

Philip Warren, Defence Construction Canada, CAM-1, Site Clean up, Jenny Lind Island, Kitikmeot

P.O. Box 1360 Cambridge Bay, NU X0B 0C0 Phone: (867) 983-4600 Fax: (867) 983-2594

The decision of the Board in this case is 12.4.4 (a) **the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;**

Reason for Decision

NIRB's decision is based on specific considerations that reflect the primary objectives of the Land Claims Agreement. Our considerations in making this decision included:

- the potential impact of further contamination of the ecosystem from PCB's, heavy metals, petroleum products or other materials entering the environment and subsequently into the food chain from failure of the designed storage and containment structures;
- the capability of plans for the clean up, storage and removal of contaminated soils, spills and to prevent the further migration of PCB's and petroleum products;
- the capability of plans to control runoff and drainage control within and around the facility;
- the potential to contaminate marine environment through barge loading and off-loading and marine shipping;
- the potential to contaminate land and surrounding waterbodies from on land transport of contaminated waste;
- the potential to contaminate clean areas from wind blown debris or contaminated machinery;
- the potential to impact fish or fish habitat;
- the impact and disturbance to nesting migratory birds and their habitat along coastal areas due to activities;
- the potential to impact on traditional hunting and fishing activities;
- the potential to impact permafrost;
- the potential impact from disturbance to vegetation;
- the potential impacts to the landscape;
- potential impact of quarrying activities to the ecosystem;
- the potential impact to the ecosystem from accidental spillage of petroleum products;
- the storage and disposal of fuel, garbage, sewage, and grey water, and the impact of these on the ecosystem.

Terms and Conditions:

- That the terms and conditions attached to this screening decision report will apply.

PART A: General

1. The Proponent shall provide NIRB with all permits and authorizations required to undertake the project prior to the commencement of on site activities.
2. The Proponent shall file a comprehensive annual report with the Board no later than March 31 of the year following the calendar year reported, for the duration of the Project, which shall contain the following information:

- a. A summary of activities undertaken for the year, including but not limited to the amount contaminated soil removed from the site;
 - b. A work plan for the following year;
 - c. An update on the extent of contamination on-site and supporting documentation;
 - d. Wildlife encounters and actions/mitigation taken;
 - e. A summary of local hires and initiatives;
 - f. A summary of community consultations undertaken and the results (if any);
 - g. A summary of site-visits by inspectors with results and follow-up actions;
 - h. A summary of site-visits with community members (if conducted);
 - i. Site photos and updated site maps;
 - j. The number of barges utilized;
 - k. Issues related to monitoring including updates to the Plan;
 - l. Revisions to the Abandonment and Restoration Plan; and
 - m. A summary of how it has complied with all project Terms and Conditions and how the terms and conditions are achieving their purpose.
3. NIRB shall be notified prior to any changes in operating conditions or plans associated with this land use activity.
4. Any amendment requests deemed by NIRB to be outside the original scope of the project will be considered a new project.

PART B: Physical Environment

5. The Proponent shall control all movement of heavy machinery, vehicles and equipment within the hazardous material management area to prevent the dispersion of potentially hazardous dust and materials into the environment.
6. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting. The Proponent shall suspend operation if rutting occurs.
7. The Proponent shall avoid causing soil damage that disturbs natural drainage patterns or exposes permafrost. These areas shall be repaired immediately.
8. The Proponent shall leave a strip of undisturbed vegetation at least thirty (30) metres width between waterbodies and roads and quarries.
9. The Proponent shall remove any obstruction to natural drainage.

PART C: Water

10. The Proponent shall only use the specified volume of water from sources approved by the Nunavut Water Board.
11. The Proponent shall collect all wash water and dispose of it as directed by the Nunavut Water Board.
12. The Proponent shall ensure that all water intake hoses are equipped with a screen with an appropriate mesh size to ensure that there is no entrapment of fish.

PART D: Biological Environment

13. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this land use operation.
14. The Proponent shall ensure that there is minimal disturbance to any nesting birds and wildlife in the area. Harassment of wildlife is prohibited. This includes persistently worrying or chasing animals, or disturbing large groups of animals.
15. Pursuant to the Migratory Bird Convention Act Regulations the Proponent shall not disturb or destroy the nests or eggs of migratory birds. The period from June 1 to August 15 is the general migratory bird breeding season. If nests containing eggs or young are encountered, the Proponent shall avoid these areas until nesting is complete and the young have left the nest.
16. The Proponent shall ensure that aircraft pilots adhere to flight altitudes of greater than 610 m above ground level, unless there is a specific need for low-level-flying which does not to disturb wildlife.
17. The Proponent shall ensure that aircraft maintain a vertical distance of 1000m and a horizontal distance of 1500m from groups/flocks of birds.
18. The Proponent shall not feed wildlife.
19. The Proponent shall follow procedures outlined in the "Safety in Bear Country Manual", and should contact the regional wildlife officer for information and advice on measures which should be taken to minimize the possibility of conflicts/interactions with bears.
20. The Proponent shall not locate any operation so as to block or cause diversion to the migration of caribou.
21. From May 15 to July 15, the Proponent shall cease activities that interfere with caribou migration or calving, such as the movement of equipment and ATV or snowmobile use until the caribou and their calves have vacated the area.
22. The Proponent shall ensure that during the presence of caribou and muskox within sight and sound of a camp that all personnel will remain quietly in camp.
23. The Proponent shall ensure that there is no hunting or fishing by employees or any contractors hired (unless Nunavut authorizations are obtained).
24. The Proponent shall ensure compliance with Section 36 of the Fisheries Act which requires that no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.
25. The Proponent shall ensure that land use activities avoid environmentally sensitive areas (denning, nesting areas) by a minimum of 250metres.

PART E: Stream Crossings

26. The Proponent shall ensure that culverts are removed upon abandonment.

PART F: Transportation and storage of contaminated waste

27. For the loading of contaminated soil into shipping containers, the Proponent must ensure that:

- a. Workers in the storage area wear protective clothing and follow safety protocols for working with contaminated soil;
 - b. All spills are immediately cleaned up and reloaded into containers; and
 - c. WHMIS standards are fully adhered to.
28. The Proponent shall install an impermeable membrane on the ground/floor of the contaminated soil storage site/facility before storing contaminated soil on site.
29. The Proponent shall rest containers on a wooden platform that will be used solely for this purpose each season. Containers will not rest directly on the beach.
30. The Proponent shall ensure that the loading of containers onto barges and ships is only conducted in good weather. Specific factors to consider are wind, ice concentrations, fog, waves, and icebergs.
31. When transferring hazardous or contaminated cargo, the Proponent shall ensure that conditions are such that the barges can be pulled up immediately adjacent to the second vessel, leaving no space large enough for a container to fall through between the two vessels.
32. The Proponent shall ensure that contaminated waste containers are strong enough to easily withstand dropping events without any breakage of the seal.
33. The Proponent shall secure containers on the barge.
34. The Proponent shall use waterproof containers that withstand corrosion in seawater for a minimum of 15 years.
35. The Proponent shall use containers that comply with the *International Maritime Organization Dangerous Goods Code* and the *Transportation of Dangerous Goods Act*.
36. The Proponent shall physically connect containers by chains or safety lines to the barge or vessel at all times during transfer to other vessels.
37. If the containers are reused in subsequent years, the Proponent shall ensure that the containers are decontaminated, and washing effectiveness measured and compared to a minimum standard (i.e. <1.0 mg/m² PCBs by swab test).
38. The Proponent shall, for all handling operations beginning at Jenny Island and ending at the licensed disposal facility, follow not only the requirements of the *Transportation of Dangerous Goods* legislation in Canada, but also the following legislative requirements:
 - a. The *Arctic Waters Pollution Prevention Act*;
 - b. The Guidelines for the Operation of Tankers and Barges in Canadian Arctic Waters;
 - c. The Arctic Ice Regime Shipping System Standards;
 - d. The *International Maritime Organization Dangerous Goods Code*; and
 - e. All other environmental and regulatory laws in Canada, including but not limited to: the *Fisheries Act*; *Canada Shipping Act*; *Safe Containers Convention Act*; *Nunavut Public Health Act*; *Nunavut Safety Act*; *Nunavut Spill Contingency Planning and Reporting Regulation*; and the *Canada Labour Act*.
39. The Proponent shall ensure that the following requirements are met for transportation at sea:
 - a. The designated carrier will have seaworthy certifications and Ice Class certification;

- b. The designated carrier will follow all applicable environmental regulations;
 - c. The containers will be secured to prevent movement during sea transport;
 - d. The vessel will be on a direct route and will not approach any communities, thereby reducing the possibility of a vessel wreck occurring in proximity to community food chains;
 - e. The designated carrier obtains shipping insurance sufficient to enable an environmentally proper salvage in the event of a shipwreck;
 - f. The shipping facilities will have a retrieval process in place for retrieving containers if they should sink;
 - g. All containers will be double sealed; and
 - h. The pick-up will be scheduled during the ice-free period.
40. The Proponent shall ensure that the following is adhered to for the transportation of containers on land:
- a. The designated carrier will follow approved Transportation of Dangerous Goods Regulations;
 - b. Containers will be secured to prevent movement during land transport;
 - c. The designated carrier will have a spill contingency plan in place that will immediately and effectively remove all spilled PCB-contaminated soil in the event of a spill;
 - d. The carrier will have insurance to cover public liability and property damage, and pollution liability;
 - e. Trained personnel will perform the handling, loading and driving operations; and
 - f. The carrier will have a waste-tracking system in place.
41. The Proponent shall ensure that all contractors, including those handling the soils on-site, the shipping company, and the company responsible for transporting the soils in the final deposition site, are fully licensed and have all the permits necessary to operate such facilities.

PART G: Storage and Management of Hazardous Waste and other Hazardous Materials

42. The Proponent shall ensure that all waste and hazardous material management areas are located a minimum distance of one hundred (100) metres from the nearest water body.
43. The Proponent shall have an Emergency Response and Spill Contingency Plan approved by the Nunavut Water Board prior to the commencement of on-site activities.
44. The Proponent shall have emergency response equipment appropriate for the hazardous waste stored on site.
45. The Proponent shall ensure that any chemicals or wastes associated with the project do not spread to the surrounding lands or enter into any water body.
46. The Proponent shall not mix or dilute any hazardous materials with any substance or divide into smaller quantities to avoid meeting the definition of hazardous waste.
47. The Proponent shall store hazardous material in their original containers, where possible, or in containers manufactured for the purpose of storing hazardous waste. The containers must be sealable and not damaged or leaking.
48. The Proponent shall place containers such that each container can be inspected for signs of leaks and deterioration.

49. The Proponent shall maintain a record of the type and amount of waste in storage.
50. The Proponent shall label all containers according to the requirements of the Work Site Hazardous Materials Information System (WHMIS) of the Safety Act or the relevant Transportation Authority.
51. The Proponent shall ensure that residual waste, petroleum or other chemicals, from barrels are not released into the environment.
52. The Proponent shall assess the contents of barrels which still contain product and shall not bury those found to contain hazardous waste.
53. The Proponent shall segregate wastes by chemical compatibility to ensure safety of the public and workers.
54. The Proponent shall remove any leaking and deteriorated containers and transfer their contents to an impermeable container.
55. The Proponent shall ensure that all ethylene glycol (antifreeze) is managed in accordance with the *Environmental Protection Act (EPA)* due to its potential to attract wildlife.

PART H: Fuel

56. The Proponent shall ensure that the transportation of fuel shall be done in compliance with the *Transportation of Dangerous Goods Act and Regulations* requirements.
57. The Proponent shall ensure that fuel storage containers are not located within thirty-one (31) metres of the ordinary high water mark of any body of water.
58. The Proponent shall use self-supporting insta-berms for the storage of barreled fuel on location.
59. The Proponent shall ensure that all valves on fuel tanks have receptacles placed beneath them to catch any leaked fuel.
60. The Proponent shall inspect all fuel containers for leaks daily and shall report and repair all leaks immediately.
61. Fuel storage containers in excess of 4,000 litres capacity shall either be double-walled, self bermed construction, or diked with adequate storage capacity. An impermeable liner shall be used to ensure that no fuel escapes. The Proponent is encouraged to consult Environment Canada on the implementation of the 2003 CCME Guidance Document PN 1326 entitled: *Environmental Code of Practice for Above Ground and Underground Storage Tank Systems containing Petroleum Product and Allied Petroleum Products*.
62. The Proponent shall immediately report **all** spills of petroleum and hazardous chemicals to the Twenty-four (24) hour spill report line (867) 920-8130. Spills shall also be reported to Environment Canada at (867) 920-5131.
63. The Proponent shall ensure that vehicle and equipment maintenance and servicing shall be conducted only in designated areas and shall implement special procedures to manage fluids, waste and contain potential spills.

PART I: Waste Disposal

64. The Proponent shall construct, operate, maintain, reclaim and monitor the landfarm and per the direction of the Nunavut Water Board.

