.6 Submit details of the sewage disposal system to the Engineer prior to the acquisition/installation of the camp.

.7 Monitor and record the depth of permafrost at the camp sewage lagoon monthly during construction activities and at start-up and prior to closure. Submit permafrost depth data to the Engineer monthly.

.8 At the completion of construction, backfill temporary lagoon to provide a minimum of 300 mm granular fill over settled solids.

6 Measurement for Payment

.1 Work of this section will not be measured. Include all costs in Schedule D - Balance of Project Complete in the Tender Form.

.2 In addition to the parameters listed in .1 above, provide testing for the following parameters:

- nitrate
- nitrite
- sulphate
- sodium
- potassium
- calcium
- magnesium
- manganese
- hardness
- conductivity
- total suspended solids
- total petroleum hydrocarbons
- include total and dissolved concentrations for all inorganic elements.

The criteria for these parameters will be provided during construction.

1 General

.1 Provide and operate complete construction camp services, including the provision, preparations and serving of food, as required for construction personnel, and the Engineer and his authorized personnel.

.2 Unless otherwise indicated, the camp and associated facilities remain the property of the Contractor at the conclusion of the contract.

.3 Provision of construction camp services consists of the design, supply, installation, operation and maintenance of construction camp including all associated facilities, food, utilities and services required for camp such as: heating; lighting; fuel; potable and domestic water systems; sewage collection, treatment and disposal system; waste, refuse and garbage collection and disposal system; camp fire prevention, alarm and fire fighting system; camp safety and security service; meals and catering service; sleeping and washroom facilities; bedding and bedding laundry service; janitorial service; personnel laundry facilities; recreational facilities; and snow removal.

.4 Provide and pay for the all potable and domestic water systems; sewage collection, treatment, and disposal systems; refuse and garbage collection and disposal systems; power, heating and lighting systems associated with the operation of the construction camp.

.5 Provision of construction camp services shall include shutdown and reopening of construction camp for the Contractor's workforce. Provision of construction camp services shall include Engineer's Site Office as further specified in this Section.

.6 Demobilize and remove the construction camp from the site at the completion of the Contract. Grade as necessary to match surrounding terrain and to ensure positive drainage as directed by the Engineer.

.7 Obtain and pay for, as part of provision of construction camp services any and all licences, permits, and authorizations required to comply fully with all laws, ordinances and regulations of the Federal, Provincial, Territorial and local authorities in connection with the performance of work of this Section. The Owner will obtain the Water License for the site operations.

.8 Provide construction camp services for own workforce, Engineer, and Engineer's authorized personnel as follows:

.1 Resident Engineer: duration of the project.
.2 Environmental Inspectors: 2 persons for duration of contaminated soil excavation and debris cleanup programs, and an additional 3 persons for the duration of all landfill excavation activities, including all testing to be carried out by the Owner.
.3 Geotechnical Engineer: 50 days in 2002, and 50 days in 2003. (Subject to revision based on the Contractor's schedule.)

.4 Project Design Engineer: 12 days in 2002, and 12 days in 2003.
.5 DCL Project Management Office Personnel: 16 days in 2002 and 16 days in 2003.

.9 The Contractor is advised that any of the existing site facilities to be demolished as part of this Contract are available to the Contractor to support the operation of the Construction Camp. The Contractor shall be responsible for all costs associated with the upgrading or conversion of the existing site facilities to satisfy the requirements of this Section. Information describing the existing facilities is included in the Appendix of these Specifications and in the Site Photographs.

.10 The Contractor is advised that some of the existing site facilities to be demolished as part of this Contract contain painted materials that are contaminated with polychlorinated biphenyls (PCBs). PCBs at concentrations in excess of 50 ppm are considered to be hazardous substances. Storage, handling and disposal of PCBs are regulated under the Canadian Environmental Protection Act, and the Federal Transportation of Dangerous Goods Act. Comply with all applicable regulations.

2 Requirements of Regulatory Agencies

.1 Construction camp including its facilities, utilities, services, location and operation is subject to the approval of the Engineer and is to be designed, established and operated in accordance with applicable Federal, Territorial and local codes, regulations and requirements governing construction camps. The construction camp shall meet or exceed the most recent edition of the Government of Nunavut, Public Health Act and Regulations.

.2 Operate the camp in accordance with Camp Rules as specified in Clause 16 of this Section.

.3 Prior to acquisition and installation of camp and services, submit a plan of layout and siting to Engineer for review and approval. Submission is to include full details demonstrating compliance with all codes and standards.

.4 Obtain applicable licences, permits and authorizations prior to establishing camp. Submit proof of same to Engineer.

.5 Undertake all requirements of licenses, permits and authorization whether obtained by Owner or Contractor.

3 Environmental Requirements

.1 Comply with requirements of Environmental Regulatory Agencies and the provisions of Section 01560 - Environmental Protection of this Specification.

.2 Submit to the Engineer before the opening of the camp, proof of adherence to all the environmental regulations. Display all applicable regulatory permits at the camp site.

.3 Sampling and laboratory testing of a water sample obtained in 2000 from the former DEW Line water supply source and reservoir at the PIN-3 site has been carried out by the Environmental Sciences Group (ESG) - Royal Military College. The results of this limited analytical program are included in the table at the end of this Section. THE RESULTS INDICATE THAT THE TOTAL COLIFORMS EXCEED THE DRINKING WATER GUIDELINES AND THE E.COLI AND FECAL COLIFORMS MAY EXCEED THE DRINKING WATER GUIDELINES AND REQUIRE FURTHER TESTING.

.4 Provide and pay for equipment, supplies and materials required to treat the water in accordance with the Health Canada Guidelines for Canadian Drinking Water Quality.

.5 CARRY OUT AND PAY FOR ADDITIONAL SAMPLING AND ANALYSES OF THE CONSTRUCTION CAMP WATER SUPPLY SOURCE TO PROVE THAT THE WATER QUALITY SATISFIES THE HEALTH CANADA GUIDELINES FOR CANADIAN DRINKING WATER QUALITY. SUBMIT THE RESULTS OF THIS ANALYSIS TO THE ENGINEER PRIOR TO OPENING THE CAMP.

.6 Carry out monthly sampling and testing of the camp water source as long as the camp is operational. Provide results to Engineer with monthly progress claims.

.7 Comply with sewage treatment, discharge and closure requirements as outlined.

.8 Comply with sewage treatment, discharge and closure requirements as outlined in Section 01560 - Environmental Protection.

4 Construction Camp

.1 Provide and maintain camp in good operating condition and provide adequate and suitable furnishings.

.2 The use of soft-sided (i.e. tents) facilities for the accommodation of personnel and for the kitchen complex is not permitted.

