4.8 LANDFILL CLOSURE AND DEVELOPMENT

.1 Install geocomposite clay liners where indicated on the Contract Drawings. Cover landfills with granular fill material to provide a minimum cover thickness as indicated on the Contract Drawings. Regrade the landfill areas to restore natural drainage patterns and topography.

.2 Provide drainage controls such as diversion ditches and sediment filters, as required, to prevent runoff from reaching water bodies during closure, remediation and construction of landfills.

4.9 DISPOSAL OF SITE DEBRIS

.1 Collect, sort and dispose of hazardous and non-hazardous site debris in accordance with Section 02219 of the Contract Specifications.

.2 Test contents of intact barrels and dispose of as described in the Contract Specifications, Section 02090.

.3 Handle and dispose of asbestos according to the methods described in the Contract Specifications, Section 02081.

.4 Workers are to wear appropriate protective clothing when handling potentially hazardous material as directed in Section 02090 of the Contract Specifications.

.5 Minimize off-road activity during collection of site debris.

.6 Avoid releasing any hazardous materials into the environment during the handling of hazardous materials. Invoke the emergency response plan (Section 7.0) and take appropriate action in the event of a spill or other emergency situation.

4.10 DEMOLITION OF BUILDINGS AND STRUCTURES

.1 Carry out demolition, sorting and disposal of hazardous and non-hazardous demolition waste in accordance with Section 02060 of the Contract Specifications.

.2 Do NOT dismantle or disturb structures containing nests actively occupied by birds of prey during the nesting season (see Section 5.0).

4.11 MARINE VESSEL MOVEMENTS

.1 It is anticipated that marine vessels will be used for the transport of equipment and materials to and from the CAM-M site. Under certain circumstances, marine vessels can adversely affect wildlife. Sea mammals and flocks of waterfowl are to be avoided by all shipping.

.2 To minimize disruption to hunting and fishing activities, vessel traffic shall be restricted to traditional shipping lanes, where they exist. Vessel operators are to avoid marked fishing gear that may be encountered near shore.

.3 Inform all marine vessel operators of all applicable EPP requirements when scheduling arrangements are made or at other appropriate periods prior to the arrival of the vessel at the site.

4.12 AIRCRAFT MOVEMENTS

.1 It is anticipated that fixed wing commercial and, if required, chartered aircraft will be used at the CAM-M construction site to transport personnel, perishable supplies and various construction materials and equipment.

.2 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 1,000 metres, above ground or water, when passing over these areas. Low-level flights to observe or photograph wildlife shall not be permitted.

.3 Inform all charter aircraft pilots of all applicable EPP requirements when scheduling arrangements are made or at other appropriate periods prior to the arrival of the aircraft at the site.

4.13 TRANSPORTATION OF HAZARDOUS MATERIALS

.1 Store hazardous materials in accordance with Section 02090 of the Contract Specifications and ensure that each storage area is separated from the nearest water body by a 30 metre buffer zone; at beach storage areas consideration must be given to the reach of sea ice and storm tides.

.2 Shipping

.1 The *Transportation of Dangerous Goods Act* (TDGA) and the *International Air Transport Association* (IATA) Dangerous Goods Regulations govern the shipment of hazardous goods within Canada. If shipping out of Canada, Canadian regulations and regulations of the destination country both apply. Requirements of the International Marine Dangerous Goods Code (IMDGC) must be addressed in international waters (e.g., near Greenland).

.2 Any material classified as hazardous by the TDGA must be accompanied by the appropriate TDG shipping documents. The documents are to state the shipper, the receiver and all carriers involved in the transport of the shipment. Non-hazardous materials are also to be accompanied by a document indicating ownership and responsibility of the receiver.

.3 Package all hazardous material in accordance with the Transportation of Dangerous Goods Regulations.

.4 For TDG classification 9.3, dangerous goods in quantities larger than 5 kilograms or 5 litres, and for wastes that contain more than 500 grams of PCB mixture (a mixture with PCB concentration > 50 ppm), the following procedures apply:

.1 Complete a waste manifest for each shipment, specifying a unique reference number and DND's waste generator number, to accompany the shipment to the final destination.

.2 Document on the manifest the origin and destination of the shipment.

.3 All manifests are to be reviewed and signed by the Engineer prior to submission.

.4 Deliver the manifest to the initial carrier and forward to the relevant government agencies within two days of sending the shipment.

.5 On receipt of the dangerous goods, the receiver shall send a copy of the manifest to the sender, the carrier of the shipment, and the relevant government agencies within two working days.

.6 The Contractor is responsible for submitting the signed TDG shipping documents and waste manifests to the relevant parties as detailed in the TDG Regulations.

.7 Notify provincial and territorial governments of any shipments of PCB mixtures which pass through their borders.

.5 Test any waste of unknown TDGA hazard to determine whether any transport hazard exists according to the regulations. Package any substance which is considered hazardous under the TDGA in accordance with the regulations and the national standard Performance Packaging for Transportation of Dangerous Goods. For shipment off-site by air, the IATA Dangerous Goods Regulations and its standards will apply. Both the TDGA and the IATA regulations specify the packaging requirements for dangerous or hazardous goods according to risk.

