Your Back

Back injuries are a common workplace injury. These injuries can easily result from the improper lifting of heavy camp equipment, core trays, drill samples, drill pipe and bits – or even from the changing of a tire or lifting a wheel off the roof of a vehicle. Injuries often result if you lift with a bent back, or with the object held away from your body or to your side. To avoid back injury, it is important to keep your back muscles strong and flexible and to use correct lifting procedures.

Follow these correct lifting procedures when you lift any object, especially a heavy one.

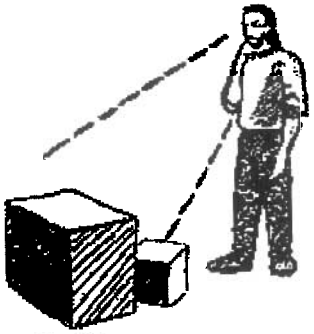
1. Plan the lift before you begin. Make sure your footing is secure and the route is clear, if you must carry the object.

2. Get a good grip. Use gloves if your hands are sweaty or if the object is slippery.

3. Lift with your legs, not with your back. Keep your back straight when you lift. Avoid twisting when you lift. Cradle heavy objects close to your body when carrying them.

4. Lift within your ability. Get assistance if there is any possibility that you might injure yourself if you do the job alone. Don't "show off" by doing the job alone.

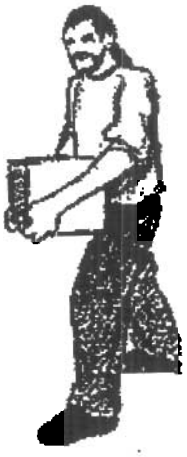
5. When you lift with a team, make sure you plan the lift together and execute the lift according to your plan.



1. Plan your lift.

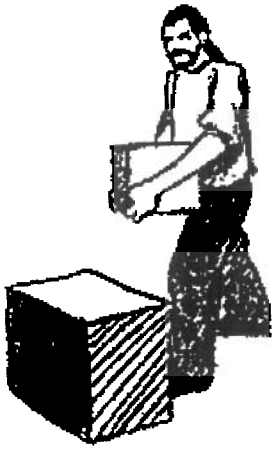
2. Get a good grip.

3. Lift with your legs.



Lift with your legs,

NOT with your back.



4. Lift within your ability.

7.2) Electrical Hazard

In doing geophysics, conductor wires are commonly energized during surveying, thus exposing workers to an electrical hazard. Contact burns from contact with electrical current are the most common kind of electrical burn to occur in doing geophysical surveys.

Burns from an electric current may be more serious than they appear as they cause damage to the skin and other underlying tissues.

First Aid for Electrical Burns

- An electrical shock can cause:
  - Third degree burns
  - Stopped breathing
  - Cardiac arrest
  - Head/spinal injuries, fractures & dislocations (from victim being thrown from the shock)

To Give First Aid:

- Begin scene survey - never approach a casualty of an electrical injury until the power is off.
- Shut off the current, or get the casualty away from the electrical source, if safe to do so.
- Perform primary survey and give life-saving first aid.
  - Check for breathing and give AR if needed
  - Check circulation and give CPR if there is no pulse
- Perform a secondary survey.
  - Cover the entry and exit wounds with clean dry dressings
  - Steady and support fractures and / or dislocations
- Obtain medical help.

7.3) Safe Surveying Procedures

- Make no assumptions that any hazard is obvious or that any safety procedure is self-evident.
- Promote increased safety awareness by identifying conditions that can lead to serious accidents or fatalities.
- In inhabited areas, when geophysical surveys are in progress, road crossings should be guarded and warning signs should be posted.
- All individuals should become as self reliant as possible in terms of safety awareness.
- Shut down, disconnect, insulate and open the loop during lightning storms.
- Take special precautions when operating equipment in urban areas. These include guarding transmitter and loop, notifying police and municipal authorities.

7.4) Borehole Geophysics Safety Guide – Addendum

For the Prevention of Radio Frequency Radiation Hazards when Operating Geophysical Equipment in the Vicinity of Explosives

For the Prevention of Radio Frequency Radiation Hazards when Operating Geophysical This guide outlines the specifications for geophysical transmitters which output radio frequencies that could potentially detonate commercial explosives. The following tables define the minimum distances within which transmitters may be safely operated. This is dependent on the output power and radio frequency (RF) ranges of transmitters. Also included are the design specifications for geophysical and communications transmitters for cross-reference.

Table 1

Recommended Distance for Commercial Transmitters

(Institute of Makers of Explosives – Washington, D.C.)