.3 Submit to Engineer for review, prior to mobilization, camp details to confirm that camp facilities, utilities, services and operation conform to all applicable regulatory agencies requirements.

.4 Pay for all costs for the inspection of camp and electrical facilities by Nunavut officials.

5 Erection of Camp

.1 Place all camp buildings and facilities so as not to interfere with any construction, cleanup or other site activities. Camp location and layout shall be such that snow-drifting onto permanent facilities will be minimized.

.2 Obtain Engineer's approval for location of construction camp.

.3 Carry out all work necessary to protect the environment, such as constructing gravel pads (if required) prior to actual installation of camp facilities.

6 Maintenance

.1 Maintain camp buildings, power plant, fuel storage facilities, water lines, sewage system, garbage disposal containers, heating and cooling units, appliances and furniture in neat, clean and good operating condition, and make repairs as necessary.

.2 Heat camp buildings to maintain environmentally controlled conditions between 20 and 22°C. Storage buildings do not have to be environmentally controlled provided that perishable materials are not stored therein.

.3 Clean camp buildings daily. Clean and sanitize toilets, urinals, showers, wash basins, washing machine, and laundry tubs daily.

.4 Provide adequate bug, pest and wildlife control to all buildings, facilities and camp site.

.5 In the event of temporarily vacating camp, clean up and leave camp facilities in a safe, tidy and secure condition. Winterize as necessary to protect camp during shut-down period.

7 Sleeping Quarters

.1 Sleeping quarters for Engineer and his authorized personnel shall be within the camp complex, but segregated from those for Contractor's staff.

.2 IN SLEEPING QUARTERS FOR OWN WORK FORCE, PROVIDE A MINIMUM OF 4.6 m^2 OF FLOOR SPACE FOR EACH OCCUPANT.

.3 It is anticipated that the Engineer's work force will include both male and female personnel. Design and operate the construction camp with due consideration of the separate and private requirements for this work force.

.4 Contractor to provide for a single room with a minimum floor area of 6 m^2 for use of the Resident Engineer.

.5 Sleeping quarters for other Engineer's support personnel, as indicated in Clause 7.1 of this Section, shall provide for maximum double occupancy with a minimum floor area of 9.2 m^2.

.6 Provide a minimum of 11 m^3 of air space for each occupant.

.7 Provide key-locks and keys for Engineer's and Engineer's staff sleeping quarters upon their use of these facilities.

8 Kitchen/Dining Complex

.1 The functional design of the kitchen shall include all equipment necessary for food storage, preparation, cooking and the serving of three meals daily to meet camp population requirements.

.2 Provide dishwashing and garbage handling equipment consistent with the required function of the kitchen.

.3 Provide seating capacity of the dining area to meet camp population requirements.

.4 Store all non-perishable food supplies in adequate containers kept in an orderly manner and under sanitary conditions, in a vermin-proof enclosure.

.5 Store all perishable food supplies in properly refrigerated indoor areas within the construction camp to preclude the attraction of wildlife.

9 Ablution and Latrine Facilities

.1 Provide ablution and latrine facilities in the following scale:

.1 Flush toilets in the following ratio:
.1 One toilet for 1 to 5 persons.
.2 Two toilets for 6 to 10 persons.
.3 Three toilets for 11 to 15 persons.
With the addition of one toilet for 15 additional persons after 15 persons.

.2 Urinals in the ratio of one for each 25 persons.

.3 A wash basin of stainless steel, porcelain or its equivalent in the ratio of one for each five persons, with one mirror over each basin.

.4 Individual shower units with non-slip flooring together with adjacent dressing cubicles in the ratio of 1 to 11 persons.

.2 Maintain separate ablution and latrine facilities for female/male populations.

.3 Clean ablution and latrine facilities daily. Supply adequate amounts of paper towels, toilet tissue, and individual drinking cups in washrooms.

10 Engineer's Site Office

.1 Provide office accommodation and furniture on-site for the Engineer.

.2 Provide electrical lighting system, giving a minimum of 200 lux, using surface mounted, shielded commercial fixtures with 10% upward lighting component.

.3 Provide Engineer's office accommodation with the following:

.1 Two double-pedestal desks, each with top surface not less than 150 cm by 75 cm.
.2 Two desk chairs.
.3 Two chairs, stacking type.
.4 Two four-drawer file cabinets with locking mechanisms.
.5 One bookcase, not less than 90 cm wide by 30 cm deep by 120 cm high, complete with adjustable shelves.
.6 Two double-tray in/out paper distribution baskets.
.7 Two waste paper baskets.
.8 Four duplex receptacles, 120 V, 60 Hz.
.9 One plan table.

.4 Provide and maintain at Engineer's office two satellite phone lines or equivalent communication approved by the Engineer.

.5 Provide and maintain at Engineer's office one satellite telephone, one standard paper (not thermal film) fax machine, and one copy machine with required supplies for their operation for the Engineer's exclusive use. The fax machine is to include a Space Fax interface, as manufactured by INFO SAT, or equivalent to the following specifications:

.1 Data Rates: 2400 to 4800 bits per second (bps) connection with mobile communicator, 2400 to 9600 bps connection with fax machine;
.2 0.5 Amp operating current;
.3 Power Requirements: 6 Watts normal operation, 12 Watts maximum;
.4 Voltage: 12 Volts DC nominal
.5 Temperature: -10 to +55°C operating; -45°C to +80°C storage;
.6 Automatic power standby mode;
.7 Front Indicator status lights: power on, ready, data, connected;
.8 RJ11 jack for connection to fax machine;
.9 Port for connection to Mobile Earth Terminal;
.10 Port for data connection;
.11 To support standard Group 3 fax machines;
.12 Data compression capabilities to minimize transmission air time;
.13 One number dialling;
.14 Query mailbox for listing of fax messages and for delivery status notifications;
.15 Broadcasting of faxes to multiple recipients with a single call using pre-programmed distribution lists.

.6 Establish an e-mail address for use by the Engineer through the satellite phone provider.

.7 Satellite charges, long distance charges, and/or e-mail account charges for the telephone, fax machine, and e-mail transmissions are to be paid by the Contractor. The Contractor will be reimbursed for the costs in accordance with the Prime Cost Allowance for Engineer's Office Supplies as described in Section 01020 - Prime Cost Allowances.

.8 PROVIDE FOR USE BY THE ENGINEER AND THE ENGINEER'S SUPPORT STAFF, FOUR MOBILE COMMUNICATION RADIOS. THE RADIOS SHALL ALLOW FOR ON-SITE COMMUNICATION BETWEEN THE ENGINEER, ENGINEER'S SUPPORT STAFF, AND THE CONTRACTOR

.9 DUE TO THE REMOTENESS OF THE SITE, IT IS CRITICALLY IMPORTANT THAT THE COMMUNICATION EQUIPMENT PROVIDED BY THE CONTRACTOR FOR THE ENGINEER'S USE IS RELIABLE AND OF THE HIGHEST QUALITY. IMMEDIATELY REPAIR OR REPLACE FAULTY EQUIPMENT. THE EQUIPMENT SHALL BE OPERATIONAL FROM THE DAY WORK COMMENCES.

