

APPENDIX E

Health and Safety Plan

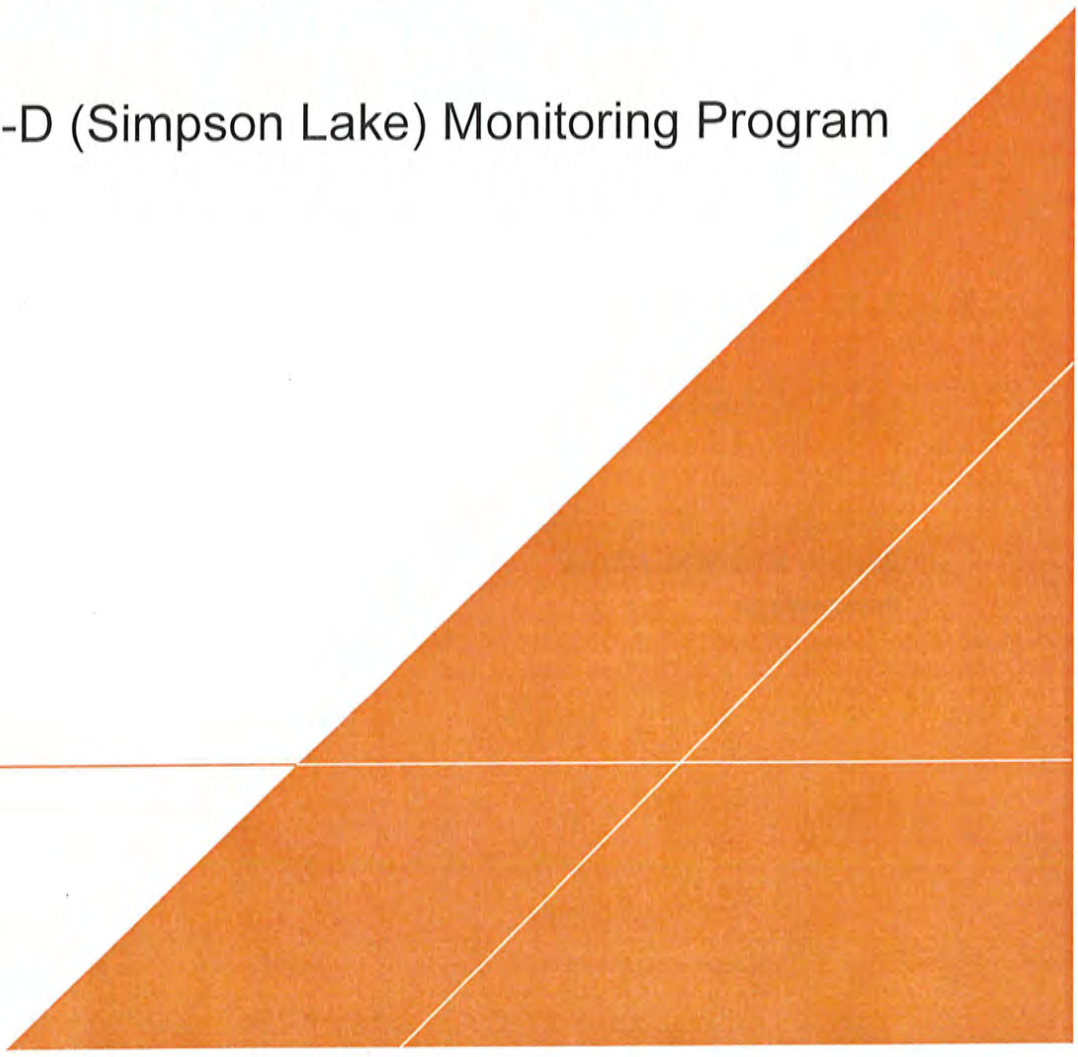


Indigenous and Northern Affairs Canada

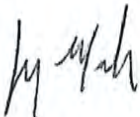
HEALTH AND SAFETY PLAN

2016 CAM-D (Simpson Lake) Monitoring Program

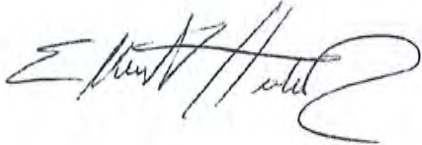
July 27, 2016

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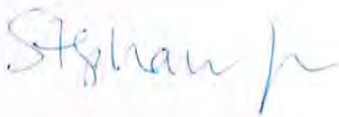
HEALTH AND SAFETY PLAN – CAM-D (SIMPSON LAKE)

