sc. Molecular Genetics, Customer Service Representative
Email: alejandro.escobar-lopez@bureauveritas.com
Phone# (587)930-7749

==========

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DQF349	DQF350	DQF351		
Sampling Date		2025/07/31 11:30	2025/07/31 12:00	2025/07/31 11:30		
COC Number		761597-01-01	761597-01-01	761597-01-01		
	UNITS	**SW25-01**	**SW25-02**	**SW25-DUPA**	**RDL**	**QC Batch**
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	380	310	380	0.50	C039223
Misc. Inorganics						
Total Suspended Solids	mg/L	4.5	2.7	4.3	1.0	C039897
Misc. Organics						
Extractable (n-Hex.) Total Petroleum Hydrocarbon	mg/L	5.0	4.0	4.0	2.0	C039636
RDL = Reportable Detection Limit						

Bureau Veritas ID		DQF351		
Sampling Date		2025/07/31 11:30		
COC Number		761597-01-01		
	UNITS	**SW25-DUPA Lab-Dup**	**RDL**	**QC Batch**
Misc. Organics				
Extractable (n-Hex.) Total Petroleum Hydrocarbon	mg/L	5.0	2.0	C039636
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate				

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		DQF349	DQF349	DQF350	DQF351		
Sampling Date		2025/07/31 11:30	2025/07/31 11:30	2025/07/31 12:00	2025/07/31 11:30		
COC Number		761597-01-01	761597-01-01	761597-01-01	761597-01-01		
	UNITS	**SW25-01**	**SW25-01 Lab-Dup**	**SW25-02**	**SW25-DUPA**	**RDL**	**QC Batch**
Elements							
Total Calcium (Ca)	mg/L	47	47	57	47	0.30	C042452
Total Magnesium (Mg)	mg/L	65	65	41	65	0.20	C042452
Total Lead (Pb)	mg/L	0.00028	0.00030	0.0047	0.00028	0.00020	C042451

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

VOLATILE ORGANICS BY GC-MS (WATER)

Bureau Veritas ID		DQF349	DQF350	DQF351		
Sampling Date		2025/07/31 11:30	2025/07/31 12:00	2025/07/31 11:30		
COC Number		761597-01-01	761597-01-01	761597-01-01		
	UNITS	**SW25-01**	**SW25-02**	**SW25-DUPA**	**RDL**	**QC Batch**
Volatiles						
Benzene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	C039963
Toluene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	C039963
Ethylbenzene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	C039963
m & p-Xylene	mg/L	<0.00080	<0.00080	<0.00080	0.00080	C039963
o-Xylene	mg/L	<0.00040	<0.00040	<0.00040	0.00040	C039963
Xylenes (Total)	mg/L	<0.00089	<0.00089	<0.00089	0.00089	C038802
F1 (C6-C10) - BTEX	mg/L	<0.10	<0.10	<0.10	0.10	C038802
F1 (C6-C10)	mg/L	<0.10	<0.10	<0.10	0.10	C039963
Instrument Surrogate Recovery (%)						
1,4-Difluorobenzene (sur.)	%	101	102	102		C039963
4-Bromofluorobenzene (sur.)	%	95	97	96		C039963
D4-1,2-Dichloroethane (sur.)	%	104	104	105		C039963
RDL = Reportable Detection Limit						

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Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

TEST SUMMARY

Bureau Veritas ID: DQF349
Sample ID: SW25-01
Matrix: Water

Collected: 2025/07/31
Relinquished: 2025/08/02
Received: 2025/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
BTEX/F1 in Water by HS GC/MS/FID	HSGC/MS	C039963	N/A	2025/08/09	Kevin Santiago
F1-BTEX	CALC/MS	C038802	N/A	2025/08/10	Automated Statchk
Hardness Total (calculated as CaCO3)	CALC	C039223	N/A	2025/08/08	Automated Statchk
Elements by ICP - Total	ICPA	C042452	2025/08/08	2025/08/08	Vincy Scaria
Lead (Total)	ICPM	C042451	2025/08/08	2025/08/08	Kevin Huang
TPH (Gravimetric, n-Hexane)	CALC	C039636	2025/08/06	2025/08/07	May Liang
Total Suspended Solids (NFR)	BAL	C039897	2025/08/06	2025/08/06	Haydee Estilong