.3 Labelling

.1 Label and placard packages according to class and division of the hazardous item. Requirements may differ between the IATA and TDGA regulations. A label or placard design is unique to each classification.

.2 Label all packages on at least two sides and write the name of the hazardous substance beside the label. Placard large containers as defined by the class and division with the TDG product identification number clearly displayed. The product identification number is indicated by the substance name in the regulations.

4.14 EXPLOSIVES

.1 BLASTING SHALL NOT OCCUR UNLESS SPECIFIC PERMISSION IS GRANTED BY THE NORTH WARNING SYSTEM AND THROUGH THE SITE ENGINEER. The use of explosives is potentially dangerous to human and animal health. The following procedures apply:

.1 Comply with all provisions as detailed in the SUR.
.2 Obtain all necessary permits and licenses.
.3 Handle, transport, store, and use explosives and all other related hazardous material in accordance with all applicable laws, regulations and orders of regulating authorities.
.4 Electric detonation methods are PROHIBITED.
.5 Restrict use of explosives to authorized and certified/licensed personnel who have been trained in their use.
.6 Minimize defacement of landscape features and other surrounding objects controlling the scatter of blasted material beyond the cleared working area.
.7 Minimize shock or instantaneous peak noise levels.
.8 Prevent scatter from blasting from reaching fuel or hazardous substance storage locations. A minimum distance of 300 metres in rocky terrain, and 1,000 metres in the presence of metal is required.
.9 Do NOT conduct blasting in the vicinity of concentrations of wildlife.
.10 Restrict blasting to above water and a minimum of 100 metres from concentrations of fish.

4.15 WORK SITE CLEAN UP AND ABANDONMENT

.1 Remove all buildings, fuel barrels, vehicles, equipment and surplus materials from the site following completion of work.

.2 Stabilize all large earthwork slopes. Gravel access roads required for operation and maintenance may remain.

.3 Regrade all disturbed areas to restore natural drainage patterns.

5.0 PROTECTION MEASURES FOR VALUED ENVIRONMENTAL COMPONENTS

5.1 GENERAL

.1 This section describes the required protection measures for the valued environmental components identified at the CAM-M, Cambridge Bay site. The Contractor shall comply with all requirements described in this section.

5.2 HUMAN HEALTH AND SAFETY

.1 Potential hazards to human health and safety are present at the CAM-M site in the form of hazardous materials and contaminated soil, hazardous local terrain and unpredictable weather conditions. Hazardous material and contaminated soil have the potential to enter water bodies and the food chain, and thereby affect vegetation, fish, wildlife and the health of people who travel, hunt and fish in these areas. Site debris may present a physical hazard to people travelling through these locations.

.2 Take all necessary precautions when handling and transporting hazardous materials and contaminated soil to ensure that the materials do not come into contact with site personnel or local residents. Site workers shall wear protective clothing as directed in Section 02090 of the Contract Specifications when handling hazardous materials.

.3 All site personnel working on or in the vicinity of clean up operations must be trained in, made aware of, and adhere to the requirements of the Workplace Hazardous Materials Information System (WHMIS) program.

.4 Outdoor recreation activities of site personnel have the potential to adversely affect nearby fish, wildlife and heritage resources. Although recreational time will be limited, some staff will undoubtedly wish to leave camp for recreational purposes. Subject to camp rules and the requirements of territorial fishing licenses and regulations, staff may be permitted to leave the site for recreational purposes. Normal precautions for Arctic travel include: provision for rapidly changing weather conditions; possible bear encounters; filing a trip plan; first aid kit, survival kit and insect repellant.

.5 Personal firearms are not permitted in the construction camp. However, each camp superintendent shall keep sufficient weapons (including one for backup or replacement) for defence in the event of a bear encounter which threatens human safety. When not in use, all weapons shall be locked as per all applicable legislation and access controlled by the camp superintendent.

.6 All country foods must be stored as to preclude the attraction of wildlife. This should include the need to store all foods in properly refrigerated areas that are indoors, in the construction camp.

5.3 LOCAL RESOURCE USE

.1 The community of Cambridge Bay is located approximately three kilometres from the site. Local residents fish and hunt, including traditional hunts of sea mammals, in the general vicinity of the site. A potential concern involves physical conflicts between ship traffic and fishing nets, near shore pollution incidents during ship-to-shore transfer of fuel and equipment, shore-to-ship transfer of hazardous materials, and shoreline terrain damage during beach landing area preparation.

.2 Clean up activities and related shipping shall not interfere with local resource use in excess of levels normally encountered by established local activities and shipping. To minimize disruption to hunting and fishing activities, vessel traffic shall be restricted to traditional shipping lanes where they exist. Vessel operators are to avoid marked fishing gear that may be encountered near shore.