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HEALTH AND SAFETY PLAN

2016 CAM-D (Simpson Lake) Monitoring Program

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1 PURPOSE

The purpose of this site-specific Health and Safety Plan (HASP) prepared by Arcadis Canada Inc. (Arcadis) is to specify the detailed measures to be taken to protect both site workers and the public during the work to be carried out at CAM-D. The site specific HASP also assigns responsibilities; establishes personnel protection standards and mandatory safety practices and procedures with respect to environmental aspects of the site related activities; and provides for contingencies that may arise during on-site activities.

The provisions of this plan are mandatory for all sub-contractors engaged in conducting the work activities. As necessary, when new information regarding a potential hazard emerges and this new information suggests that further safeguards would be prudent, amendments to this plan will be issued pertaining to specific precautions to be taken for specific locations or operations or regarding specific hazards. Unless any of these Amendments specify otherwise, all provisions of this plan shall remain in effect for the duration of project work at the site.

This plan has been developed in accordance with accepted worker health and safety practices and applicable territorial and federal Occupational Health and Safety regulations. This HASP represents the minimum Health and Safety precautionary requirements and guidelines to be expected. All sub-contractors working on-site will agree to, and abide by, the requirements of this site specific HASP as a condition of working on this Project. A copy of the site specific HASP shall be kept on-site at all times for the duration of on-site activities. Anticipated personnel to whom this HASP becomes applicable are:

- 2 Arcadis staff members;
- 1 Bear Monitor;
- 1 Indigenous and Northern Affairs Canada (INAC) representative; and
- 1 Aircraft Pilot. *for Dornier*

2 AUTHORITY

This site-specific HASP is provided by Arcadis to cover environmental activities at CAM-D, the site. This plan is intended to supplement, not replace, applicable acts and regulations regarding worker health and safety.

The Arcadis Site Health and Safety Officer (SHSO) or his/her representative will be responsible for implementing the site specific HASP for the duration of work being conducted at the Site. Mr. Jason Mauchan, or his designate shall function as the SHSO and will be responsible for the health and safety of those on the site. Mr. Mauchan is appropriately trained for the position. The SHSO has the authority to stop work and to authorize the resumption of work based on health and safety considerations, as specified in this plan. Any health and safety issues or concerns will be communicated directly to the on-site representative of INAC, to the Arcadis Project Manager and to the appropriate authority at INAC.

Prior to commencement of the work, every sub-contractor working at the site will provide a copy of their HASP to Arcadis for their records and maintain a copy at the site. This is a mandatory requirement to work on the site.

Personnel and agencies involved in health and safety related communications are outlined in Table1.

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Table 1: Emergency Contact Information

Contact	Person or Agency	Phone Number
Hospital	Stanton Territorial Hospital, Yellowknife	867-669-4100
	Kitikmeot Regional Health Centre, Cambridge Bay	867-983-4500
Police	RCMP Cambridge Bay	867-983-0123
	RCMP Emergency Contact	867-983-1111
Fire Department	Cambridge Bay Fire Department	867-983-2337
Consulting Engineers	Arcadis Canada Inc. 329 Churchill Avenue North	(613) 721-0555
Arcadis Health Care Line	WorkCare (non-lifethreatening injury/illness)	1-800-455-6155
Drug and Alcohol Testing	Driver Check Inc.	1-800-463-4310
Arcadis Canada Inc.	Chris Ludwig	613-721-0555 (O) 613-222-8192 (cell)
	Stephanie Joyce	613-721-0555 (O) 613-986-8398 (cell)
	Andrew Henderson	613-721-0555 (O) 613-286-7760 (cell)
	Julie Dittburner	613-721-0555 (O) 613-794-7747 (cell)
	David McClellan (Corporate H&S Director)	905-614-1978
	Alec MacAdam (Corporate H&S Specialist)	720-454-0948
	Charlotte Lamontagne	867-975-4578 (O) 867-222-1712 (cell) 867-223-1417 (cell)
	Spencer Dewar	867-975-4625 (O)
Aircraft Charter Company	Adlair Aviation - Cambridge Bay Dispatch	867- 983-2569
Spill Report Line (24-hr)	Department of Environment, Nunavut	867-920-8130

The Arcadis SHSO may choose to conduct a safety site audit as and when site operations demand. During the audit, if health and safety related deficiencies are found, suitable written corrective actions will be recommended. It is binding on the part of the subcontractors to abide and implement the recommended corrective actions within the specified time limits. The Arcadis SHSO will reserve the authority to inspect the implementation of corrective and/or mitigative actions.

3 HEALTH AND SAFETY REGULATIONS

Before activities at the site commence, sub-contractor(s) Health and Safety representative(s) must review this HASP and indicate that they understand, and all workers engaged at the Site will demonstrate ongoing compliance of the plan by signing the Tailgate Health & Safety Meeting Forms (**Appendix B**). While carrying out work at the site, it is the responsibility of the Prime sub-contractor to ensure the health and safety of its employees and sub-contractors engaged by it. It is the duty of all workers employed at the site to report unsafe working conditions to the SHSO. To comply with the health and safety requirements outlined in this plan, Arcadis will ensure/provide that:

- At least one on-site personnel is trained in first aid and level C CPR. First-aid and additional Arcadis personnel certification is provided in **Appendix A**.
- On-site personnel are equipped with appropriate Canadian Standards Association (CSA) approved personal protective equipment as deemed necessary by the SHSO (personal protective equipment requirements at the Site are discussed in Section 7.0 of this HASP).
- On-site personnel will attend daily health and safety tailgate meetings led by the Arcadis SHSO. Tailgate Health and Safety Meetings will be conducted at the beginning of each work day for the review of health and safety issues and site conditions. Tailgate Health and Safety Meeting forms are provided in **Appendix B**.
- Equipment and materials used in the project meet applicable safety standards.
- A health and safety incident/accident reporting system will be in place to prevent reoccurrence of incidents/accidents through staff education.
- An appropriate area shall be designated as the onsite First-Aid Station. It shall be selected so that it is in close proximity to the work area but remain a safe distance from major activities and potential hazards. The First Aid Station shall be clearly identified and will contain: the First Aid Kit, copy of this HASP, an appropriate supply of water for washing/decontamination, and any other objects deemed necessary by the SHSO and/or Arcadis Project Manager.

4 SITE AND WORK PROGRAM DESCRIPTION

4.1 Site Location and Description

The former CAM-D (Simpson Lake) Intermediate DEW Line Site (the site) is centrally located on the Boothia Peninsula, approximately 80 km west of Kugaaruk, 120 km southeast of Taloyoak, and 160 km east of Gjoa Haven within the Kitikmeot Region, Nunavut, at the general latitude of 68° 35 'N and general longitude 91° 58' W.

The site was operated from 1957 until 1963, when it was vacated and abandoned. In 1985 Indian and Northern Affairs Canada, Department of National Defence (DND) and Environment Canada (EC) conducted a partial clean up of the site and future environmental hazards were identified. A Short Range Radar (SRR) facility was constructed between 1992 and 1995, 1 km east of the site. The SRR was not remediated during the CAM-D remediation project. A 1994 scientific investigation of the site was conducted by the Environmental Sciences Group of Royal Roads Military College; sampling identified Tier I and Tier II contaminated soils. As has been the practice at similar DEW line facilities, a detailed site investigation was undertaken prior to the commencement of remediation activities. Based on this assessment, a comprehensive site remediation work plan and reference document, *CAM-D DEW Line Site, Simpson Lake, Nunavut, Remedial Action Plan*, dated December 2007 (RAP) was developed and remediation options for each waste stream identified. The Remedial Action Plan (RAP) has been designed to meet cleanup objectives, in accordance with the INAC Abandoned Military Site Remediation Protocol (AMSRP).

The CAM-D site remediation occurred between 2008 and 2011 with final demobilization of equipment planned for winter of 2012-13. Remediation activities included the following:

- Mobilization of equipment, materials and personnel to site by winter cat train;
- Airstrip improvement;
- Road improvement;
- Camp set-up and operation;
- Quarrying of gravel and overburden materials;
- Construction and closure of a Non-Hazardous Waste Landfill (NHWL);
- Sewage Lagoons construction, operation and decommissioning;
- Hazardous material removal, handling and transportation;
- Temporary storage on site for hazardous materials, equipment and fuels;
- Building and infrastructure demolition;
- Debris consolidation and disposal;
- Excavation of petroleum hydrocarbon compound (PHC)-contaminated soils and disposal off site;
- Excavation and removal of metals and polychlorinated biphenyl (PCB)-contaminated paint from site;
- Site grading;
- Demobilization of equipment, materials/wastes and personnel and;
- Site monitoring with long-term monitoring requirements to be assessed after the first five years.

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A temporary camp was established at the site to facilitate the remediation activities. Upon completion of site remediation, all camp facilities, including equipment and excess fuel, were removed from the site.

4.2 Description of Work Program

Arcadis proposes to complete Year 5 of the CAM-D Simpson Lake Long-Term Monitoring Plan. Tasks involved in the completion of site monitoring include, but are not limited to:

- Mobilization to CAM-D by chartered aircraft from Cambridge Bay (Dornier 228);
- One field day on-site with a return trip to Cambridge Bay;
- Provision of a bear monitor with firearm;
- Visual monitoring of the general site conditions including borrow areas, excavation areas, regrades etc.;
- Natural environmental monitoring as detailed in the AMSRP and the LTM Plan;
- Visual monitoring (including photographs) of the physical integrity of the NHWL looking for evidence of erosion, ponding, frost action, settlement and lateral movement, using the recording template provided in the LTM plan;
- Purging of water and collection of groundwater (active layer) samples from the monitoring wells around the NHWL; analyses will include total and dissolved metals, PHC F1 to F4, PCB, total dissolved solids (TDS), total suspended solids (TSS), major ions, hardness, colour, pH and conductivity;
- Collection of soil samples in areas of seepage and staining identified during the visual monitoring, if required; analyses to include PHC F1 to F4, select metals and PCBs; and
- Submission of samples to a CALA-accredited laboratory.

4.3 General Safety Precautions

The following general safety precautions are applicable to all work tasks:

- Eating, chewing gum or tobacco, and smoking are prohibited in contaminated or potentially contaminated areas, or where there is a possibility for the transfer of contamination.
- Contact with potentially contaminated substances should be avoided. Puddles, pools, mud, etc., should not be walked through. Kneeling, leaning, or sitting on equipment or the ground should be avoided, whenever possible. Monitoring equipment should not be placed on a potentially contaminated surface, such as the ground.
- Spillage of contaminated/hazardous liquids should be prevented, to the extent possible. In the event that spillage occurs, the liquid should be contained, if possible.
- Splashing of contaminated materials should be prevented.
- Field crew members should use all their senses to alert themselves to potentially dangerous situations (i.e. presence of strong, irritating, or nauseating odours).

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- Field crew members should be familiar with the physical characteristics of investigations, including:
 - Wind direction in relation to the ground zero area
 - Accessibility to Associates, equipment, and vehicles
 - Communications
 - Hot zones (areas of known or suspected contamination)
 - Site access
 - Nearest water sources
 - Routes and procedures to be used during emergencies
- A minimum number of personnel and equipment should be in the contaminated area, but only to the extent consistent with workforce requirements of safe site operations.
- All wastes generated during Arcadis or subcontractor activities at the site must be disposed of as directed by the Project Manager.