Bureau Veritas ID: DQF349 Dup
Sample ID: SW25-01
Matrix: Water

Collected: 2025/07/31
Relinquished: 2025/08/02
Received: 2025/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICP - Total	ICPA	C042452	2025/08/08	2025/08/08	Vincy Scaria
Lead (Total)	ICPM	C042451	2025/08/08	2025/08/08	Kevin Huang

Bureau Veritas ID: DQF350
Sample ID: SW25-02
Matrix: Water

Collected: 2025/07/31
Relinquished: 2025/08/02
Received: 2025/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
BTEX/F1 in Water by HS GC/MS/FID	HSGC/MS	C039963	N/A	2025/08/09	Kevin Santiago
F1-BTEX	CALC/MS	C038802	N/A	2025/08/10	Automated Statchk
Hardness Total (calculated as CaCO3)	CALC	C039223	N/A	2025/08/08	Automated Statchk
Elements by ICP - Total	ICPA	C042452	2025/08/08	2025/08/08	Vincy Scaria
Lead (Total)	ICPM	C042451	2025/08/08	2025/08/08	Kevin Huang
TPH (Gravimetric, n-Hexane)	CALC	C039636	2025/08/06	2025/08/07	May Liang
Total Suspended Solids (NFR)	BAL	C039897	2025/08/06	2025/08/06	Haydee Estilong

Bureau Veritas ID: DQF351
Sample ID: SW25-DUPA
Matrix: Water

Collected: 2025/07/31
Relinquished: 2025/08/02
Received: 2025/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
BTEX/F1 in Water by HS GC/MS/FID	HSGC/MS	C039963	N/A	2025/08/09	Kevin Santiago
F1-BTEX	CALC/MS	C038802	N/A	2025/08/10	Automated Statchk
Hardness Total (calculated as CaCO3)	CALC	C039223	N/A	2025/08/08	Automated Statchk
Elements by ICP - Total	ICPA	C042452	2025/08/08	2025/08/08	Vincy Scaria
Lead (Total)	ICPM	C042451	2025/08/08	2025/08/08	Kevin Huang
TPH (Gravimetric, n-Hexane)	CALC	C039636	2025/08/06	2025/08/07	May Liang
Total Suspended Solids (NFR)	BAL	C039897	2025/08/06	2025/08/06	Haydee Estilong

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

TEST SUMMARY

Bureau Veritas ID: DQF351 Dup
Sample ID: SW25-DUPA
Matrix: Water

Collected: 2025/07/31
Relinquished: 2025/08/02
Received: 2025/08/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TPH (Gravimetric, n-Hexane)	CALC	C039636	2025/08/06	2025/08/07	May Liang

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

GENERAL COMMENTS

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

Package 1	5.3°C

Note: C of C information incomplete. The following information is missing on the chain of custody form. Notified client via email
- The task order number is not listed on COC
- Regulatory Criteria is missing
-# jars used is missing