.3 Schedule annual meetings with local associations to discuss these issues and to minimize any potential problems. This will include consultation to confirm the scheduling and locations of hunting and fishing activities. Assign a contact person to answer questions and address concerns of local residents or resource users.

5.4 LOCAL ECONOMY AND CONTACT WITH LOCAL RESIDENTS

.1 Cambridge Bay, with a population of over 1,000 people, offers a wide variety of services. Impacts and potential impacts of the clean up activities on the local economy are for the most part predicted to be positive. Benefits may accrue to Inuit and northern residents from employment prospects and training opportunities.

.2 Maximize employment and business opportunities in the north, in accordance with the guidelines in the Contract Specifications. Provide communication with the community of Cambridge Bay to keep them informed of contracts and significant project developments for which local businesses and individuals may be qualified to work.

.3 Schedule regular meetings with the community of Cambridge Bay to discuss ongoing work and to address any community concerns. Briefing meetings with all camp personnel are required to discuss and explain Camp rules which must be established to minimize conflict with local residents.

5.5 AESTHETIC VALUE

.1 It is anticipated that the clean up activities will have an overall positive effect on the aesthetic value of the CAM-M site in that redundant buildings and structures will be demolished, and all disturbed areas (landfills, debris piles, sewage outfalls and borrow pits) will be restored as closely as possible to their original appearance. Construction personnel are to ensure that their activities do not contribute to any additional degradation of the local environment.

5.6 SURFACE WATER AND FISH HABITAT

.1 The removal of the contaminated soil from the sewage outfall and remediation of main landfills requires general drainage maintenance. These activities have the potential to degrade the quality of surface water if executed improperly. Siltation, erosion and a decrease in water quality can result.

.2 Arctic char and arctic grayling are known to exist in the water supply lake near the station. In addition, abundant lakes and ponds, as well as streams in the general vicinity may contain other fish species, and fish may appear in large numbers during spawning and migration. The timing of spawning and migrations is dependent upon the species; however, in rivers and streams, concentrations may be observed at any time during the ice-free period.

.3 The following applies to work adjacent to waterways:

.1 Prevent siltation of water bodies supporting fish by the use of berms or silt fences as required, and by minimizing activities adjacent to watercourses.
.2 Do NOT operate equipment in waterways.
.3 Do NOT use streambeds for borrow material.
.4 Do NOT dispose of excavated fill, waste material or debris in waterways.
.5 Survey areas immediately upstream and for 100 m downstream of proposed work areas to determine presence of concentrations of fish.
.6 Avoid concentrations of fish during culvert removals and work adjacent to waterways.
.7 Do not ford streams at or immediately upstream of locations containing concentrations of fish.
.8 Restrict blasting to above water and more than 100 m from concentrations of fish.
.9 Where possible, conduct in-stream work during low flow periods.
.10 When removing culverts:
- slope banks to conform to grade of adjacent stream bank as applicable; and
- if required, stabilize bank using erosion resistant material.

.4 Obtain authorization from Fisheries and Oceans Canada for alterations or crossings of any water body constituting fish habitat. (See Section 3.0.)

5.7 PERMAFROST SOILS

.1 Poorly drained soils are typically ice-rich, and thus susceptible to permafrost degradation. The top layer of soil provides a protective thermal barrier that prevents permafrost degradation. The often poorly developed organic layer and typically sparse vegetation cover results in soils that are easily eroded. Erosion removes the thermal protection and causes permafrost degradation. Vehicle and equipment traffic, and soil excavation can disturb the surface layer and degrade the permafrost.

.2 Minimize disturbance to permafrost soils by restricting vehicle and heavy equipment traffic to existing roads and designated work areas unless approved by the Engineer.

.3 Minimize activity in areas adjacent to work areas.

.4 Do NOT operate vehicles or heavy equipment off-road following heavy rain or melting snow until the soil has dried sufficiently to prevent excess rutting.

.5 Install appropriate drainage and erosion control structures along access roads, where required.

.6 Implement the following procedures during facility siting and excavations to minimize disruption of permafrost:

- .1 Site facilities such as work camps and storage areas such that they do not impede surface drainage or result in ponding. Construct gravel pads or use other appropriate methods to protect ice-rich soil from thermal or physical damage.
- .2 Minimize extent of disturbance during excavations.
- .3 Promptly backfill excavated areas with granular fill as indicated on the Contract Drawings and Specifications.
- .4 Minimize the development of new borrow areas.
- .5 Do NOT store materials directly on unprotected ground.
- .6 Regrade disturbed areas to restore natural drainage patterns.

.7 Repair rutting that impedes local drainage or exposes permafrost in ice rich soils to the satisfaction of the Engineer.

5.8 COASTAL MARINE RESOURCES

.1 The coastline adjacent to Cambridge Bay on Victoria Island is used by marine mammals and seabirds for feeding, migration and breeding. These mammals and birds are particularly vulnerable to oil spills since they spend a significant amount of time on the surface; some may occur in large concentrations.

