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1 Description of Work

- .1 Work under this contract covers the provision of a construction camp and operation of the camp for two construction seasons to support the environmental restoration and demolition of facilities at the CAM-F, Sarcpa Lake DEW Line Site.
- .2 Specific camp support at the CAM-F site includes, but is not limited to, the following:
 - .1 Mobilization and demobilization of all personnel, equipment, support facilities and materials required to complete the work.
 - .2 Provision of the following site support services:
 - .1 Construction Camp as specified in Section 01592 - Construction Camp, including operation, maintenance, catering and janitorial service.
 - .2 Safety, fire protection, office and medical services as specified.
- .3 Work by others includes the site restoration construction activities at CAM-F. Within the context of these specifications, the contractor responsible for the site restoration construction activities at CAM-F will be referred to as the Construction Contractor. The Construction Contractor will provide
 - .1 Transport and storage of 75,000 litres of diesel fuel to CAM-F to run the camp generator(s) for the duration of the project.
 - .2 All air transportation, at a minimum frequency of once per week, for food re-supply and personnel movement between CAM-F and Iqaluit during construction.

2 Site Description

- .1 The CAM-F site (68° 33' N, 83° 19' W) is located on the Melville Peninsula, approximately 85 km west of Hall Beach, and 100 km south-west of Igloolik in the Territory of Nunavut. The site is landlocked limiting site access to helicopters, small aircraft and a winter CAT train from Hall Beach. CAM-F was constructed in 1957 as an intermediate site for the DEW Line system. It was used for a short period of time until it was abandoned in 1963. It was converted to a scientific research station in 1977 under the Science Institute of the Northwest Territories and Canada, Department of Indian and Northern Affairs and operated seasonally until 1988.
- .2 The CAM-F site consists of two main parts including the station area and former construction camp areas at Sarcpa Lake. Site facilities consist of an airstrip, small module train, warehouse, garage, Quonset, Inuit house, two former landfill areas, and oil and lubricants (POL) storage facilities. The site contains approximately 9,160 barrels, a radar tower that has been knocked down and other site debris. The station is accessed via 3 km by road from the shores of Sarcpa Lake. The beach area at

Sarcpa Lake includes a former construction camp. The former camp area consists primarily of scattered barrels and abandoned construction equipment, a small machine shop and generator pad.

3 Definitions

- .1 Engineer's Authorized Personnel: Within the context of these Specifications, the term Engineer's Authorized Personnel refers to personnel appointed by the Engineer or authorized on site by the Engineer. Engineer's Authorized Personnel will provide recommendations/technical guidance to the Engineer, as required, for the enforcement of these specifications.
- .2 Construction Contractor: The contractor procured to provide the remediation restoration at the CAM-F Sarcpa Lake site is defined as the Construction Contractor. The Construction Contractor will provide support for specific work items in this Contract including the provision of heavy equipment for camp mobilization, set up and demobilization, the provision and bulk storage of diesel fuel to CAM-F for the operation of the camp and the provision of air transportation between CAM-F and Iqaluit for food re-supply and movement of personnel during construction.
- .3 Camp Contractor: The Camp Contractor will supply and operate the camp in support of the environmental restoration at the CAM-F Sarcpa Lake site.

4 Work Schedule

- .1 Mobilize the camp to Hall Beach in September 2005, by barge or sealift and set up temporary storage in Hall Beach until winter. During the winter of 2005/2006, the camp and remediation equipment will be mobilized from Hall Beach into Sarcpa Lake via CAT train by the Construction Contractor. Site clean up activities are expected to begin in 2006 and continue through to the summer of 2007. In the winter of 2007/2008, the camp and equipment will be demobilized from the site back to Hall Beach via CAT train by the Construction Contractor. The Camp Contractor is required to be on site during all activities and mobilizations.

5 Measurement for Payment

- .1 Notify Engineer of planned work activities at least 48 hours in advance of operations to permit required measurements for payment.
- .2 Items measured for payment and specific lump sum items will be included in the Basis of Payment Schedule.
- .3 Work under this section includes all costs for lump sum items directly attributable to a particular pay item including equipment, operators, materials, equipment maintenance and depreciation, etc. All costs for unit price items are to be included

in the appropriate unit price in Basis of Payment Schedule.