Results relate only to the items tested.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
C039636	YML	Method Blank	Extractable (n-Hex.) Total Petroleum Hydrocarb	2025/08/07	<2.0		mg/L	
C039897	HE1	Method Blank	Total Suspended Solids	2025/08/06	<1.0		mg/L	
C039963	KSN	Method Blank	1,4-Difluorobenzene (sur.)	2025/08/09		101	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/08/09		89	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/08/09		99	%	50 - 140
			Benzene	2025/08/09	<0.00040		mg/L	
			Toluene	2025/08/09	<0.00040		mg/L	
			Ethylbenzene	2025/08/09	<0.00040		mg/L	
			m & p-Xylene	2025/08/09	<0.00080		mg/L	
			o-Xylene	2025/08/09	<0.00040		mg/L	
			F1 (C6-C10)	2025/08/09	<0.10		mg/L	
C042451	KH2	Method Blank	Total Lead (Pb)	2025/08/08	<0.00020		mg/L	
C042452	VSC	Method Blank	Total Magnesium (Mg)	2025/08/08	<0.20		mg/L	
			Total Calcium (Ca)	2025/08/08	<0.30		mg/L	
C042451	KH2	RPD [DQF349-02]	Total Lead (Pb)	2025/08/08	6.6		%	20
C042452	VSC	RPD [DQF349-02]	Total Magnesium (Mg)	2025/08/08	0.19		%	20
			Total Calcium (Ca)	2025/08/08	0.45		%	20
C039636	YML	RPD [DQF351-03]	Extractable (n-Hex.) Total Petroleum Hydrocarb	2025/08/07	22		%	40
C039636	YML	LCS	Extractable (n-Hex.) Total Petroleum Hydrocarb	2025/08/07		110	%	70 - 130
C039897	HE1	LCS	Total Suspended Solids	2025/08/06		97	%	80 - 120
C039963	KSN	LCS	1,4-Difluorobenzene (sur.)	2025/08/09		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/08/09		105	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/08/09		99	%	50 - 140
			Benzene	2025/08/09		102	%	60 - 130
			Toluene	2025/08/09		105	%	60 - 130
			Ethylbenzene	2025/08/09		111	%	60 - 130
			m & p-Xylene	2025/08/09		112	%	60 - 130
			o-Xylene	2025/08/09		107	%	60 - 130
			F1 (C6-C10)	2025/08/09		99	%	60 - 140
C042451	KH2	LCS	Total Lead (Pb)	2025/08/08		101	%	80 - 120
C042452	VSC	LCS	Total Magnesium (Mg)	2025/08/08		91	%	80 - 120
			Total Calcium (Ca)	2025/08/08		89	%	80 - 120

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

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

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

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

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C567422
Report Date: 2025/08/12

WSP Canada Inc.
Task Order#: 18105460-2025-60
Site#: N/A
Site Location: Tuk Base, Tuktoyaktuk, NT
Project #: CA-GLD-18105460

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Sandy Yuan, M.Sc., QP, Scientific Specialist

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

C567422
2025/08/04 06:30

4000 19st N.E.
Calgary, Alberta T2E 6P8
www.bvna.com

Phone: (403) 291-3077
Fax: (403) 291-9468
Toll Free: 800-563-6266

EXXONMOBIL/IMPERIAL OIL - BUREAU VERITAS
CHAIN-OF-CUSTODY RECORD
ANALYSIS REQUESTED

C of C # 761597-01-01

761597

INVOICE INFORMATION	REPORT INFORMATION
Company Name: Imperial Oil Ltd. - WSP Canada Inc.	Company Name: WSP Canada Inc.
Contact Name: Canada Accounts Payable	Contact Name: Virginia Anderson
Address: 2800, 700 - 2nd Street SW Calgary AB T2P 2W2	Address: 16820-107 Ave Edmonton AB T5P 4C3
Email: CAPayablesInvoice@wsp.com	Email: virginia.anderson@wsp.com
Phone: (403) 299-5600	Phone: (780) 455-9032
Sampler Name (Print): Sean Fitzgerald	Consultant Project #: CA-GLD-18105460

MCAL-2025-08-174

	FIELD SAMPLE ID	MATRIX: GROUND WATER	SURFACE WATER	SOIL	OTHER	# CONTAINERS	SAMPLING: DATE (YYYY/MM/DD)	TIME (24 HR)	FIELD FILTERED & PRESERVED	LAB FILTRATION REQUIRED	BTEX/F1 in Water by HS GC/MS/FID	TPH (Gravimetric, n-Hexane)	Total Suspended Solids (HFR)	Lead (Total)	Total Hardness in Water
1	SW25-01		X			7	2025/07/31	1130			X	X	X	X	X
2	SW25-02		X			7	2025/07/31	1300			X	X	X	X	X
3	SW25-dupA		X			7	2025/07/31	1130			X	X	X	X	X
4															
5															
6															
7															
8															
9															
10															

IOL SITE LOCATION: Tuk Base

IOL PROJECT # (if applicable): N/A

BUREAU VERITAS TASK ORDER # OR SERVICE ORDER # + LINE ITEM: -

REGULATORY CRITERIA / DETECTION LIMITS:
- ☐ Alberta Tier I ____ ☐ CDWG
- ☐ SEQG (SK) ☐ NoSC (SK)
- ☐ CCME ☐ Other