.2 Seabirds are also vulnerable to disturbance during the nesting period. Species such as fulmars, murres, and terns nest in colonies that may be disrupted by low-flying aircraft and close approaches by ships.

.3 Where concentrations of birds and mammals are known to be near construction sites, advise chartered aircraft pilots 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. Inform charter aircraft pilots of all applicable EPP requirements when scheduling arrangements are made or at other appropriate periods prior to the arrival of the aircraft at the site.

.4 Marine mammals and flocks of seabirds must be avoided by all shipping. Where feasible, ships shall maintain a minimum distance of 1 km from known seabird colonies.

.5 During transfer of fuel to land-based storage tanks, equip the hoses or pipes with properly functioning and approved check valves to prevent backflow of fuel in the case of failure. Attend all fuel transfer operations at all times. In the event of a spill of fuel, implement the appropriate contingency plan as detailed in Section 7 of this EPP.

5.9 TERRESTRIAL RESOURCES

.1 Peary caribou, muskoxen, arctic fox, raptors (birds of prey), waterfowl and other wildlife have been reported at the CAM-M site. Polar bear encounters in the vicinity of the Station appear to be rare. Concern for human/wildlife contact, which may include wildlife harassment, habitat degradation or dangerous encounters, is based on the potential for disruption of activities and increased wildlife mortality. Wildlife mortality may also result from consumption of waste or contaminated substances.

.2 Protect wildlife from avoidable impacts using the following procedures:

.1 EMPLOY A DEDICATED BEAR 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, particularly polar bears, act in accordance with the contingency plan (Section 7.0). 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.

.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 behaviour. The firearms shall be controlled by the camp superintendent.

.15 Report vehicle collisions with wildlife, encounters with troublesome animals, and/or the presence of potentially troublesome animals to the Engineer and to the District Wildlife Officer.

.3 At the CAM-M site, several species of avifauna have been observed, including Rough-Legged Hawk, nesting in a communication dish at the Station, shorebirds nesting in high concentrations in the vicinity of the sewage outfall, and Snow Buntings, eiders, ptarmigan, plovers and turnstones all nesting in the general vicinity of Station facilities.

.4 Disruption of avifauna during the nesting period can result in reproductive failure. The arrival of avifauna at specific locations in the Arctic is influenced by weather conditions and other factors. Inclement weather or a delayed spring melt may delay arrival by several weeks. In general however, the chronology of arrival, nesting, and departure is relatively consistent between years.

.5 Typically within two weeks of arrival, nesting commences and continues for one to two months until the young leave the nest. Following this, the birds feed in preparation for the fall migration and depart by mid to late September.

.6 The migration and breeding chronology of major groups of birds is shown in Table 5.1.

.1 Schedule work to minimize impacts on these species.

.2 Specifically avoid raptors because of their comparatively low abundance and their position at the top of the food web. Minimize impacts on these species by scheduling disruptive activities outside of the nesting period and by discouraging nesting at work areas.

.3 Removal of nest material from structures may prevent Rough-Legged Hawks from nesting; however, if the nest is occupied upon arrival at the site for commencement of clean up activities, proceed with demolition only after the young have left the nest.

.7 The population of Rough-Legged Hawks was low in 1994 and it is possible that nests will not be active during the clean up period.

TABLE 5.1
APPROXIMATE NESTING AND BREEDING CHRONOLOGY FOR BIRDS OBSERVED NEAR THE CAM-M SITE

Group or Species	Arrival	Nesting Period		Length of Breeding Season	Departure
		From	To		
Peregrine falcon (central)	Mid-May	Early June	Late August	65-75 days	Late September
Rough-Legged Hawk	Late May to Early June	Early June	Late August	65-75 days	Late September
Waterfowl	Late May to Early June	Early to Mid-June	Mid to late July	25-38 days	Early September
Shorebirds	Late May to Early June	Early June	Early to late July	20-25 days	Late August

.8 Shorebirds are expected to begin arriving in early June. They commence nesting during early June and the young leave the nest soon after hatching. The young develop over the remainder of the summer and the birds begin to congregate for the migration south.

.9 Conduct removal of raptor nests at Cambridge Bay in consultation with the Northwest Territorial Department of Renewable Resources.

5.10 HERITAGE RESOURCES

.1 DEW Line sites are often located in areas which have been seasonally settled or visited by Inuit over the past 1000 years; by their Palaeo-Eskimo predecessors for as many as three thousand years before the Inuit; and by Europeans and Eurocanadians over the past four centuries. Archaeological sites and recent camps and cemeteries exhibiting evidence of the presence of former occupants have been found on or adjacent to all of the DEW Line stations. Many of the sites have been disturbed by previous DEW Line activities. The traditional and scientific value of heritage resources is greatly diminished if they are disturbed or moved. Archaeological sites in the Northwest Territories are protected by law, and disturbance of archaeological sites and collection of archaeological specimens is prohibited except under the terms of an archaeological research permit.