.10 Provide and maintain at Engineer's office, complete shower facilities for the Engineer and Engineer's support staff to be separate from the shower facilities used by Contractor's workforce.

.11 Provide key-locks and keys for Engineer's office upon the Engineer's use of facilities.

.12 Maintain Engineer's office accommodation in clean condition. Clean and sanitize washroom and shower facilities daily.

11 Fire Protection Equipment

.1 Install and maintain fire protection systems and equipment as specified in Section 01546 - Fire Safety Requirements.

12 Linen, Bedding and Laundry

.1 Supply linen and bedding. Provide each person living in camp with three blankets, two sheets, one pillow, and one pillow cover.

.2 Change two sheets and one pillow case once per week or whenever a change of occupant occurs.

.3 Launder sheets and pillow covers regularly to provide weekly supply of clean linen.

.4 Provide clean blankets to all camp occupants. Clean blankets at the end of each construction season or more frequently if condition requires.

.5 Cooking staff shall wear suitable kitchen attire. Launder kitchen attire daily.

13 Food Schedule

.1 Provide food of the highest quality giving a balanced diet and served under acceptable standards of cleanliness by experienced personnel. Eggs and dairy products shall be Grade "A".

.2 As a minimum, provide three meals a day. Provide casual meals or fourth meals if irregular shifts are worked or irregular travel by personnel is required.

.3 Main courses to be served at meals are classified as follows:

.1 First Line: Beef steak, roast beef, roast pork, veal cutlets, baked ham, ham steak, chicken, turkey, pork chops, roast lamb, roast veal, vegetarian lasagne, pasta with meatless sauce, quiche.

.2 Second Line: Fish, short ribs, spare ribs, stews, meat pies, liver, curried dishes, spaghetti and meatballs, sausages, salisbury steak, swiss steak, ground beef, corned beef, vegetarian chilli, omelettes, vegetarian baked beans, vegetarian patties

.3 Third Line: Hot dogs, vegetarian hot dogs, omelettes, chilli con carne, baked beans, chicken and turkey turnovers, bagels and cream cheese, dishes using leftover meats, soup and sandwiches.

.4 At lunch and supper, serve one first line and a choice between a second and third line. Do not repeat the same selection more than twice weekly. Beef steak shall be served at least once per week. A vegetarian entrée should be made available at all meals, if requested.

.5 Provide box lunches for all camp occupants who will not be in camp for noon meal.

.6 Contractor will be given twelve hours notice to serve fourth and/or casual meals to work forces of other contractors and Engineer.

.7 Provide "Mug Up" nightly at 2100 hours consisting of tea, coffee, hot chocolate, fruit juice and any leftover pastries at cook's discretion. Make coffee available at coffee breaks.

.8 Make available daily apples and oranges; serve other types of fresh fruit at least once per week.

.9 Fresh salads are to be provided daily.

.10 Provide whole milk each day; powdered milk is not acceptable for drinking but may be used in cooking.

14 Vehicle Parking

.1 Provide sufficient space adjacent to camp to park vehicles.

15 Service Connections

.1 Power for the Contractor's use at the site will be provided and paid for as described in Section 01500 - Temporary Facilities.

.2 Install, hook up and test water supply, heating and electrical services necessary to operate the construction camp.

.3 Ground all buildings and electrical equipment with an approved grounding system

16 Camp Rules

.1 A camp of this size and nature in a remote location requires that certain basic rules be established for the mutual benefit of all camp residents.

.2 Prepare a set of camp rules, for the Engineer's approval, prior to commencing operations.

.3 Camp rules shall cover such items as property damage, smoking, use of alcoholic beverages, drugs, firearms, security, nuisance, and all other matters to make the camp an orderly, well managed operation.

.4 Provide copy of camp rules to all camp occupants prior to or upon arrival in camp.

.5 Camp rules are to prohibit the consumption of alcoholic beverages on site.

17 Access to the Work

.1 The Contractor shall be responsible for the transport of personnel and equipment to the various work areas on the site.

18 Transportation

.1 Provide return air transportation services for the Engineer and the Engineer's support personnel from Cambridge Bay to the PIN-3 site. Air transportation shall be provided by a twin engine aircraft.

.2 It is anticipated that air transport of the Engineer's support personnel will be scheduled to coincide with the transport of the Contractor's workforce to and from the site. Provide air transportation for Engineer's personnel at a minimum frequency of one return trip per week and two additional trips per month scheduled according to the Engineer's request.

.3 The Engineer will advise the Contractor of Engineer's and Engineer's personnel air transportation requirements one week in advance of trip departure.

19 Measurement for Payment

.1 Include all costs for the provision, operation and maintenance of ALL camp facilities and equipment, including sampling and analyses of the water supply lake and water treatment and sewage disposal requirements, preparation of a gravel pad for the foundation of the construction camp (including supply, placement and compaction of granular fill as required), and any regrading required after demobilization and removal of the construction camp, inspection of camp and electrical facilities by Nunavut officials, on-site mobile communication equipment, as well as the provision of catering, rooms, and laundry and janitorial services for the Contractor's and his subcontractor's personnel, in Schedule D - Balance of Project complete in the Tender Form. Indicate the cost of this work as a separate line item in the cost breakdown specified in Section 01005 - General Instructions.

.2 The provision of room and board and associated services for the Engineer and his authorized personnel will be measured for payment by the person-day for each day that personnel reside overnight at the camp. Engineer's room and board will be paid under Item A.01591-1 in the Schedule of Unit Prices.

.3 Provision of casual meals to visiting Engineer's authorized personnel will be measured for payment by the number of meals served. Casual meals will be paid under Item A.01591-2 in the Schedule of Unit Prices.

.4 Costs for the provision of Engineer's consumable office supplies, including Engineer's charges for satellite and/or long distance telephone and e-mail charges, will be paid under Prime Cost Allowance, Schedule C, Item C.01591-1 of the Tender Form. Refer to Section 01020 - Prime Cost Allowances.

.5 The provision of air transportation from Cambridge Bay to PIN-3 of Engineer's authorized personnel will be measured for payment by the number of person return trips, and will be paid under Item A.01591-3 in the Schedule of Unit Prices.

.6 The provision of satellite and/or long distance communication links for the Engineer and authorized personnel will be measured for payment by the line-week for each week that communication systems are available and fully operational. Communication links must be operational for the entire week to be eligible for payment. One week shall comprise Sunday through Saturday. Communications links will be paid under Item A.01591-4 in the Schedule of Unit Prices.

.7 The unit price items, as described in Clauses 19.2, 19.3, 19.5 and 19.6 above, shall include direct costs only. All indirect costs associated with the work described in Clauses 19.2, 19.3, 19.5 and 19.6 above, including profit, camp, supervision, overhead, etc., shall be included in Schedule D – Balance of Project Complete in the Tender Form.

PIN-3: LADY FRANKLIN POINT WATER SUPPLY LAKE - LABORATORY ANALYTICAL RESULTS[1]					
				CCME Drinking Water Guidelines	
Parameter	Units	Water Reservoir	Water Supply Lake	Max. Acceptable Concentration	Aesthetic Objective
PH			8.11	6.5-8.5	
Conductivity	µS/cm		701		
Hardness	mg/L				
Sodium	mg/L		146.9		200
Potassium	mg/L		4.74		
Magnesium	mg/L		34.2		
Calcium	mg/L		38.9		
Iron	mg/L		0.07		0.3
Manganese	mg/L				0.05
Nitrate	mg/L		0.012	45	10
Nitrite	mg/L		<0.008	3.2	1
Sulphate	mg/L				500
Chloride	mg/L				250
Copper	mg/L				1
Nickel	mg/L				
Cobalt	mg/L				
Cadmium	mg/L				0.005
Lead	mg/L			0.01	
Zinc	mg/L				5
Chromium	mg/L			0.05	
Arsenic	mg/L			0.025[2]	0.025
PCBs	mg/L				
Total Petroleum Hydrocarbons	mg/L				
Total Coliforms	cts/100 mL	1,100 to 1,600	440 to 650	10	
E.Coli	cts/100 mL	<1 to 1	<1 to <2	None	
Faecal Coliforms	cts/100 mL	<1 to 1	<1 to <2	None	

[1] All analytical results provided by the Environmental Sciences Group - Royal Military College.
[2] Interim Maximum Acceptable Concentration.

1 Rental Conditions

.1 Vehicles provided for purposes of this contract are accepted at risk of supplier whether in possession of supplier or Engineer.

.2 No claim, demand or legal proceeding is to be brought against the Crown in respect of damage to vehicles, including damage caused by negligence of officer or servant of the Crown while acting within scope of his duties.

.3 Indemnify and save harmless, the Crown, officers, servants and agents of the Crown from and against actions, causes of action, suits, debts, duties, agreements, claims and demands whatsoever whether arising out of negligence or otherwise, which may hereafter exist or be made for or by reason of any cause, matter or thing whatsoever arising out of these terms of rental and transportation or operation of equipment herein referred to.

2 Vehicles

.1 Supply two crew cab 4-wheel drive pickup trucks for use by the Engineer and Engineer's support personnel for the duration of this project.

.2 Vehicles to be in new condition, having been driven for not more than 60,000 kilometres.

.3 Equip vehicles with heater, defroster, right and left hand mirrors, windshield washers, permanent type anti-freeze, spare wheel, jack, wheel wrench, snow tires on drive wheels and spare, directional signals with two-way flasher, full width front seat and license in accordance with Territorial regulations.

.4 Make available on site for exclusive use by the Engineer and the Engineer's support personnel, one new, motorized quad-track vehicle equipped with a minimum engine size of 400 CCs, standard double seat, two helmets of various sizes, a baggage rack, a trailer, and a tire repair kit. The use of this vehicle will not be shared with the Contractor.

.5 The vehicles shall remain the property of the Contractor.

3 Delivery

.1 Deliver vehicles to location designated by Engineer at the site.

.2 Engineer may return vehicles during work shutdown periods.

.3 Winterize and store vehicles in accordance with manufacturer's recommendations.

.4 Upon written request from Engineer, redeliver or replace returned vehicles.

4 Maintenance

.1 Maintain vehicles in good running order for duration of project. If vehicles are out of commission for any period of time, provide other replacement vehicles.

.2 Repair and maintain vehicles expeditiously.

5 Fuel and Lubricants

.1 Provide and pay for all fuel and lubricants required to operate the vehicles for the duration of the project.

6 Measurement for Payment

.1 Work for this section will not be measured. Include all costs in Schedule D - Balance of Project Complete in the Tender Form. Indicate the cost of this work as a separate line item in the cost breakdown specified in Section 01005 - General Instructions.

1 General

.1 This Section describes the existing facilities available to the Contractor at the PIN-3 site.

2 Site Facilities

.1 Any of the existing site facilities to be demolished as part of this Contract are available to the Contractor to support the operation of the construction camp.

.2 Any of the existing site facilities not to be demolished as part of this contract are not available to the Contractor.

.3 The Contractor is advised that some of the existing site facilities to be demolished as part of this Contract are coated with paint that contains polychlorinated biphenyls (PCBs). PCBs at concentrations in excess of 50 ppm are considered to be hazardous substances. Storage, handling and disposal of PCBs are regulated under the Canadian Environmental Protection Act, and the Federal Transportation of Dangerous Goods Act. Comply with all applicable regulations. The results of laboratory testing carried out on PCB-amended painted materials are included in the Appendix.

.4 Pay for all costs associated with upgrading or converting the existing site facilities as necessary to satisfy the requirements of Section 01591 - Construction Camp.

.5 There is no NWS equipment or fuel available on site for use by the Contractor.

3 Site Equipment and Supplies

.1 No equipment or supplies are available on-site to support the Contractor's operation.

4 Measurement for Payment

.1 Work for this section will not be measured. Include all costs in Schedule D - Balance of Project Complete, in the Tender Form.

1 Description

.1 This section specifies general requirements for the supply and installation of all materials and equipment for incorporation in the permanent work.

2 General

.1 Use new material and equipment unless otherwise specified.

.2 Within 7 days of written request by Engineer, submit the following information for materials and equipment proposed for supply:

.1 name and address of manufacturer,
.2 trade name, model and catalogue number,
.3 performance, descriptive and test data,
.4 manufacturer's installation or application instructions,
.5 evidence of arrangements to procure.

.3 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.

.4 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.

3 Manufacturers' Instructions

.1 Unless otherwise specified, comply with manufacturers' latest printed instructions for materials and installation methods.

.2 Notify Engineer in writing of any conflict between these specifications and manufacturers' instructions. Engineer will designate which document is to be followed.

4 Delivery and Storage

.1 Deliver, store and maintain packaged material and equipment with manufacturers' seals and labels intact.

.2 Prevent damage and soiling of material and equipment during delivery, handling and storage. Remove rejected material and equipment from site.

.3 Store material and equipment in accordance with suppliers' instructions. Keep materials identified as requiring heated indoor storage in such an environment until they can be stored or installed in the permanent facilities.

