



AURORA GEOSCIENCES

COMPANY SAFETY MANUAL

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1.0 COMPANY SAFETY POLICY

Aurora Geosciences Ltd. is committed to preventing injury to our employees, to preventing damage and loss to our physical assets and to minimizing the environmental impacts of our work.

In fulfilling this commitment to protect people, property and the environment, management will provide and maintain safe and healthy work conditions in accordance with industry standards and in compliance with legislative requirements. Management will strive to eliminate any foreseeable hazards which may result in property damage, accidents or personal injury/illness. The company will implement and continuously review work place procedures to ensure employee health and safety are protected and environmental impacts are minimized, while ensuring that work is completed efficiently and in a cost-effective manner. The company will implement procedures to safely, expeditiously and lawfully deal with any workplace incidents or accidents.

All employees will be equally responsible for minimizing accidents within our facilities. Safe work practices and procedures will be clearly defined in the Company Safety Manual for all employees to follow. Accidental loss can be controlled through good management in combination with active employee involvement. Safety is the direct responsibility of all managers, supervisors and employees. The company will train its employees in these work procedures and will monitor compliance with these work procedures.

It is the policy of Aurora Geosciences Ltd to ensure that our activities have minimal impact on the environment. It is our goal that we will leave every exploration site as clean as possible.

It is the responsibility of all crew chiefs and expeditors to be familiar with this manual. Copies will be available in all offices and warehouses, and at all remote work sites. All employees have an explicit and equal responsibility to perform their jobs properly in accordance with established procedures and safe work practices.

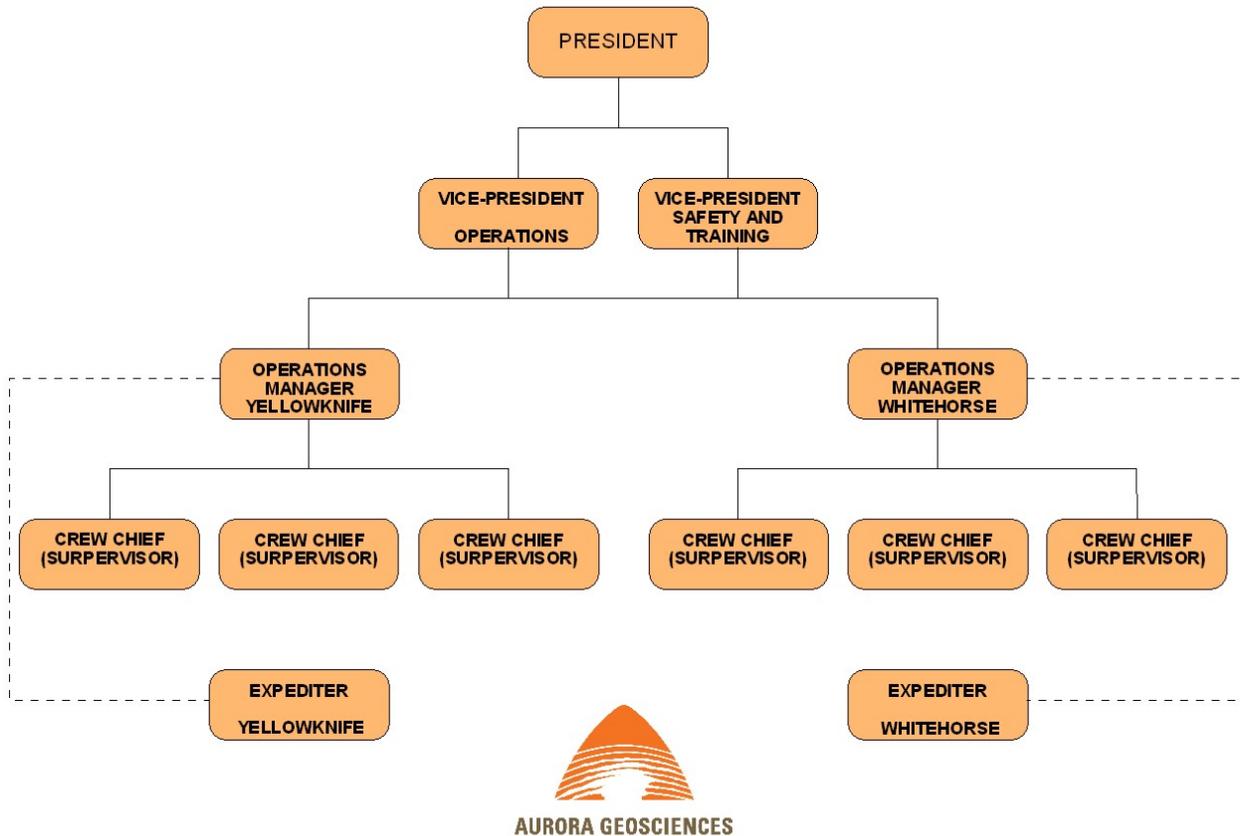
I trust that all of you will join me in a personal commitment to make safety a way of life.

| | |
|---|------------------|
| Signed:  | Date: 2007-02-29 |
|---|------------------|

***The safety information in this policy does not take precedence over applicable government legislation, with which all employees should be familiar.**

1.1 ORGANIZATION, ROLES & RESPONSIBILITIES

Safety and environmental protection measures will be implemented by the staff designated in the organization chart shown below:



The President retains overall responsibility for the development and implementation of health, safety and environmental protection policies and procedures. His operational responsibilities are delegated to the Vice President - Safety and Training (CSO).

CSO's Responsibilities:

1. To provide information, instructions, and assistance to all supervisory and management staff in order to protect the health and safety of all the employees.
2. To understand and enforce the accident prevention policy as well as the Occupational Health and Safety legislation.
3. To provide all supervisory and management staff with an understanding of our accident prevention program as well as relevant Occupational Health and Safety legislation.
4. To provide all supervisory staff with proper, well maintained tools and equipment, as well as any other special personal protective devices that may be required.
5. To provide ongoing safety education programs and approved first aid training

- courses as required.
6. To monitor departments and projects and hold them accountable for their individual safety performance.

Supervisor's Responsibilities:

1. To know and apply Aurora's safety policy and relevant Occupational Health and Safety legislation.
2. To ensure that all employees are educated to work in a safe manner and that they use all protective devices and procedures required by Aurora and by legislation to protect their health and safety.
3. To warn all employees of any potential or actual dangers and to advise them how to isolate, prevent, or remove such dangers.
4. To arrange for medical treatment when required, in the case of injury or illness, including transportation to a doctor or hospital when necessary.
5. To report all accidents immediately, to investigate all accidents fully, and to advise management on how to prevent similar accidents in the future.
6. To carry out regular inspections of the work place to ensure a safe and healthy environment.

Worker's Responsibilities:

1. To read, understand, and comply with Aurora's safety policy, safe work practices, procedures, and rules.
2. To use the safety equipment and personal protective devices and clothing required by legislation, their employer and the job's specific requirements.
3. To notify their supervisor(s) of any unsafe conditions or acts that may be of danger to other workers or themselves.
4. To report all accidents and injuries to their supervisor(s) as soon as possible.
5. To take every reasonable precaution to protect the safety of other workers and themselves.

Expediter's Responsibilities:

1. Ensuring that all hazardous materials are stored in accordance with applicable regulations and that Workplace Hazardous Materials Information System (WHMIS) data sheets are available and up to date.
2. Shipping and handing all dangerous goods defined by IATA or DGR in accordance with applicable regulations and legislation.
3. Maintaining all equipment in safe and good working order.
4. Ensuring that all first aid equipment is checked and restocked prior to assigning it to any crew.

2.0 WORK SITE HAZARD ASSESSMENT

In order for a safety program to work, it is necessary to identify and control all the hazards which may be present in the workplace. Hazards can exist in many forms: they can be visible or hidden, a condition or an act. Recognition and control of hazards are necessary to ensure that corrective actions are completed on a timely basis. The systematic control of hazards will accomplish the following;

- reduced frequency and severity of accidents
- reduced financial costs
- reduced human suffering

Hazard recognition and control involves;

- determining what hazards are present in the workplace
- assessing the level of risk for the hazards identified
- implementing strategies to eliminate or reduce the risk involved
- monitoring and following-up to ensure the control strategies chosen are implemented and effective

Every workplace consists of four major components. These are;

1. the people (employees, visitors, clients, suppliers, subcontractors, etc.
2. the environment in which they work
3. the materials they work with
4. the equipment and tools they use

The hazard assessment worksheets and forms on the following pages are provided for the efficient and complete performance of work site hazard assessments, implementing strategies to reduce the risks, and monitoring and tracking the control strategies.

| Step #1 | | | Work Site Hazard Assessment | | | | | | | | |
|---|--|-----------------------|-----------------------------|------------|-------------------------|--------------------------|--------------------|------------|----------|---------|-------------------------|
| Client: | | Crew Chief: | | Date/Time: | | | | | | | |
| Location: | | Type of Operation: | | Crew Size: | | | | | | | |
| Assessment Team Names And Positions: | | | | | | | | | | | |
| <table style="width:100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">Hazard Priority (Status)</td> <td style="width: 16.5%; text-align: center;">#1 Imminent Danger</td> <td style="width: 16.5%; text-align: center;">#2 Serious</td> <td style="width: 16.5%; text-align: center;">#3 Minor</td> <td style="width: 16.5%; text-align: center;">#4 O.K.</td> <td style="width: 16.5%; text-align: center;">#5 Not Applicable (N/A)</td> </tr> </table> | | | | | | Hazard Priority (Status) | #1 Imminent Danger | #2 Serious | #3 Minor | #4 O.K. | #5 Not Applicable (N/A) |
| Hazard Priority (Status) | #1 Imminent Danger | #2 Serious | #3 Minor | #4 O.K. | #5 Not Applicable (N/A) | | | | | | |
| ITEM | IDENTIFIED HAZARDS ACTIVITIES AND LOCATIONS | STATUS (1-2-3-4-5) | SAFETY HAZARD AND LOCATION | | | | | | | | |
| 1 | Waste Disposal/Housekeeping | | | | | | | | | | |
| 2 | Material Storage/Handling | | | | | | | | | | |
| 3 | Protection to Public | | | | | | | | | | |
| 4 | Water/Vibration/Erosion | | | | | | | | | | |
| 5 | High Risk Positioning | | | | | | | | | | |
| 6 | Working on Water/Boats | | | | | | | | | | |
| 7 | Flammables (Fire/Explosion) | | | | | | | | | | |
| 8 | Hazardous Chemicals (WHMIS) | | | | | | | | | | |
| 9 | Off-Road Vehicles | | | | | | | | | | |
| 10 | Helicopter Operations | | | | | | | | | | |
| 11 | Cables/Ropes/Chains/Slings | | | | | | | | | | |
| 12 | Night Lighting | | | | | | | | | | |
| 13 | Power Tools/Pneumatic/Compressors | | | | | | | | | | |
| 14 | Chainsaws/Line Cutting | | | | | | | | | | |
| 15 | Vehicle/Machine Condition | | | | | | | | | | |
| 16 | Electrical Wiring & Guards | | | | | | | | | | |
| 17 | Exposed Electrical Conductors/IP | | | | | | | | | | |
| 18 | High Traffic | | | | | | | | | | |
| 19 | Ventilation | | | | | | | | | | |
| 20 | Weather Conditions | | | | | | | | | | |
| 21 | Hot Work | | | | | | | | | | |
| 22 | Cold Work | | | | | | | | | | |
| 23 | Working Alone/Communications | | | | | | | | | | |
| 24 | Hoisting/Lifting | | | | | | | | | | |
| 25 | Working on Ice | | | | | | | | | | |
| 26 | Diamond Drilling | | | | | | | | | | |
| 27 | PPE: Basic/Specialized | | | | | | | | | | |
| 28 | Fatigue | | | | | | | | | | |
| 29 | Wild Animals | | | | | | | | | | |
| 30 | Firearms | | | | | | | | | | |
| 31 | | | | | | | | | | | |
| 32 | | | | | | | | | | | |
| 33 | | | | | | | | | | | |
| Assessment Team Comments on Priority Items: | | | | | | | | | | | |
| Item # | | | Priority | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Note: For corrective action, transfer information by Hazard Priority Number to Step #2 "Work Place Hazard Assessment Corrective Action" form | | | | | | | | | | | |

| Step #2 | | WORKPLACE HAZARD ASSESSMENT CORRECTIVE ACTION | | |
|--------------------------------|----------|--|---------------------------|---------|
| Client Name: | | | | |
| Project Name(s): | | | Time/Date: | |
| Survey Types Covered: | | | | |
| Assessment Team: | | | | |
| Name | | Position | | |
| _____ | | _____ | | |
| _____ | | _____ | | |
| _____ | | _____ | | |
| | | | FOLLOW-UP | |
| ITEM # | PRIORITY | RECOMMENDED ACTION | ACTION TAKEN DATE/TIME | BY WHOM |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| COPIES TO: (FOR ACTION) | | | (FOR INFORMATION): | |
| Manager's Signature: | | | Date: | |

3.0 SAFE WORK PRACTICES

Getting the job done safely means that everyone involved follows Safe Work Practices.

Definition:

Safe work practices are a set of positive guidelines or "Do's and Don'ts" — on how to perform a specific task that may not always be done in a certain way.

Safe Work Practices are ways of controlling hazards and doing jobs with a minimum risk to people and property. To reduce risks, Aurora Geosciences Ltd. has a written set of Safe Work Practices outlining what is to be done in general terms for each job considered to be hazardous. These have been developed to fit our particular job types and hazards. Management understands and fully endorses these Safe Work Practices, and will ensure that:

- They are in writing.
- They are related to the scope of work.
- All employees understand the Safe Work Practices that apply to them.
- Supervisors and workers ensure that all Safe Work Practices are followed.