.2 At the CAM-M site, two recent sites were identified, as shown on the Contract Drawings. A small cairn is located 600 m north of the station and a 1 m long hunting blind is located on the east side of the small lake to the south/southeast of the station. The work activities at the site will not adversely affect these known resources; however, given the nature of the environment in the region, there is some potential for future finds.

.3 Obtain a generic pamphlet from the regulatory authorities for use at the site, which illustrates typical site and artifact types, and describes procedures to follow in the event of encountering an archaeological site.

.4 In the event that heritage resources are discovered during clean up activities, the following procedures apply:

- .1 Report discovery of archaeological site or artifacts immediately to the Engineer.
- .2 Do NOT disturb archaeological sites or artifacts discovered and cease work in that area until appropriate authorities are notified.
- .3 Report all archaeological finds in accordance with Section 7.4 of this EPP.
- .4 Do NOT resume activities in the vicinity of the find until confirmation and direction from the Engineer is received.

.5 Reports of archaeological sites found shall include:

- .1 the identify of the person making the discovery;
- .2 description of the site location, including topography, landmarks, etc.;
- .3 the nature of the activity resulting in the discovery;

.4 description of the archaeological site, including size, features or details visible, supplemented by sketches or photographs;

.5 actions currently taken to protect the archaeological features; and

.6 extenuating circumstances.

.6 All personnel are to be discouraged from visiting archaeological and other heritage sites.

6.0 ENVIRONMENTAL INSPECTION

6.1 GENERAL

.1 As part of its overall commitment to a strategy of environmental protection and quality assurance, the Owner intends to employ a dedicated environmental inspection staff to monitor its own compliance with the EPP and all applicable laws, regulations, permits, guidelines and standards.

.2 The environmental inspection staff will be a part of the DEW Line Clean Up Project Management Office (PMO). The PMO has been formed as per the Terms of Reference of the Memorandum of Understanding between the Director General Environment and Defence Construction Canada (DCL).

.3 The Owner will be represented at the site by the Engineer who will report to the DCL Contract Manager. Environmental inspection staff at each site will report to the Engineer.

.4 The Contractor will maintain regular contact with the environmental inspection/Quality Assurance team. This will include, but is not limited to:

- attendance at regular meetings as scheduled with the inspector
- immediately reporting concerns over any aspect of this EPP
- immediately reporting any spills or other event that may have an effect on human or environmental health and/or safety.

7.0 CONTINGENCY PLANS

7.1 GENERAL

.1 The following generic contingency plans present the prescribed course of action to be followed in the case of unanticipated events during clean up such as fuel or chemical spills, potentially dangerous wildlife encounters, and the discovery of heritage resources. The plans will enable persons in a particular contingency situation to maximize the effectiveness of the environmental protection response and meet all regulatory requirements for reporting to the appropriate authorities.

.2 Submit to the Engineer for approval detailed spill contingency plans for the site. Identify response capabilities by detailing response times, and types and volumes of spills to which the Contractor can respond to. The following information is required as a minimum:

.1 a description of pre-emergency planning:
.2 personnel roles, lines of authority and communication:
.3 emergency alerting and response procedures:
.4 evacuation routes and procedures, safe distances and places of refuge:
.5 emergency phone numbers;
.6 directions/methods of getting to the nearest medical facility;
.7 emergency decontamination procedure:
.8 emergency medical treatment and first aid:
.9 emergency equipment and materials;
.10 emergency protective equipment;
.11 procedures for reporting incidents: and
.12 spill response and containment plans for all materials which could potentially be spilled.

7.2 FUEL AND HAZARDOUS MATERIAL SPILLS

.1 The objective of the fuel-related contingency plan is to protect the environment by minimizing the impacts of spill events through clear and concise instructions to all personnel.

.2 A variety of fuels, and liquid and dry chemicals will be in use at the CAM-M site during clean up. The greatest volumes will likely involve Arctic diesel fuel. Other substances such as acids, solvents, lubricants, hydraulic fluid, antifreeze, fuel additives and engine coolants also pose potential environmental and safety hazards. For simplicity, POL and minor chemical spills will be considered together. As chemicals are usually stored and transferred in barrels of 205 litres or smaller capacity, any spill quantity is likely to be small.

.3 Based on the hazardous materials identified for disposal, Emergency Response Plans (ERPs) are not required during transport under the TDG regulations. If materials identified for disposal are listed on Schedule XII of the TDG regulations and are in volumes exceeding those specified in that schedule, register an ERP with the Director General of the Transport of Dangerous Goods Directorate. The ERP is to contain information such as the nature and risks of the particular dangerous good and contact names and numbers for emergency assistance.

.4 If a spill or a dangerous occurrence is discovered during transport in excess of those volumes listed in Part 9, Table 1 of the TDG regulations, the person who has management or control of the goods at that time must immediately notify the Emergency Authority in the province where the occurrence took place. The appropriate authorities are listed in Part 9, Table 2 of the TDG regulations. The person must also notify his/her employer, the owner of the vehicle on which the goods were carried, and the owner of (consigner) the dangerous goods. The person's employer is then required to issue a written report to the Director General within 30 days of the occurrence in the form detailed by the TDG regulations.