.4 Touch-up damaged factory finished surfaces to Engineer's satisfaction. Use primer or enamel to match original. Do not paint over name plates.

5 Conformance

.1 When material or equipment is specified by standard or performance specifications, upon request of Engineer, obtain from manufacturer an independent testing laboratory report, stating that material or equipment meets or exceeds specified requirements.

6 Measurement for Payment

.1 Work under this section will not be measured. Include all costs in Schedule D - Balance of Project Complete in the Tender Form.

1	Record Drawings
2	Manufacturers' Data Books
3	Other Records
4	Measurement for Payment

1 Record Drawings

.1 Engineer will provide to Contractor, two sets of white prints for record drawing purposes.

.2 Maintain project record drawings and record accurately deviations from Contract documents on one set of prints.

.3 Record changes in red.

.4 Record the following information:

.1 Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface monument.
.2 Areal extent and depth of contaminated soil excavation.
.3 Location and elevation (survey coordinates) of groundwater wells, and thermistors.
.4 Location(s) used for the disposal of effluent.
.5 Areal extent and depth of granular material placed on regraded landfills.
.6 A minimum of three surveyed cross-sections of each regraded landfill; also survey breaklines (distinct changes in slope).
.7 Location and depth of key trench at the Main Landfill and Tier II Disposal Facility.
.8 Liner elevation at the Main Landfill.
.9 Location, depth and description of the following materials disposed in landfills by the Contractor:
.1 metal material;
.2 asbestos containing materials;
.3 PCB-amended painted materials (<50 ppm); and
.4 all other materials.
.10 Location and description of containerized hazardous waste materials.
.11 Survey coordinates and elevation of post-landfill construction closure sampling locations as indicated by the Engineer.
.12 Field changes of dimension and detail.
.13 Changes made by Change Order or Field Order.

.5 At completion of project and prior to final inspection, neatly transfer notations to second set and submit both sets to Engineer. Information on completed areas should be forwarded at the end of each construction season.

.6 Reference survey coordinates and elevation to existing control points as indicated on the Drawings. In the event that monuments have been removed or destroyed, re-establish control monuments.

2 Manufacturers' Data Books

.1 Provide all manufacturers' data as specified in the relevant sections to the Engineer for distribution.

.2 Within 120 days of completion of the work, consolidate a set of approved product data in one document, and submit five copies to the Engineer.

3 Other Records

.1 At the completion of each season, or upon Engineer's request, submit all survey information.

.2 Within 90 days of completion of the work, submit the following to the Engineer:

.1 Copies of all documents and permits obtained by the Contractor.
.2 Results of all testing carried out by the Contractor.
.3 Copies of all shipping documents identifying the shipper, the receiver and all carriers involved in the transport of materials.
.4 All survey information in electronic format.
.5 Any other pertinent information.

.3 Consolidate the above information in one document, and submit five copies to the Engineer.

4 Measurement for Payment

.1 Include all direct costs for the work required to complete the Record Drawings in Item B.01720-1 in Schedule B, Schedule of Lump Sum Items, in the Tender Form.

.2 All indirect costs associated with the work described in Clause 4.1 of this section; including supervision, overhead, profit as well as fixed camp costs, shall be included in Schedule D - Balance of Project Complete, in the Tender Form.

1.0 GENERAL

1.1 Description

.1 This section specifies the requirements for the demolition, removal and containerization or disposal of all structures and utilities as indicated on the Drawings.

1.2 Related Work

.1 Section 02081 - Asbestos Abatement.

.2 Section 02090 - Hazardous Waste Material.

.3 Section 02209 - Grading.

1.3 Reference Standards

.1 National Building Code of Canada, Current Edition.

.2 CSA-S350-M1980, Code of Practice of Safety in Demolition of Structures.

.3 SOR/92-507, Storage of PCB Material Regulations.

.4 Where the referenced codes and standards are found to be at variance with these specifications, the most stringent regulations shall apply.

.5 Conduct all work in accordance with all appropriate Federal and Territorial legislation, and international conventions including:

.1 Transportation of Dangerous Goods
.2 Guidelines for the packing of cargo, other than bulk cargo into or onto cargo transport units (CTU's) applicable to transport operations by all surface and water modes of transport.

1.4 Work Included

.1 Demolition, removal and disposal or containerization of all structures and utilities as indicated on Demolition Plans and/or as indicated in the Demolition Tables in the Appendix (and related ancillary facilities) including the following:

.1 Removal and disposal of all contents of buildings identified for demolition and including storage tanks.
.2 Removal, segregation and containerization of building facility components coated with PCB-amended paint at PCB concentration levels in excess of 50 parts per million.
.3 Removal and disposal of asbestos material in accordance with Specification Section 02081 - Asbestos Abatement.

.4 Removal and disposal of concrete contaminated with PCBs at concentrations in excess of 1 ppm and less than 50 ppm.

.5 Removal and containerization of concrete contaminated with PCBs at concentrations in excess of 50 ppm.

.6 Removal and placement of hazardous waste material in containers in accordance with Section 02090 - Hazardous Waste Material.

.7 Removal, wrapping in plastic, and disposal of creosote-treated timbers.

.8 Removal and disposal of drainage culverts, including culvert excavation.

.9 Backfilling of any areas excavated to facilitate demolition requirements, including the backfilling of holes from which timber piles were removed.

.10 Restoration and grading of all areas affected by demolition work in accordance with Section 02209 - Grading.

.11 Disconnecting and capping of services as indicated or directed by the Engineer.

.12 Establishment of a Temporary Storage Area and transportation of containerized PCB materials to this area.

.13 Provision a photographic record of all completed containers prior to closing.

1.5 Existing Conditions

.1 The information presented on the Drawings and in the Specifications that describes the structures and utilities to be demolished is based upon site conditions during the 2000 and 2001 field investigation programs.

.2 Take over structures and utilities to be demolished based on their condition on the date that the Contractor mobilizes to the site.

.3 Structural Detail Drawings and the information presented in Appendix A provide brief descriptions, an asbestos inventory, the results of testing carried out on PCB-amended and lead based painted materials, floor plans and/or building sections and details, for structures and facilities to be demolished. These tables and drawings indicate only the major construction details and building systems, and are not to be construed as exact for final demolition requirements. The Contractor will be responsible for all work as described in Clause 1.4 of this Section, which includes the complete demolition, removal and disposal or containerization of all facilities and structures designated for demolition.

.4 The information presented in Appendix A indicates types and quantities of hazardous waste materials that have been previously identified, and must be removed and disposed of in accordance with the Specifications. Should other potentially hazardous waste material, other than that already identified, be encountered in the course of demolition work, stop work immediately, and notify the Engineer. Do not proceed until written instructions have been received from Engineer.

.5 The Site Photographs in Appendix D show the condition of the facilities and structures during the 2000 and 2001 field investigation programs. These photographs are intended to provide information on the general condition of the facilities and structures to be demolished. Photographs are of a selected group of structures, and are not intended to depict the total scope of work. The Owner and Engineer cannot guarantee the accuracy of and are not responsible for the interpretation of this information.

.6 The Contractor is advised that the module train was destroyed by fire in January 2000. Ash and burnt debris are to be removed as per Clause 3.7 of this Section.

1.6 Qualifications

.1 The Contractor shall be thoroughly familiar with and knowledgeable about existing site conditions, scope of work and requirements of the Specification.

.2 Only Contractor's personnel capable of demonstrating a history of satisfactory experience in the area of hazardous waste management and who can satisfy Federal and Territorial requirements will be permitted to carry out the work of this Section. The Contractor's Superintendent responsible for the work of this Section shall have a minimum of five years of experience in the area of hazardous waste management.

.3 Follow at all times, guidelines such as those established in Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities: NIOSH Publication No. 85-115, or Hazardous Waste Worker Training Manual: Canadian LIUNA - Contractors Training Council, 1992.

.4 All activities involving the handling of hazardous materials shall be directly supervised by the Contractor's personnel who have successfully completed a 40 hour training course for Hazardous Waste Activities in compliance with OSHA 29 CFR 1910.120 or other approved equivalent training courses such as the Canadian Hazardous Waste Workers Program.

.5 Contractor's personnel trained as described in Clause 1.6.4 above shall instruct and direct all workers with respect to the waste management procedures and labour and safety practices to be followed in carrying out the work.

.6 Provide workers with protection appropriate to the potential type and level of exposure. Establish specific safety protocols prior to commencing clean up activities, and include with the Work Methodology Plan described in Clause 1.7 of this Section.

.7 Provide suitable safety clothing and equipment as required during the course of the work.

.8 Trained and certified personnel are required to complete all Transportation of Dangerous Goods Act (TDGA) documentation and recording requirements.

1.7 Demolition Drawings and Work Methodology Plan

.1 Where required by authorities having jurisdiction, submit for approval drawings, diagrams or details showing sequence of disassembly work or supporting structures and underpinning. Submissions to bear stamp of qualified professional engineer registered in the Northwest Territories (Nunavut).

.2 The demolition component of the Work Methodology Plan, as described in Section 01005 - General Instructions (Clause 22), is to include and/or address, but is not necessarily limited to:

.1 Methods and equipment to be used for demolition operations including removal of pipe culverts.
.2 An asbestos abatement plan describing the asbestos removal method, mode of transport, asbestos bagging materials, and other containerization requirements;
.3 Supply of containers for packaging of hazardous demolition debris, including all required approvals, as well as a description of the type, volume and number of containers;
.4 Methods and equipment to be used for handling PCB-amended and lead-based paint during all phases of the work;
.5 Methods and equipment to be used to segregate and containerize the various types of PCB amended painted materials, including methods and materials to provide bracing of structural members within the containers, and to provide seal on containers to prevent escape of paint flakes, chips, and/or dust;
.6 Details of health and safety plans including the experience and qualifications of personnel to carry out demolition and asbestos removal requirements, and training programs to be implemented prior to commencing the work;
.7 Details of personnel protective equipment and decontamination procedures to be used during all phases of the work, and especially during the asbestos abatement and removal and handling of PCB-amended painted materials;
.8 Record keeping and reporting methods;
.9 Work schedule;
.10 Compliance with all regulations;
.11 Handling and disposal of wash water;
.12 Detailed cost estimate, including a detailed breakdown of costs for labour, equipment, material and supplies for the intermediate containerization of PCB-amended painted materials and subsequent consolidation into barge containers.
.13 Any other items that are pertinent to the work.

.3 Do not commence demolition work, including asbestos abatement, until:

.1 Written approval of the Work Methodology Plan has been received from the Engineer and the Government of Nunavut, Safety; and
.2 The Contractor has demonstrated to the Engineer that all required permits to be acquired by the Contractor for the work have been obtained.

1.8 Protection

.1 Prevent movement, settlement or damage of adjacent structures, services, roadways, and parking areas to remain. Provide bracing, shoring and underpinning required. Make good damage and be liable for injury caused by demolition.

.2 Take precautions to support structures and, if safety of building being demolished or adjacent structures or services appear to be endangered, cease operations and notify the Engineer.

.3 Protect existing facilities designated to remain. In the event of damage, immediately replace such facilities, or make repairs to approval of the Engineer at no additional cost to the Owner.

.4 Prevent damage and minimize stripping of natural terrain, features and vegetation. Make good all damage.

.5 Prevent debris from blocking surface drainage system, mechanical and electrical systems that must remain in operation

.6 Protect buildings, facilities and utilities in use adjacent to the work area.

.7 Ensure safe passage of persons around area of demolition.

.8 Prevailing weather conditions and weather forecast shall be considered. Do not proceed with demolition work when weather conditions constitute a hazard to the workers and site.

.9 Cover and wet down dry materials, ash and rubbish to prevent blowing dust and debris. Provide dust control for existing and temporary roads.

1.9 Fires

.1 Fires and burning of demolition materials on site are not permitted unless specifically indicated in these Specifications or as authorized in writing by the Engineer.

.2 Where fires or burning are permitted, prevent staining or smoke damage to structures, materials or vegetation which are to be preserved. Restore, clean and return to new condition stained or damaged work.

.3 Provide supervision, attendance and fire protection measures in accordance with Section 01546 - Fire Safety Requirements.

1.10 Measurement For Payment

.1 Include all direct costs for the following work items in the lump sum price for Demolition, Items B.02060-1 to B.02060-10 for each facility to be demolished as indicated in Schedule B, Schedule of Lump Sum Items in the Tender Form:

.1 Removal and disposal of asbestos materials.

.2 Demolition, removal, and disposal of non-hazardous demolition debris and Module Train rubble and ash.

.3 Demolition and removal of PCB-amended painted demolition wastes, including concrete.

.4 Segregation and placement of painted materials, with PCB concentrations in excess of 50 ppm, into intermediate containers and subsequent consolidation of intermediate containers and larger demolition materials into barge containers, including the installation of bracing, locks, dunnage and drip trays within the containers, as required and supply and placement of appropriate labelling and placards on the containers.

.5 The placement in layers and compaction of asbestos and non-hazardous demolition debris, excluding PCB-amended painted materials with concentrations of PCBs in excess of 50 parts per million, into the designated on-site non-hazardous waste landfill.

.6 Removal and disposal of culverts and all items related to the Module Train runoff pond(s).

.7 The demolition, removal, wrapping in plastic, and disposal of creosote-treated timbers, including the supply and placement of granular material used to backfill the holes from which creosote-treated timber piles were removed.