Practices described under maintenance & preparation will be implemented by the Expeditors or Crew Chiefs prior to departure. The operational practices describe the safe practices, rules or procedures to be followed during field operations. Reporting describes any formal reporting requirements required to document the correct implementation of the Safe Work Practices.

| |
|--|
| * For further information see the appropriate current Occupational Health and Safety Legislation |
|--|

3.1: **Fire and use of fire extinguishers**

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance & preparation

3.1.01 Good housekeeping is essential in the prevention of fires. Fires can start anywhere and at any time. Therefore it is important to know which fire extinguisher to use and how to use it. Always keep fire extinguishers visible and easy to access. Fire extinguishers have to be properly maintained to work well. Where temperature is a factor, ensure that care is taken in selecting the right extinguisher.

Operations

3.1.02 Types of Fires

Class A: These fires consist of wood, paper, rags, rubbish and other ordinary combustible materials.

Recommended Extinguishers

Water from a hose, pump-type water can, pressurized extinguisher, or soda acid extinguishers.

Fighting the Fire

Soak the fire completely — even the smoking embers.

Class B: Flammable liquids, oil and grease.

Recommended Extinguishers

ABC units, dry chemical, foam and carbon dioxide extinguishers.

Fighting the Fire

Start at the base of the fire and use a swinging motion from left to right, always keeping the fire in front of you.

Class C: Electrical equipment.

Recommended Extinguishers

Carbon dioxide and dry chemical (ABC units) extinguishers.

Fighting the Fire

Use short bursts on the fire. When the electrical current is shut off on a Class C fire, it can become a Class A fire if the materials around the electrical fire are ignited.

3.1.03 The various types of extinguishers purchased, used, and tested must be in accordance with the recognized standards.

3.2 Defective tools

Date Prepared: _____
Revised: _____
Approved: _____

3.2.01 Defective tools can cause serious and painful injuries. If a tool is defective in some way, **DO NOT USE IT!**

3.2.02 Be aware of problems such as:

- Chisels and wedges with mushroomed heads.
- Split or cracked handles.
- Chipped or broken drill bits.
- Wrenches with worn-out jaws.
- Tools which are not complete, such as files without handles.
- Broken or inoperative guards.
- Insufficient or improper grounding due to damage on double-insulated tools.
- No ground wire on the plugs or cords of standard tools.
- An on/off switch not in good working order.
- A cracked tool blade.
- The wrong grinder wheel is being used.
- The guard on a power saw has been wedged back.

3.2.03 Guidelines:

To ensure the safe use of tools:

- never use a defective tool.
- double check all tools prior to use.
- ensure that defective tools are repaired or discarded and replaced.

3.3 Truck & trailer use

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance and preparation

- 3.3.01 Each spring and fall, the Expediter in each office will ensure that vehicles are serviced including checking of brakes, emission equipment, lights, steering & alignment and tire condition. He will also ensure that the standard list of tools and equipment required for the vehicle is complete and in good working order.
- 3.3.02 Prior to leaving for a job, the Expediter will check the tire pressure, working operation of lights and brakes, fire extinguisher condition, and general good working operation of the vehicle.
- 3.3.03 Drivers must be over 23 years old, possess a valid drivers licence, have no convictions for impaired driving and be familiar with the safe operation of the vehicle.
- 3.3.04 If a trailer is used, the safe operation of tail lights, brakes (if equipped) and hitches must be verified. No trailer will be used that does not also have a secured safety chain in addition to a properly sized ball hitch. All loads must be properly secured . If the load contains a number of small items, the load must be completely wrapped in a strong tarp and then secured to the trailer.

Operations

- 3.3.05 Drivers will limit their working day to 8 hours unless absolutely unavoidable. Drivers will take breaks as frequently as necessary to ensure that they are alert and in full control of the vehicle.
- 3.3.06 Drivers shall not consume drugs or alcohol immediately prior to or during any road trip until the destination is reached. Consumption of drugs or alcohol in any company truck at any time is prohibited.
- 3.3.07 Smoking in company trucks is prohibited.
- 3.3.08 No driver shall be assigned a truck with trailer unless he has been trained by the Expediter to properly attach the trailer, balance the load and back up the trailer.
- 3.3.09 All flat deck loads will be placed so that the heaviest objects are close to the front headache rack and ahead of the vehicular centre of gravity.
- 3.3.10 Lone drivers will be provided with a satellite phone for emergency use.

Records & reporting

3.3.11 Vehicle maintenance and repair records will be kept in a spread sheet for each office.
The Expeditors will be responsible for updating these spread sheets.

3.4 **Camp operations**

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance & preparation

3.4.01 A camp safety manual in the form conforming to national H&S guidelines will be prepared for each exploration camp.

Operations

3.4.02 A designated safety officer will be appointed for each camp. This person in the NWT / Nunavut will be qualified to Supervisor Level I. This person will be one of the Crew Chief (geophysical camp), Project Geologist (drill camp) or First Aid Attendant (either).

3.4.03 Persons arriving in camp will be given a full safety briefing by the safety officer covering:

- a. Communications: location and operation of phones & radios; phone lists and contact procedures in the event of an emergency.
- b. First Aid: Designated first aid attendant, location of first aid station, procedures to be followed in the event of an accident.
- c. Fire safety: Location of fire fighting equipment, procedures to be followed in the event of fire.
- d. Environment: Fuel storage and filling procedures, garbage handling, procedures in the event of large animal encounters.
- e. Firearms in camp.

A copy of the camp safety manual will be placed in each tent.

3.4.04 Each tent will be equipped with a battery powered smoke detector, a Class ABC fire extinguisher in good working condition and an air horn.

3.4.05 Tents will be staggered and set at least 5 metres apart when laying out a camp to minimize the chance that fire may spread from tent to tent.

3.4.06 Electrical installations will be done in accordance with local codes and in accordance with manufacturers instructions. All circuits will be protected with breakers and all electrical installations grounded at both the generator and locally.

3.4.07 Grey water pits will be placed at least 30 m away from any body of water and in every case far enough away from a water body so as to ensure that waste water cannot

drain to the water body on surface.

- 3.4.08 Human waste will be bagged and flown out in winter camps where this is mandated by local regulations. If an outhouse is used, the pit will be excavated at least 4 feet deep in well drained sediment. The outhouse will be kept clean and seats will be disinfected at least weekly. Abandoned waste pits will be closed by applying lime, by covering the waste with at least one foot of sediment, and by clearly marking the pit location with a labeled picket.
- 3.4.09 Garbage will be collected in receptacles provided in each tent. The garbage receptacles in the kitchen tent will be equipped with fitting lids. Kitchen garbage will be disposed of daily. Garbage will be completely burned with diesel and waste oil in a burn drum equipped with a screen. Metal and glass residue will be collected and either buried or back hauled to town and disposed of properly on a regular basis.
- 3.4.10 Fuel will be stored at a single location, at least 30 m from any water body and in a place with no immediate drainage to any body of water. A fuel spill liner and berm will be employed if bulk fuel storage is in effect. Empty drums will be back hauled regularly from camp and will not be allowed to accumulate. Fire fighting equipment will be placed near any location where fueling occurs.
- 3.4.11 A fuel spill kit must be onsite in all camps where refueling of equipment will be done from drums or bulk fuel containers.
- 3.4.12 Camp decommissioning: Camps sites will be cleaned up to a standard meeting or exceeding local regulations for camp clean up. If not burned, tent frames will be laid down on the floors. All metallic debris including wiring will be removed from camp sites and garbage will be disposed of according to local regulations, whether that be by back haul out of the bush, or by proper burial to a depth and in such a manner as to prevent it from being exposed by animals, erosion or other natural agencies.

3.5 *Traversing on foot*

Date Prepared: _____
Revised: _____
Approved: _____

The following standard procedures, regulations, training requirements, responsibilities and safe work practices are primarily designed for personnel traversing on foot in most regions of Canada. Traversing on foot in mountains and arctic regions often have very difficult conditions and hazards that the traverser must be aware of and prepared for. Aurora personnel that will be traversing on foot in mountainous regions and in tundra conditions must be made aware of the hazards unique to, or specific to these environments. In some situations additional training may be required. It is the joint responsibility of the crew chief and the worker to identify these training needs and to ensure that they are completed prior to any field activities taking place.

Preparation

- 3.5.01 Employees must inform some other person (s) (eg. Crew chief, other member of your party, local police or natural resources personnel) of where you plan to go, what route you plan to follow, and when you plan to return.
- 3.5.02 A clear plan of search and rescue and communication protocols should be laid out in advance in the eventuality of an employee not returning back on time.
- 3.5.03 Employees must traverse in pairs. If this is not possible/feasible then separation distances must be short and/or two-way radio communications maintained.
- 3.5.04 Employees must be properly equipped with and use all personal protective equipment required for the task and/or activity at hand.

Training

- 3.5.05 No formal training is presently available. New employees routinely work with and gain experience from experienced field personnel.
- 3.5.06 First Aid training is a must. It is recommended that all employees working in the field obtain proper First Aid training.

3.6 Helicopter operations

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance & preparation

3.6.01 No helicopter pilot will be employed in field operations unless he has the requisite experience and demonstrated ability to perform this work safely and efficiently. The Crew Chief will confirm with the helicopter contractor that the pilot has the necessary ability and experience to perform the contracted work before mobilization.

3.6.02 The Crew Chief will verify that the helicopter is equipped with a programmable VHF transceiver and will provide the radio frequencies of the hand held VHF radios to the helicopter pilot before operations commence.

3.6.03 The Crew Chief will ensure that the helicopter pilot knows the level of experience of each crew member and their familiarity with the type of aircraft employed in the operations. The Crew Chief will ensure that a helicopter safety briefing is conducted for all persons flying in the aircraft prior to commencing operations.

Operations

3.6.03 Hard hats, eye and ear protection and gloves will be worn by any person loading nets or slings beneath a helicopter. A second spotter equipped with a hand held radio will communicate with the helicopter pilot if at least two people are conducting the slinging operations.

3.6.04 When transported by helicopter bear spray will be carried in a sealed box in the boot or pod. Firearms will be unloaded before being transported by helicopter.

3.7 Boat operations

Date Prepared: _____
Revised: _____
Approved: _____

Maintenance & preparation

3.7.01 Prior to deployment, the Expediter and Crew Chief will ensure that any boat to be used is sound and fully equipped with life jackets, tools and paddles. They will also verify that the motor works properly and that the fuel tanks and lines are sound.

3.7.02 The Crew Chief will ensure that any person operating a boat is familiar with safe operation of the boat and motor.

Operations

3.7.03 Approved life jackets will be worn by all persons transported in boats.

3.7.04 Outboard motor fueling operations will be conducted away from water bodies. Only fuel containers in good condition and equipped with tight fitting lids will be used.

3.8 Snowmobile & ATV use

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance and preparation

3.8.01 Each snowmachine shall have a spares kit including a plug, wrench, spare belt, spare starter rope, spare front bulb, pliers and crescent wrench.

3.8.02 Each ATV will have a spares kit including a plug, wrench, can of Puncture-Seal or equivalent and a tire pump. Each ATV will be equipped with approved helmets if required per 2.07.

3.8.04 All snowmachines and ATV's will be inspected and checked by the Expediter and crew chief before deployment including but not restricted to free and safe operation of the throttle and kill switch, proper operation of brakes and proper operation of head and tail lights.

Operations

3.8.05 The Crew Chief will ensure that all persons who are driving ATV's or snow machines have been instructed in the safe operation of the vehicles before they are allowed to operate them. No ATV or snowmachine will be operated by a person less than 18 years of age.

3.8.06 Prior to using any snowmachine or ATV, the driver will verify that the throttle functions properly, that the kill switch or ignition switch works properly and that the brakes are in good working order.

3.8.07 Where required by statute or client stipulation, crew shall wear approved safety helmets when operating ATV's or snowmobiles.

3.8.08 Snowmachines and ATVs shall be used within their design capacity and shall carry only the number of persons and/or the amount of weight that they were designed for.

3.8.09 No driver or passenger shall be intoxicated or consume alcohol immediately prior to or during the operation of any ATV or snowmobile.

Records & reporting

3.8.09 The Expeditors shall maintain a record of all maintenance and repairs done to each snow machine or ATV in a spreadsheet.

3.9 Firearms and animal defence

Date Prepared: _____
Revised: _____
Approved: _____

Firearms and ammunition will be stored, transported and used in accordance with applicable Federal and State or Territorial rules, statutes and legislation, depending upon location. Where the rules in this manual conflict with any Federal, State or Territorial rule, statute or legislation, the latter shall take precedence.

Maintenance & preparation

- 3.9.01 No person will handle a firearm unless properly instructed and qualified to do so. The Operations Officer in each branch will ensure that firearms safety training is conducted for staff likely to need firearms before the season commences.
- 3.9.02 Firearms will be stored unloaded, in a clean and oiled condition, and in an authorized locked firearms storage locker. Keys will be in the custody of the Expediter.
- 3.9.03 The Crew Chief and Expediter will verify that any firearm deployed on a job is unloaded, equipped with the appropriate ammunition and is locked with an approved trigger lock. Firearms will be signed out on the equipment lists, specifying the serial number, type and calibre.
- 3.9.04 Bear bangers will be stored in a safe dry location and charges which are more than 1 year old will not be sent in the field. Flare projectors will be inspected before issue to ensure that they are in good working order and are not cracked.
- 3.9.05 Operations officers and crew chiefs will ensure that, prior to being sent to the field, new staff are fully briefed on the hazards posed by large animals and on the measures to be taken to avoid problems and deal with an encounter.
- 3.9.06 Personal firearms will not be taken in the field unless approved by the Crew Chief. Personal firearms taken to the field will be stored and used in accordance with the rules in this manual and the Crew Chief may order any personal firearm removed from camp at any time.

Operations

- 3.9.06 In a fixed camp, the camp firearm will remain under the control of the Crew Chief or a person he so designates. The firearm will be stored together with ammunition, unloaded and unlocked in a location known to all persons in camp. This location will be away from any area in which food is stored, prepared or consumed. If all personnel are away from a camp during the working day, the firearm may be stored in an alternate location near camp and known to all staff.
- 3.9.07 The Crew Chief will designate persons to use the company firearm in the event of an

incident. No other person will use the company firearm except in case of an emergency.

3.9.08 Camps will be kept in a clean condition and, where possible, equipped with an electric bear fence to keep wildlife away.

