Waste Management Plan

Cambridge Bay Soil and Water Treatment Facility
Kitikmeot Environmental Ltd.



WASTE MANAGEMENT PLAN

FINAL

Cambridge Bay Soil and Water Treatment Facility
V.2.2
4300CBSTF

March 2022

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EXECUTIVE SUMMARY

This Plan outlines what Kitikmeot Environmental Ltd. will do with any waste generated on site. Wastes include contaminated soil and water that can't be treated on site, as well as those that can be; each of these are disposed of differently. Waste also includes materials that need to be disposed of if there is a spill on site that needs to be cleaned up. Soil that is successfully treated on site is used either for fill or to cover garbage at the landfill. Water that is successfully treated on site can be used to increase moisture at the soil treatment facility or can be released to ground surface. Any soil or water that cannot be successfully treated is hauled to and disposed of at an authorized location.

REVISION HISTORY

DATE	DOCUMENT VERSION	SUMMARY OF CHANGES MADE	AUTHOR	APPROVER
June 2016	Ver. 1	Initial Draft	JF	
January 2017	Ver. 1	Initial Final Issue	JF	
December 2022	Ver.2.1	Ownership Change, Contacts & Date Updates	KHF	
May 2026	Ver.2.3	Section 1.0 operation contacts updated Appendix A Tables updated with relevant data and references. Remove references to water treatment plant and ASTs. Section 9.0 update references	MG	MG

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1.0 INTRODUCTION

Kitikmeot Environmental Ltd. (KEL) operates a soil and water treatment facility located adjacent to the Hamlet of Cambridge Bay sewage lagoon.

Coordinates for the Facility are:

69^0 07' 40.52" N 105^0 02' 35.29"W

The site is accessible by road, from an access road off Natik Street.

Facility operations and maintenance contacts:

Corporate Office:

Kitikmeot Environmental Ltd.
30 Mitik Street
Cambridge Bay, NU
X0B 0C0

Operator Contacts:

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Primary Contact

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Secondary Contact

The effective date for this Waste Management Plan (the Plan) is January 1, 2023. The Plan will be effective for the duration of the lease and the life of the facility, a period of five (5) years, after which it will be reviewed for renewal.

2.0 ENVIRONMENTAL POLICY

Our commitment to the protection of the environment needs to be demonstrated in how we conduct our day-to-day business operations. The highest standards of care are to be taken by all employees to minimize the environmental impact of all operations. The company management team has the responsibility to take a leadership role and develop policies and procedures that minimize environmental effects. Employees have the responsibility to bring to the attention of their immediate supervisor those procedures and incidents which may impair the environment. Our policy is to:

1) Comply with all applicable government regulations.
2) Consider the environmental effects of our operations.
3) Provide staff with all the necessary information, training and equipment.
4) Develop processes, policies and procedures that minimize the occurrence and consequences of environmental incidents.

Our corporate environmental goal is to minimize the environmental impact of our operations.

3.0 PROJECT OBJECTIVES AND SCOPE OF WORK

The purpose of this Plan is to identify waste streams and outline management methods for wastes generated at the Facility. The scope of this Plan includes operation and maintenance of the Facility.

KBL will manage the program operations responsibly and will comply with all licences, permits and applicable territorial and federal laws and regulations related to waste management specific to Facility operation. The following table lists regulations and guidelines that will be applied and referenced for the Facility operations in Yellowknife.

Table 1. Relevant Waste Management Regulations and Guidelines

Jurisdictional Authority	Regulation or Guideline
Government of Nunavut (GN), Department of Environment (DoE)	*Environmental Guideline for the General Management of Hazardous Waste (2010)*
Government of Nunavut (GN), Department of Environment (DoE)	*Environmental Guideline for Site Remediation (2002)*
Government of Nunavut (GN), Department of Environment (DoE)	*Environmental Guideline for Contaminated Site Remediation (2003)*
Environment Canada (EC)	*Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils (SAIC 2006)*
Environment and Climate Change Canada (ECCC)	*The Fisheries Act RS.C., 1985, c. F-14 (1985)*
Transport Canada (TC)	*Transportation of Dangerous Goods Regulations (2012)*

3.1. Project Description

The purpose of this project is to operate a permanent soil and water treatment facility in Cambridge Bay, NU (CBSWTF). The site of the CBSWTF is located at $69^0$07'40.52" N $105^0$02'35.29"W. The permanent facility includes an engineered cell to receive petroleum hydrocarbon-contaminated snow and water. Water is treated on site by a package treatment plant. Treated water is stored in a tank until it is confirmed that the water meets discharge criteria, after which it is reused on site or released to the surrounding environment. Following bioremediation, treated soil meeting license criteria will beneficially be reused off site. Soil and water not meeting discharge/reuse criteria is transported off site for disposal at a suitable facility. The facility also includes an area of the treatment pad designated for storage of hazardous wastes awaiting transportation to authorized facilities.

The CBSWTF includes: one engineered cell consisting of three sub-cells: one cell 50 m x 40 m, for receipt, storage and treatment of petroleum hydrocarbon-contaminated soil; one cell designed for storage of up to 170 m^3 of petroleum hydrocarbon-contaminated snow and water; and one cell 19 m x 14 m designed for storage of hazardous waste awaiting shipment.

3.2. Rationale

Operation of the proposed Facility will provide industry with a continued, local treatment option for petroleum hydrocarbon-impacted waste. In addition, having a local service provision may provide a reduced cost structure to generators which in turn may promote liability management as opposed to alternative management techniques such as long-term monitoring or natural attenuation. Further, on-site treatment of soil and water allows for a significant reduction in the amount of site-specific infrastructure that may otherwise be required to manage these waste streams at source (i.e. at exploration and mine sites). In addition, production of soil suitable for beneficial reuse is desirable in an area where soil is naturally scarce.

4.0 ENVIRONMENTAL SETTING

Cambridge Bay, including the CBSWTF, is situated within the Northern Arctic ecozone (ECG 2013). In this ecoregion, the landscape predominantly consists of low rolling plains covered with soil and rock debris left by glaciers. Many coastlines are characterized by wide flat plains with perennially frozen ground (permafrost). Mean annual temperatures range from -30 to -35°C in winter and from 5°C to 10°C in summer. Mean annual precipitation is 100-200 mm, with snow potentially falling during any month. Much of the region is devoid of plants, with the exception of some coastal lowlands and nutrient rich sheltered valleys. Muskox, Caribou, Arctic Fox and Polar Bear are the three dominant large mammals in the area, with the Collared Lemming being the only small mammal. Birds including Snowy Owl, Snow Geese, Canada Geese, and Horned Larks are also common to the region (ECG 2013).

5.0 WASTE TYPES

Materials received at the site for treatment will include petroleum hydrocarbon-contaminated soil, water, and snow. All materials are profiled prior to receipt to ensure that they meet acceptance criteria (Appendix A). Contaminated soil undergoes treatment via bioremediation. To support effective and efficient treatment, the soil is mechanically mixed and amendments such as water and surfactants may be added to modify pH, moisture content and enhance bioavailability of contaminants. Once the bioremediation process has been given adequate time, soil is sampled to confirm it meets discharge/beneficial reuse criteria (as presented in Appendix A). Soil meeting reuse criteria is hauled off site for local beneficial reuse, such as backfill or alternative daily cover at the Cambridge Bay Landfill. Soil not meeting beneficial reuse criteria is hauled off site for disposal at an appropriate facility such as a Class II landfill. Similarly, water, snowmelt and biotreatment pad leachate are all collected and treated through the use of physical absorption by spill booms placed in the water and the sue of flocculants and oxidants to precipitate out or oxidized contaminants.

Water meeting discharge criteria is then used as a soil amendment on the biotreatment pad, for dust suppression or released to the environment at a designated location. Water not meeting discharge criteria is hauled off site for disposal at an licensed approved receiving facility.

Additional waste streams include spent absorbent pads/booms from the pond, and contaminated soil, snow and water as well as spent spill response material that may arise from an accidental spill. Potential environmental effects arising from waste management on site are considered negligible: only treated water meeting discharge criteria is released to the environment.

Activities on site are limited to those associated with operation and maintenance of the biotreatment pad and water treatment. No vehicles or additional equipment are stored or maintained on site, nor is there an office or full-time personnel on site. As such, no wastes associated with these activities are expected to be generated.

A portion of the bermed and lined soil treatment pad is used for the storage of hazardous waste containers (drums, bags etc.) that are awaiting transportation to authorized facilities. These types of waste could include fuels, oils, solvents and glycols which require consolidation, containerization and temporary storage onsite while awaiting shipment to authorized facilities.

Table 2. Waste Streams, Source of Generation and Characteristics, Cambridge Bay SWTF

Waste Stream	Source of Generation	Characteristics	Management Option	Volume
Treated soil	Biotreatment	Bioremediated soil	Beneficial reuse off-site as fill or alternative daily cover at the Cambridge Bay landfill	Up to 3,000 m^3/year
Petroleum hydrocarbon-contaminated soil	Biotreatment	Soil not successfully bioremediated	Transported off site for final disposal at an approved Class II Landfill	Negligible

Treated water	effluent	Water, snow melt and/or biotreatment pad effluent treated, meets discharge criteria	Beneficial reuse as a dust suppressant, application to biotreatment pad as a soil amendment, or discharge to the environment	Up to 10 m^3/day between June 1 and Sept 30
Petroleum hydrocarbon-contaminated water	effluent	Water not successfully treated	Transported off site for final disposal at an approved licensed facility	Negligible
Spent spill response materials	Spill or accidental release from facility or vehicles absorbent booms from effluent pond	Petroleum hydrocarbon-contaminated adsorptive materials	Transported off site for final disposal at an approved licensed facility	Unknown
Petroleum hydrocarbon-contaminated soil, water and snow	Spill or accidental release from facility or vehicles	Petroleum hydrocarbon-contaminated soil, water or snow	Treatment through on-site process (biotreatment/effluent pond) or transported off site for final disposal at an approved Class II Landfill	Unknown
Hazardous Wastes	Commercial or industrial	Fuels, Oils, Glycols	Temporary Storage in cell while awaiting shipment	Unknown

6.0 WASTE MANAGEMENT

As a waste management company, KEL incorporates the basic principles of waste management into daily operations, which includes source reduction, reuse, recycling, treatment, release, and disposal. Accordingly, waste is managed on site by:

- Soil biotreatment;
- Water treatment;
- Off-site reuse;
- Effluent discharge; and
- Off-site disposal.

Environmental impacts associated with soil biotreatment, water treatment and effluent discharge, as described below, are anticipated to be negligible based on facility design, implementation of mitigation measures, and adherence to monitoring plans. Baseline studies, mitigation measures and monitoring plans are presented in the *Cambridge Bay Soil and Water Treatment Facility Environmental Protection Plan* (KEL 2026a).

6.1. Soil Treatment

An engineered biotreatment pad is utilized to receive petroleum hydrocarbon-contaminated soil from off-site sources including residential, commercial and industrial properties where a hydrocarbon spill or leak has occurred. Prior to receipt on site, contaminated soil is profiled which may include sampling and analysis and/or review of contaminant Materials Safety Data Sheets (MSDS) information and suitable movement documents to determine suitability for treatment. Soil meeting acceptance criteria in *Cambridge Bay Soil and Water Treatment Facility Operations and Maintenance Plan* Table A1 (KEL 2026b) is deposited into the soil treatment pad. The biotreatment pad has been constructed as per engineered drawings shown in Appendix (C).

The CBSWTF has been designed to receive up to 3,000 m^3 (a drawing of the Facility Plan and Section is provided in Appendix B). The cell is 50 m by 40 m, surrounded by a soil berm approximately 1.5 m tall with 2:1 side slopes measured from existing grade. The base of the cell is graded to a 1.0% slope on the long axis, away from the entrance ramps to control and direct interior drainage towards the water storage cell.

At least 0.2 m of soil fill <8mm in diameter, debris, and organics (protective fill) covers the base of the cell and the sides of the berm to protect the overlaying geomembrane against punctures. A Solmax 460ST 60 mm single textured high-density polyethylene (HDPE) liner (or equivalent) covers the cell floor, overlaps the crest of each berm, and is anchored into the side of the perimeter berms. A 16 oz non-woven geotextile overlays the geomembrane as a precaution against punctures and is anchored into the perimeter berms. Approximately 500 mm of fill free from debris and organics overlays the geotextile on the base of the cell, for torsion protection from turning vehicles. At least 300 mm of fill overlays the interior side slopes of the berms.

While it is not expected to be frequent, there may be times throughout operation wherein it may be necessary to add amendments to the soil to promote effective and efficient breakdown of hydrocarbon constituents. Typical amendments include fertilizer to stimulate natural microflora activity, water to adjust moisture content and lime to modify pH. In more extreme circumstances, other soil conditioners such as surfactants (Ivey-sol or equivalent), can be added to liberate hydrocarbon from soil particle adsorption to promote bioavailability. Similarly, an oxidant (RegenOx or equivalent) may be used to promote oxidation. In the event that any of these are required, MSDS is located in a small storage shed or storage container on site and be accessible to all workers, and the *Cambridge Bay Soil and Water Treatment Facility Spill Contingency Plan* (KEL 2026c) is updated to include an appropriate spill response plan for the soil amendment. Any amendments is procured for immediate use; no long-term storage on site is expected. Over the short term, amendments is stored with appropriate containment in the locked shed on site or off-site at the KEL Office.

Further details pertaining to biotreatment facility operation can be found in the (KEL 2026c).

6.2. Utility Locates

An engineered pond is utilized to accept STF leachate and petroleum hydrocarbon-contaminated water and snow from off-site sources including residential, commercial and industrial properties where a petroleum hydrocarbon spill or leak has occurred. Prior to receipt on site, snow and water is profiled which may include sampling and analysis and/or review of contaminant MSDS information and suitable movement documents to determine suitability for treatment. Water and snow is deposited into an engineered cell and will remain in the cell until snow has melted, at which time the meltwater is directed to an adjacent on-site effluent pond. Effluent generated at the biotreatment pad will also be directed to the engineered pond via portable trash pump.

Engineered Pond

The pond has been designed to contain up to 170 m^3 of water at any one time maintaining a free board of at least 0.3 m. The cell can accommodate snow piled to the height of the top of the berm (0.9 m) to limit the risk of overtopping during spring melt. The cell is designed to be 14 m by 19 m, surrounded by a soil berm approximately 0.8 m tall with 3:1 side slopes measured from existing grade with 0.3 m of freeboard.

At least 0.2 m of soil fill free from material greater than 8 mm in diameter, debris, and organics (protective fill) covers the base of the pond and the sides of the berm to protect the overlaying geomembrane against punctures. The base of the pond area is graded and proof rolled with a smooth drum roller. A GSE NW8 non-woven geomembrane, or approved equivalent, will cover the pond floor overlapping the crest of each berm and is anchored into the side of the perimeter berms. A Layfield Enviro Liner 6140, or approved equivalent, overlays the geomembrane as a precaution against punctures and is anchored into the perimeter berms.

When sufficient water has built up in the pond the water will be sampled and sent to an accredited laboratory for analysis. If the water meets the effluent discharge criteria outlined in Table A4 (KEL 2026b) the water will be discharged to the environment as described in section 6.3.

6.3. Reuse and Disposal

Once bioremediated soil has been analyzed, it is classified as either meeting reuse criteria, or requiring off-site disposal at a approved licensed facility. It is planned that the majority of the soil material meeting reuse criteria in Tables A1 and A2 (KEL 2026b) is used either as fill or as alternative daily cover at the Cambridge Bay Landfill.

Treated effluent water meeting discharge criteria Table A4 (KEL 2026b) is either beneficially reused or discharged to the environment. Treated effluent is batch discharged to the ground surface through a dedicated hose wherein the water will flow overland to natural drainage. Depending on conditions on the biotreatment pad, treated effluent can be applied to the soil lifts to aid in bioremediation and promote dust suppression. Remaining treated effluent is released to the environment adjacent to the Facility. It is expected that discharge from the effluent pond will occur between July 1 and Sept 30. Discharge volumes

will not exceed 10 m^3/day; given reuse options, typical discharge volumes are expected to be much less.

Depending on conditions on the biotreatment pad, treated effluent not meeting discharge criteria can be applied to the soil lifts to aid in bioremediation and promote dust suppression. Material requiring disposal, including untreated water, soil that could not be treated, and spent spill response materials is disposed of at approved waste facility locations.

7.0 DOCUMENTATION AND REPORTING

Waste management reporting is in accordance with requirements set forth in the license and with record keeping and reporting requirements of the Government of Nunavut and KEL's internal Policies and Procedures. The focus of waste management reporting is to ensure that the generation, handling and final disposition of materials is accounted for. The following information for each waste stream collected, stored and reported is as follows:

- Movement documents (Federal Manifests or Bill of Ladings);
- Volume and/or weight;
- Disposal summaries; and
- Applicable analytical and/or profile information.

8.0 TRAINING

Personnel managing waste are certified in Workplace Hazardous Material Information System (WHMIS) and Transportation of Dangerous Goods (TDG). Any waste shipment requiring a Federal Movement Document (FMD) will need to have the FMD filled out by an individual holding a valid certificate in TDG.