.8 The removal and disposal or containerization, including the supply of containers, of fuel and fuel residual product from fuel tanks, POL pipelines, and disposal of fuel tanks and pipelines, including line supports and marker posts.

.9 The removal, draining, and packaging of transformers and oil, including the supply of containers.

.10 The demolition, removal and disposal and containerization as required, including the supply of containers, of sewage and sewage sludge from sewage tanks and sewage lines to be demolished, including line supports and marker posts.

.11 Supply and placement of granular backfill material in areas excavated to facilitate demolition requirements, including holes from which timber piles were removed.

.12 General site grading of areas disturbed by demolition operations, including culvert removal.

.13 On-site transportation of hazardous waste materials, including containers of PCB amended painted materials, to the on-site Temporary Storage Area.

The above work items will not be measured for payment.

.2 The Contractor is advised that the Engineer reserves the right to remove from the demolition requirements of this Contract, any item listed to be demolished. Payment for demolition, as described in Clause 1.10.1 of this Section, will be made only if the facility is demolished and demolition debris is landfilled on site, and/or containerized, as required.

.3 All indirect costs associated with the work described in Clause 1.10.1 of this Section including supervision, overhead, profit, etc., as well as fixed camp costs shall be included in Schedule D - Balance of Project Complete in the Tender Form.

.4 The supply and transport to the site of barge containers, including identification labels, signage and materials to be placed within the base of the barge containers to serve as a means for containing materials within the container (drip trays), and all bracing, locks, dunnage and strapping, will be measured for payment by the number of containers supplied and transported to the site. Supply of Barge Containers - PCB Amended Painted Materials will be paid under Item A.02060-1 in the Schedule of Unit Prices.

.5 The supply and transport to the site of wooden (Sea-Can) containers for the intermediate containerization for the intermediate containerization of PCB-Amended Painted Materials will be measured for payment by the number of containers supplied and transported to the site. Supply of Intermediate Containers - PCB Amended Painted Materials will be paid under Item A.02060-2 in the Schedule of Unit Prices

.6 The unit price items, as described in Clauses 1.10.4 and 1.10.5 above, shall include direct costs only. All indirect costs associated with the work described in Clauses 1.10.5 and 1.10.6 above, including profit, camp, supervision, overhead, etc. shall be included in Schedule D – Balance of Project Complete in the Tender Form.

.7 The sorting, handling, containerization, and on-site transport of unknown hazardous demolition materials shall be measured and paid for as indicated in Section 02090 - Hazardous Waste Material.

.8 Include all costs for other elements of work not specifically described herein in the appropriate unit price or lump sum cost items described above.

.9 The Contractor shall be responsible for all costs associated with any additional repackaging of container contents resulting from the failure by the Contractor to properly pack and secure the container contents.

.10 The placement of fill for the grading of the Temporary Storage Area will be paid under items included in Section 02209. The development of the Temporary Storage Area, including signs and barricades, will not be measured for payment. Include all costs for signs and barricades in Schedule D - Balance of Project Complete.

.11 The supply, transport, placement and compaction of granular fill associated with the disposal of materials in landfills shall be measured and paid for as indicated in Section 02209 – Grading.

2.0 PRODUCTS

.1 Hazardous Waste Material Containers: In accordance with Section 02090 - Hazardous Waste Material. Submit details of the containers to the Engineer for review prior to commencement of the work as part of the Work Methodology Plan described in Clause 1.7 of this Section.

.2 A listing of the components of each facility that are to be containerized is presented in the Appendix. PAINTED SURFACES ON MODULE TRAIN RUBBLE HAVE NOT BEEN SAMPLED AND TESTED FOR PCBs. IF PAINTED MATERIALS ARE IDENTIFIED IN THE MODULE TRAIN RUBBLE, ASSUME THAT THESE MATERIALS ARE TO BE CONTAINERIZED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

.3 Plastic for Wrapping of Creosote-Treated Timbers:

.1 Polyethylene sheeting, 0.15 mm (6 mil) minimum thickness.

.4 Barge Containers for the consolidation of Intermediate Containers containing PCB Amended Painted Materials (>50 ppm PCB's) and larger PCB Amended Painted Materials:

.1 Containers shall be of steel plate construction with sufficient support to withstand the vertical and lateral pressures exerted by the materials placed in them. The containers shall be leak-proof, of sufficient durability to prevent the PCB material from being affected by the weather and suitable for transport on sea-barges and semi-trailer roadway vehicles and international shipment requirements.

.2 Barge containers are to be in new condition with dimensions of 8 feet x 8 feet x 20 feet (2.44 m x 2.44 m x 6.1 m).

.3 Containers are to be designed to support the full gross weight for bottom lift by forklift or equivalent.

.4 The containers shall be the end loading type. Provide seal of opening to prevent the escape of paint flakes, chips and/or dust upon opening of the containers.

.5 Submit details of the containers to the Engineer for review prior to commencement of the work as part of the Work Methodology Plan described in Clause 1.7 of this section.

.6 The barge containers shall have drip trays, composed of metal or polyethylene with plywood protection, capable of containing a minimum of 110% of the total volume of all PCB liquids stored within the container.

.7 The barge containers should be inspected and certified.

.8 Affix to the entrance and all visible sides of the barge container, a black and white weatherproof label measuring 150 mm by 150 mm in the form illustrated in Figure 1 at the end of this specification section.

.9 Affix to the entrance and all visible sides of the barge container, a black and white weatherproof label measuring 150 mm by 150 mm in the form equivalent to that in Figure 1 at the end of this specification section and translated into the local dialect.

.10 Affix to the entrance and all visible sides of the barge container, a black and white weatherproof label measuring 76 mm by 76 mm bearing the unique registration number of the Department of the Environment. The label shall be in the form illustrated in Figure 2 at the end of this specification section.

.11 These containers are to remain the property of the Owner.

.5 Intermediate containers for the Storage of PCB Amended Painted Materials (>50 ppm PCB's)

.1 Intermediate containers are to be wooden (Sea-Can) containers in new condition with dimensions of 4 feet x 4 feet x 6 feet (1.22 m x 1.22 m x 1.83 m).

3.0 EXECUTION

3.1 Work

.1 Before commencing demolition, remove all hazardous materials and asbestos-containing products. Hazardous material and asbestos removal work must be completed and accepted by the Engineer prior to the start of demolition.

.2 Before commencing demolition of fuel storage tanks, remove and dispose of remaining contents and tank sludge, and clean tanks, in accordance with Section 02090 - Hazardous Waste Material.

.3 Pump out existing water and sewage tanks prior to demolition. Clean water and sewage tanks and lines in accordance with Section 02090 – Hazardous Material.

.4 Drain and package transformers in accordance with Section 02090 – Hazardous Waste Material.