3.9.09 In the event that any animal is shot, the Crew Chief will ensure that conservation or wildlife officials are contacted if this is required by local regulations. The carcass will be disposed of by burning or by burial at a location away from the camp.

3.9.10 No person will carry loaded flare projectors on their person. Bear spray cannisters will be equipped with a trigger safety clip and will be taped in addition.

3.9.11 Staff will take all reasonable measures to avoid animal encounters including, where possible or applicable, avoidance of animal habitat and wearing warning devices.

3.10 Drills and drill sites

Date Prepared: _____
Revised: _____
Approved: _____

Aurora personnel are often required to work around drills and drill sites. These operations can include diamond drills, reverse circulation drills, percussion drills and their auxiliary equipment. The main purpose of drilling operations is to obtain samples of the subsurface material for locating and evaluating mineral deposits. The drilled hole may also be utilized for a variety of down hole geophysical survey and hole direction survey equipment.

Drilling operations may be conducted on surface or in an underground mine environment. For the purposes of this field manual, only surface drills and drill sites will be considered. For underground operations, additional instruction and training with respect to mine operations are required.

Drilling is often a fast-paced and, some of the time, a hectic operation that is very production oriented. Many of the tasks that the drill crew does will require their full and undivided attention. The hazards presented by a drilling operation are many and can have high potential for serious or fatal injury if not properly managed and controlled. A safe and efficient drilling operation requires co-operation and co-ordination between the drill crew and the company employees.

Hazards associated with a drill site include, but are not limited to:

- Mechanical hazards associated with the rotating drill stem, drive shafts, drive chains and cable hoists, to name a few
- Overhead hazards and objects that may fall from the tower or hoisting mechanism
- Noise from the drill motor and auxiliary equipment
- Vision hazard from metal particles, dust, dirt, greases and other lubricants and drill mud additives
- Chemical hazards from drill mud additives, hydrofluoric and sulphuric acid, petroleum products and cement
- Mobile hazards from other equipment at the site such as trucks, tractors, skidders and helicopters
- Slips and falls due to the many lubricants and muds used in the drilling process that often make the drill platform very slippery
- Most of the drill equipment is very heavy and if not handled properly can cause serious lifting injuries to the back
- Drill sites contain combustible material and flammable liquids. Good fire prevention measures are a must

Standard Procedures & Regulations

3.10.01 While on a drill site, employees will conduct their activities in consultation with the drill contractor's foreman or senior driller on site.

- 3.10.02 Always make sure the drill crew is aware of your presence and what you are planning to do when you are on a drill site. Inform them when you have completed your work and are leaving the site.
- 3.10.03 While on a drill site, employees must have and use the proper personal protective equipment, which will include:
- an approved safety hard hat
 - approved safety boots
 - approved hearing protection (ear muffs or ear plugs)
 - approved eye protection (safety glasses or goggles)
 - sturdy work gloves
- 3.10.04 Employees conducting down hole surveys or tests that require the support of the drill contractors equipment shall:
- ensure that the procedure is approved by the drill contractor
 - ensure that only the drill contractors employees operate the drill contractors equipment
- 3.10.05 No smoking is permitted in those areas where there are flammable liquids or gasses are stored.
- 3.10.06 Always stick to those areas of the drill site where your work requires you to be.
- 3.10.07 Never handle or operate any of the drill equipment or auxiliary equipment except by special arrangements between Aurora and the drill contractor and under the drill contractor's supervision.
- 3.10.06 While on a drill site no employee will act in a manner that could endanger the health and safety of others, or the efficiency of the operation.
- 3.10.07 Be sure that your clothing is adequate and suitable for the conditions of the work you need to carry out at the drill site. Examples are waterproof gear, rubber gloves, etc.
- 3.10.08 Stay well out of the drill crew's way during periods of critical activities such as hoisting rods, lowering rods, changing or adding a rod string, pulling the core tube and moving the drill or other equipment.
- 3.10.09 Advise the drill crew of any hazards you may observe and of which they may be unaware.

3.11 Chain saw safety - Line cutting & pad building

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance & preparation

3.11.01 Chain saws will be checked before deployment to ensure that:

- chains and bars are in good repair
- engines are properly tuned
- the exhaust is fitted with a proper spark arresters
- chain brake works properly
- the ignition / kill switch works properly

3.11.02 Chaps, hard hats equipped with screens and ear defenders will be issued with all chain saws.

3.11.03 Persons employed as cutters will have at least one year's experience as a brusher and will demonstrate safe proficiency in general chainsaw maintenance and safety, brushing operations, and falling including the use of wedges and jacks to the satisfaction of the Operations Officer for that branch. Persons employed as lead cutters will have two years experience as a cutter and will successfully complete the B.C. Falling and Bucking Training Standard course.

Operations

3.11.04 All persons employed in line cutting or pad building operations will wear proper safety boots, approved hard hats, gloves, chaps, a safety visor or safety glasses and ear protection.

3.11.05 Line cutting crews will work in pairs consisting of a cutter and a brusher. Each pair will be equipped with a hand held radio on a common frequency with other workers in the area.

3.11.06 Workers will comply with safe work practices for logging described in the B.C. Workers Compensation Board Fallers' and Buckers' Handbook except where exceeded by local statutory requirements.

3.12 Winter Field Operations

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance & preparation

- 3.12.01 Expeditors will ensure that all winter survival packs are checked per the equipment checklists and properly stocked with fresh food and camp stove fuel prior to deployment.
- 3.12.02 Expeditors will verify the proper operation of satellite phones assigned to a crew, will ensure that the batteries are charged and in good condition, and will ensure that a standard emergency phone list is placed in the lid of the phone carrying case.
- 3.12.03 Expeditors will verify the proper operation of VHF radios assigned to a crew and will ensure that the operating frequencies of the radio are recorded under the battery pack on the back of the radio.

Operations

- 3.12.04 Crew chiefs will instruct all new staff in safe working procedures in the cold including:
 - a. Recognition and treatment of frostbite and hypothermia
 - b. Safe operation of the snowmachines
 - c. Use of GPS receivers and procedures to follow if lost.
 - d. Use of survival kits
- 3.12.05 In any camp run by the company with more than 4 persons, the crew chief will hold a safety meeting for all staff on site and review:
 - a. First Aid procedures including the designation of the camp F.A. attendant.
 - b. Location of fire fighting equipment, fire alarm and fire fighting procedures
 - c. Location of camp phone, emergency phone list, contact and notification procedures to be followed in event of a medical incident, aircraft incident or lost person. An emergency procedures form (Appendix B) will be posted near the camp phone.
 - d. A helicopter safety briefing by the authorized helicopter company representative.
 - e. Animal encounters

f. Safe work procedures particular to the job.

Minutes will be kept and the names of all persons in attendance will be recorded.

- 3.12.06 Each day, the crew chief will leave a written record of the location of the crews in camp. This will specify which people are working in each area and when they are planning to complete their work and return to camp.
- 3.12.07 Crews will remain in camp if the temperature is below -45° C, if there are high winds during very cold weather, or if visibility is seriously obscured by blowing snow or fog.
- 3.12.08 A survival pack rated for the size of crew on-site will be positioned at each winter work site. This rule is waived for staking crews and for line cutting crews working in the trees.
- 3.12.09 Staking crews working in the trees and line cutters will take individual survival gear with them including a radio, fire starter and matches, food and sufficient clothes to stay out overnight in cold weather.

4.0 SAFE JOB PROCEDURES

This section describes safe work procedures, grouped by type of operation. Procedures described under maintenance & preparation will be implemented by the Expeditors or Crew Chiefs prior to departure. The operational procedures describe the specific practices, rules or procedures to be followed during field operations. Reporting describes any formal reporting requirements required to document the correct implementation of the Safe Job Procedures.

4.1 *Induced polarization*

Date Prepared: _____

Revised: _____

Approved: _____

Maintenance & preparation

4.1.01 Prior to use, the IP transmitter will be placed on an insulated stand and the IP chassis ground will be checked by measuring the potential between a salted ground stake and the instrument console. No transmitter which shows a potential difference of more than 5 V will be used in survey operations.

4.1.02 Prior to use, the generator ground will be checked by measuring the resistance between the chassis ground pin, the plug ground pin and a salted ground stake. No generator which shows a resistance of more than 1 ohm between the ground stake and either chassis ground will be used in survey operations.

4.1.03 Wire used in IP survey operations will have a diameter of at least 18 gauge, be covered with rubber or plastic insulation, and be rated to a dry breakdown voltage of at least 600V. Splices will be made with a “western union” knot and taped with electrical tape. Sections which are burned or which have abrasions will be cut out.

Operations

4.1.04 Prior to any IP survey, the Crew Chief will brief the crew on the safe conduct of the survey covering the following topics:

- a. Location of the transmitter, current lines and the infinite.
- b. Voltages to be used and potential effects of contacting electrodes.
- c. Procedures for marking and if necessary burying current lines to avoid public hazards and for briefing members of the public if a guard is posted on the current lines.
- d. Demonstrating the correct method for splicing power lines and verifying that the crew can properly splice the power lines (western union).
- e. Briefing the crew on survey procedure paying particular attention to standard radio commands for turning the power on, confirming it is on and turning the power off.
- f. Emergency procedure to be followed if a crew member comes in contact with the current wires including equipment shutdown, applicable first aid and communication protocols.
- g. Ensuring that every member of the crew knows how to safely shut down the

transmitter and generator.

- h. Verifying the proper operation of the hand held radios.
- i. Fire hazards.

4.1.05 Standard radio commands will be used to turn the transmitter power on (POWER ON) and to turn the power off (POWER OFF). The transmitter operator will respond to any command by declaring the state of the transmitter (POWER IS ON or POWER IS OFF).

4.1.06 In the event that the transmitter power goes off during a reading cycle, the transmitter operator will request clearance before trying to turn the power back on.

4.1.07 No person shall be employed as a current electrode technician unless in the opinion of the Crew Chief he understands how electric current is transmitted, understands the hazards involved with this job, and has demonstrated an ability to perform this task with care and attention.

4.1.08 Only the current electrode technician will work at the front end of the reading array and only he will turn the power on. The transmitter operator will not turn the power on unless he receives a command to do so from the current electrode technician or verifies that the current electrode technician is clear of the current electrodes before turning the power on.

4.1.09 At any time, any crew member may order the transmitter to shut off by issuing the proper command. Upon receiving the command "POWER OFF", the transmitter operator will shut down the transmitter immediately, regardless of who issued the command.

4.1.10 Any crew member who notices a short in the wire and arcing to ground will immediately call for "POWER OFF" and upon confirmation that the "POWER IS OFF" shall repair the wire.

4.1.11 In laying out current wires, crews will make every effort to keep the current wires widely separated and to keep the current wires out of any damp ground or standing water.

4.1.12 In laying out the current wires, the reels will be carried down the line and placed as close as possible to the current electrodes to minimize the potential difference between the wire on the reel and the current electrode. If the current electrode technician notices any burning on the reels, he will immediately call for "POWER OFF" and upon confirmation that the "POWER IS OFF", he shall locate the break / burn and repair the damage before resuming transmission.

4.1.13 Crew members shall avoid walking down the power lines at any time the transmitter

power is turned on. In the event that they do walk down the lines, they shall inform the crew chief and maintain radio contact with the crew.

- 4.1.14 Current wires which cross trails, paths or roads that may be used by the public will be buried. Current wires crossing roads or trails which are commonly frequented by the public will be clearly marked with warning signs labeled "HIGH VOLTAGE" and sentries in radio communication with the transmitter operator will be posted at any crossing points.
- 4.1.15 IP surveys will be suspended in the event that electrical storms are present in the vicinity and the survey crew shall immediately evacuate the area due to the danger of electrical strike of the IP wire array.
- 4.1.16 Generators used as main power supplies for the transmitter will be properly grounded and the output voltage will be verified to be within specifications before the generator is attached to the transmitter.
- 4.1.17 The IP transmitter will be protected from rain and kept off damp ground during operation.
- 4.1.18 At the back of the transmitter, the current wires will be held apart, off the ground, and positioned so there is no chance they can come into contact with the transmitter chassis. The transmitter will be operated with a ground stake attached to chassis ground if the unit is equipped with an external ground plug.
- 4.1.19 If copper sulphate is used upon completion, solid copper sulphate shall be recovered and dried and any sludge or liquid shall be drained on the ground at least 10 m from any body of water and repeatedly flushed with water until dissolved.
- 4.1.20 Absorbent fuel spill pads shall be placed beneath IP generators and waste oil shall be stored in containers and removed from the field for proper disposal.

Reports

- 4.1.19 The Crew Chief will verify the correct operation of the IP system prior to mobilization by performing the standard instrument checks on the list provided with the job instructions. Upon completion, he will sign off the equipment checks sheet and return it to the expediter before leaving.

4.2 Seismic blasting

Date Prepared: _____

Revised: _____

Approved: _____

The procedures in this section are a supplement to the applicable Territorial or State and Federal explosives handling regulations, statues and legislation. All employees will strictly comply with the applicable Territorial or State and Federal explosives handling regulations, statues and legislation and where conflicts exist between these procedures and those prescribed by government authorities, the latter shall be employed. No person will handle explosives unless he is duly qualified or authorized to do so in accordance with applicable government rules and regulation.

Maintenance & preparation

4.2.01 Blasting galvanometers and high voltage blasters will be checked under appropriate loads before being deployed.

4.2.02 Blasting wires will be checked for continuity and condition prior to being deployed.

4.2.03 Company explosives handling regulations and drivers information sheet will be provided to the driver who shall place them within reach on either the drivers seat or the door side pocket in compliance with TDG regulations.

4.2.04 Trucks carrying explosives will be marked with appropriate explosives placards and be equipped with a satellite phone.

Operations

4.2.05 Prior to the survey, the Crew Chief will brief the crew on the safe conduct of seismic blasting operations covering:

- a. The type, location and quantity of explosives in the work area.
- b. A description of the sensitivity of the explosives products to detonation or ignition.
- c. Safe procedures for transporting explosives.
- d. Safety signals to be employed to indicate that a blast is imminent and to indicate that blasting has terminated and an area is safe.
- e. The location of first aid equipment and the procedure to be followed in the event of any accident (making the area safe, first aid, notification).