- .4 All camp costs shall include, but are not limited to:
 - .1 Supply of camp facilities; mobilization of camp to Hall Beach.
Design, supply and installation of construction camp facilities as specified in Section 01592 - Construction Camp.
 - .2 Design, supply, installation and operation of camp support facilities including heating, lighting, fuel, potable and domestic water systems, sewage collection, treatment and disposal, refuse and garbage collection and disposal, fire safety requirements, kitchen equipment, laundry equipment, recreational facilities and vehicle parking. Provide the fuel tank and connecting lines. All diesel fuel will be provided by the Construction Contractor.
 - .3 Obtaining and complying with all licenses, permits, and authorizations required to comply fully with all laws, ordinances and regulations of the Federal, Territorial and local authorities, including all costs for the inspection of camp and electrical facilities by Government of Nunavut.
 - .4 Shutdown and reopening of the construction camp.
 - .5 Demobilization of the construction camp from the site at the completion of the Contract.
 - .6 Heavy Equipment for the transport of the camp from Hall Beach to the site via CAT train and installation on site will be provided by the Construction Contractor. Communicate and coordinate transport of the camp with the Construction Contractor.
 - .7 Locate and arrange for secure temporary storage in Hall Beach as necessary.

6 Permits

- .1 Obtain and pay for any permits and licenses associated with the development and operation of the construction camp.
- .2 The Engineer has applied for a Land Use Permit, Water Use License and a Quarrying Permit. Comply with all restrictions and requirements of these permits.
- .3 Register, obtain and pay for all required licenses and permits for individual tradesmen employed for work as referenced in the various Sections of the Contract Specifications.
- .4 Pay all costs associated with complying with the requirements for the permits and licenses noted in the above Clauses.

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Site Maintenance

- .1 Keep the site free from the accumulation of waste materials and debris as specified in Section 01355 – Waste Management.
- .2 Upon completion of the work, clean away and dispose of all surplus material, supplies, rubbish and temporary works leaving the site neat and tidy to the requirements of the Engineer and the Land Use Permit.

1 General

- .1 Personnel safety, medical facilities and reliable communications are of paramount concern due to the remoteness of the site.
- .2 The Camp Contractor shall be responsible for the safety of all persons and property on or about the construction camp. Ensure that all work is performed in accordance with all applicable safety regulations and site specific requirements. The Construction Contractor shall be responsible for safety of all persons and property on or about the construction areas beyond the camp area as determined by the Engineer.
- .3 Implement, maintain and supervise a comprehensive safety and health program that meets the standards and requirements of applicable regulatory agencies and to the satisfaction of the Engineer. Make program known to all camp personnel at the site and include specific instructions on safe performance of duties including working in a harsh environment, monitoring for compliance, safety communications and instruction, and actions to be taken in the event of safety violations, accidents, emergencies, personnel injury and sickness. Include in the program an effective reporting system to the Engineer on safety and health matters.
- .4 Designate a Medic who shall be qualified to administer emergency and survival first aid. The Medic must have completed a recognized post-secondary paramedic program. At least one fully trained Medic shall be available on site at all times.
- .5 Arrange regular safety meetings, to be held no less frequently than once per week. Record the minutes of such meetings and maintain a complete file for review by the appropriate authorities. Submit a copy of these meeting minutes to the Engineer within three days of the meeting. All costs for such meetings shall be borne by the Camp Contractor.
- .6 Supply and maintain, at known places on-site, safety equipment necessary to protect the workers, the Engineer and Engineer's Authorized Personnel against accident or injury as prescribed by the governing authorities, the Engineer, and site specific requirements.
- .7 Personnel shall be medically fit for work in the Arctic at an isolated location with limited medical facilities.