.5 Remove and dispose of demolition debris as specified in this Section and in Section 02209 - Grading.

3.2 Environmental Protection

.1 Perform work in an environmentally acceptable manner. Comply with requirements of Section 01560 - Environmental Protection, the Land Use Permit and the Water Use License.

3.3 Safety and Personnel Protection

.1 Unless otherwise specified, carry out demolition work in accordance with Section 01005 - General Instructions and Section 01545 - Safety, Medical, Security Requirements.

.2 Some areas designated for demolition under this contract involve materials which contain PCBs and lead-based paints, as well as other contaminants which are considered hazardous to human health. PCBs at concentrations in excess of 50 ppm are considered to be hazardous substances. Storage, handling, and disposal of PCBs are regulated under the Canadian Environmental Protection Act and the Federal Transportation of Dangerous Goods Act. Comply with all applicable regulations.

.3 During the removal of PCB-amended painted (PAP) materials, follow the Personnel Protection Requirements specified for the removal of Type 3 asbestos materials as indicated in Clause 1.8.4 of Section 02081 - Asbestos Abatement. Use respirators with organic vapour - HEPA combination filters. Wear appropriate eye protection (goggles, face shields, safety glasses) during paint scraping operations.

.4 When working with PCB-containing materials, lead-based paints, and other contaminants, workers shall wear protective clothing and equipment acceptable to Labour Canada or Territorial Labour Department as suitable for exposure in the work area. Follow National Institute for Occupational Safety and Health (NIOSH) guidelines in providing protection for on-site personnel including contract employees, subcontractors, the Engineer, Engineer's staff, and other authorized personnel.

.5 Fluorescent lamp ballasts are to be handled, and general safety precautions followed, as stated below:

.1 Some ballasts in the buildings to be demolished may contain PCB-filled capacitors.

.2 Wear gloves while handling ballasts and dispose of gloves with ballasts. Avoid breaking or damaging ballast cases.

.3 Refer to Environment Canada Publication, "Identification of Fluorescent Lamp Ballasts Containing PCBs".

3.4 Preparation

.1 Inspect site and verify with the Engineer items designated for demolition.

.2 Locate and protect all utility and service lines to remain. Preserve in operating condition, active utilities and services traversing the site.

.3 Disconnect electrical and telephone service lines entering buildings to be demolished in accordance with rules and regulations of authorities having jurisdiction. Post warning signs on electrical/ communication lines and equipment that must remain energized to serve other properties during period of demolition.

.4 Disconnect and cap underground services outside of buildings scheduled for demolition.

.5 Protect all instrumentation installations. Repair or replace, at not cost to the Owner, any instrumentation damaged by Contractor's operations.

3.5 Removal and Containerization of PCB-Amended Painted Materials

.1 Prior to dismantling structures and facilities, remove all loose PCB-amended paint and place in a polyethylene bag. The use of heat to remove loose paint is NOT permitted. Place bags of loose paint materials in the Hazardous Waste Material Containers specified in Clause 2.1 of this Section.

.2 During facility dismantling operations, contain PCB-amended paint particles by the use of polyethylene sheets or other measures to seal facilities. Use drop sheets, as required, to collect paint particles that become removed from surfaces during dismantling operations.

.3 The use of heat (e.g. cutting torches) to cut or dismantle facilities containing PCB-amended paint materials is not permitted unless the paint has been removed from the areas to be cut.

.4 Placement of PAP Materials into Intermediate (Sea-Can) containers:

.1 Place into the Sea-Can containers, all PAP material that is sized or that can be easily sized to fit within the lined Sea-Can containers.

.2 Place the material in the Sea-Can containers such that no movement of the PAP material will occur during normal condition of transport.

.3 Place loaded and closed Intermediate (Sea-Can) containers into the barge containers for off-site transport.

.5 Placement of PAP Materials into Barge containers

.1 Prior to loading PAP materials into barge containers, place a layer of 60 mil (1.5 mm) polyethylene sheet on the bottom of the container. The polyethylene is to extend a distance of at least 400 mm up the sides of the container to serve as a drip tray.

.2 As an alternative to the 60 mil sheet drip tray, place a 6 mil (0.15 mm) minimum thickness of polyethylene on the bottom of the container. The polyethylene is to extend a distance of at least 400 mm up the sides of the container. Place 0.5" thick plywood over the polyethylene to protect it from damage.

.3 Place neatly into the barge containers, all Intermediate (Sea-Can) containers and PAP materials that cannot fit within the intermediate containers.

.4 Distribute the weight of the material evenly over the floor of the container. Where cargo items of a varying weight are to be packed into a container or where a container will not be full, arrange the material so that the center of gravity of the cargo is close to the mid-length of the container. Do not concentrate heavy loads on small areas of the container floor.

.5 Position materials within the container so that the center of gravity is below the half-height of the cargo space.

.6 Position materials within the containers such that lateral bracing for the load is NOT provided by the sidewalls of the containers. Provide and use wooden bracing material or strapping to ensure that the material does not move during transport. Anchor the strapping material to the fastening loops built into the frame of the containers. Anchor the bracing material to the structural frame of the container.

.7 Place filled Intermediate (Sea-Can) Containers and larger demolition materials in the barge containers such that no movement of this material will occur during normal conditions of transport. Use dunnage, folded cardboard or other suitable means, as required, to fill the void spaces within the barge containers.

.8 Do not leave ary gaps between Intermediate (Sea-Can) containers, larger demolition materials and the front or side walls of the barge containers, that would allow cargo shifting.

.9 Construct a wooden frame at the rear of the container to prevent the movement of materials within the container and to prevent pressure on the door. Anchor the bracing material to the structural frame of the container.

.10 Remove gross contamination from clothing before leaving work areas containing PCB-amended painted materials. Remove outer clothing before leaving work area, and place in polyethylene bags.

.11 Clearly mark on all containers, the contents in accordance with the requirements of the Canadian Environmental Protection Act for the Storage of PCB Materials (SOR/92-507), and with the Transportation of Dangerous Goods Regulations. Submit to the Engineer a copy of the inventory of the contents of each container upon completion of demolition work. Trained and certified Contractor personnel are required to complete all Transportation of Dangerous Goods Act (TDGA) documentation and recording requirements. The Engineer will serve as the Owner's representative as the generator of the waste, and will sign all documentation as required.

.12 Lock or place barge containers within the Temporary Storage Area in a manner that prevents access to the contents by unauthorized personnel.

.13 Provide a photographic record of all completed containers prior to closing.

.6 Decontaminate all equipment that comes into direct contact with PCB-amended paint. Place all rags or cloths used during the equipment decontamination in polyethylene bags. Place bags in the Hazardous Waste Material Containers specified in Clause 2.1 of this Section.