SPECIAL INSTRUCTIONS:

JARS USED AND NOT SUBMITTED: Enter N/A for Water

TURNAROUND TIME
- Standard (5 days)
- Rush (3 days) (2 days) (1 day) (same day)

Date Required

	YES	NO	COOLER ID: m cul			YES	NO	COOLER ID:				YES	NO	COOLER ID:			
SEAL PRESENT	✓					SEAL PRESENT						SEAL PRESENT					
SEAL INTACT	✓		TEMP °C	6 (1)	6 (2)	4 (3)	SEAL INTACT		TEMP °C	(1)	(2)	(3)	SEAL INTACT		TEMP °C	(1)	(2)	(3)
COOLING MEDIA PRESENT	✓						COOLING MEDIA PRESENT						COOLING MEDIA PRESENT					

* RELINQUISHED BY:		DATE:	TIME (24 HR)	RECEIVED BY:		DATE:	TIME (24 HR)
1.	Sean Fitzgerald	2025/08/03	1800	1.	ATRAVELLER	2025/08/04	06:30
2.				2.			
3.				3.			

COC – 1018 (2016) IOL – AB White: Bureau Veritas Yellow: Client

Custody Tracking Form

eCOC Number: 761597-01-01

Please use this form for custody tracking when submitting the work instructions via eCOC (electronic Chain of Custody). Please ensure your form **has a barcode or a Bureau Veritas eCOC confirmation number** in the top right hand side. This number links your electronic submission to your samples. This form should be **placed in the cooler with your samples.**

Relinquished By				Received By			
Sean Fitzgerald		Date	2025/08/01	ATRAvelpain		Date	2025/08/04
		Time (24 HR)	1300			Time (24 HR)	06:30
		Date				Date	
		Time (24 HR)				Time (24 HR)	
		Date				Date	
		Time (24 HR)				Time (24 HR)	

Unless otherwise agreed to, submissions and use of services are governed by Bureau Veritas' standard terms and conditions which can be found at www.bvna.com.

Triage Information

Sampled By (Print)	# of Coolers/Pkgs				
Sean Fitzgerald	1/1	Rush ☐	Immediate Test ☐	Food Residue ☐	
		Micro ☐		Food Chemistry ☐	

***** Laboratory Use Only *****

Received At	Lab Comments:
Labeled By	
Verified By	

Custody Seal		Cooling Media	Temperature °C		
Present (Y/N)	Intact (Y/N)	Present (Y/N)	1	2	3
Y	Y	Y	6	6	4

Drinking Water Metals Preservation Check Done (Circle) YES NO

COR FCD-00340 /5
PAGE 1 of 1

C567422
2025/08/04 06:30

DATA QUALITY REVIEW CHECKLIST - IMPERIAL OIL PROJECTS

Consultant: WSP Canada Inc.

Sampling Date: July 31, 2025

Location: Tuk Base, Tuktoyaktuk, NT

Laboratory: Bureau Veritas Calgary

Consultant Project Number: CA-GLD-18105460

Sample Submission Number: C567422

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Instrument Surrogate Recovery	X			All laboratory QC results are within
Extraction Surrogate Recovery			X	acceptance criteria.
Method Blank Concentration	X			
Matrix Duplicate RPD	X			
Matrix Spike Recovery			X	
Lab Control Sample Recovery	X			

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration			X	All field QC samples are within
Trip Blank Concentration			X	alert limits.
Field Duplicate RPD	X			

Has CoA been signed off (Yes/No)?:	Yes
Has lab warranted all tests were in statistical control in CoA (Yes/No)?:	Yes
Has lab warranted all tests were analyzed following SOP's in CoA (Yes/No)?:	Yes
Were all samples analyzed within hold times (Yes/No)?:	Yes
All volatiles samples methanol extracted (if required) within 24 hours (Yes/No)?:	n/a
Is Chain of Custody completed and signed (Yes/No)?:	Yes
Were sample temperatures acceptable when they reached lab (Yes/No)?:	Yes

Is data considered to be reliable (Yes/No/Suspect)?: Yes

If answer is "No", describe and provide rationale:

Data Reviewed by (Print): Carlo Truong

Data Reviewed by (Signature): 

Date: August 14, 2025