2

Camp Site Specific Health and Safety Plan

- .1 Prepare a Camp Site Specific Health and Safety Plan that incorporates the requirements of this specification. The Camp Contractor will be responsible for all Site Specific Health and Safety Requirements within the camp area. The Construction Contractor is responsible for all Site Specific Health and Safety requirements outside the camp area at the CAM-F site.
- .2 The Camp Site Specific Health and Safety Plan shall include, at a minimum, the following sections:
 - .1 A Statement of the Camp Contractor's Safety Policy.
 - .2 Safety Responsibilities of all on-site personnel.
 - .3 Safe Work Practices and/or Job Procedures.
 - .4 Camp Rules and their enforcement.
 - .5 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
 - .6 Safe work procedures for, but not limited to, cold weather survival, remote work, handling and exposure to hazardous materials and general worker health and safety.
 - .7 Name and telephone number of Camp Contractor's corporate Safety Officer and on-site Safety Representative.
- .3 Communicate the Camp Site Specific Health and Safety Plan to all personnel onsite, and make one copy available in the camp.
- .4 Provide two copies of the Camp Site Specific Health and Safety Plan to the Engineer prior to the commencement of work. The Engineer will review the Camp Contractor's Site-specific Health and Safety Plan and provide comments to Camp Contractor within 10 days after receipt of plan. Revise plan as appropriate and resubmit plan to Site Engineer within 5 days after receipt of comments from Site Engineer.
- .5 The Engineer's review of Camp Contractor's final Site Specific Health and Safety Plan should not be construed as approval and does not reduce the Camp Contractor's overall responsibility for Health and Safety.
- .6 Medical Surveillance: Where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to the Engineer.
- .7 On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations as indicated by the Engineer.

3 Medical

- .1 Provide and maintain first aid facilities at the camp for all workers as required by the Statutes of the Nunavut Safety Act.
- .2 Maintain first aid supplies and sick quarters separately from general living quarters when camp population normally ranges between 26 and 50 occupants.
- .3 Provide the appropriate Nunavut first aid kit, based on the number of workers, in accordance with the Nunavut Safety Act.
- .4 Establish an emergency response plan acceptable to the Engineer, for the removal of any injured person to medical facilities or a doctor's care in accordance with applicable legislative and regulatory requirements.
- .5 Provide proof of First Aid credentials to the Engineer prior to the start of each construction season. Provide the appropriate number of first aid attendants on site in accordance with the Nunavut Safety Act (minimum of one).

4 Accidents and Accident Reports

- .1 Immediately report, verbally, followed by a written report within 24 hours, to the Engineer, all accidents of any sort arising out of or in connection with the performance of the work, giving full details and statements of witnesses. If death or serious injuries or damages are caused, report the accident promptly to the Engineer by telephone or facsimile in addition to any report required under federal and territorial laws and regulations.
- .2 If a claim is made by anyone against the Camp Contractor or the subcontractor on account of any accident, promptly report the facts in writing to the Engineer, giving full details of the claim.
- .3 Submit copies of reports or directions issued by Federal, Territorial health and safety inspectors to the Engineer.

5 Security

- .1 Enforce the Camp Rules as provided under Section 01592 - Construction Camp.
- .2 Limit site access only to persons employed on the project. Unauthorized persons will be permitted on site only with the approval of the Engineer.

6

WHMIS/MSDS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding employee training, use, handling, storage, and disposal of hazardous materials, and regarding labelling and provision of Material Safety Data Sheets as required by WHMIS legislation.
- .2 Submit copies of WHMIS data sheets to Engineer on delivery of materials. Submit copies of Material Safety Data Sheets (MSDS) to the Engineer.

7

Measurement for Payment

- .1 Work under this section includes all costs for the preparation and revision, based on the Engineer's comments, of the Camp Site Specific Health and Safety Plan; provision of first aid personnel and facilities; coordination of safety meetings; and to supply and maintain safety equipment necessary to protect the workers. These costs are to be included in the lump sum price for Camp Site Specific Health and Safety Plan, Item 01351-1, as indicated in Basis of Payment Schedule.

1 Regulatory Requirements

- .1 Comply with the requirements of the Land Use Permit, the Water License and the Public Health Act (Nunavut) and Authorities having jurisdiction.

2 Construction Camp Waste

- .1 Provide a waste, refuse and garbage collection and disposal system. This should include, at minimum, a secure waste disposal bin to temporarily store dry solid waste generated from the camp operations.
- .2 Provide a fuel fired incinerator to dispose of putrescible waste, as directed by the Engineer. Operate the incinerator on a daily basis.
- .3 All solid and liquid waste that cannot be incinerated will be turned over to the Construction Contractor for disposal on an as required basis.