4.3.1 Buddy System

Where deemed hazardous by the Arcadis SHSO, workers will conduct all site activities with a buddy who is able to:

- Provide his or her partner with assistance;
- Observe his or her partner for signs of chemical or heat exposure;
- Check the integrity of his or her partner's protective clothing periodically;
- Notify the site supervisor if emergency help is needed;
- Prearrange hand signals or other emergency communication signals such as:
 - Hand gripping throat: out of air, can't breathe;
 - Gripping partner's wrist or placing both hands around waist: leave area immediately, no debate;
 - Hands on top of head: need assistance;
 - Thumbs up: okay, I'm alright, I understand;
 - Thumbs down: no, negative.

4.4 Aircraft Passengers Safety

Fixed-wing aircraft will be used extensively to mobilize to and from the sites. A "Safety Guide for Aircraft Charter Passengers", produced by Transport Canada is available in **Appendix C**. Standard protocols for the use of aircraft will be followed, including:

Normal Operation

- Inform the pilot of:
 - Cargo weights;
 - Site coordinates;
 - Any hazardous goods (e.g. firearms, ammunition, bear spray, bear bangers, fuel, volatile substances, flammable liquids);
 - Applicable medical problems; and
 - Susceptibility to motion sickness.

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- Stay well to the side of runways/approaches when aircraft are arriving or departing;
- Protect eyes against blown dust and particles;
- Keep runways/approaches clear;
- Wait for instruction to approach or leave aircraft;
- Load cargo carefully and secure it against movement;
- Secure seatbelts (and shoulder straps, if provided) while in flight; and
- Read instructions on the operation of doors, emergency exits, and the location of the ELT (emergency locator transmitter) and emergency equipment.

During an Emergency

- Follow instructions;
- Do not distract the pilot;
- Check that any loose gear in the cabin is secured;
- Assume brace position;
 - Tighten seatbelt;
 - If shoulder straps are present, tighten shoulder straps and sit upright, knees together, arms folded across chest; or
 - Without shoulder straps, bend forward so chest is on your lap, head on knees, arms folded under thighs.
- After an Emergency Landing
- Wait for instructions to exit;
- Ensure no hazards (i.e. fire, water) are present outside emergency exit before opening. If hazards exist, locate an alternative exit;
- Assist others to evacuate well clear of the aircraft (up-wind of aircraft to avoid inhalation of fumes if necessary);
- Remove first aid and other emergency equipment after no threat of fire;
- Administer first aid if required;
- Remove ELT, read instructions and activate;
- Make the site as conspicuous as possible from the air; and
- Stay near the aircraft - don't wander away from the site.

4.5 On-site Communications

Communications during the fieldwork is as follows:

- Satellite phone, activated 24/7 to contact Cambridge Bay, Yellowknife, Ottawa, or other external locations during emergencies and for routine updates of field progress;
- Verbal communications between workers using 2-way radios;
- Use of a rifle or bear banger to get immediate attention of all staff.

Rally/muster point in case of an emergency will be established once on-site and will remain for the duration of the field program unless otherwise decided by the SHSO.

4.6 Physical Hazards and Mitigation Procedures

The following sections provide potential physical hazards encountered during the execution of tasks included in the work program. Procedures for the mitigation of hazards are also discussed as part of this HASP. Further, the identified hazard(s) and mitigation procedures will be discussed with all personnel working on site prior to working in the area of the hazard(s).

Generally encountered hazards during field operations include but are not limited to:

- Slips, trips and falls;
- Traffic related incidents;
- Partially buried debris, exposed at the surface, which might be unseen;
- Heavy lifting, bending, shovelling, (general manual labour) hazards;
- Poor housekeeping practices;
- Cuts, scrapes, and bruises from hand tool usage or handling of soils/rock;
- Underground/overhead utility strikes;
- Heat stress/cold stress (harsh weather, including snow etc. – See Section 4.8);
- Bears and other wildlife (See Section 4.9); and
- Entering/exiting charter planes/working near propellers.