4.2.06 The blaster on the crew may delegate some of his work to an assistant provided that he directly supervises the work of this assistant.

- 4.2.07 Blasting caps will be checked with an approved blasting galvanometer before being inserted into primer or other high explosives.
- 4.2.08 Cap leg wires will not be hooked to the blasting wires until the blaster has verified that the leg wires are shunted by measuring the resistance of the wire loop directly with a blasting galvanometer.
- 4.2.09 Hand held (< 5 W) radio transceivers will not be used within 5 m of the blasting wires.
- 4.2.10 Where possible, a broken wire loop will be used to trigger the seismograph and the charges will be initiated by the blaster from a location where he has a clear view of the blast area and its approaches.
- 4.2.11 Where the charge can only be initiated by the observer at the seismograph, the observer will:
- a. Not hook up the blasting box to the blasting wires until instructed by the blaster.
 - b. Not fire the charge until the blaster has informed him that the area is clear.
- 4.2.12 Charges will not be buried unless absolutely necessary to achieve sufficient signal. If charges must be buried or stemmed, only sand, soil or snow will be used to cover the charges.
- 4.2.13 Hard hats equipped with ear defenders will be worn by all crew members working in the blasting area.
- 4.2.14 The crew will post warning signs on all access roads or trails leading into the blasting area and will post sentries equipped with radios to guard these entrances. The blaster will check with all sentries before detonating any charge and will sound an "All Clear" upon successful completion of the blast.
- 4.2.15 In the event of misfire, the crew will wait a minimum 30 minutes before approaching the blast site. Misfires shall be detonated by a charge placed on top of the misfired charge and the misfired charge and its cap leg wires shall not be touched.
- 4.2.16 All leg wires, shunts, explosives boxes and wrappings shall be picked up and all blast holes shall be filled in upon completion of blasting operations. Waste explosives shall be destroyed by incineration and excess caps either returned or taped together and detonated.

4.3 **Blast trenching and pad building**

Date Prepared: _____

Revised: _____

Approved: _____

The procedures in this section are a supplement to the applicable Territorial or State and Federal explosives handling regulations, statues and legislation. All employees will strictly comply with the applicable Territorial or State and Federal explosives handling regulations, statues and legislation and where conflicts exist between these procedures and those prescribed by government authorities, the latter shall be employed. No person will handle explosives unless he is duly qualified or authorized to do so in accordance with applicable government rules and regulation.

Maintenance & preparation

- 4.3.01 Blasting galvanometers and high voltage blasters will be checked under appropriate loads before being deployed.
- 4.3.02 Blasting wires will be checked for continuity and condition prior to being deployed.
- 4.3.03 Company explosives handling regulations and drivers information sheet will be provided to the driver who shall place them within reach on either the drivers seat or the door site pocket in compliance with TDG regulations.
- 4.3.04 Trucks carrying explosives will be marked with appropriate explosives placards and be equipped with a satellite phone.

Operations

- 4.3.05 All blasts will be detonated with electrical blasting caps using an approved high voltage blasting box. Tape fuse will not be used under any circumstances.
- 4.3.06 All personnel working at the blasting site during drilling and blasting operations will wear hard hats, safety boots, ear protection and safety glasses.
- 4.3.07 Blasts will be primed and fired in the same working day; no charges may be left overnight in the holes.
- 4.3.08 In the event of a misfire or bootleg, *applicable local blasting regulations will be strictly complied with.*
- 4.3.09 No hand held radio transceiver (< 5 W) will be operated within 5 m of the blasting wires.
- 4.3.10 All leg wires, shunts, explosives boxes and wrappings shall be picked upon completion of blasting operations. Waste explosives shall be destroyed by incineration and excess caps either returned or taped together and detonated.

4.3.11 Unless explicitly instructed, trenches shall be back filled after they have been sampled, mapped and photographed and after representative samples are placed besides them opposite their site of excavation. Topsoil and vegetative mat shall be removed before blast trenching and replaced during reclamation.

5.0 GENERAL RULES

Date Prepared: _____
Revised: _____
Approved: _____

1. All work shall be carried out in accordance with appropriate safe work practices and the supervisor's direction.
2. All unsafe acts and conditions, including "near miss" incidents, are to be reported to appropriate supervision promptly.
3. All incidents that result in damage or injury are to be reported to a supervisor immediately.
4. All appropriate personal protective equipment as described in the safe work practices and safe job procedures as well as those instructed by the supervisor are to be worn and used at all times on all job sites.
5. Fighting, horseplay, practical jokes or otherwise interfering with other workers is prohibited.
6. Theft, vandalism or any other abuse or misuse of company property is prohibited.
7. First aid treatment is to be obtained promptly for any injury.
8. Only those tools that are in good repair, with all guards and safety devices in place, shall be used.
9. Every worker shall keep his/her work area neat, clean and orderly.
10. Operate all vehicles and mobile equipment in accordance with site rules and highway regulations.

Grounds for Dismissal

The following are prohibited at all times on all company property and all company job sites:

- Possession or consumption of alcohol or illegal drugs as described in the company Drug and Alcohol Policy (Section 5.2)
- Arriving for work or remaining at work when ability to perform the job safely is impaired by drug or alcohol
- Improper possession of firearms contrary to pertinent Safe Work Practices
- Damaging, disabling or interfering with safety, fire-fighting or first aid equipment

5.1 Drug & alcohol policy

Date Prepared: _____

Revised: _____

Approved: _____

This document describes the corporate policy concerning the use of drugs and alcohol.

1. The use of illegal drugs by any employee during hours of employment and / or at any company office, work site or camp is grounds for immediate dismissal with cause.
2. Any person taking medication which may endanger any other person, endanger equipment or impair the safe performance of their duties may be dismissed with cause in the event that they fail to inform their supervisor of their requirement to take medication and / or comply with any measures put in place to ensure that they can work safely.
3. Most camps, crew accommodation provided in town and job sites are “dry”. At such locations, the consumption of alcoholic beverages in any quantity is grounds for immediate dismissal and the possession of alcoholic beverages, if the person was aware of the camp restrictions, is also grounds for immediate dismissal.
4. At camps, crew accommodation or work sites where alcoholic beverages are permitted, company policy is that consumption is to be limited to 2 beer or equivalent drinks per day in the hours after work only. Consumption of alcohol in excess of these limits or outside of these hours is grounds for dismissal.
5. No person shall be required to submit to a drug or alcohol test as a condition of general employment with the company. Nonetheless, should any client require that our employees submit to drug or alcohol tests, the company will ensure that any person employed on projects for these clients requiring such tests have been tested impartially and that the results of these tests are made available to the employee.
6. Any employee who knowingly takes a substance or engages in practices whose effect is to defeat the effectiveness of a drug test is liable to dismissal with cause.

The terms and conditions of this policy are included in standard Terms of Employment forms, effective July 2004.

5.2 **Safety enforcement policy**

Date Prepared: _____

Revised: _____

Approved: _____

The management of Aurora Geosciences Ltd. is committed to the safety excellence of its employees by providing an injury and accident free workplace. All employees are to abide by the regulations, safety rules, and the use of safe work practices and safe job procedures.

Safety violations will be handled in an objective but firm manner. The enforcement progression follows the following with documentation at each stage:

- **Verbal Warning**
- **Written Warning**
- **Suspension**
- **Dismissal**

EMPLOYEE WARNING REPORT

Employee's Name: _____

Date of Warning: _____

Project: _____

Warning Issued by (print): _____

Type of Violation: Safety Other

Company Statement (Supervisor's Report):

Signature: _____

Employee Statement (check the appropriate statement)

- I agree with the company's statement.
- I disagree with the company's statement for the following reasons. (State below)

I have entered my statement of the above matter.

Employee Signature: _____ Date: _____

- I would like to receive a copy of this statement for my records.

PLEASE BE AWARE THAT THIS REPORT WILL BE KEPT ON FILE AT THE HEAD OFFICE, AND THE ISSUE MAY BE DISCUSSED AT COMPANY HEALTH AND SAFETY MEETINGS IN THE FUTURE.

Management Signature: _____ Date: _____

6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE is the fifth and last means of protecting workers from injury. PPE is only employed when administrative and engineering controls are ineffective or insufficient. Hazards should be minimized by ensuring that all jobs are well planned, that workers are properly trained, and that all Safe Work Practices and Safe Job Procedures are followed. PPE then provides an additional degree of protection from injury.

PPE generally falls into two categories.

Basic is the PPE that should be worn at all times by all personnel in the workplace. This normally includes hard hats, eye protection, safety footwear, and appropriate clothing.

Specialized covers PPE, which is used only for specific jobs or for protection from specific hazards. This includes: off-road vehicle helmets, welder's gloves, goggles and aprons; x-ray, laser-beam and radiation goggles; respiratory protective equipment; chainsaw safety protective equipment; and special fire-resistant clothing.

Information gathered from the JHA, applicable regulations, and the experience of management and workers will help you in your selection of appropriate PPE for your operation. In cases of special problems such as chemical handling or working at heights, you may wish to call on outside expertise to assist in the selection of PPE.

6.1 Policy for Personal Protective Equipment

Date Prepared: _____

Revised: _____

Approved: _____

The following will be observed and practiced by the company and employees when the company undertakes any job or contract.

- All employees, guests and visitors will wear all appropriate basic CSA approved safety equipment and any other specialty Personal Protective Equipment (PPE) required for the job site.
- All PPE used by Aurora Geosciences Ltd. will be within the requirements of OH&S legislation and CSA standards.
- All PPE used by Aurora Geosciences Ltd. will be maintained in accordance with manufacturer's instructions and requirements.
- Company-issued PPE will be inspected at the time of issue and before each use by the employee using the PPE.
- All PPE that is of questionable reliability, damaged, or in need of service or repair will be removed from service immediately.
- All PPE that has been removed from service will be tagged "OUT OF SERVICE." Any PPE tagged "OUT OF SERVICE" will not be returned to service until repaired and inspected by a qualified person.
- Aurora Geosciences Ltd. will maintain appropriate inspection and service LOGS/RECORDS for SPECIALTY PPE.
- No piece of PPE will be modified or changed contrary to its manufacturer's instructions or specifications or OH&S Legislation.

* The safety information in this policy does not take precedence over applicable government legislation, with which all employees should be familiar.

6.2 Information sheet for eye & face protection

Date Prepared: _____

Revised: _____

Approved: _____

General Information

This PPE is designed to protect the worker from such hazards as:

- Flying objects and particles
- Molten metals
- Splashing liquids
- Ultraviolet, infrared and visible radiation (welding)

There are two types of PPE:

1. **"basic eye protection"** includes:

- Eye cup goggles
- Monoframe goggles and spectacles with or without side shields

2. **"face protection"** includes:

- Metal mesh face shields for radiant heat or hot and humid conditions
- Chemical and impact resistant (plastic) face shields
- Welders' shields or helmets with specified cover
- Filter plates and lenses

Hardened glass prescription lens and sport glasses are not an acceptable substitute for proper, required industrial safety eye protection.

Comfort and fit are very important in the selection of safety eye wear. Lens coatings, venting or fittings may be needed to prevent fogging.

Contact lenses should **NOT** be worn at the work site unless the weather or other circumstances of the job dictate that they are the preferred mode of vision correction. Contact lenses may trap or absorb particles or gases causing eye irritation or blindness.

Basic eye protection should be worn with face shields. **Face shields** alone often are not enough to fully protect the eyes from work hazards. When eye and face protection is required, advice from specialists, information on Material Safety Data Sheets (MSDS) for various chemicals, or your supplier will help you select such protection.

For more information, refer to:

- Alberta's Occupational Health and Safety Act, Regulation and Code
- Standards for "Industrial Eye and Face Protectors"

Do

- Ensure your eye protection fits properly (close to the face);
- Clean safety glasses daily, more often if needed;
- Store safety glasses in a safe, clean, dry place when not in use; and
- Replace pitted, scratched, bent and poorly fitted PPE. (Damaged face/eye protection interferes with vision and will not provide the protection it is designed to deliver.)

Do Not

- Modify eye/face protection; or
- Use eye/face protection that does not have a proper certification. (Various markings or the safety stamp for safety glasses are usually on the frame inside the temple near the hinges of the glasses.)

* **For further information refer to the appropriate current Occupational Health and Safety Legislation or Standards.**

6.3 Information sheet for head protection

Date Prepared: _____

Revised: _____

Approved: _____

General Information

Safety headwear is designed to protect the head from impact from falling objects, bumps, splashes from chemicals or harmful substances, and contact with energized objects and equipment.

In industry, the recommended type of protective headwear is a hard hat that has the required "dielectric strength." There are many designs, but they all must meet CSA requirements for Class G (General Usage) and Class E (Electrical trades).

Most head protection is made up of two parts:

- The shell (light and rigid to deflect blows)
- The suspension (to absorb and distribute the energy of the blow)

Both parts of the headwear must be compatible and maintained according to manufacturer's instructions. If attachments are used with headwear, they must be designed specifically for use with the specific headwear used. Bump caps or laceration hats are not considered safety helmets. In general they can only be used when the only hazard is that a worker might strike his/her head against a stationary object.

Working in the field in the north presents hazards different from other industrial work sites. In the winter it is likely that the most serious danger faced by the worker is cold, rather than falling objects. It is important to evaluate the potential hazards posed on upcoming jobs and wear headgear appropriate to the risks presented. Of course, when operating off-road vehicles, it is important to wear the appropriate helmet and visor, when appropriate to do so.

Inspection and Maintenance

Proper care is required for headgear to perform efficiently. Its service life is affected by many factors including temperature, chemicals, sunlight and ultraviolet radiation (welding). The usual maintenance for headgear is simply washing with a mild detergent and rinsing thoroughly.

Do

- Replace headgear that is pitted, holed, cracked or brittle;
- Replace headgear that has been subjected to a blow even though damage cannot be seen;
- Remove from service any headgear if its serviceability is in doubt;
- Replace headgear and components according to manufacturer's instructions; and
- Consult applicable legislation or your supplier for information on headgear.