.5 The most common pollution incidents will probably involve spills of arctic diesel or aircraft fuel onto land or water resulting from:

- human error during transfer operations between holding tanks;
- rupture of lines, tanks, valves, dykes or barrels from deterioration or damage;
- seepage from fittings or valves;
- accidental spills during POL transport via vehicle or aircraft; and
- equipment failure.

.6 A person in control of a substance at the time of a spill shall report the spill via the appropriate spill response line. Quantities of substances which represent "a spill" are listed in Schedule B of the NWT Spill Contingency and Reporting Regulation NWT Reg R-068-93. Advise the Engineer of all spills.

.7 In the event of a spill, protection of human health and safety is paramount. Contamination of personnel involved in clean up is a real possibility as is contamination of the surrounding workplace and environment.

.1 The individual discovering a spill shall:

.1 Warn people in the immediate vicinity and evacuate the area if necessary.

.2 Identify the spilled material if possible, and take all safety precautions before approaching it.

.3 Attempt to immediately stop the leakage and contain the spill, if safe to do so.

.4 Report to the Engineer the spill location, type of material, volume and extent, status of spill (direction of movement), and prevailing meteorological conditions.

.5 In the event of a shoreline spill, provide information about beach location, contaminated area, beach characteristics, presence of wildlife and archaeological sites which might be threatened.

.2 Both the Contractor and the Engineer have specific responsibilities in responding to a spill event. These are described as follows:

.1 Contractor's Responsibilities:

.1 Ensure response crew members are appropriately trained.

.2 Practice spill prevention by performing regular maintenance on all POL systems, and by using proper methods for the handling of POL products.

.3 Provide personnel, materials, and equipment necessary for adequate response to POL and hazardous materials spills.

.4 Establish communications and verbally report all spills to the Engineer as soon as practical.

.5 Isolate and eliminate all ignition sources.

.6 Ensure safety and security at the spill site.

.7 Stop or reduce discharge, if safe to do so.

.8 Make every effort to contain the spill by dyking with earth or other barriers on land and containment booms on water.

.9 Assess potential for fuel/chemical recovery.

.10 Deploy on-site crews to mobilize pumps, empty 205 L drums, hand tools and absorbents to the spill site.

.11 Request assistance, if required, from DND (through the Engineer) and the Canadian Coast Guard.

.12 Hire additional assistance, if required, from northern residents, local communities, and commercial spill response firms.

.13 Follow all guidelines and regulations for disposal of spilled materials, associated debris, contaminated soil and water as established by appropriate government agencies.

.14 Assess potential terrain and wildlife disturbance, erosion and archaeological site disturbance in any areas to be affected by clean up operations and contact relevant authorities.

.15 Document all events/actions.

.16 Report the spill to the Spill Report Line and follow up with a written spill report. This report shall summarize the initial report information; confirmation of spill volume; actions taken; future remediation/monitoring requirements; and a sketch map and/or photographs of the spill area.

.3 Be familiar with bear deterrent procedures and ensure that at least one designated staff member is competent with the camp firearms. Be familiar with the GNWT "Safety in Bear Country" manual and make available a reference copy at the site office.

.4 Collisions with large mammals such as caribou, bears and muskoxen may occur. Operators of vehicles and equipment shall make every effort to avoid such encounters. 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 office.

.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 the bear away from the site.

.4 Shoot the 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 for treatment of animal-inflicted wounds from the appropriate medical facility.

7.4 HERITAGE RESOURCES

.1 Avoid all archaeological sites at the CAM-M site during clean up activities.

Unrecorded archaeological sites containing such remains as habitation structures, hunting blinds, food caches and graves, and objects such as tools, utensils and butchered animal bone may be inadvertently discovered and disturbed during clean up activities. All site personnel are prohibited from knowingly disturbing any archaeological or other heritage site or collecting any artifacts. Removing artifacts is a criminal offence.

.3 In the event of finding heritage resources:

.1 Cease site work immediately in the area; do NOT remove any artifacts or other associated objects from the site unless their integrity is threatened in any way.

.2 Mark the site's visible boundaries and avoid the area during clean up activities.

.3 Report the discovery of the site immediately to the Engineer and the Prince of Wales Northern Heritage Centre and Inuit Heritage Trust by phone or fax and comply with any site protection instructions issued. Do not engage in any archaeological excavation activities.

.4 Prepare reports of any discovery for the respective regulatory authority and DND/PMO indicating:

- the identity of the person making the discovery:
- the nature of the material;
- the nature of the activity resulting in its discovery:
- the location of the find including a description of the site location, topography, landmarks, etc.
- a description of the archaeological site including size, features or details visible, supplemented by sketches or photographs;
- protection measures instituted;
- the present location of any heritage material removed for safekeeping: and
- extenuating circumstances.