Radio Frequency (Hz,MHz)	Transmitter Power[1] (Watts)	Minimum Distance (Metres)
0.535 – 1.605 MHz	Up to 4,000	250
0.535 – 1.605 MHz	5,000	275
0.535 – 1.605 MHz	10,000	400
0.535 – 1.605 MHz	25,000	610
Up to 50 MHz	100	250
Up to 50 MHz	500	520
Up to 50 MHz	1,000	770
Up to 50 MHz	5,000	1,680
Up to 50 MHz	50,000	5,190

(1) Power delivered to antenna

Table 2

Equipment Specifications

Equipment Type	Transmitter Output[1] (Watts)	Frequency (Hz, MHz)
Crone 2 kW Generator	2,000	7.5-30 Hz
Crone 4.8 kW Generator	4,800	1.67-30 Hz
Geonics TEM67	4,500	0.3-25 Hz
Apex MaxMin	156	110 – 14,080 Hz
Motorola P200 Walkie-Talkie	5	30 – 300 MHz
Crone Syncronization radio	3 W – average output	27.12 MHz

(1) Power delivered to antenna

8. COMMUNICATIONS

In a remote or isolated camp effective radio communication is required at several levels:

- Base Camp to nearest town.
- Base Camp to Diamond Drill rig
- Base Camp to Outpost camp(s) (if applicable).
- Base Camp to Bush workers (optional).

8.1) Equipment

Several types of radio communication equipment are available, & are described briefly below:

A _____telephone is located _____. As a general rule, this is the most effective and reliable means of "reaching the outside world." All personnel will be instructed in the proper use of this "Phone".

NOTE: This equipment may be used for Anglo / HBED personal calls (maximum of 20 minutes per week), however, be forewarned that extra calls the cost is $_____ per minute. Charges for ALL personal calls will be recovered by Anglo / HBED above the allowable maximum. Calls and time utilization are to be recorded on a "Call Record List" to be kept near the phone. Note: Incoming calls are charged to base satellite phone number.

A list of Emergency Contact numbers shall be posted near the phone.

A _____radio is located in the First Aid area, and is intended for use only during Emergency (i.e. other phone is inoperable). All personnel will receive instruction regarding proper usage of this equipment.

The Drilling contractor is to maintain radio communication between the camp and drill rig on their company system frequency.

9. SURVIVAL TECHNIQUES

BE PREPARED - A great number of case histories of survival incidents indicate that previous preparation and rehearsal, both mental and actual, are the most effective means of producing the correct survival action in time of emergency. Clearly, it is extremely difficult to provide actual conditions - they will not be provided on this project - however, many fatal accidents can be directly traced to a lack of proper preparation. In addition to having adequate survival gear, the mind must also be prepared. Most of us think, "It can't happen to me." WRONG ATTITUDE. That is why they are called "accidents" - they can happen to anyone, anywhere and at anytime.

9.1) Survival Preparation

The following section deals mainly with SURVIVAL PREPARATION - that is measures that can be taken prior to arriving in a survival situation. Specific SURVIVAL TECHNIQUES represent a lengthy subject that is treated in various, published survival manuals.

- All vehicles should contain a survival kit sufficient for the number of passengers carried. Demand to know its location and insist it be carried in the vehicle at all times.
- Leave instructions or a copy of your planned travel route with someone in camp. If nobody will remain in camp, leave the written instructions in a conspicuous location. The search part will know where to begin.
- If you should get lost or become disoriented - DON'T PANIC. Remain calm, find a place to get comfortable and WAIT. Somebody will be searching for you.
- Assist with the search by making your location as visible as possible. Light a fire, use flares, blow a whistle, fire a rifle (if available) etc.

9.2) Survival Advice for Desert Conditions

If you are stranded in a hot desert location, you need shade. You must keep activity to a minimum to control your body temperature and your sweat rate. Follow these guidelines:

- Know how to avoid hypothermia and sun or heat-related problems. You should remain still in the shade and rest during the day. Do any necessary work at night.
- When resting, do not sit directly on the ground. The ground surface temperature is often much warmer than the air temperature. Search for elevated places (1-2 meters) to rest such as a tree limb or a rock ledge, if they are available. Otherwise, scrape away at least 6 to 8 inches of the surface dirt in your resting area. The deeper you dig, the cooler the hole – but the deeper you dig, the more sweat you produce.
- Your vehicle's interior can become very hot during daytime hours, even with all the windows open. The shade cast by vegetation or rocks may be cooler than the shade cast by your vehicle. However, it may be coolest under the vehicle, especially if you can scrape any loose surface material that has retained heat.
- Ration your sweat, not your drinking water.
- Wear a long-sleeved shirt, long pants and a broad-brimmed hat to cover as much skin as possible. Light colored clothing is best.
- To create shade, rig a canopy out from the side of your vehicle with a sheet of opaque plastic (white is best). Leave at least 2 feet of open space below it for ventilation.

A healthy worker acclimatizes to the exposure and can maintain a normal body temperature by conserving heat in the cold and by dissipating heat when it is hot.

Heat Exposure

When a body sweats excessively to dissipate heat, the resulting loss of body salts and fluids cause a muscular reaction called heat cramps. Prolonged exposure to a hot environment causes heat exhaustion. When the temperature control mechanisms of the body fail, heat stroke results.

HEAT CRAMPS

Look for:

- Muscle spasms, painful cramps and excessive sweating.

What to do:

- Give a glass of slightly salted water to drink (5mL of salt in one liter of water). Repeat once in ten minutes if needed.

HEAT EXHAUSTION

Look for:

- pale face, cold clammy skin;
- muscle cramps;
- headache and dizziness;
- weak pulse and rapid shallow breathing;
- Vomiting and loss of consciousness.