3 Sewage Disposal Requirements

- .1 Provision of a sewage collection, treatment and disposal system. The sewage treatment system should consist of two temporary lagoons located in an area approved by the Engineer. Provide and install the necessary piping to ensure the lagoons can be operated independently.
- .2 Size each of the lagoons to provide an individual capacity for 45 days of wastewater storage or one half of the duration of the construction season, whichever is less. The maximum fluid depth shall not exceed one metre. The Construction Contractor will provide the equipment and operators necessary to construct the lagoon.
- .3 Locate the temporary lagoon area:
- .1 A minimum of 100 m from the construction camp, Engineer's Office, and/or other temporary facilities.
- .2 A minimum of 50 m from drainage paths.
- .3 A minimum of 100 metres from water bodies supporting aquatic life.
- .4 Downwind of the construction camp based on the prevailing wind direction.
- .4 Treat all sewage to meet the following:

<u>Parameter</u>	<u>Maximum Allowable Concentration</u>
Oil and Grease	None Visible
PH	6 to 9
Total Suspended Solids	180 mg/L
BOD	120 mg/L
Faecal Coliforms	10,000 CFU/dl

If unable to meet the above discharge criteria, provide additional storage and/or treatment necessary to meet criteria prior to discharge.

- .5 If unable to meet the above discharge criteria, provide additional storage and/or treatment necessary to meet criteria prior to discharge.
- .6 Submit details of the sewage disposal system to the Engineer 15 days prior to the mobilization of the camp to Hall Beach.
- .7 At the completion of construction, the temporary lagoon will be backfilled by the Construction Contractor.

4 Measurement for Payment

- .1 Work under this section includes all costs for the supply, transport and installation of all necessary secure waste bins, sewage piping, stakes and connecting hardware; provision of a waste collection and disposal system; operation and maintenance of the sewage collection, treatment and disposal system in the lump sum price for Waste Management, Item 01355-1, as indicated in Basis of Payment Schedule.

1 General

1. The work specified in this section comprises the provision of all labour, equipment and materials necessary for mobilization and demobilization of the construction camp to the CAM-F site.
2. Mobilization shall include transportation to the site of the Camp Contractor's labour, equipment, and materials to ensure the camp is fully operational for the start of the 2006 construction season. Mobilization shall include camp and equipment set up at Sarcpa Lake. Equipment necessary for mobilization of camp components, materials and supplies from Hall Beach to Sarcpa Lake shall be provided by the Construction Contractor. Mobilization will also include the provision of meals for all on-site personnel for the duration of the set-up period. The camp contractor should provide the necessary labour (including wild life monitors), equipment, and supplies to feed 20 people for two weeks during the camp set-up. The Crown will provide temporary shelter (nylon and canvas tents) until such time that the Camp Contractor's facilities are inhabitable.
3. Demobilization shall include the dismantling and removal from the site of all of the Camp Contractor's equipment and materials; clean up of the site, and transportation of labour from the site. The Construction Contractor will provide support, in the form of heavy equipment with operators, to transport the camp from the approved camp location on site to Hall Beach.
4. Do not mobilize to the site without written authorization from the Engineer.

2 Measurement for Payment

- .1 Work under this section includes all costs for mobilization of all camp equipment, materials and supplies to Hall Beach, including all labour and storage costs, and are to be included in the lump sum price for Mobilization via Sealift to Hall Beach, Item 01591-1, as indicated in Basis of Payment Schedule. Payment for Item 01591-1 will not be made until the Sealift Manifest receipt for the camp equipment is submitted to and approved by the Engineer. Fifty percent (50%) of Item 01591-1 will be paid on receipt of the Sealift Manifestation and the remainder will be paid once all equipment, materials and supplies are located in the approved and secure storage location in Hall Beach.
- .2 Work under this section includes all costs for mobilization of all camp equipment, materials and supplies from Hall Beach to CAM-F via CAT train provided by the Construction Contractor and are to be included in the lump sum price for Mobilization from Hall Beach to CAM-F, Item 01591-2, as indicated in Basis of Payment Schedule. Payment for Item 01591-2 will not be made until the Camp has been approved for start-up by the Engineer.

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- .3 No payment will be made for Item 01591-2 until it is demonstrated that all communication links are up and fully operational in accordance with Section 01592 - Construction Camp.
 - .4 Work under this section includes all costs for demobilization of all camp equipment and materials from CAM-F, Sarcpa Lake, to Hall Beach via CAT train provided by the Construction Contractor are to be included in the lump sum price for Demobilization to Hall Beach, Item 01591-3, as indicated in Basis of Payment Schedule. Payment for Item 01591-3 will not be made until clean up of the site to the satisfaction of the Engineer and removal from the site of the construction camp, equipment and materials.
 - .5 The Camp Contractor is to arrange for temporary storage and security of all camp equipment, materials and supplies in Hall Beach where necessary.

1 General

1. Provide and operate complete construction camp services, including the provision, preparation and serving of food, as required for the Construction Contractor's personnel, the Engineer and the Engineer's Authorized Personnel. Provide and equip the engineers' office, geotechnical and analytical laboratories.
2. The Camp Contractor will mobilize the Camp to Hall Beach in September 2005, by barge or sealift. The Camp will be moved from the "beach" at Hall Beach to temporary storage until winter freeze-up. During the winter of 2005/2006, the camp and remediation equipment will be mobilized from Hall Beach into Sarcpa Lake via CAT train provided by the Construction Contractor. Clean up activities are expected to begin in 2006 and continue through to the summer of 2007. In the winter of 2007/2008, the camp and equipment will be demobilized from CAM-F to Hall Beach via CAT train provided by the Construction Contractor. The Construction Contractor will provide heavy equipment and operators to assist the Camp Contractor with the transport of the Camp to and from the beach landing area in Hall Beach to the approved camp location on site.
3. The expected duration of remedial activities on-site will generally be in the period of July 1 to September 30. During the winter months, work will cease and equipment and facilities on-site shall be winterized. It is expected the Camp Contractors' workforce and accessory personnel will mobilize to and from the site from nearby northern communities. The Construction Contractor will provide all transportation, at a minimum frequency of once per week, between CAM-F and Iqaluit for food re-supply and movement of personnel during construction. Completion of the site remediation and demobilization of the Camp Contractor's facilities and equipment is anticipated for 2007/2008.
4. The location of the construction camps must be approved by the Engineer prior to site set up.
5. Unless otherwise indicated, the Construction Contractor will provide support in the form of heavy equipment and operators to assist the Camp Contractor with erection of the camp.
6. Unless otherwise indicated, the camp and associated facilities remain the property of the Camp Contractor at the conclusion of the contract.
7. Provision of construction camp services includes, but is not limited to, 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; 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; wildlife monitor(s); personnel laundry facilities; recreational facilities; and snow removal.

8. Provide and pay for all potable and domestic water systems; power, heating and lighting systems associated with the operation of the construction camp.
9. Provision of construction camp services shall include shutdown and reopening of construction camp for the Construction Contractor's workforce. Provision of construction camp services shall include Engineer's Site Office and Laboratories as further specified in this Section.
10. Winterization of the camp shall include the securing of all camp facilities against all elements at the site. The winterization period is considered to be the down time between the construction field seasons.
11. Demobilize and remove the construction camp from the site at the completion of the Contract. The grading of the site, as necessary to match surrounding terrain and to ensure positive drainage as directed by the Engineer will be provided by the Construction Contractor. The Construction Contractor will provide heavy equipment and operators to assist the Camp Contractor with demobilizing the camp to Hall Beach. Any necessary costs and arrangements associated with the camp storage at Hall Beach are the responsibility of the Camp Contractor.
12. Provide construction camp services for own workforce, the Construction Contractor's personnel, the Engineer, and Engineer's authorized personnel as follows:
 1. Construction Contractor's Workforce: 30 personnel for 75 days per year.
 2. Resident Engineer: 1 person for 75 days per year.
 3. Environmental Inspectors: 2 persons each for 75 days in 2006 and 60 days in 2007.
 4. Geotechnical Engineer: 1 person for 75 days in 2006 and 60 days in 2007.
 5. Engineers Authorized Personnel, PWGSC and INAC Office Personnel: up to five (5) personnel on site at any one time for a total of 30 days in 2006 and 25 days in 2007.
 6. The maximum camp population anticipated (excluding the Camp Contractor's workforce) is 39.
 7. The above estimates are subject to revision based on the Construction Contractor's Schedule.

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 18 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 Comply with all requirements of licenses, permits and authorization whether obtained by Engineer or Construction Contractor.

3 Environmental Requirements

- .1 Comply with sewage treatment, discharge and closure requirements as outlined in Section 01355 - Waste Management.
- .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 campsite.
- .3 Carry out and pay for sampling and analyses of any construction camp water supply source to prove that the water quality satisfies the Health Canada Guidelines for Canadian Drinking Water Quality. The sampling and analysis is to be provided at the water supply source and at the distribution source prior to consumption.
- .4 Provide bottled water that meets Health Canada Guidelines for Canadian Drinking Water Quality until it is demonstrated, by a minimum of two consecutive sets of analytical test results, that the local source meets the Health Canada Guidelines for Canadian Drinking Water Quality. In the absence of analytical test results, local sources must NOT be used, and the supply of bottled water must be maintained. Submit information on bottled water, including the source and water quality test results to the Engineer prior to opening the camp.
- .5 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.
- .6 The Camp Contractor shall carry out weekly sampling and testing of the camp water source as long as the camp is operational.
- .7 Record daily fresh water obtained from all local sources in liters.

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 Provide an alarmed trip wire around the camp to provide warning of wildlife intrusions whenever wildlife monitors are not patrolling. The Construction Contractor will provide wildlife monitor(s).
- .4 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.
- .5 Pay for all costs for the inspection of camp and electrical facilities by Nunavut officials.
- .6 Provide and maintain a diesel powered generator for power for the camp. The Construction Contractor will provide and store 75,000 litres of diesel fuel to site for the operation of the camp generators.

5 Erection of Camp

- .1 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.
- .2 Place all camp buildings and facilities so as not to interfere with any construction, clean up or other site activities. Camp location and layout shall be such that snow-drifting onto permanent facilities will be minimized.
- .3 Obtain Engineer's approval for location of construction camp. The camp shall be located on-site unless otherwise approved in writing by the Engineer.
- .4 Carry out all work necessary to protect the environment.

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°C 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 When vacating camp between construction seasons, clean up and leave camp facilities in a safe, tidy and secure condition. Ensure all camp facilities are adequately protected against all elements during the 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 from the Camp Contractor's and Construction Contractor's staff.
- .2 In sleeping quarters for own work force, provide a minimum of 4.6 m² 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 Provide a single room with a minimum floor area of 6 m² for use of the 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 m².
- .6 Provide a minimum of 11 m³ of air space for each occupant.
- .7 Provide key-locks and keys for Engineer 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 Recreation Area

- .1 Provide a recreation area, complete with furniture, within the camp complex.
- .2 The recreational area will have a minimum floor area of 60 square metres and include a minimum of three couches, one coffee table, one television (36 inch minimum size) with satellite feed, video game system, DVD player, various DVD movies and table games.
- .3 Clean the recreation area daily and maintain all electric lights and heating systems in good working condition during the operation of the camp. Maintain building in acceptable condition

10 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 Maintain separate ablution and latrine facilities for the Engineer and Engineer's

support staff.

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

11 Engineer's Site Office

- .1 Provide office accommodation and furniture on-site for the Engineer. The use of this facility shall not be shared with the Camp or Construction Contractor.
- .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 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, to the following specifications:
 - .1 Data Rates: 2,400 to 4,800 bits per second (bps) connection with mobile communicator, 2,400 to 9,600 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 Provide for use by the Engineer and the Engineer's Authorized Personnel, four mobile communication radios, complete with charging units. The radios shall allow for on-site communication between the Engineer, Engineer's Authorized Personnel, the Construction Contractor and the Camp Contractor. The radios shall have a minimum range of 10 km.
- .8 It is critically important that the communication equipment provided by the Camp Contractor for the Engineer's use is reliable and of the highest quality. Immediately repair or replace faulty equipment. Ensure that the communication links are capable of providing simultaneous usage of the phone and fax lines. The equipment shall be operational from the day work commences. No payment for Item 01591-2, Mobilization from Hall Beach to CAM-F will be made until it is demonstrated that the communication lines are up and fully operational.
- .9 Provide key-locks and keys for Engineer's office upon the Engineer's use of facilities.
- .10 Maintain Engineer's office accommodation in clean condition.

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Field Laboratory

- .1 Supply and pay for two separate field laboratories, complete with furniture, for the use by the Engineering staff. The two labs will include a geotechnical lab and an analytical lab. The two laboratories may be combined in one module unit.
- .2 Locate the field laboratories in the construction camp complex and make ready for use three days prior to the first day work commences for which testing is required, and remain available for the duration for which testing is required.
- .3 Provide and maintain two satellite phone lines at the analytical lab. The analytical lab will have a minimum floor area of 40 square metres complete with heating system, lighting system, a minimum of three 110 and one 220 volt, 60 cycle electric outlets, water and sewer system, sink, work benches, garbage cans, stove, hood and fan,

refrigerator, shelving and clothes rack, two desks, two 0.75 m x 1.50 m tables, three chairs, one four-drawer filing cabinets and adequate windows. Provide a minimum of 30 square metres of shelf area.

- .4 The geotechnical lab will have a minimum floor area of 20 square metres complete with a heating system, lighting system, a minimum of four 110 and one 220 volt, 60 cycle electric outlets, water and sewer system, sink, work benches, garbage cans, shelving, one desk, one 0.75 m x 1.50 m table, two chairs, one four-drawer filing cabinet and adequate windows. Provide a minimum of 10 square metres of shelf area.
- .5 Establish one electronic mail (E-mail) address, through the satellite phone provider, for the two labs.
- .6 Equip the analytical laboratory with a standard refrigerator with a total minimum capacity of 0.48 cubic metres (17 cubic feet) and a chest freezer with a total minimum capacity of 0.28 cubic metres (10 cubic feet). The refrigerator and freezer shall remain the property of the Camp Contractor.
- .7 Equip the geotechnical lab with the following new granular material testing equipment, or approved equivalent:
 - .1 One forced convection bench top laboratory oven with digital controls, stainless steel interior and suitable for effective drying of soil samples.
 - .2 One rack of sieves: 200 mm metric sieves, or equivalent. Sieve sizes: 0.080, 0.160, 0.425, 1.25, 2.5, 5.0, 10.0, 25.0, 50.0, 75.0 and 100.0 mm.
 - .3 One wash sieve, lid and pan.
 - .4 Pans and Tares:
 - 2 each 13" x 9" x 2"
 - 2 each 26" x 18" x 3.5"
 - 2 each 9.3" x 5.3" x 2.7"
 - 100 paper plates - 200 mm min. diameter (for use in microwave).
 - 100 aluminum pie plates - 200 mm min. diameter (for use in oven).
 - .5 One sieve brush.
 - .6 One precision grade electronic scale with an accuracy and readability to 0.1 g and a minimum capacity of 8 kg.
 - .7 One polyethylene tarp for sample splitting: 1.8 m x 1.8 m minimum size.
 - .8 One 115 V / 60 Hz portable sieve shaker with timer and minimum 1/3 hp motor drive. This unit must be capable of securing a minimum of ten full size 8" sieves
 - .9 One pair of oven mitts.
 - .10 Salinity Refractometer.
- .8 Equip the analytical lab with an industrial microwave oven. This will remain the property of the Camp Contractor at the completion of the Contract.

- .9 Clean both laboratories at least two times per week, and maintain all electric lights, heating, water and sewer systems in good working condition during the period the laboratory is required. Maintain building in acceptable condition.
- .10 Provide power to each of the laboratories on a 24 hour/day basis while the restoration activities requiring laboratory services are in operation. Equip all power supplies with adequate surge protection. Damage to equipment resulting from power surges will be repaired or replaced at no cost to the Engineer.
- .11 Submit to the Engineer for approval, a sketch of the proposed laboratories before fabrication or construction.
- .12 Provide Engineer with key-locks for the field laboratories prior to commencement of activities requiring laboratory services being in operation.

13 Fire Protection

- .1 Provide all fire prevention, and fire protection for the construction camp.
- .2 Implement a fire safety program that includes fire prevention, fire protection and fire fighting requirements. Submit details of the fire safety program in writing to the Engineer for review prior to start of construction. Such review does not relieve the Camp Contractor from any obligations or responsibilities required by the Contract.
- .3 Ensure that any subcontractors and other contractor personnel on-site are briefed on fire safety requirements and are familiar with the fire prevention, fire protection and fire fighting program for the construction camp.
- .4 The fire safety program shall meet or exceed the most recent editions of the following codes and standards:
 - a. Nunavut Safety Act.
 - b. National Fire Code of Canada.
 - c. Canada Labour Code.
- .5 Personnel designated for fire fighting services must be provided with training for any special hazards that may be present. These personnel must also be provided with protective equipment as required by the Canada Labour Code.
- .6 Reporting Fires
 - a. A person discovering a fire and all fire related incidents shall report