7.5 KEY CONTACT LIST

.1 24 Hour Spill Report Line

.1 In the event of a spill, contact the 24 Hour Spill Report Line and provide with all the relevant details.

- Telephone: (867) 920-8130 Fax: (867) 873-6924

.2 Environment Canada, as lead agency shall then be contacted by officials to ensure the appropriate response. The lines are staffed 24 hours a day and can also be used to coordinate a response in the event of a non-spill emergency outside of normal working hours.

DEW LINE CLEAN UP PROJECT
CAMBRIDGE BAY, NWT

SITE USE RESTRICTIONS

1.0 PURPOSE

1.1 The purpose of these restrictions is to ensure that while DEW Line Clean Up (DLCU) activities are underway at CAM-M (the Cambridge Bay Long Range Radar Site), there will be no interference with ongoing operations of the North Warning System (NWS).

2.0 GENERAL CONDITIONS

2.1 The NWS sites, while the property of Department of National Defence (DND) and the responsibility of North Warning System Office (NWSO), is in the custody of the NWS Operation and Maintenance (O&M) Contractor, presently FRONTEC Logistics Corp. It is O&M Contractor personnel who operate and maintain the site. Their rules and regulations concerning conduct, posted on site, must be obeyed. Failure to comply with these procedures, regulations and rules will result in expulsion from the site.

2.2 The Cambridge Bay site serves as an NWS Long Range Radar (LRR) and Logistics Support Site (LSS) and will be occupied for the duration of the project.

2.3 The DLCU Contractor will respect all NWS installations in the vicinity of the work and confirm the condition of existing facilities with Site Engineer.

2.4 The DLCU Contractor shall make good any damage resulting from Contractor's use of any access roads or working areas on the site. The DLCU Contractor shall plan his work so that all site accesses are kept open during construction.

2.5 The DLCU Contractor must use the site in strict accordance with this document, the North Warning System Environmental Protection Order (NWO 12.01), North Warning System POL Spill Contingency Plan, the contract specifications, and the NWS LSS Manager's briefing.

2.6 The DLCU Contractor must not unreasonably encumber the site with materials or equipment, and must store products and equipment in a manner which will not interfere with operations of the NWS station or unrestricted access to the airstrip or sealift beach.

2.7 The DLCU Contractor will provide all temporary facilities including the design, supply, construction, maintenance, operation and removal of the facilities and services required to support the clean up of the site. The DLCU Contractor may choose to upgrade and use those buildings scheduled for demolition as part of his construction camp.

2.8 Temporary facilities shall be provided as specified at the work site, and any other location where temporary facilities are essential to the work. Temporary facilities shall satisfy Federal, Provincial, Territorial and local authorities having jurisdiction, comply with the requirements the NWS POL Spill Contingency Plan prepared by Frontec Logistics and North Warning System Order NWO 12.01 'Environmental Protection'.

3.0 COMMUNICATIONS

3.1 The point of contact for the NWS and the NWS O&M Contractor at CAM-M is the CAM-M LSS Manager who is responsible for all NWS and NWS O&M contractor activities on site. It is imperative that CAM-M LSS Manager be aware of all activities occurring at the site.

3.2 The point of contact for the NWSO (North Warning System Office, Ottawa) is the NWS OPI (North Warning System, Office of Primary Interest) for the DLCU Project. Contact between the DLCU Project and the NWS OPI shall be maintained through the Site Engineer.

3.3 Land in and about the Cambridge Bay airport is owned by the Government of the Northwest Territories. The NWS maintains facilities in this area including the hangar, ATB, aircraft refueller and associated aircraft POL tanks, and POL tanks and facilities located at and adjacent to the sealift beach.

3.4 The point of contact for activities related to the Cambridge Bay Airport is the Airport Manager. The DLCU Contractor shall schedule his work with due regard to potential conflicts that may arise due to those operations, and shall ensure compliance with all requirements set out by the Airport Manager.

3.5 Radio, telephone and fax communications are the responsibility of the DLCU project and the DLCU project contractor. Limited telephone communications are available through the CAM-M site facilities on a non-interference basis with site operations and other activities ongoing at the site.

Installation of dedicated telephone lines into NWS facilities at CAM-M from the town of Cambridge Bay must be approved by and coordinated with the NWS and the CAM-M LSS Manager.

PROCEDURES FOR THIRD PARTY SUPPORT

1 Third Party Support (TPS) includes all transport, meals, accommodations, equipment, facilities (laboratory and office space) available to federal government representatives as well as response to requests (such as response to a request to connect the DLCU Contractor's power cables to site power) and required inspections of the site and equipment required by these Site Use Restrictions.

2 TPS may be provided on the condition that it does not interfere with normal site operations, and after a complete and accurate TPS request has been submitted and approved. All costs associated with the provision of TPS are the responsibility of the DLCU project.

3 All requests for TPS must be forwarded to the NWS OPI (North Warning System Office of Primary Interest) for the DLCU Project using the form attached as Annex A. The OPI is currently designated as DAEPM(R&CS 2-3-5), J.D. Boissonneault (Telephone (613-992-9743, FAX (613) 996-4366).