65. The Proponent shall use a CCMA compliant incinerator for non-hazardous combustible waste. Food wastes shall be incinerated daily to eliminate potential for wildlife problems created by the attraction of wildlife to garbage.
66. The Proponent shall ensure that non-combustible non-hazardous wastes are buried in landfills.
67. The Proponent shall construct, operate, maintain, reclaim and monitor the landfills and per the direction of the Nunavut Water Board.
68. The Proponent shall construct, operate, maintain, reclaim and monitor all containment areas to ensure that there is no seepage of leachate. Any seepage that occurs shall be collected and treated as hazardous material.
69. The Proponent shall ensure that any areas designated for waste disposal shall not be located within thirty (30) metres of the ordinary high water mark of any body of water, unless otherwise authorized.
70. The Proponent shall ensure that all waste management sites are mapped and inventoried. Updated maps shall be provided to NIRB.
71. The Proponent shall recover and recycle material wherever practical.
72. The Proponent shall treat and dispose of all lead and PCB contaminated paints and painted materials as hazardous materials.
73. The Proponent shall deposit all sewage and greywater discharged in a sump and ensure that no drainage enters any waterbody.

PART J: Quarries

74. The Proponent shall locate quarries at least thirty (30) meters above the high water mark of any waterbody.
75. The Proponent shall slope the sides of the excavations and embankments except in solid rock to 2:1 (two horizontal, one vertical).
76. The Proponent shall perform tests to ensure that construction material is not acid generating and/or metal leaching.

PART K: Camp

77. The Proponent shall not erect camps or store material on the surface ice of lakes or streams.
78. The Proponent shall locate all infrastructure facilities on gravel, or other durable land.
79. The Proponent shall keep the land use area clean and tidy at all times.

PART L: Archaeological & Palaeontological Sites

80. *The Proponent shall conduct an archaeological assessment of the site paying special attention to the location of quarries as the Government of Nunavut Department of Culture, Language, Elders and Youth (GN-CLEY) has noted known sites, including a grave site, in the vicinity. The Proponent shall contact GN-CLEY regarding the status of the sites once the investigation is complete and before quarrying commences. These sites are to be avoided.*
81. *The Proponent shall follow all protocols for the protection and restoration of archaeological and palaeontological resources as outlined by the Government of Nunavut Department of Culture, Language, Elders and Youth.*

PART M: Monitoring

82. The Proponent shall monitor all waste containment facilities during operation and closure to ensure that there is no seepage of leachate. Parameters shall include but not be limited to PCBs.
83. The Proponent shall monitor the landfarm during operation and closure to ensure its effectiveness.
84. The Proponent shall monitor quarry sites for potential acid generation and metal leaching.
85. The Proponent shall monitor water quality during operation and closure to ensure that water quality meets levels approved by the Nunavut Water Board.
86. The Proponent shall monitor soil quality for metals and other contaminants during operation to determine and verify the extent of clean-up required.
87. The Proponent shall monitor soil quality during operation to ensure clean-up objectives are met and maintained.
88. Where permafrost is required for containment, the Proponent shall monitor permafrost aggradation and propose contingency plans if this fails to occur or becomes ineffective due to global warming.

PART N: Socio-economics

89. The Proponent shall ensure that workers wear protective clothing and follow established protocols for working with contaminated soil and conducting all on site works.
90. The Proponent shall record all injuries and incidents and have reporting procedures included in an approved Emergency Response Plan.
91. The Proponent shall ensure that all personnel are trained and that the requirements of the Workplace Hazardous Materials Information System (WHMIS) are followed.
92. NIRB would like to encourage the proponent to hire local people where possible.
93. The Proponent shall keep local communities and residents informed regarding its activities in the region.

PART O: Closure

94. The Proponent shall advise NIRB and the Land Use Inspector in writing at least 15 days prior to the completion of activities.

95. The Proponent shall remove all equipment, scrap metal and discarded machinery upon abandonment.
96. The Proponent shall commence and foster revegetation where possible. Methods should include scarification and transplanting native vegetation from other areas.
97. The Proponent shall regrade the landfills to match the contours of the land.
98. The Proponent shall backfill and recontour all sumps to match the natural environment prior to the expiry date of the permit.

Validity of Land Claims Agreement

Section 2.12.2

Where there is any inconsistency or conflict between any federal, territorial and local government laws, and the Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated July 31, 2006 at Cambridge Bay, NU



Elizabeth Copland, A/Chairperson