9.0 REFERENCES

Canadian Council for the Ministers of the Environment (CCME). 2014. Canadian Environmental Quality

Government of Nunavut (GN). 2014. Environmental Guidelines for the Management of Contaminated Sites. Department of Environment.

Ecosystem Classification Group. (ECG) 2013. Ecological Regions of the Northwest Territories – Northern Arctic. Department of Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, NT, Canada.

Kitikmeot Environmental Ltd. (KEL). 2026a. Cambridge Bay Soil and Water Treatment Facility Environmental Protection Plan.

Kitikmeot Environmental Ltd. (KEL). 2026b. Cambridge Bay Soil and Water Treatment Facility Operation and Maintenance Plan.

Kitikmeot Environmental Ltd. (KEL). 2026c. Cambridge Bay Soil and Water Treatment Facility Spill Contingency Plan.

Science Applications International Corporation (SAIC). 2006. Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils. Presented to Contaminated Sites Division and Emergencies Engineering Technologies Office (EETO), Environmental Technology Centre, Environment Canada.

Transportation of Dangerous Goods Regulations. SOR/2012-245

APPENDIX A

Soil Acceptance and Reuse Criteria

Table A1. Acceptance and Re-Use criteria for Petroleum Hydrocarbons to be met prior to industrial use of treated contaminated soils

PHC Reuse Criteria	ADC Fine-Grained Soil (mg/kg)	ADC Coarse-Grained Soil (mg/kg)	Facility Acceptance Criteria (mg/kg)
Benzene	0.03	0.0068	N/A
Toluene	0.37	0.08	N/A
Ethylbenzene	0.082	0.018	N/A
Xylenes	11	2.4	N/A
PHC (F1)	960	960	12500
PHC (F2)	320	320	12500
PHC (F3)	260	260	10000
PHC (F4)	2500	1700	5000

* If testing for particle size is not completed to determine if the soil is Coarse or Fine – grained, soil must be treated to achieve the Coarse-grained soil criteria

Source:
Government of Nunavut's Environmental Guidelines for the Management of Contaminated Sites.

Table A2. Acceptance and Re-Use criteria for Metals to be met prior to industrial use of treated contaminated soils

Parameter	Units	CCME Industrial Guidelines for Metals in Soil (mg/kg)	Facility Acceptance Criteria (mg/kg)
Antimony	mg/kg	40	40
Arsenic	mg/kg	12	12
Barium	mg/kg	2000	2000
Beryllium	mg/kg	8	8
Cadmium	mg/kg	22	22
Chromium (total)	mg/kg	87	87
Chromium, hexavalent (Cr(VI))	mg/kg	1.4	1.4
Cobalt	mg/kg	300	300
Copper	mg/kg	91	91
Lead	mg/kg	600	600
Mercury	mg/kg	50	50
Molybdenum	mg/kg	40	40
Nickel	mg/kg	50	50
Selenium	mg/kg	2.9	2.9
Silver	mg/kg	40	40
Thallium	mg/kg	1	1
Tin	mg/kg	300	300
Uranium	mg/kg	300	300
Vanadium	mg/kg	130	130
Zinc	mg/kg	360	360

Source:
Government of Nunavut's Environmental Guidelines for the Management of Contaminated Sites.



Table A3: Field Parameters to be measured with water quality meter at time of sampling in the field.

Parameters
pH
Electrical conductivity (EC)
Total suspended solids (TSS)
Temperature (°C)
Visual assessment for hydrocarbon sheen

Sources:
GN Department of Environment Environmental Guideline for Industrial Waste Discharges

Table A4. Treated Water Discharge Guidelines

Parameters	Units	Site-Specific Guidelines
Parameters	**Units**	**Site-Specific Guidelines**
Hydrocarbons/Phenols/PAHs		
Benzene	mg/L	1
Toluene	mg/L	2
Ethylbenzene	mg/L	2.5
Xylenes	mg/L	0.3
EPH	mg/L	5.0
LEPH	mg/L	0.5
Total phenol	mg/L	2.0
PAHs	mg/L	various
Ethylene Glycol	mg/L	1920
General Water Quality		
Alkalinity		-
Chloride	mg/L	1500
Hardness		-
Nitrate	mg/L	400
Nitrite	mg/L	0.2-2.0 depending on Cl of receptor

Table A4. Treated Water Discharge Guidelines

Parameters	Units	Site-Specific Guidelines
Salinity	PSU (ppt)	10-40 depending on natural salinity of receptor
Total Metals		
Arsenic (As)	mg/L	0.125
Beryllium (Be)	mg/L	1
Boron (B)	mg/L	12
Cadmium (Cd)	mg/L	0.015
Chromium, Hexavalent (Cr6)	mg/L	0.015
Chromium, Trivalent (Cr3)	mg/L	0.560
Cobalt (Co)	mg/L	0.04
Copper (Cu)	mg/L	0.02
Lead (Pb)	mg/L	0.02
Mercury (Hg), Total	mg/L	0.00025
Molybdenum (Mo)	mg/L	10
Nickel (Ni)	mg/L	0.083
Selenium (Se)	mg/L	0.02
Silver (Ag)	mg/L	0.015
Zinc (Zn)	mg/L	0.1

Parameters without guidelines indicated by "-"

BC Environmental Management Act Contaminated Sites Regulations, Schedule 3.2 Generic Numerical Standards (marine/estuarian waters), 2023

Canadian Council of Ministers of Environment Water Quality Guidelines for the Protection of Aquatic Life, as amended, 2026

Where no guideline exists, parameter is analyzed for ongoing trend analysis

APPENDIX B

General Location of Soil and Water Treatment Facility



LOCATION PLAN

Source: ESRI

N

390 195 0 390

Meters

KBL

Scale:	1:24000
Date:	2020-08-07
File #:	4300
Drawn By:	DLS
Designed By:	DLS
Reviewed By:	KO

KBL Environmental LTD.

Cambridge Bay
Soil Treatment Facility



N

30 15 0 30

Meters

SITE MAP

Source: ESRI

KBL

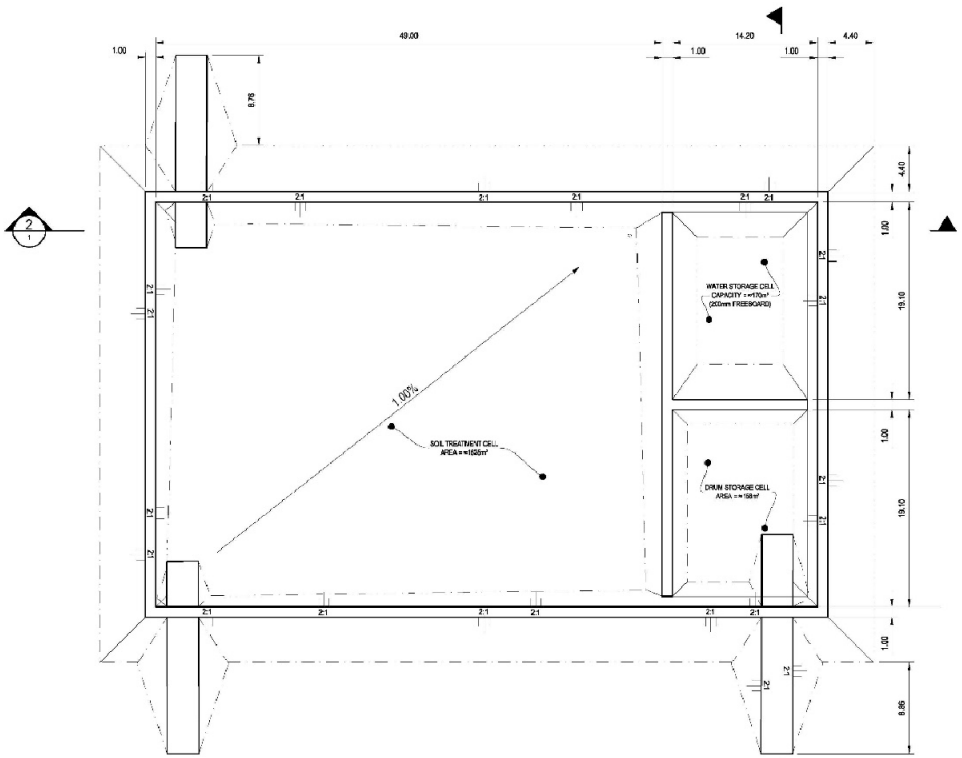
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File #:	4300
Drawn By:	DLS
Designed By:	DLS
Reviewed By:	KO

KBL Environmental LTD.