Do Not

- Drill, remove peaks, or alter the shell or suspension in any way;
- Use solvents or paints on the shell (makes shell "break down");
- Put chin straps over the brims of certain classes of headgear;
- Use any liner that contains metal or conductive material; or
- Carry anything in the hard hat while wearing the hard hat.

For more information, look at:

- CSA Standard "Industrial Protective Headwear"
- ANSI Standard

6.4 Information sheet for foot protection

Date Prepared: _____

Revised: _____

Approved: _____

General Information

Safety footwear is designed to protect against foot hazards in the workplace. Safety footwear protects against compression, puncture injuries, and impact. Safety footwear is divided into three grades, which are indicated by colored tags and symbols:

- The tag color tells the amount of resistance the toe will supply to different weights dropped from different heights.
- The symbol indicates the strength of the sole. For example, a triangle means a puncture resistant sole able to withstand 135 kg (300 ft. lbs) of pressure without being punctured by a 5 cm (2 inch) nail.

Your choice of protective footwear should always overprotect, not underprotect.

Do

- Choose footwear according to the job hazard, the temperatures in which you will be working, and approved standards;
- Lace up boot and tie laces securely (boots do not protect if they are a tripping hazard or fall off);
- Use a protective boot dressing to help the boot last longer and provide greater water resistance (wet boots conduct current); and
- Choose a high-cut boot to provide ankle support (fewer injuries).

Do Not

- Wear defective safety footwear (i.e., exposed steel toe caps);
- Underprotect your feet; or
- Modify safety footwear.

For more information, look at:

Alberta's Occupational Health and Safety Act and other applicable legislation
CSA Standard "Protective Footwear"

- * **For further information see Appropriate Current Occupational Health and Safety Legislation.**

7.0 PREVENTATIVE MAINTENANCE PROGRAM POLICY

Date Prepared: _____

Revised: _____

Approved: _____

All tools, vehicles, and equipment shall be properly maintained so as to reduce the risk of injuries to employees or damage to property. In order to facilitate this, a company-wide inventory control system will be implemented which will track all equipment and tools as well as tracking maintenance and repairs to the equipment.

Management shall ensure that all preventative maintenance is carried out by qualified personnel according to established schedules and that records are maintained.

All employees shall regularly check all tools, vehicles, and equipment that they are working with, and shall take out of service any tools, vehicles, or equipment that pose a hazard due to a need for repair.

Work site activity involves people working with tools and equipment. In addition to ensuring that workers use the tools and equipment properly, it is vital that tools and equipment be properly inspected, maintained, and kept in good repair. Use warning tags to prevent employees from operating damaged or defective equipment, and lock out/tag out any machine that is under maintenance. An effective Preventative Maintenance Program will reduce the risk of injuries, damage and lost production.

Occupational Health and Safety Legislation requires that "An employer shall ensure that all equipment used on a work site is maintained in a condition that will not compromise the health and safety of workers."

The qualifications of maintenance personnel and operators are key to the success of a Preventative Maintenance Program. All individuals who perform maintenance work or operate the equipment should have the appropriate skills, accreditation and/or certification. This certification applies both to company employees and to contracted maintenance services.

Qualifications should include:

- Possession of a valid driver's license, in the case of vehicle operators.
- Successful completion of a practical operating examination administered by competent and authorized personnel.
- Vision meeting the appropriate standard; vision tests must be conducted by competent and authorized personnel.
- Hearing, with or without a hearing aid, which is adequate for the specific operation; hearing tests will be conducted by competent and authorized medical personnel.
- No history of epilepsy, of a disabling heart condition, or any other physical disability or impairment.

- Training in the following areas:
 - Familiarity with and comprehension of the safety requirements for the piece of mobile equipment, which they intend to repair or operate;
 - Use of manufacturers' operating and maintenance manuals; and
 - How to communicate to the maintenance personnel when there is a problem with a specific piece of equipment.

To ensure that all equipment is maintained in a safe working condition and to ensure that first aid and safety equipment and supplies are complete prior to a job, the following measures will be implemented:

1. The CSO will prepare and distribute standard lists of First Aid equipment and supplies required for each camp configuration. The first aid equipment required for each job will be clearly specified in the equipment list provided to the expediter for packing. Expediters will check each kit for completeness and to ensure that it is fully stocked with fresh (non-expired) supplies.
2. Pre-deployment checks of equipment which may pose an HSE hazard will be prepared by the CSO. These checks will be documented in the survey preparation checklist normally left with the expediter prior to departure. The crew chief will perform all instrument and equipment checks and will ensure that completed checklist is left with the expediter prior to departure.
3. All communication equipment will be fully charged, will be checked before deployment and, in the case of VHF radios, will have their frequencies verified and recorded on the back plate. Satellite phones will be sent out with standard emergency phone lists in the case including the contact information for police, hospital, search and rescue, environmental protection and company notification.

Equipment/Vehicle Checklist

Name of Project: _____ Inspected By: _____

Date/Time: _____ Vehicle Make & Model: _____

Unit #: _____ Mileage: _____ km/miles

| Rating Legend: | | NA - Not Applicable | M - Passed but maintenance required |
|---------------------------------|-------------------------|--------------------------------------|--|
| | | P - Passed in good working condition | R - Rejected, repair necessary before returning to service |
| Fluid Levels | | | |
| | Motor Oil | | Rear End |
| | Radiator | | Brake Fluid |
| | Power Steering | | Air Filter |
| | | | Oil Change Required? |
| | | | Oil Filter Changed? |
| | | | Windshield Washer |
| Driver's Compartment | | | |
| | Sun Visors | | Horn & Switches |
| | Windshield Wipers | | Windshield Defrost |
| | Side Windows | | Beam Indicator |
| | Pedal Pads | | Fire Extinguisher |
| | Seats & Seatbelts | | First Aid Kit |
| | Speedometer | | Survival Kit |
| | | | Steering Power Assist |
| | | | Windshield |
| | | | Instrument Lamps |
| | | | Hazard Warning Kit/Flares |
| | | | Air Pressure Gauge |
| | | | Cellular Phone |
| | | | Booster Cable |
| Body Exterior | | | |
| | Head Lamp Operation/Aim | | Clearance Lamps |
| | Tail Lamps | | Brake Lights |
| | Marker Lamps | | Hazard Lamps |
| | Trailer Hitch | | TDG Placards |
| | Trailer Wiring Harness | | Paint |
| | | | Turn Signal Lamps |
| | | | Fenders/Mud Flaps |
| | | | Body & Doors |
| | | | Bumpers |
| | | | Tire Pressure |
| Under The Hood | | | |
| | Hood | | Fuel Pump and System |
| | Power Steering System | | Fan & Belt |
| | Cooling System | | Windshield Washer Pump |
| | Exhaust System | | Windshield Washer Container |
| | | | Battery & Wiring |
| | | | Carburetor |
| | | | Distributor |
| | | | Air Filter |
| Undercarriage | | | |
| | Pin & Bushing Wear | | Sprocket |
| | Link Wear | | Shock Absorbers |
| | Roller Wear | | Oil Pan |
| | Idler Wear | | Drag Link |
| | Track Wear | | Tie Rod |
| | Roller Guards | | Frame Rails |
| | | | Springs |
| | | | Muffler |
| | | | Pittman Arm |
| | | | Differential |
| | | | Suspension |
| | | | Axles |
| Brake, Tires, and Wheels | | | |
| | Brake Components | | Brake Failure Indicator |
| | Disc Brakes | | Park Brake |
| | Brake Drum Condition | | Brake Operation |
| | Brake Lines & Hoses | | Wheel Bearings |
| | Tire Iron | | Spare Tire |
| | | | Road Clearance |
| | | | Tire Pressure |
| | | | Tire Wear |
| | | | Jack |
| | | | Chains |

Equipment Passed

Equipment Not Passed

Work Required

Assigned To

Completion (Date/Time)

1. _____

2. _____

3. _____

Repair Person's Signature: _____ Supervisor's Signature: _____

8.0 SAFETY TRAINING POLICY

Date Prepared: _____

Revised: _____

Approved: _____

Purpose

The purpose of this policy is to provide for general and specialized safety and related training throughout all levels of the organization.

Policy

The company will provide, and employees will participate in, all safety and related training that is necessary to minimize losses of human and physical resources of the company.

This training will include, but not be limited to:

- Safety orientations for newly-hired personnel;
-
- Job-specific training;
- Safety training for supervisors and management;
- Task and trade-specific training and certification;
- Specialized safety and related training; and
- Refresher and update training.

Remember: "Learning continues for a Lifetime."

*** The safety information in this policy does not take precedence over applicable government legislation, with which all employees should be familiar.**

8.1 Requirement for health and safety training

To ensure that all employees receive the necessary HSE training:

1. The CSO will establish and maintain a register describing each employee's experience and documenting safety training they received. The latter will include the expiry date of any qualification.
2. In consultation with the Operations Officers for each branch, the CSO will schedule safety training for each branch to ensure that all employees receive necessary training.
3. The CSO will ensure that the Expeditors receive necessary IATA and DGR training necessary to handle dangerous goods in accordance with the law. Where possible, this will be conducted with self-study or correspondence course packages.
4. Operations officers will ensure that crew chiefs brief their crews on operational safety as part of a briefing conducted before leaving for a job.
5. In a company camp where there are more than 4 persons, the Crew Chief will conduct a safety meeting as soon as feasible after arriving or setting up camp. This meeting will explicitly cover safety hazards associated with the particular job, with emergency procedures (first aid, communication protocol, evacuation procedures, etc.). The crew chief will document the meeting using the appropriate form.

8.2 New employee safety orientation

Date Prepared: _____
 Revised: _____
 Approved: _____

| | |
|--|----------------------------------|
| Employee: | Orientation Date: |
| Hire Date: | Job Class: |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>Introduction</p> <ul style="list-style-type: none"> <input type="checkbox"/> Company History <input type="checkbox"/> Company Safety Policy <p>Responsibility for Safety</p> <ul style="list-style-type: none"> <input type="checkbox"/> Worker <input type="checkbox"/> Supervisor <input type="checkbox"/> Manager <p>Emergency Procedures</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fire <input type="checkbox"/> Ambulance <input type="checkbox"/> First Aid <input type="checkbox"/> Security/Police <input type="checkbox"/> Incident Reporting <p>General Rules</p> <ul style="list-style-type: none"> <input type="checkbox"/> Alcohol and Drugs <input type="checkbox"/> Horseplay, Fighting <input type="checkbox"/> Vehicle Operation <input type="checkbox"/> Theft, Vandalism <p>Personal Protective Equipment</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hard Hats <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Winter Gear <input type="checkbox"/> Hearing Protection <input type="checkbox"/> Other _____ </div> <div style="width: 48%;"> <p>Safe Work Practices</p> <ul style="list-style-type: none"> <input type="checkbox"/> General Housekeeping <input type="checkbox"/> Fires <input type="checkbox"/> Defective Tools <input type="checkbox"/> Trucks and Trailers <input type="checkbox"/> Remote Camps <input type="checkbox"/> Traversing on Foot <input type="checkbox"/> Helicopters <input type="checkbox"/> Boats <input type="checkbox"/> Off-Road Vehicles <input type="checkbox"/> Firearms <input type="checkbox"/> Drill Sites <input type="checkbox"/> Chain Saws and Line-Cutting <input type="checkbox"/> Winter Work <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <p>Safe Job Procedures</p> <ul style="list-style-type: none"> <input type="checkbox"/> IP Surveying <input type="checkbox"/> Seismic Blasting <input type="checkbox"/> Blast Trenching <input type="checkbox"/> Pad Building <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <p>Meetings</p> <ul style="list-style-type: none"> <input type="checkbox"/> Safety Committee <input type="checkbox"/> Tool Box </div> </div> | |
| Trainer/Supervisor: _____ | Employee Signature: _____ |

SAFETY ORIENTATION QUESTIONNAIRE

Name of worker _____ Date/Time _____

(Please Print)

Branch Location _____

Note: Place ✓ by correct response:

1. Hazard identification and control is important to maintain a safe working environment.

No: Yes:

2. Working safely is a condition of employment.

No: Yes:

3. All injuries, regardless how minor, must be reported immediately to your supervisor.

No: Yes:

4. It is important to maintain good housekeeping in your work area.

No: Yes:

5. You observe an unsafe condition on site, should you:

- Wait for the weekly tailgate safety meeting and report it.
- Report it immediately to your supervisor.
- Let someone else worry about it.

6. While on a drill site, employees will conduct their activities in consultation with the drill contractor's foreman or senior driller on site.

No: Yes:

7. Staking crews working in the trees and line cutters will always have with them in the field:

- A radio
- Fire starter and matches
- Food and clothing sufficient to survive overnight in cold weather
- All of the above

Page 1 of 2

8. On a winter camp job, the temperature is below -45° and it is windy with blowing snow. Is it permissible to leave camp to work on the hopes that the weather will improve?

No:

Yes:

9. Personal protective equipment (hearing protection, fall protection, eye protection) should be worn whenever:

- Someone else is wearing it
- Your supervisor advises you to wear it
- The potential for personal injury exists

10. Is smoking in company vehicles or buildings allowed?

No:

Yes:

11. Tools and equipment which are damaged or whose guards are inoperative or missing are okay to use 'just this once', if no one is around.

No:

Yes:

12. The Workplace Hazardous Material Information System (WHMIS) /Hazardous Communication system (HAZCOM) designates certain products as controlled products and require them to be labelled. This label is a warning for you the worker. The label tells you the:

- Name of the product
- Hazard symbol
- Risks when you use it
- Personal protective equipment to wear
- First aid treatment if necessary
- All of the above

13. Material Safety Data Sheets (MSDS) are also required for WHMIS/HAZCOM controlled products. These sheets are readily available for your additional information by asking your supervisor to see them.

No:

Yes:

Signature of worker: _____ Page 2 of 2

8.3 Company safety training courses

Date Prepared: _____

Revised: _____

Approved: _____

The following is a current list of safety courses and training modules recognized and administered by Aurora Geosciences Ltd.