The following measures are considered mandatory to ensure that the above hazards are mitigated to the greatest extent possible:

- Daily Tailgate Health and Safety meetings – be aware of specific known physical hazards;
- Ongoing last minute risk assessment will be conducted by site workers.
- Job Safety Analysis Forms shall be completed for required specific work tasks and shall be reviewed prior to the execution of the task (**Appendix D**);
- Personal Protective Equipment (PPE) as prescribed by the HASP and SHSO;
- All underground utilities will be clearly marked and delineated prior to any subsurface disturbances;
- Overhead utilities will be identified and strategies for their avoidance will be decided upon prior to execution of the work program;
- Labour intensive tasks shall be carried out at an appropriate pace, and using appropriate lifting/bending techniques;
- Potentially hazardous debris shall be removed from work areas or flagged at the soonest possible opportunity; and

Work areas will be kept clean and clear of obstructions to the extent possible.

4.7 Chemical Hazards and Mitigation Procedures

Potentially hazardous chemical constituents are present at the site in contaminated soil and groundwater. Contaminants of concern include: PHCs, PCBs, and metals. All work involving the handling of contaminated/hazardous material requires the following mitigation procedures:

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- PPE must be worn as prescribed for the handling of potentially contaminated materials.
- Normal hygiene practices such as washing hands and face before eating, drinking, smoking, chewing gum or tobacco, or other hand-to-face activity, or before leaving the project site shall be employed.
- Avoid skin contact with or accidental ingestion of soil or water.
- Field staff should use all their senses to alert themselves to potentially dangerous situations (i.e., presence of strong, irritating, or nauseating odours). Respirators may be prescribed by the SHSO at any time throughout the execution of the work program.

All recovered contaminated/hazardous materials shall be contained appropriately in a manner preventing potential releases to the environment.

4.8 Monitoring

Based on the nature of the site activities that will be performed and the type of (suspected) contamination present in the area, monitoring of chemical concentrations in air or for combustible gases is not required as part of this HASP.

Should operations commence which disturb or expose any substance to create a potential airborne hazard or if airborne contamination is suspected as a result of observed site conditions; work at the site shall cease until a sufficient air monitoring program is in place and appropriate protective measures are implemented to mitigate identified risks.

4.9 Harsh Weather Conditions

Harsh weather conditions can arrive at the site anytime, therefore, each member of the team must abide by the following:

- To deal with low and sub zero temperature every staff member must bring warm clothes, backup clothes, waterproof breathable outerwear, waterproof boots, hats, gloves, rain vests; learn how to use a kerosene heater; and learn how set up wall tents;
- To deal with strong winds, have adequate clothing and shelter, avoid working near steep slopes or water bodies until winds have calmed down, and cancel return charter until landing conditions are improved;
- To deal with fog, only work near camp where field workers can always be under direct sight of the bear monitor and stop work if fog is too dense; and
- To deal with rain and freezing rain, have adequate clothing and shelter and remember keeping dry remains the most important point.

Occasional delays may occur due to adverse weather conditions. It is of primary importance to work under safe conditions even if it causes delays. The Team Leader/SHSO decides when to stop work. Staff will stay in their tents during adverse weather conditions. Regular safety rounds are undertaken every hour around the camp installations by the Team Leader/SHSO.

4.10 Wildlife Safety

Wildlife safety and monitoring is continuous during the entire fieldwork period. One Inuit staff member or sub-contractor having a strong knowledge of wildlife, and the use of rifles to scare or kill bears will be assigned as the Bear Monitor. The role of a Bear Monitor is as follows, but not limited to:

- Conduct a visual inspection of gun and fire a test shot to ensure gun is in working order;
- Check for wildlife, such as bears, approaching the work site;
- Protect wildlife by preventing it from approaching the workers by using a loud noise such as a shot from a fire arm by the wildlife monitor, aimed towards the sky (bears will be temporarily scared by a loud noise);
- Ensure that all garbage and food waste are picked up and properly packaged after meals (all workers at the site should assist with maintaining a clean camp);
- Have all field workers under direct view at all times;
- Walk around perimeter of the work place or hills to look for wildlife approaching the site, inform staff if wildlife is approaching, and inform field workers of the measures being taken to address the approaching wildlife; and
- Conduct any other measures necessary to protect the health and safety of staff and contractors from wildlife, especially bears.

Before any fieldwork begins on this project, all Arcadis staff and subcontractor staff are to have reviewed documentation related to Grizzly and Polar Bear Safety. Listed below are resources where some documentation is located.

- Parks Canada Polar Bear Safety and other wildlife can be found at:
<http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaag/activ/activ3/e.aspx>
- Parks Canada – If you Encounter a Bear:
<http://www.pc.gc.ca/eng/docs/pc/guide/nature/nature03.aspx>
- Hinterland's Who's Who – Grizzly Bear Fact Sheet found at:
<http://www.hww.ca/en/wildlife/mammals/grizzly-bear.html?referrer=https://www.google.ca/>
- Hinterland's Who's Who – Polar Bear Fact Sheet found at:
<http://www.hww.ca/en/wildlife/mammals/polar-bear.html>

A couple of general comments regarding bear behaviour include:

- Do not try to run away from a bear. They can outrun a human. Seeing an animal fleeing from them arouses their instincts to chase. They think you are prey. Always back away slowly from a bear.
- Do not stare at them directly. Direct eye contact, to them, is a sign of aggression.
- If a bear stalks you and then attacks, or attacks at camp while you are sleeping do not play dead – fight back.

5 TASK SPECIFIC JOB SAFETY ANALYSES

Activities which involve potentially higher risks require a documented risk management procedure referred to as a Job Safety Analysis (JSA). A JSA consists of a step by step analysis of the task to be carried out, the hazards which may be encountered, and the techniques or controls to be implemented in order to prevent an incident or near-miss from occurring. JSAs are to be completed prior to the undertaking of the activity for which it is written and reviewed and discussed by all persons involved in the task. Since site, weather, equipment, and/or crew conditions may vary from day to day; the JSA must be reviewed and revised as per any changes during the daily safety meeting. Activities included in the scope of work which will require the completion of a JSA include, but are not necessarily limited to:

- Water sampling
- Soil sampling
- Geotechnical assessment
- Wildlife Monitoring

Four partially completed and one blank JSA forms, to be completed prior to any of the aforementioned activities or when deemed necessary by the SHSO, are provided in **Appendix D**.

6 PERSONAL PROTECTIVE EQUIPMENT

PPE that will protect personnel and visitors from the hazards and potential hazards likely to be encountered during site work will be prescribed by the Arcadis SHSO and used by all personnel working at or visiting the Site. PPE selection is based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

6.1 Level of Protection

PPE required to be worn at the site is dependent upon the task(s) being performed. The SHSO/project manager has the authority to regulate additional PPE requirements should he/she deem it necessary. Based on the task(s) being carried out at the Site, the following PPE levels are required:

Table 2: PPE Requirements

TASK	Description	Required Protection
Charter Fixed-wing Aircraft Travel	Travel by fixed-wing aircraft to site	As per pilot's direction
Water Sampling	Sampling water using peristaltic pump from pre-installed monitoring wells	- Hard hat - Visi-Vest - Safety Boots - Safety Glasses - Work Gloves (handling tools) - Nitrile Gloves (handling water/soils)
Soil Sampling	Sampling soil from hand-excavations	- Hard hat - Visi-Vest - Safety Boots - Safety Glasses - Work Gloves (handling tools) - Nitrile Gloves (handling water/soils)
Geotechnical Assessment	Visual and photographic inspection of landfill areas	- Hard hat - Visi-Vest - Safety Boots - Safety Glasses - Work Gloves (handling tools) - Nitrile Gloves (handling water/soils)

7 HAZARD, INCIDENT AND NEAR MISS REPORTING

If an accident occurs or an incident which could have resulted in an accident occurs, the SHSO or his/her representative and the affected party or parties will complete an incident/accident report. The affected parties will review the report and determine together, as a team, appropriate mitigation to prevent the reoccurrence of the incident/accident in the future. The incident/accident, regardless of severity, will be reported immediately to the client representative and Arcadis Project Manager. Near-Miss occurrences and hazard identifications will also be recorded and reported for the prevention of future hazardous situations. Forms for the reporting of near misses, hazard identification, and incidents are attached in **Appendix E**.