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- immediately, by fastest available means, to Engineer and site superintendent.
- b. A person discovering a fire shall, if possible, remain in the vicinity to direct fire fighting personnel.
- .7 Interior and Exterior Fire Protection and Alarm Systems
- .1 Install and maintain smoke alarm systems within the Construction Camp in accordance with the National Building and Fire Codes and as required in the Nunavut Safety Act.
- .2 Fire protection and alarm systems shall not be:
- .1 Obstructed.
- .2 Shut-off.
- .3 Left inactive at the end of working day or shift without notification and authorization of Engineer.
- .3 Do NOT use fire protection equipment for other than fire fighting purposes.
- .8 Fire Extinguishers
- .1 Provide and maintain fire extinguishers in sufficient quantity to protect, in an emergency, the work in progress and the physical plant on site.
- .9 Smoking Precautions
- .1 Do NOT permit smoking in hazardous areas. Exercise care in the use of smoking materials in non-restricted areas.
- .2 Provide and place signs prohibiting smoking in areas where smoking is not permitted.
- .3 Signs prohibiting smoking shall be in English and the local dialect and shall have black lettering not less than 50 mm high, with a 12 mm wide stroke on a yellow background. In lieu of lettering, symbols of not less than 150 mm by 150 mm may be used.
- .4 Smoking is prohibited within 7.5 metres of fuel storage and dispensing facilities.
- .5 Provide and place signs indicating that smoking within 7.5 metres of fuel storage and dispensing facilities is not permitted, and that the vehicle ignition must be turned off while the vehicle is being refuelled. Provide

at least one weather-resistant sign at each fuel dispensing location. The signs shall have a minimum dimension of 200 mm and letters not less than 25 mm high. In lieu of lettering, signs may have international "No Smoking - Ignition Off" symbols not less than 100 mm in diameter. Install signs in a location visible to all drivers approaching the dispensing location, and at the dispensing unit.

.10 Rubbish and Waste Materials

- .1 Rubbish and waste materials are to be kept to a minimum.

.11 Flammable Liquids

- .1 The handling, storage and use of flammable liquids shall be governed by the current National Fire Code of Canada.
- .2 Flammable liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable liquids exceeding 45 litres for work purposes requires the permission of the permitting authority.
- .3 Transfer of flammable liquids is prohibited within buildings.

14 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.

15 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, caribou, vegetarian lasagna, pasta with meatless sauce, quiche.
 - .2 Second Line: Fish (including arctic char and lake trout), 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 shall be made available at all meals.
- .5 Provide box lunches for all camp occupants who will not be in camp for noon meal.
- .6 The Camp 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 21:00 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.

Vehicle Parking

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

17 Service Connections

- .1 Install, hook up and test water supply, heating and electrical services necessary to operate the construction camp.
- .2 Ground all buildings and electrical equipment with an approved grounding system.

18 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.

19 Access to the Work

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

20 Transportation

- .1 The Construction Contractor shall be responsible for the transport of provisions and Camp Contractor on site personnel, at a minimum frequency of once per week, between CAM-F and Iqaluit during construction.

21 Measurement for Payment

- .1 Work under this section includes all costs for the provision, operation and maintenance of ALL camp facilities and equipment, including water treatment, 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 all personnel residing in the camp in Item 01592-8, Camp Operation and Maintenance, in the Basis of Payment Schedule.

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- .2 The provision of room and board and associated services for the Engineer and Authorized Personnel will be measured for payment by the person-day for each day that the personnel resides overnight at the camp. Engineer's room and board will be paid under Item 01592-1 in the Basis of Payment Schedule.
 - .3 The provision of room and board and associated services for the Construction Contractor's Personnel will be measured for payment by the person-day for each day that the personnel resides overnight at the camp. The Room and Board for the Construction Contractor will be paid under Item 01592-2 in the Basis of Payment Schedule.
 - .4 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 01592-3 in the Basis of Payment Schedule.
 - .5 The provision of satellite and/or long distance communication links and service for satellite and/or long distance telephone and E-mail for the Engineer's Office and analytical/geotechnical laboratories 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 01592-4 in the Basis of Payment Schedule.
 - .6 The provision of camp shut down and re-opening services will be measured for payment individually. Camp shut down will be paid for under Item 01592-5 and camp re-opening will be paid for under Item 01592-6 in the Basis of Payment Schedule.
 - .7 Winterization of the camp will be measured for payment as the total time the camp is present at the site but unoccupied and will be paid for under Item 01592-7 in the Basis of Payment Schedule.