4 All TPS requests arising from the DLCU Contractor will be provided through the Site Engineer.

5 Requests for TPS will be reviewed by NWSO and forwarded to the NWS O&M Contractor for action.

6 The DLCU Project must submit a yearly forecast of TPS requirements not later than 120 days prior to the anticipated start of the construction season, and must provide a monthly update of these requirements when changes are required.

7 The yearly forecast shall include:

a) number, type and intended use of equipment and vehicles;
b) the anticipated time and duration of the requirement;
c) the number of persons anticipated; and
d) the nature of TPS required (meals, accommodation etc.).

12.0 ELECTRICAL POWER

12.1 Normal electrical power (120/208 Volt, 3 phase, 60 Hz) is available to the DLCU Contractor for construction office trailers (lighting and heating) and small tools etc.

12.2 Power at CAM-M will be hooked up to the source by the NWS O&M Contractor.

12.3 The DLCU Contractor is to install, maintain and remove temporary lines to the satisfaction of the Site Engineer.

12.4 Availability of power is subject to operational requirements and may be discontinued any time without acceptance of any liability for damage or delay caused by its removal. In the event of power shortage or failure, priority will be given to operational requirements.

13.0 WATER

13.1 Water supply is available from the water lake shown on the drawings. Contractor will haul its own water supply. The quality of drinking shall conform with the requirement set out in Environmental Protection Plan. Water for barrel washing and other clean-up activities will be hauled by the Contractor.

14.0 PROJECT GARBAGE AND SEWAGE

14.1 The DLCU Contractor is responsible for the collection and disposal of all garbage and the off site disposal of sewage generated from temporary facilities brought to the site for the duration of the project.

15.0 USE OF ALCOHOL AND DRUGS ON NWS SITES

15.1 All NWS sites are dry sites. Alcohol and/or illegal drugs are not permitted.

16.0 HAZARDOUS AREAS

16.1 Due to the nature of electronic equipment, radiation and high voltage hazards, exist in certain areas of the NWS structures. Care should be taken to observe posted regulations concerning these hazards.

16.2 There are no human health hazards caused by working in the vicinity of NWS radar sites due to the type and power of electronic emissions from the radars.

17.0 HUNTING/FIREARMS AND FISHING

17.1 Hunting is not permitted at any of the sites. Personal firearms are not permitted on site. Fishing is permitted with a valid licence and in strict accordance with existing regulations.

18.0 PHYSICAL

18.1 NWS sites are at remote locations. Personnel who are in need of medical facilities or suffering from a condition that requires a frequent dosage of medication to maintain proper mental and/or physical health should not work at NWS sites.

19.0 SITE SECURITY

19.1 The DLCU Contractor shall be responsible for the safety and security of his personnel, material, equipment and work, whether the equipment is made available to the DLCU Contractor from NWS site as part of on-site support or belongs to the DLCU Contractor.

[redacted]

HIRD PARTY SUPPORT REQUEST

ease print clearly or type)

e:_____

QUESTING AGENCY:_____ ORIGINATOR:_____

THORITY (NWSO OPI):_____ TELEPHONE:_____

IT PURPOSE:_____

/CONTRACT NO.:_____

LSS and/or SITES TO BE VISITED:	ARRIVAL DATE:	DEPARTURE DATE

ITOR INFORMATION:

SURNAME & FIRST NAME	EMPL. NO.	GENDER M/F	SEC. LEVEL	COMPANY & POSITION HELD

MMERCIAL TRAVEL:

Flight Number	Arrival Time	Community

ARTER ARRANGEMENTS:

ll support for this activity require the use of Government

ıtracted O&M airlift from the LSS to/from a LRR or SRR ?

es and known, estimate the number of flying hours required by aircraft type.

_____ Rotary Wing _____ Fixed Wing

2-4 authorizing signature. _____

TE: Provide a description of the O&M flying support requirement in the body of your request.

[redacted]

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AʌTERIAL HANDLING FOR SHIPMENT TO THE LSS

______________________ Total Weight:__________ Cubic Feet:______________

______________________ Total Weight:__________ Cubic Feet:______________

______________________ Total Weight:__________ Cubic Feet:______________

______________________ Total Weight:__________ Cubic Feet:______________

DDITIONAL REQUIREMENTS:

ᴗo you require ground transportation airport to site? Y / N

Do you require rations and quarters on site? Y / N

/ill you be visiting LSS-Goose Bay? Y / N

(If yes, please see LSS-Goose Bay Ramp Pass Application)

"See Annex C)

Do you require access to:

Operations Zone: Y / N

Security Zone: Y / N

COMSEC Area: Y / N

SITE SUPPORT:

ɔ you require the use of site personnel? Y / N

. ɔ you require heavy equipment? Y / N

If yes, please specify requirements below:

PLEASE PROVIDE ANY OTHER PERTAIN INFORMATION WHICH MAY BE REQUIRED: