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E.A.	1
W. RES.	1
File-	1784

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May 16, 2002

File: PIN-M 3.6

Greg Cook
Environmental Assessment Officer
Water Resources Division
Indian and Northern Affairs Canada
P.O. Box 1500
Yellowknife, NT X1A 2R3



Dear Mr. Cook

RE: Water Use License Application N7-1-1784 for PIN-M, Cape Parry DEW Line Site

On behalf of Defence Construction Canada, we are submitting the following information and clarifications as requested in your letter dated April 22, 2002 regarding the above noted water use license application.

Item 1 - Borrow pit reclamation: When a borrow excavation is completed, the sides of the excavation are to be graded to achieve gentle slopes which fit the local topography. Swales or ditches are to be constructed as required to prevent surface standing water. Upon completion of final grading, all slopes are to be in a stable condition and any organic material that was stripped and stockpiled at the start of borrow development is to be spread around the reclaimed borrow area.

Item 2 – Guidelines: A formal response from Defence Construction Canada regarding the use of CCME Guidelines will be provided at a later date.

Item 3 – Landfill extension construction: Please see the attached pdf file with the design drawings for details of the landfill extension construction. As only non-hazardous and non-leachable materials are to be placed within this landfill, there would not be any potential for contaminant migration from this landfill.

Item 4 – Sewage treatment: Sewage is to be discharged to a temporary lagoon area, located within the DND reserve. The lagoon is to be sized to provide capacity for 90 days of wastewater storage or the duration of the construction season, whichever is less. The maximum fluid height shall not exceed one metre. The temporary lagoon is to be located a minimum of 100 m from the construction camp and other temporary facilities, a minimum of 100 m from drainage paths, a minimum of 450 m from water bodies supporting aquatic life, and downwind of the construction camp. At the completion of construction, the temporary lagoon is to be backfilled with a minimum of 300 mm of granular fill over the settled solids.

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Greg Cook
Indian and Northern Affairs Canada
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Item 5 – Wildlife and vegetation mitigation measures: Please see the mitigation measures attached to this document.

Item 6 – Spill Contingency Plan: Please see the pdf document containing the spill contingency plan, updated as per the Northwest Territories Water Board's *Guidelines for Contingency Planning*, dated January 1987.

We trust the information provided addresses your concerns. If you have any further questions or comments, please feel free to contact the undersigned at 403-270-9220.

Sincerely,

UMA ENGINEERING LTD.

Eva Schulz, P.Ag.
Environmental Scientist

EMS:elt

Encl. Design Drawings
Mitigation Measures
Spill Contingency Plan

cc: Suzanne Belanger-Fontaine, DCC

R331!

MITIGATION MEASURES

Under certain circumstances, marine vessels can adversely affect wildlife. Sea mammals and flocks of waterfowl are to be avoided by all shipping. Where feasible, ships shall maintain a minimum distance of 1 km from known seabird colonies.

Where concentrations of birds or mammals are known to be near construction sites, charter pilots shall be advised to maintain an altitude of at least 500 metres and preferably 1000 metres, above ground or water, when passing over these areas. Low-level flights to observe or photograph wildlife shall not be permitted. **LOW LEVEL FLIGHTS OVER BIRD SANCTUARY ARE PROHIBITED.**

The murre colony at PIN-M can be expected to be occupied as soon as open water appears. This species is susceptible to impacts due to the high numbers that congregate in one area, and the precarious location of the egg and young. Activities adjacent to the colony shall only proceed prior to the arrival or after the nesting period of these birds.

There is concern over human/wildlife contact which could include harassment by project personnel causing disruption of activities such as calving, breeding, nesting and rearing, all of which may take place on the site proper. Prevent avoidable conflicts with wildlife using the following procedures:

- .1 Employ a dedicated wildlife monitor(s) at all times.
- .2 Require all on-site personnel to be familiar with the contents of "Safety in Bear Country"
- .3 Do NOT feed, injure or harass wildlife.
- .4 Ensure that clean up activities do NOT interfere with wildlife movement through the area.
- .5 Do NOT disturb birds nesting on site.
- .6 Vehicle, vessel and aircraft movements shall conscientiously avoid all known concentrations of wildlife or areas known to be frequented by important species or concentrations of wildlife.
- .7 Do NOT attempt to chase, catch, divert, follow or otherwise harass wildlife by aircraft, vehicle, boat or on foot.
- .8 Control refuse and make inaccessible to bears and other scavengers.
- .9 In the event of unanticipated or unavoidable contact with mammals, act in accordance with the contingency plans. Familiarize all individuals working at or visiting the site with this plan as part of their orientation to the work site.
- .10 Equipment and vehicles shall yield to wildlife, where possible.
- .11 Except in the vicinity of the airfield, advise charter aircraft pilots not to fly at elevations lower than 500 metres above ground or water.
- .12 In the event that wildlife are spotted from the air, aircraft shall not make descents for observation or photography.
- .13 Domestic or wild pets are not allowed in camps with the exception of controlled watch dogs.

MITIGATION MEASURES

- .14 Project personnel shall not be permitted to possess personal firearms. The only firearms allowed on site shall be for protection from bears and shooting of animals exhibiting aberrant behavior. The firearms shall be controlled by the Contractor's Site Superintendent.
- .15 Report vehicle collisions with wildlife, encounters with troublesome animals, and/or the presence or potentially troublesome animals to the Engineer and to the District Wildlife Officer.

Disruption of avifauna during the nesting period can result in reproductive failure. For this reason, concentrations of nesting birds such as the murre colony at PIN-M should be avoided during this period. Raptors should also be avoided because of their comparatively low abundance and their position at the top of the food web. Impacts on these species can be minimized by scheduling disruptive activities outside the nesting period and by discouraging nesting at work areas.

Polar bear and grizzly bear occurrences are rare in the vicinity of the PIN-M site. However, bears are a potential hazard to workers at all times and the situation can be aggravated by the presence of any substance that a bear perceives to be food. Dedicated wildlife monitors should be employed at all times during clean up operations.

Operators of vehicles and equipment shall make every effort to avoid encounters with large mammals. Congregations of animals near food or garbage are a potential problem which can be overcome by proper disposal of food wastes. Concentrations of scavenging animals such as wolves, foxes and bears increase the risk of diseases, particularly rabies, and danger to personnel. The following precautions and actions are to be taken at each site:

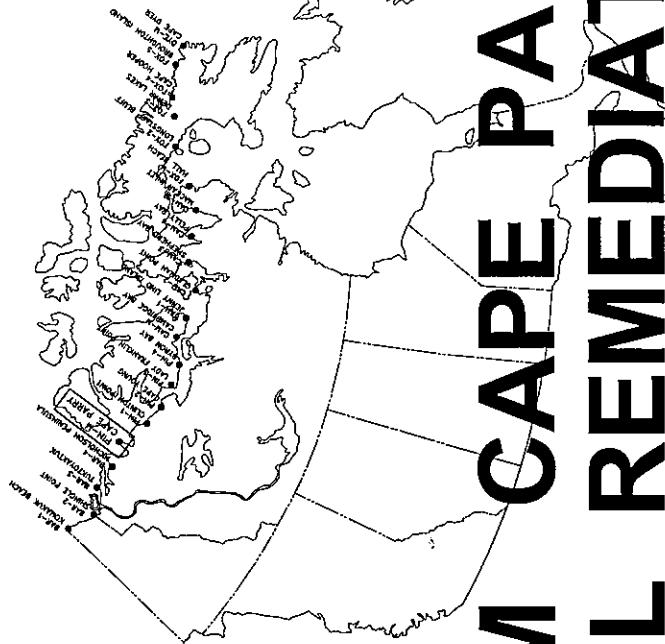
- .1 The killing of wildlife for any reasons at variance with the Wildlife Act and regulations is an offence. Coordinate procedures for handling wildlife problems and incidents with the regional GNWT wildlife officer.
- .2 Advise personnel to maintain watch for bears and immediately report any sighting to the Engineer. Immediately notify all personnel of the sighting. If the threat of attack is considered significant, assign a full time bear monitor to the site.
- .3 Use vehicles, noisemakers and, if necessary, a firearm to frighten a bear away from the site.
- .4 Shoot a bear only if the bear returns repeatedly, refuses to leave or directly threatens human safety. Killing is considered a last resort and, if at all possible, contact the appropriate wildlife officer and alert them to the problem. If a bear is to be shot, assign the task only to a person familiar with and competent with the camp firearm. Wounded or otherwise aggravated bears can be extremely dangerous.
- .5 Report the death of a bear to the Engineer and the appropriate GNWT wildlife officer who will issue instructions as to disposal of the carcass and the formal reporting procedures to be followed.
- .6 Due to the possibility of rabies, shoot any animal which bites a human and retain the carcass intact pending instructions from the appropriate wildlife officer. If possible, notify the wildlife officer before any drastic action is taken. Seek medical advice from the appropriate medical facility for treatment of animal-inflicted wounds.



DEW LINE CLEAN UP PROJECT

DRAWING INDEX	
DRAWING No.	TITLE
SITING	GENERAL SITE PLAN / PROJECT SURVEY
H-278/3-9101-101	WEST LANDFILL AREA SITE PLAN
H-278/3-9101-102	STATION AREA LANDFILL SITE PLAN
H-278/3-9101-103	MANY LANDFILL AREA SITE PLAN
H-278/3-9101-104	WEST POINT LANDFILL AREA SITE PLAN
H-278/3-9101-105	STATION AREA LANDFILL EXTENSION CROSS SECTIONS
H-278/3-9101-106	CROSS SECTIONS

PIN-M CAPE PARRY LANDFILL REMEDIATION TENDER DRAWINGS





FRANKLIN

FRANKLIN BAY

This topographic map shows contour lines (elevation 3000 ft) and drainage courses across Franklin Bay. Key features include:

- WEST LANDFILL:** Indicated by a shaded area and labeled "WEST LANDFILL".
- DRAINAGE COURSE TO BE EXCAVATED WITH TYPE 2 STONE BACKFILLED WITH THE DIRT REMOVED AND REMOVED (SEE NOTE 6):** Labeled "TP-17" and "TP-18".
- APPROXIMATE PERIMETERS OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 2 STONE BACKFILLED WITH THE DIRT REMOVED AND REMOVED (SEE NOTE 6):** Labeled "TP-17" and "TP-18".
- APPROXIMATE PERIMETERS OF PARTIALLY SHREDDED AND BURIED DEBRIS TO BE REMOVED AND REMOVED WITH TYPE 1 GRANULAR FILL: AREAS INDICATED BY HATCHED AREA (SEE NOTE 6):** Labeled "TP-19" and "TP-20".
- APPROXIMATE PERIMETER OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 1 GRANULAR FILL AS DIRECTED BY THE ENGINEER (SEE NOTE 6):** Labeled "TP-21".
- APPROXIMATE PERIMETER OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 1 GRANULAR FILL AS DIRECTED BY THE ENGINEER (SEE NOTE 6):** Labeled "TP-22".
- POTENTIAL STORMWATER SOURCES:** Labeled "TP-23".
- DRRAINAGE COURSES:** Labeled "TP-24" and "TP-25".
- LANDFILLS:** Labeled "TP-26" and "TP-27".
- NOTES:**
 - TP-17: APPROXIMATE PERIMETERS OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 2 STONE BACKFILLED WITH THE DIRT REMOVED AND REMOVED (SEE NOTE 6).
 - TP-18: APPROXIMATE PERIMETERS OF PARTIALLY SHREDDED AND BURIED DEBRIS TO BE REMOVED AND REMOVED WITH TYPE 1 GRANULAR FILL: AREAS INDICATED BY HATCHED AREA (SEE NOTE 6).
 - TP-19: APPROXIMATE PERIMETERS OF PARTIALLY SHREDDED AND BURIED DEBRIS TO BE REMOVED AND REMOVED WITH TYPE 1 GRANULAR FILL AS DIRECTED BY THE ENGINEER (SEE NOTE 6).
 - TP-20: APPROXIMATE PERIMETERS OF PARTIALLY SHREDDED AND BURIED DEBRIS TO BE REMOVED AND REMOVED WITH TYPE 1 GRANULAR FILL AS DIRECTED BY THE ENGINEER (SEE NOTE 6).
 - TP-21: APPROXIMATE PERIMETER OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 1 GRANULAR FILL AS DIRECTED BY THE ENGINEER (SEE NOTE 6).
 - TP-22: APPROXIMATE PERIMETER OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 1 GRANULAR FILL AS DIRECTED BY THE ENGINEER (SEE NOTE 6).
 - TP-23: POTENTIAL STORMWATER SOURCES.
 - TP-24: APPROXIMATE PERIMETER OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 2 STONE BACKFILLED WITH THE DIRT REMOVED AND REMOVED (SEE NOTE 2).
 - TP-25: APPROXIMATE PERIMETER OF LANDFILL EXCAVATION AREA TO BE EXCAVATED WITH TYPE 2 STONE BACKFILLED WITH THE DIRT REMOVED AND REMOVED (SEE NOTE 2).

TEMPORARY BENCHMARKS					
NO.	COORDINATES		ELEV.	DESCRIPTION	
	NORTHING	EASTING			
5	10 345.104	9 303.263	12.131	PI-MAIL	
8	10 370.845	9 365.208	0.012	PI-MAIL	

General Notes:

**1. ALL ELEVATIONS ARE REFERENCED TO
MEAN SEA LEVEL.**

1. ALL HAZARDOUS DUSTS WITHIN AREA TO BE PLACED IN STATION, AREA LANDFILL EXTENSION.
2. HORIZONTAL DISTANCE REFERENCED TO SURVEY CONTROL MONUMENTS.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DESTROYED.
5. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DESTROYED.
6. LIMIT OF EXCAVATION TO BE FIELD VERIFIED BY EXCAVATOR OWNER OR CONTRACTOR. THE EXCAVATOR IS TO TEST THE EXCAVATED SOIL AND DETERMINE IF IT IS DUST FREE. IF DUST IS FOUND, DUST REMOVAL AND CONSTRUCTION OF A DUST CONTAINMENT WALL IS TO BE VERIFIED BY ESG ON BEHALF OF THE CONTRACTOR. REMOVAL OF DUST FROM THE EXCAVATOR AND CONSTRUCTION IS TO BE DETERMINED BY THE DESIGNERS AND DIRECTED BY THE CONTRACTOR.

INDUCTION	CONCERNED - ASSESSMENT	
	NO. OF EXERCISE	NO. OF ACCIDENTS
CY	1	0
STATION	1	0
CHE/PC	1	0
SEARCHED	1	0
TRAILING	1	0
RESCUED	1	0
DECONTAMINATED	1	0
DISPOSED	1	0
REMOVED	1	0
REMOVED NO. 1-270-9-510-102	1	0

Canada