-Orientation:

Company history, safety manual, PPE (bear spray, hard hats, gloves, winter clothing, etc.), bear video, cold water videos, vehicle use and safety, safe work practices, safe job procedures

-Basic Firearm Safety:

Firearm types, ammunition, safety, practical training

-Basic Chainsaw Safety:

Parts, safety equipment, maintenance, starting, practical training

-Bear awareness and safety

-WHMIS

-TDG (Transportation of Dangerous Goods)

-First Aid

-Food Safe

-NWT Supervisor's Certificate, Level 1, 2

-Leadership for Safety Excellence

-Line-Cutting

-IP Surveying

-Mag Surveying

-Gravity Surveying

-Max-Min Surveying

-Core Technician

-Firearm Possession and Acquisition License

-Arctic Survival Course

-DSTS (Diavik Site Safety Training)

-WHMIS Trainer

-CFC Firearms Safety Instructor

-NSNY Auditor

8.4 Training and safety meetings

Safety Meeting Topics (104 Idea Generators)

- | | |
|--|---|
| <input type="checkbox"/> Aerosol Cans | <input type="checkbox"/> Boat Handling |
| <input type="checkbox"/> Danger in a Red Container | <input type="checkbox"/> Your Seatbelt |
| <input type="checkbox"/> Compressed Gas Bottles | <input type="checkbox"/> Driving Defensively |
| <input type="checkbox"/> Fumes Can Be Dangerous | <input type="checkbox"/> Water Safety Skills |
| <input type="checkbox"/> Chemical Handling | <input type="checkbox"/> Ladders in the Home |
| <input type="checkbox"/> WHMIS | <input type="checkbox"/> Xmas Tree Safety |
| <input type="checkbox"/> Ventilation | <input type="checkbox"/> Barricades |
| <input type="checkbox"/> Explosions - Avoid Them | <input type="checkbox"/> Crane Signals |
| <input type="checkbox"/> Radiography (X-ray) | <input type="checkbox"/> Ladder Climbing |
| <input type="checkbox"/> Fire Extinguishers | <input type="checkbox"/> Electricity |
| <input type="checkbox"/> Welder Safety | <input type="checkbox"/> Equipment Guards |
| <input type="checkbox"/> Clothing | <input type="checkbox"/> Use of Hand tools |
| <input type="checkbox"/> Fire Retardant Clothing | <input type="checkbox"/> Horseplay |
| <input type="checkbox"/> Save Your Fingers | <input type="checkbox"/> Noises |
| <input type="checkbox"/> Off the Job Safety | <input type="checkbox"/> Power Tools |
| <input type="checkbox"/> Gun Handling | <input type="checkbox"/> Tripping Hazards |
| <input type="checkbox"/> Kitchen Fires | <input type="checkbox"/> Radiography |
| <input type="checkbox"/> Loved Ones Want You Safe | <input type="checkbox"/> Unloading Trucks Safely |
| <input type="checkbox"/> Lawn Mower Safety | <input type="checkbox"/> Scaffolds Are Not Playthings |
| <input type="checkbox"/> Swimming Safely | <input type="checkbox"/> Waste and Haste |
| <input type="checkbox"/> Access and Egress | <input type="checkbox"/> Leading in Safety |
| <input type="checkbox"/> Lifting | <input type="checkbox"/> Demonstrate Safety |
| <input type="checkbox"/> Fixtures and Fingers | <input type="checkbox"/> Explaining a Safety Rule |
| <input type="checkbox"/> Damage Can Be Controlled | <input type="checkbox"/> Goals Worth Working For |
| <input type="checkbox"/> Defective Equipment | <input type="checkbox"/> The Young Learn From You |
| <input type="checkbox"/> Eyes are Worth Protecting | <input type="checkbox"/> Knowledge Never Hurts |
| <input type="checkbox"/> Grinding Wheels | <input type="checkbox"/> Loss Control |
| <input type="checkbox"/> Fumes Can Be Dangerous | <input type="checkbox"/> First Aid Hints |
| <input type="checkbox"/> Housekeeping at Work | <input type="checkbox"/> Inspecting for Safety |
| <input type="checkbox"/> Climbing Safety | <input type="checkbox"/> Mistakes Can Mean Trouble |
| <input type="checkbox"/> Slips and Falls | <input type="checkbox"/> Investigating Thoroughly |
| <input type="checkbox"/> Instructing Equipment Operators | <input type="checkbox"/> No Second Chance |
| <input type="checkbox"/> Machines Can Maim | <input type="checkbox"/> Attention Can Save A Life |
| <input type="checkbox"/> Hazards Around You | <input type="checkbox"/> Insurance Against Accidents |
| <input type="checkbox"/> Care in Backing Up | <input type="checkbox"/> Analysis of an Accident |
| <input type="checkbox"/> Company Rules | <input type="checkbox"/> Habits |

- | | |
|--|---|
| <input type="checkbox"/> Protective Clothing Pays Off | <input type="checkbox"/> Job Safety Analysis |
| <input type="checkbox"/> Tools - Don't Abuse Them | <input type="checkbox"/> Benefits of Safety First |
| <input type="checkbox"/> Vision and Eye Protection | <input type="checkbox"/> Cooperation |
| <input type="checkbox"/> Tips for Truck Drivers | <input type="checkbox"/> Betting Your Life |
| <input type="checkbox"/> Materials Handling | <input type="checkbox"/> Proper Job Instruction |
| <input type="checkbox"/> Judgment May Keep You Alive | <input type="checkbox"/> Safe Worker Awards |
| <input type="checkbox"/> Be a Safety Jury | <input type="checkbox"/> Understanding |
| <input type="checkbox"/> Insurance and Injuries | <input type="checkbox"/> Signs for Safety |
| <input type="checkbox"/> Yellow Lines and Safety | <input type="checkbox"/> Tool Crib Accidents |
| <input type="checkbox"/> Organizing a Safety Committee | <input type="checkbox"/> Visual Safety Example |
| <input type="checkbox"/> Questions to Stimulate Safety | <input type="checkbox"/> Watch the Main Issues |
| <input type="checkbox"/> Teaching Safety | <input type="checkbox"/> Safe Working Positions |
| <input type="checkbox"/> Treating an Open Wound | <input type="checkbox"/> Analyze the Unsafe Act |
| <input type="checkbox"/> The Law of Safety | <input type="checkbox"/> Rewards For Safety |
| <input type="checkbox"/> You Are the Key Worker | <input type="checkbox"/> On the Job Safety |
| <input type="checkbox"/> Breathing Equipment | <input type="checkbox"/> Prevention |

Where it is appropriate, the following topics can be used as they become current or require review.

- Review of Recent Accidents
- Review of Safe Work Practices
- Review Procedures of Tasks to be Done

TOOL BOX MEETING

TOOL BOX MEETING: DATE: _____ TIME: _____

PROJECT NUMBER: _____

PROJECT/FACILITY: _____

AGENDA

- (1) REVIEW OF PREVIOUS MEETING _____
- (2) REVIEW OF INSPECTIONS/INCIDENTS _____
- (3) CURRENT TOPIC DISCUSSION _____
- (4) EMPLOYEE INPUT _____
- (5) DATE/TIME/TOPIC NEXT MEETING _____

ATTENDANCE: (Have each attendee print & sign in ink)

- (1) _____ (2) _____
- (3) _____ (4) _____
- (5) _____ (6) _____
- (7) _____ (8) _____
- (9) _____ (10) _____

TOPIC OF REVIEW:

EMPLOYEE INPUT:

ACTION(S) TO BE TAKEN:

NEXT MEETING: DATE: _____ TIME: _____

TOPIC NEXT MEETING _____

FOREMAN/SUPERVISOR SIGNATURE

REVIEWED BY:

9.0 INSPECTIONS

Date Prepared: _____
Revised: _____
Approved: _____

Safety inspections are used to identify and control hazards in the workplace before accidents/incidents occur. During an inspection, both activities and conditions in the workplace are carefully examined. Situations that have the potential to cause injury or damage (sometimes referred to as unsafe acts and unsafe conditions) are identified, and corrective action is initiated.

9.1 *Inspection policy*

Purpose

The purpose of this policy is to control losses of human and material resources by identifying and correcting unsafe acts and conditions.

Policy

This company will maintain a comprehensive program of safety inspections at all facilities and job sites.

Responsibilities

The CSO is responsible for the overall operation of the program.

Project Managers are responsible for directing formal inspections on job sites that they control and for involving workers in such inspections.

Crew Chiefs are responsible for conducting ongoing informal inspections of areas where their crews are working.

Workers are responsible for participating in and contributing to the Inspection Program.

Work Site Safety Inspection

| Location: | | Project: | |
|--|----------------------|------------------------------------|-------------------------|
| Conducted By: | | | |
| <input type="checkbox"/> Weekly | | <input type="checkbox"/> Monthly | |
| | | <input type="checkbox"/> Quarterly | |
| Priority * | Unsafe Act/Condition | Corrective Action by | Date/Time Completed: |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Priority Index: 1. Imminent Danger 2. Serious 3. Minor 4. Acceptable 5. Not Applicable (N/A) | | | |
| Copies to: _____ _____ | | Review Date: _____ | |
| Comments: | | | |

10.0 Workplace Accident / Incident Investigation Policy

Purpose

To investigate accidents/incidents so that causes can be determined and corrective actions can be implemented to prevent recurrence.

Policy

In Aurora Geosciences Ltd., the following types of incidents shall be fully investigated:

1. Accidents that result in injuries requiring medical aid.
2. Accidents that cause property damage or interrupt operations with potential loss.
3. Incidents that have the potential to result in (1) or (2) above, such as close calls or near misses.

All incidents that fall under Section 30.2 of the Yukon OH&S Act must be reported to OH&S and to WCB or other regulatory agencies as defined by the OH&S Act.

Responsibilities

1. All employees shall report all incidents as soon as possible to their immediate supervisor and assist in the investigation when requested.
2. Supervisors (Crew Chief) shall conduct initial investigations and submit their report(s) to their Project Manager or VP - Safety (CSO) promptly.
3. The Project Manager or VP - Safety shall determine the need for, and if necessary shall direct, detailed investigations. They shall also determine causes, recommend corrective action, and report to the manager.

The CSO shall review all Operations Managers' reports, determine the corrective action to be taken, and ensure that such action is implemented.

*** The safety information in this policy does not take precedence over applicable government legislation, with which all employees should be familiar.**

Incident Investigation Report

Date Prepared: _____

Revised: _____

Approved: _____

5.

8.

9.5

| | | | |
|---|--------------------------|-----------------------------------|---|
| 1. Incident Type: <input type="checkbox"/> Injury/Illness <input type="checkbox"/> Property Damage <input type="checkbox"/> Major Potential <input type="checkbox"/> Fire <input type="checkbox"/> Spill <input type="checkbox"/> Other <input type="checkbox"/> Vehicle Collision | | | |
| 2. Incident Date (M/D/Y): ____/____/____ | | 3. Time (24 Hour Clock): | |
| 4. Area: | | Specific Location: | |
| Injury/Illness | | | |
| 6. <input type="checkbox"/> First Aid <input type="checkbox"/> Medical Aid <input type="checkbox"/> Modified Work <input type="checkbox"/> Lost Time <input type="checkbox"/> Fatal | | | |
| 7. Name of Employee: | | Age: | Sex: |
| 9. Occupation: | | Experience: | |
| 10. Nature of Injury: | | | |
| | | | |
| 11. Object/Equipment/Substance Inflicting Injury/Damage: | | | |
| Property Damage | | | |
| 12. Description of Property: | | | |
| | | | |
| 13. Description of Damage: | | | |
| | | | |
| 14. Estimated Loss/Damage Cost: | | | |
| Other Actual/Potential Loss | | | |
| 15. Type: | | | |
| 16. Description: | | | |
| 17. Estimated Cost: | | | |
| 18. Evaluation of Risk Potential if Not Corrected: | | | |
| A. | Loss Severity Potential | <input type="checkbox"/> Major | <input type="checkbox"/> Serious <input type="checkbox"/> Minor |
| B. | Probable Recurrence Rate | <input type="checkbox"/> Frequent | <input type="checkbox"/> Occasional <input type="checkbox"/> Rare |

| | |
|---|------------|
| 19. Description of Incident: | |
| | |
| | |
| Diagram of Scene: | |
| | |
| 21. Witness(es): | |
| | |
| Witness(es) Statement(s) Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| 22. Immediate Cause(s) | |
| Description: | |
| | |
| | |
| 23. Underlying Cause(s) | |
| Description: | |
| | |
| | |
| 24. Corrective Action(s) (Immediate, Interim, Final): | |
| | |
| | |
| Recommendations Completed by Whom: | Date/Time: |
| 25. Date Report Completed: (Y/M/D) ____/____/____ | |
| Signatures | |
| Supervisor: | Employee: |

Accident / Incident / Loss Witness Statement

Name: _____ Date: _____

Location: _____ Time: _____

Tel: _____ Cell: _____ E-Mail: _____

Description of Accident/Incident/Loss: _____

When completing this statement, be sure to include all events and factors that led to or may have contributed to this accident/incident/loss. Include actions taken during and after. Please print clearly. Attach all **original** Witness Statements to the accident/incident/loss report. Use the back of this form for additional information.

Description: _____

Signature: _____

| | | |
|------------------------|----------------------|--------------|
| Office Use Only | | |
| File #: _____ | Date Received: _____ | Job #: _____ |
| Received By: _____ | | |

11.0 Emergency Preparedness

Date Prepared: _____
Revised: _____
Approved: _____

On each job site the manager and/or supervisor will gather information such as the location of the nearest hospital, fire station, and first aid station so as to help minimize travel time to treatment for all employees.

This information is to prevent confusion during an emergency situation, for both supervisors and managers will be aware of the various procedures to follow on each job site should an accident occur.

All employees are to be aware of the action required, but should follow the instructions set by their supervisor.