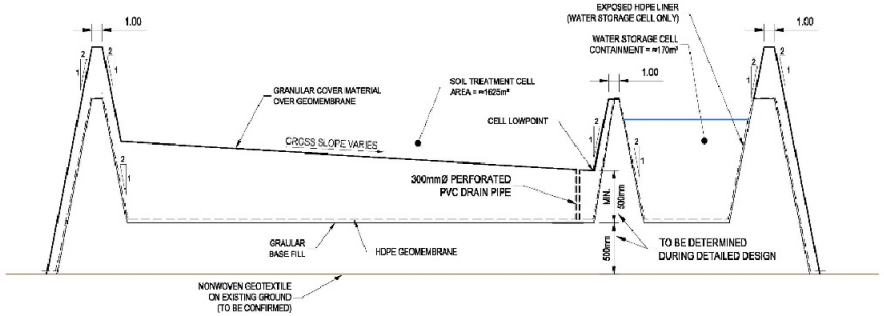
Cambridge Bay
Soil Treatment Facility

APPENDIX C

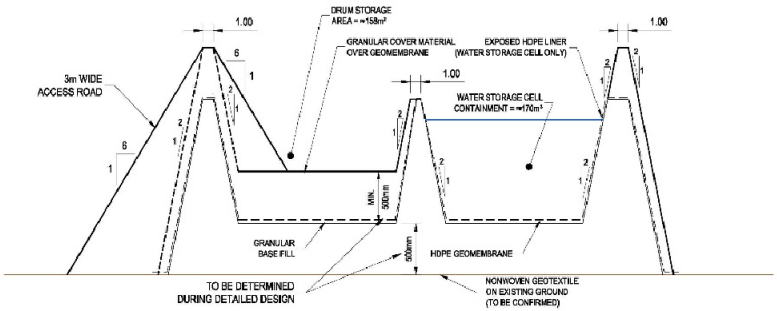
Facility Design Drawing



1 PLAN
1:250



2 SECTION
1:250h 1:25v



3 SECTION
1:250h 1:25v

NOTES:

1. FIGURE IS IN SUPPORT OF KBL'S, APPLICATION FOR A DEVELOPMENT PLAN FOR A SOIL TREATMENT FACILITY IN CAMBRIDGE BAY, NU.
2. FIGURES PRESENT GENERAL LAYOUTS AND CONCEPTUAL DESIGNS. FINAL DESIGNS AND CONSTRUCTION WILL DEPEND ON FIELD CONDITIONS AND LOCALLY AVAILABLE CONSTRUCTION MATERIALS.
3. SCALES AND DIMENSIONS ARE APPROXIMATE.
4. EXISTING GRADE IS ASSUMED TO BE FLAT AND LEVEL. ACTUAL CONFIGURATION WILL MAKE USE OF ADVANTAGEOUS NATURAL SLOPE ORIENTATIONS.
5. BERM HEIGHT MAY BE INCREASED TO ACCOMMODATE FIELD CONDITIONS.
6. GEOMEMBRANE INSTALLATION QUALITY CONTROL AND QUALITY ASSURANCE SHALL BE CONDUCTED THROUGHOUT INSTALLATION ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. BERMS AND BASE SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY IN LIFTS OF UP TO 300 MILLIMETRES.
8. PERMAFROST INSULATION LAYER AND GRADING FILL IS TO BE GRADED AND PROOF ROLLED WITH SMOOTH DRUM ROLLER OR SMOOTH PLATE PRIOR TO PLACEMENT OF GEOTEXTILE AND GEOMEMBRANE.
9. BERM SLOPES TO BE CONFIRMED DURING DETAILED DESIGN.
10. MINIMUM DEPTH OF BASE FILL ABOVE EXISTING GROUND TO BE CONFIRMED DURING DETAILED DESIGN.

REDUCED

Conditions of Use

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No.	Revision / Issue	Date	By
01	ISSUED FOR CLIENT REVIEW	01.12.2018	KB

DESIGN: KB | DRAWN: TPW | CHECKED: KB | QUALITY CONTROL: KB
DATE: APRIL 2018
SCALE: AS NOTED

KBL SOIL TREATMENT FACILITY - CONCEPTUAL DESIGN
CAMBRIDGE BAY, NUNAVUT

PROJECT NO. 15-2230-1000

SITE PLAN AND SECTION

SHEET NO. 1