8 EMERGENCY RESPONSE PLAN

This section describes contingencies and emergency planning procedures to be implemented at the site. This Emergency Response Plan is compatible with local emergency management plans.

8.1 Emergency Contacts

A listing of emergency contacts, including the local police, fire department, ambulance, poison control centre, spill reporting department, client and project manager is provided in **Appendix F**. Copies of this listing will be posted in close proximity to all work areas across the site.

8.2 Pre-Emergency Planning

An emergency evacuation route to the nearest hospital is provided in **Appendix F**. If necessary, this route will be reviewed and revised by the SHSO to ensure that the route is adequate and consistent with prevailing conditions. Note that the Kitikmeot Regional Health Centre is located in central Cambridge Bay.

8.3 Emergency Supplies

Arcadis personnel will carry emergency supplies with them to CAM-D. These will include:

- First aid kit
- Tent
- Tarp
- Matches
- Cooking equipment (i.e. pots)
- Dehydrated meals
- Emergency blanket
- Drinking water (to be purchased in Cambridge Bay)
- Bear bangers and/or bear spray (if available in Cambridge Bay – they cannot be transported by commercial aircraft)

The charter aircraft will also be equipped with emergency supplies. Prior to taking off, Arcadis personnel will confirm with the pilot(s) what emergency supplies are in the aircraft and where they are located.

As the wildlife monitor will be carrying a firearm, bear bangers and bear spray may not be required. They could be purchased in Cambridge Bay, prior to the charter flight, if they are available. However, the wildlife monitor with a firearm should be sufficient.

8.4 Roles and Lines of Authority

The SHSO has primary responsibility for responding to and correcting emergency situations. This includes taking appropriate measures to ensure the safety of site personnel (and the public), such as evacuation of personnel and adjacent residents from the site area. The site supervisor must also ensure that corrective measures have been implemented, appropriate authorities have been notified, and follow-up reports have been completed.

8.5 Emergency Recognition

Personnel should be familiar with techniques of hazard recognition from pre-assignment and site-specific briefings. In an emergency, personnel should proceed to the closest exit with their buddies and mobilize to a safe distance area identified prior to the start of work. Personnel should remain at that area until it is deemed safe by an authorized person (e.g. SHSO) to enter the area.

8.6 Emergency Medical Treatment Procedures

In the event that any person becomes ill or injured, first aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must be reported immediately to the SHSO and the Project Manager.

The SHSO, Mr. Jason Mauchan has experience working in remote wilderness environments and has received first aid and Level C CPR training (refer to Appendix A).

If an incident occurs while on-site at CAM-D that requires immediate medical attention, the sat phone will be used to contact emergency personnel. Depending on the situation, one of the following options could occur:

- The field team remains on site, to await assistance from emergency personnel;
- The entire field team travels by fixed-wing aircraft, to the location indicated by emergency personnel (Gjoa Haven, Kugaaruk or Cambridge Bay).

It will be important to notify emergency personnel immediately and follow their instructions.

8.7 Fire or Explosion

In the unlikely event that such a hazard be identified, the property owner, Project Manager and proper authorities shall be contacted immediately. Following, an incident investigation and report will be carried out and its findings documented for future hazard identification.

8.8 Spills or Leaks

In the unlikely event that such a hazard be identified, the property owner, Project Manager and proper authorities, including the Government of Nunavut Department of Environment 24-hr Spill Line (867-920-8130) shall be contacted immediately. Following, an incident investigation and report will be carried out and its findings documented for future hazard identification.