11.1 Emergency evacuation procedures

Date Prepared: _____

Revised: _____

Approved: _____

Tools/Equipment Required: Aerosol-Powered Horn

Material Required: _____

Personal Protective Equip.: _____

STEPS

1. Evacuation procedures shall be initiated by the senior supervisor on site only, unless that person is unavailable or incapacitated.
2. The person instigating the site evacuation shall instruct that the aerosol-powered horn be sounded in three (3) sharp blasts, followed by a five (5) second delay, then three (3) more sharp blasts. This shall be repeated several times to ensure that all workers on site have heard this signal. This person, having the site evacuated, shall ensure that the emergency response procedure is activated.
3. ALL workers are to leave the site upon hearing the evacuation signal and assemble at the designated muster station.
4. Each supervisor will be responsible for taking a roll call following the evacuation, to ensure that all their workers are accounted for.
5. Each supervisor shall report the results of the roll call to the senior supervisor on site, as required in the Site Safety Plan.
6. The Superintendent shall determine if the site is safe to reoccupy following an evacuation. No one is to enter the site without authorization.

PLEASE POST

FIELD CAMP SAFETY CHECKLIST AND EMERGENCY PROCEDURES

FIRE PROCEDURES

In Arctic winter conditions, exposure to the cold can be just as deadly as the fire itself. Everyone must prepare for the possibility of having to evacuate their quarters in the middle of the night.

You must always keep a warm coat in your tent and wear appropriate indoor/outdoor shoes for the conditions, around camp in case you have to leave the tent and go outside immediately.

If you hear the fire alarm or three blasts of a hand held foghorn in a tent camp these procedures are to be followed:

- Treat all fire alarms as if they were an actual fire.
- In case of fire pull the nearest fire alarm or blast three sounds with a hand held air horn in a tent camp.
- If the fire can be put out with an extinguisher, do so **AFTER** you have sounded the alarm.
- If you are awakened by the alarm, **GRAB YOUR COAT AND FOOTWEAR AND GET OUT!!**
- If you are awakened by the alarm and you smell smoke, **DO NOT STAND UP !** Roll out of bed and stay as close to the floor as possible. Collect your **COAT AND FOOTWEAR QUICKLY** and **EXIT THE TENT.**
- Everyone is to meet in the **DESIGNATED MEETING AREA** for a crew count. Report to your foreman at once.
- **DO NOT LEAVE THE DESIGNATED MEETING AREA.** Your foreman or camp manager will give you further instructions.

UNDER NO CIRCUMSTANCES are you to attempt retrieving personal belongings until you have authorization to return to your tent.

SAFETY EQUIPMENT

- Wear safety glasses while fueling equipment from bladders and when operating hand power tools.
- Wear ear protection in generator buildings or anywhere loud noise is prevalent.
- Boats should be equipped with proper safety equipment (life jackets, bailer, rope, whistle and paddle).
- Life jackets should be worn at all times when boating.

WILDLIFE

- Keep camp and work site clean at all times.
- **DO NOT FEED** any wildlife.
- Familiarize yourself with available literature on bear safety.
- Carry bear spray and crack flares in the field and advise all personnel of any bear sightings.

HYGIENE

- Practice good personal health habits
- Keep in mind that there are other people in camp and clean up after yourself, particularly in the bathrooms.

USE OF DRUGS

- Possession of illegal drugs is cause for immediate dismissal.

COLD WEATHER

- Do not leave camp without appropriate cold weather clothing.
- These should include insulated footwear, gloves, insulated pants and jackets with a hood..
- Dress in layers.

SURVIVAL GEAR

- Do not leave camp without proper survival gear for the conditions.
- Ask your camp supervisor to provide you with a survival package if you have not received one.
- Survival package should include signaling flares, bear spray and/or scare bangers, compass, first aid kit, dry foods, and thermal reflecting blanket.
Please report any unsafe work practices to the Camp Supervisor or First Aid Attendant.

MEDICAL/MEDIVAC PROCEDURES

CAMP NAME: _____

MEDICAL ATTENDANT ON SITE: _____

IN THE EVENT OF ANY INJURY OR EMERGENCY:

1) OUR CAMP GPS COORDINATES ARE:

CAMP NAME: _____

LATITUDE: _____

LONGITUDE: _____

OUR CAMP SATELLITE PHONE NUMBER IS: _____

1. ADVISE THE FIRST AID ATTENDANT(S) OR CAMP SUPERVISOR of

Accident location _____

How many people are involved _____

What has happened _____

2. THE FIRST AID ATTENDANT OR CAMP SUPERVISOR ON SITE TAKES CHARGE of the situation making the decisions regarding who else needs to be contacted immediately.

3. IF THE FIRST AID ATTENDANT OR CAMP SUPERVISOR REQUIRES YOUR ASSISTANCE YOU MAY BE ASKED TO DO THE FOLLOWING:

- Call the nearest AURORA office.

Yellowknife: 867-920-2729

Cindy Perry: 867-445-2460

Whitehorse: 867-668-7672

Warren Kapaniuk: 867-334-5065

- If, for some reason no one can be reached call the air support company, the information you will need is as follows:

4. Advise the **nearest nursing station or Hospital** of the incident and that they will be receiving a patient and estimated time of arrival.
5. Report back to **First Aid Attendant** what happened during the calls and **stand by** in case further assistance is required.

List of Emergency Call Numbers:

Aurora Geosciences Ltd, Whitehorse (867) 668-7672
 Whitehorse, Expediter Cell phone (867) 334-5065

Aurora Geosciences Ltd, Yellowknife (867) 920-2729
 Yellowknife, Expediter Cell phone (867) 445-2460
 Client Office: _____

Helicopters
 Trans North Helicopters, Whitehorse (867) 668-2177
 Helidynamics helicopters, Whitehorse (867) 668-3536
 Fireweed Helicopters, Whitehorse (867) 668-5888
 Great Slave Helicopters, Yellowknife (867) 873-2081

Fixed Wing Aircraft
 Big Salmon Air (Fixed Wing) (867) 668-4608
 Alcan Air, Whitehorse (867) 668-2107
 Air Tindi, Yellowknife (867) 669-8200
 Arctic Sunwest, Yellowknife (867) 873-4664

RCMP, Whitehorse (867) 667-5551
 RCMP, Yellowknife (867) 669-1111

Whitehorse Hospital 1-800-661-0408 or (867) 393-8700
 Yellowknife Hospital (867) 669-4111

Local Clinic Name: _____

Local RCMP: _____

The designated AGL employee or designated alternate will supervise and give direction in the event of an incident.

Date and Time of incident: _____

Nature of the incident and the people involved: _____

If anyone was injured and the nature of the injuries: _____

Time of notification of company office such as Yellowknife or Whitehorse: _____

Time any other resources were notified (ie. expeditors, fixed wing aircraft company, helicopter company, diamond drill company) and the name of the contacts: _____

Time hospital notified if applicable: _____

CAMP SAFETY MEETING REPORT FORM

CAMP SAFETY MEETING RECORD

| | |
|-----------------------------|--|
| Job: | |
| Crew chief: | |
| Camp location: | |
| Meeting date / time: | |

PERSONS IN ATTENDANCE:

| | |
|--|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

AGENDA

1. FIRST AID

2. FIRE SAFETY

12.0 Environmental Policy

Date Prepared: _____
Revised: _____
Approved: _____

1. The proper safeguard of our environment is of vital importance to our organization.
2. While doing our work, we shall consider and to the best of our abilities, provide for the appropriate protection of humans, animals, plant life, air, water, and soil.
3. We expect all employees, contractors and sub-contractors to do their best to prevent harm to the environment.
4. Our goals on every job can be met without risking harm to the environment.
5. We shall use, store, and dispose of products in such a manner that will provide appropriate protection to the environment.
6. Management will develop and enforce good environmental standards in accordance with relevant legislation.
7. Workers will be kept informed on how to do their jobs in such a manner as to cause minimum environmental harm and waste of materials.
8. Where possible, we shall recycle and promote the use of recycled products.

12.1 Wildlife Policy

1. Aurora Geosciences Ltd. is committed to ensuring a safe working environment for employees and the wildlife that they encounter in the field. All employees are required to undertake wildlife training specific to the environment in which the job is located including but not limited to endangered species identification, habitat awareness and bear safety.
2. While doing our work, we shall consider and to the best of our abilities, provide for the appropriate protection of humans, animals, plant life, air, water, and soil.
3. We expect all employees, contractors and sub-contractors to do their best to record all wildlife sightings and encounters and report them to the project supervisor and the appropriate ENR representative for the area using the attached wildlife Sighting form or an approved alternative tailored specifically for the current job.

Species:

Number Seen:

(exact or estimated)

Location:

(be as specific as possible; or mark on a map in a GNWT Wildlife office)

Date: *(include year)*

Time of Day: *(include AM or PM)*

What was it doing when you saw it:

(not in great detail; however "running south along the road, then into the bush on the west side" is better than just "running")

Other Comments / Interesting markings?:

(may be anything interesting about the sighting – Was it feeding on something? Did the animal appear to have a limp? etc.)

Name of Person(s) who saw it (and contact #):

12.1 Heritage and Archaeological site Policy

1. Aurora Geosciences Ltd. is committed to preserving the heritage of the north and all cultures it contacts during its operations.
2. We expect all employees, contractors and sub-contractors to do their best to record all archaeological sightings and potential heritage sites that are encountered in the field. When possible, GPS locations, descriptions and digital photos shall be recorded and reported to the project supervisor and the appropriate First Nations Group and The Prince of Wales Heritage Center.
3. In all instances of contact with archaeological and heritage sites employees, contractors and sub-contractors are required to practice avoidance of the locations.

12.2 Fuel spill response plan



HAZARDOUS MATERIAL SPILL CONTINGENCY PLAN

(Introduction of the Spill response plan have been referenced from the Permit application for the Moose property)

Introduction

This Spill Plan has been developed to formalize the actions taken in the event of an Oil or Hazardous Material Spill. The responsibilities of key personnel and the procedures to be followed in responding to a spill are outlined. This spill contingency plan is to minimize the health and safety hazards, environmental damage and clean up costs. The plan has been prepared to provide easy access to all the information needed in dealing with a spill. The plan will be presented to all staff during the on-site orientation. All employees and contractors are aware of the locations of the plan on site. During orientations meeting, training sessions are scheduled to ensure employees have an understanding of the steps to be undertaken in the event of a spill. All employees and contractors are shown where the spill kits are stored and are aware of how to properly use them when responding to spills.

Aurora Geosciences Ltd. have been active in the Territories over the past 30 years. Plans for the program include exploration geophysics, mapping, prospecting and a small drill program. Equipment most likely to be used during this land use permit will be a

Boyles 17A or equivalent Diamond Drill rig, a MD 500 helicopter , an 11kW generator for camp, a 16ft tin boat, a small rubber track vehicle, and small water pump with a water meter for obtaining water for camp. P 50 heating oil will be used in oil stoves, drill and the generator while Jet B will be used for the helicopter, regular unleaded gas will be used for water pump, boat and rubber track vehicle and propane for cooking and heating water.

There will be two fuel caches, one at camp and a second at Moose Dyke 2. The fuel is contained within 205 liter sealed containers. Barrels will generally be delivered by barge and be moved by helicopter or by rolling on the ground. All of the diesel and Jet A will be stored within an acceptable field berm. We will ensure absorbent padding underlies the fuel transfer areas and the smaller areas for storage of lubricants and diesel. All fuel drums will be inspected on a daily basis for leaks.

The most likely source for spillage and leakage include poor seals on drums or punctures, leaky valves, mishandled drums, improper storage, heat expansion due to overfilling, accidental puncture of fuel lines (either by wear or animals) and/or poor transfer method.

PETROLEUM PRODUCT SPILLS

A “**spill**” is defined as a “Petroleum product or lubricant which is poured, spilled, or pumped onto the ground or into water, by faulty conveyance or transfer, overturned vehicles or equipment, or through human error or negligence.”

Hazardous Material Information for gasoline and diesel fuel is included in **Appendix A**. A **table of reportable spills** for various substances is included in **Appendix B**.

REPORTING PROCEDURES

A **Spill Reporting Form** is included in **Appendix C**. The following two levels of reporting is required by any individual who locates a spill or leak:

Report to a Supervisor: The individual must report the spill or leak to his/her direct supervisor. and,

Report to the Owner: The individual and/or supervisor must report the spill or leak to the Owner of the petroleum product. The Owner shall immediately be given details of any leak or spill. It is the Owner's responsibility to ensure protection of human health and safety, provide directions to stop or contain spills, and report the spill (if necessary, see severity rating and notes above) to **Affected Agencies** prior to investigating the spill themselves.

Affected Agencies: Affected Agencies shall all be contacted through the 24-hour emergency Spill Response Line at **(867) 920-8130**.

The following information shall be conveyed to the affected agencies through the 24-hour emergency Spill Response Line. This information should be documented on the “Spill Reporting Form” provided in Appendix C.

- Location of the Spill or Leak
 - Nearest community, town, highway, major water body, kilometre location on highway if known etc.
- Time of the Spill
- Severity of Spill or Leak
 - Minor – more than 100 litres and less than 400 litres

- Major – more than 400 litres and less than 1,000 litres
- Emergency - more than 1,000 litres
- Type of Spill
 - Total loss/leakage
 - Overturned vehicle or tanker (plus name of transport company)
 - Ruptured tank
 - Lost drum
- Product Spilled
 - Diesel Fuel (Identify Grade)
 - Gasoline
 - Lubricant (Identify Grade)
 - Other (Identify)
- Nearest Watercourse
 - Identify by name and description the nearest watercourse, pond or lake, with an approximate distance to the spill.
 - Describe the soils conditions and direction of probable flow for the spilled product.
 - Potential to enter surface water
- Fire Hazard
- Hazard to life and limb, injuries
- Environmental effect expected, if any
- Equipment and clean-up consumables on hand

The response by Affected Agencies will depend upon the location of the spill and will vary according to circumstances. For the purpose of this Plan, it is recommended that only one call be made to government or other agencies using the 24 hr spill line.

Other affected parties may include organizations associated with fuel supply and transport companies or local First Nations.

The Canadian Transport Emergency Centre (CANUTEC), a branch of Transport Canada, can also be contacted for 24 hr technical advise on Dangerous Goods, as needed. The CANUTEC help line for dangerous goods is **0 (613) 996-6666 (collect)**.

Emergency Spill Response Procedure - Response Organization

The first person on the scene is to do the following:

Ensure personal and worker safety, if you cannot identify the spilled substance consider it dangerous.

If Personnel Are Injured

- Call for medical help, attend to injured person, and administer first aid if safe to do so.
- Warn / remove bystanders

If Safe (do not enter confined spaces or expose self to fire hazard)

- Stop all sources of ignition and stop or reduce the source flow of the spill
- Shut off all valves
- Shut off all electrical power
- Initiate containment: put down sorbent pads and berm spill area, if possible
- Recover product and contaminated soil / other materials
- Remain at the site and assist with response as needed when help arrives.

If Unsafe

- Initiate evacuation (upgrade or upwind), move to safe area
- Notify Owner
- Report the following: location, initial spill site, possible cause, description of present condition, affecting or about to enter water.
- Isolate area and deny entry until qualified response personnel arrive
- Deny access to all unauthorized personnel
- Update Owner on spill status

Report spill immediately to camp manager, who will determine if spill is to be reported to the NWT 24-Hour Spill Line at 867-920-8130.

Each spill kit, as well as the office and camp manager, will have copies of the NWT Spill Report form to be filled out (see Appendix B-2). Fill out and fax or email the Spill Report to the staff of the NWT 24-Hour spill line. Also fax or email the report to the head office.

NWT 24-Hour Spill Line Phone: (867) 920-8130

NWT 24-Hour Spill Line Fax: (867) 873-6924

NWT 24-Hour Spill Line Email: spills@gov.nt.ca

Response for Gasoline Spills – in water

If it is safe to do so:

- 1 Stop or reduce discharge, if safe to do so, by plugging, uprighting, adjusting valves, or other suitable method.
- 2 If possible, contain discharge by booming using commercial boom material, logs, or other material at hand.
- 3 If in rapidly flowing water, direct to quieter backwater using booms to deflect material.
- 4 Ensure that you have reported the spill.
- 5 Remove from water by skimming, using absorbents, and collect in suitable container (tanks, drums, plastic lined depression in ground or snow). See Appendix D for a listing of typical spill response tools/equipment.

NOTE: IN THE EVENT THE MATERIAL IS SPILLED DURING VERY WARM WEATHER AND THERE IS DANGER OF FIRE DUE TO FUMES, DO NOT ATTEMPT TO CONTAIN THE PRODUCT, ALLOW THE PRODUCT TO DISPERSE AND EVAPORATE.

- 6 Dispose of absorbents by recycling or incineration if conditions are suitable and after consultation with environmental authorities and/or forestry officials contacted through the Emergency Spill Response Line.

Response for Gasoline Spills - on land

If it is safe to do so:

- 1 Stop, or reduce discharge, if safe to do so, by plugging, uprighting, adjusting valves or other suitable method.
- 2 Contain spill by diking with earth, snow and ice or other barrier, possible trenching or creating a lined sump down gradient from the spill source.
- 3 Ensure that you have reported the spill.
- 4 Remove fuel from containment area with pumps, vacuum equipment and place in appropriate containers. Ensure the equipment is intrinsically safe (does not have a source of ignition/spark).
- 5 Absorb residual liquid on natural or synthetic absorbents (e.g. 3M products).
- 6 Remove contaminated soils in the spill site to an appropriate disposal site if spill located near water supply or stream/river course or for aesthetic reasons.
- 7 Dispose of contaminated fuel by recycling or incineration. In situ, incineration may be possible if permission granted from environmental and forestry officials contacted through the Emergency Spill Response Line.

Response for Diesel Spills – in water

If it is safe to do so:

- 1 Stop, or reduce discharge, if safe to do so, by plugging, uprighting, adjusting valves, or other suitable method.

- 2 If possible, contain discharge by booming using commercial boom material, logs or other material at hand.
- 3 If in rapidly flowing water, direct to quieter backwater using booms to deflect material.
- 4 Ensure that you have reported the spill.
- 5 Remove from water by skimming, using absorbents, and collect in suitable container (tanks, drums, plastic lined depression in ground or snow).
- 6 Dispose by recycling or incineration, if conditions are suitable and regulatory authorities grant permission.

Response for Diesel Spills – on land

If it is safe to do so:

- 1 Stop or reduce discharge, if safe to do so, by plugging, uprighting, adjusting valves or other suitable method.
- 2 Contain spill by diking with earth, snow or ice or other barrier, possible trenching or creating a lined sump down gradient from the spill source.
- 3 Ensure that you have reported the spill.
- 4 Remove fuel from containment area with pumps, vacuum equipment and place in appropriate containers.
- 5 Absorb residual liquid on natural or synthetic absorbents (e.g. 3M products).
- 6 Remove contaminated soils in the spill to an appropriate disposal site if spill site is located near water supply or stream/river course or for aesthetic reasons.
- 7 Dispose of contaminated fuel by recycling or incineration. In site, incineration may be possible if permission granted from environmental and forestry officials.

PROCEDURES FOR RESTORING AFFECTED AREAS

Once a spill has been contained, Aurora Geosciences Ltd. will consult with the Indian and Northern Affairs Canada Inspector assigned to the property to determine the level of cleanup required (INAC – Land Use Inspector, Yellowknife (867) 669-2761). The Inspector may require a site-specific study to ensure appropriate cleanup levels are met. Criteria that may be considered include natural biodegradation of oil, replacement of soil and revegetation.

FUEL SPILL RESPONSE PLAN

APPENDIX A

HAZARDOUS MATERIAL INFORMATION

Hazardous Materials Information:

Gasoline

Characteristics

- Flammable
- Solubility in water 1 to 100 ppm
- Floats
- Flash point - 38 to -43 C

Human Health

- Moderately toxic by inhalation. Avoid prolonged exposure to fumes

Environment

- Harmful to aquatic life. Fish toxicity: 5 - 40 ppm rainbow trout

Protective Clothing

- No specific recommendations. Protective clothing is required.

Diesel

Characteristics

- Combustible/Flammable liquid
- Insoluble in water (30 ppm)
- Floats
- Flash point 52 to 96 C

Human Health

- Low toxicity by all routes

Environment

- Fish toxicity: 10 ppm rainbow trout; 2 ppm for grass shrimp

Protective Clothing

- Gloves and boots made from neoprene or butyl rubber

Fuel Spill Response Plan

Appendix B

Reportable Spills

| Substance Spilled | TDG Code | Reportable Quantity |
|---|-----------------|---|
| Explosives of Class 1 as defined in section 3.9 of the Federal Regulations. | 1 | Any amount |
| Flammable gases, of Division 1 of Class 2 as defined in section 3.11 (a) of the Federal Regulations. | 2.1 | Any amount of gas from a container larger than 100L, or where the spill results from equipment failure, error or deliberate action or inaction. |
| Non-flammable gases of Division 2 of Class 2 as defined in section 3.11 (d) of the Federal Regulations. | 2.2 | Any amount of gas from a container larger than 100L, or where the spill results from equipment failure, error or deliberate action or inaction. |
| Poisonous gases of Division 3 of Class 2 as defined in section 3.11(b) of the Federal Regulations. | 2.3 | Any amount |
| Corrosive gases of Division 4 of Class 2 as defined in section 3.11 (c) of the Federal Regulations. | 2.4 | Any amount |
| Flammable liquids of Class 3 as defined in section 3.12 of the Federal Regulations. | 3 | 200L (Any amount if spilled into a watercourse) |
| Flammable solids of Class 4 as defined in section 3.15 of the Federal Regulations. | 4 | 25 kg |
| Products or substances that are oxidizing substances of Division 1 of Class 5 as defined in sections 3.17(a) and 3.18(a) of the Federal Regulations. | 5.1 | 50 kg or 50 L |
| Products or substances that are organic compounds that contain the bivalent “-0-0-“ structure of Division 2 of Class 5 as defined in sections 3.17 (b) and 3.18 (b) of the Federal Regulations. | 5.2 | 1 kg or 1L |
| Products or substances that are poisons of Division 1 of Class 6 as defined in sections 3.19 (a) to (e) and 3.20 (a) of the Federal Regulations. | 6.1 | 5 kg or 5 L |
| Organisms that are infectious or that are reasonable believed to be infectious and the toxins of these organisms as defined in sections 3.19(f) and 3.20(b) of the Federal Regulations. | 6.2 | Any amount |
| Radioactive materials of Class 7 as defined by section 3.24 of the Federal Regulations. | 7 | Any discharge or a radiation level exceeding 10 mSv/h at the package surface and 200 mSv/h at 1 m from the package surface. |
| Products or substances of Class 8 as defined by section 3.24 of the Federal Regulations. | 8 | 5 kg or 5 L |
| Miscellaneous products or substances of Division 1 of Class 9 as defined by sections 3.27 (1) and 2 (a) of the Federal Regulations. | 9 | 50 kg or 50 L |

In addition, all releases of harmful substances, regardless of quantity, are to be reported to the NWT spill line if the release is near or into a water body, is near or into a designated sensitive environment or sensitive wildlife habitat, poses imminent threat to human health or safety, poses imminent threat to a listed species at risk or its critical habitat, or is uncontrollable.

Spill Response for Petroleum Products (Fuels)

Appendix C

Spill Reporting Form

Spill Reporting Form

| | | | | |
|---|---|---|---|---|
|  | |  | NT-NU SPILL REPORT OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS | NT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-4130 FAX: (867) 873-5524 EMAIL: spills@gov.nt.ca |
| REPORT LINE USE ONLY | | | | |
| A | REPORT DATE: MONTH - DAY - YEAR | REPORT TIME | <input type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT | REPORT NUMBER _____ |
| B | OCURRENCE DATE: MONTH - DAY - YEAR | OCURRENCE TIME | | |
| C | LAND USE PERMIT NUMBER (IF APPLICABLE) | WATER LICENCE NUMBER (IF APPLICABLE) | | |
| D | GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION | | REGION <input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN | |
| E | LATITUDE DEGREES MINUTES SECONDS | | LONGITUDE DEGREES MINUTES SECONDS | |
| F | RES. PONSIBLE PARTY OR VESSEL NAME | RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION | | |
| G | ANY CONTRACTOR INVOLVED | CONTRACTOR ADDRESS OR OFFICE LOCATION | | |
| H | PRODUCT SPILLED | QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES | U.N. NUMBER | |
| H | SECOND PRODUCT SPILLED (IF APPLICABLE) | QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES | U.N. NUMBER | |
| I | SPILL SOURCE | SPILL CAUSE | AREA OF CONTAMINATION IN SQUARE METRES | |
| J | FACTORS AFFECTING SPILL OR RECOVERY | DESCRIBE ANY ASSISTANCE REQUIRED | HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT | |
| K | ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS | | | |
| L | REPORTED TO SPILL LINE BY | POSITION | EMPLOYER | LOCATION CALLING FROM |
| M | ANY ALTERNATE CONTACT | POSITION | EMPLOYER | ALTERNATE CONTACT LOCATION |
| REPORT LINE USE ONLY | | | | |
| N | RECEIVED AT SPILL LINE BY | POSITION STATION OPERATOR | EMPLOYER | LOCATION CALLED YELLOWKNIFE, NT |
| | | | | REPORT LINE NUMBER (867) 920-4130 |
| | LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> GOS <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> NAC <input type="checkbox"/> NEB <input type="checkbox"/> TO | | SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN | FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED |
| | AGENCY | CONTACT NAME | CONTACT TIME | REMARKS |
| | LEAD AGENCY | | | |
| | FIRST SUPPORT AGENCY | | | |
| | SECOND SUPPORT AGENCY | | | |
| | THIRD SUPPORT AGENCY | | | |

Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and faxed to the spill line at 867-873-6924. Commencing on January 2, 2007, the form can also be e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call. Spills can still be phoned in by calling collect at 867-920-8139.

| | |
|--|--|
| A. Report Date/Time | The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. Please do not fill in the Report Number: the spill line will assign a number after the spill is reported. |
| B. Occurrence Date/Time | Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above). |
| C. Land Use Permit Number /Water Licence Number | This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites. |
| D. Geographic Place Name | In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. You must include the geographic coordinates (Refer to Section E). |
| E. Geographic Coordinates | This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude. |
| F. Responsible Party Or Vessel Name | This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and e-mail. Use box K if there is insufficient space. Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill. |
| G. Contractor involved? | Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill. |
| H. Product Spilled | Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B) |
| I. Spill Source | Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overflow, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: 10 m ²) |
| J. Factors Affecting Spill | Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or equipment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space. |
| K. Additional Information | Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1". |
| L. Reported to Spill Line by | Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space. |
| M. Alternate Contact | Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill. |
| N. Report Line Use Only | Leave Blank. This box is for the Spill Line's use only. |

SPILL RESPONSE FOR PETROLEUM PRODUCTS (FUELS)

APPENDIX D

LIST OF TYPICAL SPILL RESPONSE EQUIPMENT

List of Typical Spill Response Equipment

Absorbents (For Petroleum Hydrocarbon {Fuels, Lubricants, and Solvents} and Wastewater)

Booms
Sheets
Towels
granules

Contaminated Soils Recovery Tools

Shovels
Picks
Excavators
Loaders
Trucks

Liquid Recovery Tools

Pumps
Containers
Vacuum / Eductor Truck

Fire Suppression Equipment

Various, for different material types

Personal Safety Equipment

Protective Clothing
Eye Protection
Breathing Apparatus

Note:

This is by no means an exhaustive list of materials and tools that can be assembled and used for spill response.

More information on spill response equipment and equipment suppliers can be found on the Internet. Yukon Explosives in Whitehorse is an example of a local supplier.

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List of documents and forms attached to Aurora Geosciences Ltd. company safety manual.

Work Site Hazard Assessment
Hazard Assessment Corrective Action
Incident Report
Employee Warning
Equipment / Vehicle Checklist
Safety Orientation
Safety Orientation Questionnaire
Safety Training Records and Summaries
Tool Box Meeting / Safety Huddle
Work Site Safety Inspection
Accident / Incident / Loss Investigation Report
Accident / Incident / Loss Witness Statement
Emergency Evacuation Procedure
Camp Safety Meeting Report
Spill Report Form