What to do:

- move the person out of the heat;
- loosen clothing;
- give the fully conscious casualty slightly salted water to drink, as much as the casualty will take;
- watch breathing;
- Get medical aid.

HEATSTROKE

Look for:

- flushed, hot, dry skin;
- elevated temperature;
- rapid, weak pulse;
- noisy breathing;
- convulsions, nausea, vomiting
- headache, dizziness, unconsciousness.

9.3) Suggested Standard Equipment

- **Fire starter**: Matches can be made waterproof by dipping them in nail polish or wax. They should be carried in a waterproof container. (Don't forget a striker unless using "Strike Anywhere" matches)
- **Pocketknife**: Large two bladed jack knife or Swiss Army knife. A strong, well-made solid shank hunting knife is preferable.
- **Magnetic Compass and Topographic Map or Air Photograph** of the general area.
- Many types of compasses have a sighting mirror, which may be used effectively as a **signaling device**. A mirror flash can be seen from a great distance.
- **Waterproof Notebook and pencil** to record notes and leave messages.
- **Extra food** - nuts, raisins, chocolate, sugar cubes, etc.
- **Polarized plastic goggles** if traveling in snow covered areas.
- Fluorescent red aircraft **signaling cloth**. Minimum of 2 x 2 meters.
- Large **plastic garbage bag** for instant body shelter.
- **Space Blanket**
- Small **survival kit** including nylon cord, wire, gill net, dried food, tea bags, spare large handkerchief, candle, aluminum foil.
- Small **first aid kit.**
- **A pocketbook** - relieves boredom, occupies the mind.
- A copy of a recognized **survival manual**.

10. WILDLIFE

Their basic first aid rules for animal bites and claw wounds:

- Treat every bite as a badly contaminated wound.
- Clean all bites immediately and completely within 3 hours.

- Get rapid medical care for any bite which breaks the skin even slightly, even though it appears to be minor.

10.1) BEAR ENCOUNTERS

10.1.1) If you see a distant bear

- Keep out of sight and detour as far away as possible.
- If the bear sees you, expect him to either run away, circle around you to get your scent or come closer for a better look.
- You could climb a tree if there are any in this area or walk away slowly, upwind.

10.1.2) Safe Traverse

- Anglo's policy is that radio communication or a buddy or both is made available to everyone who is on traverse.
- Inform all team members of your daily travel routes before setting out into the field.
- If bears have been seen on the property it maybe necessary to team-up, as an extra safety measure.
- If individuals are to traverse alone they must be prepared to carry a gun only if they have been properly trained in its use, if not they must team-up.
- A first aid kit is mandatory when traversing.
- Other items used to deter bear encounters are bells, whistles, bear crackers, pencil flares, and hazing with the use of a helicopter or truck.

10.1.3) Aggressive Bears

Bears, which cause damage to property or are threatening safety, must be destroyed. Alternative measures may be used beforehand such as shooting the bear with a plastic slug or trapping the bear and relocating it.

If a bear has been destroyed on property, an Anglo / HBED representative will contact the local Conservation Officer.

Avoid shooting the bear in camp. Everyone must be accounted for before a gun is used. Extra precaution must be taken due to fuel storage and individual safety. A designated person will be the only person allowed using the company gun. The shot must be taken in clear view and away from tents. Night shooting must be avoided.

ALL ALTERNATIVES MUST BE TAKEN BEFORE A BEAR IS DESTROYED

10.1.4) Housekeeping

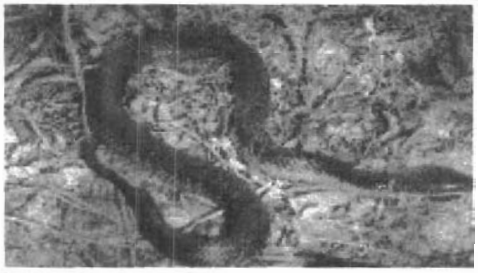
- Good housekeeping will reduce odours.
- Garbage is to be incinerated; this includes rancid fats such as cooking grease and oils from the kitchen.
- Grey water from the kitchen must be disinfected
- Do not bring foods into your sleep tent.
- The camp must be well lit to avoid any confrontations with bears in the dark.
- Not only is it necessary to maintain good housekeeping at the camp it is also mandatory that the diamond drill sites are also kept clean of any garbage accumulation.

10.2 Other Large Mammals

10.2.1) Cougar – The cougar is a large cat native to British Columbia. Rarely do they attack humans but if a cat does attack, face it and try to appear as big and imposing as possible (open your coat). Slowly back away, never run away as this behaviour triggers the cats instinct to chase. If an attack occurs protect your body with anything you may have (i.e. your packsack) and inflict pain in any way possible as these animals have very low pain threshold.

10.2.2) Moose – Moose are commonly seen but are seldom a threat to humans. However, charges from moose, particularly from a cow moose protecting her young in the spring or from an ornery bull moose or a bull in rutting season are not uncommon. If you come in close contact with a moose it is best to back off slowly and detour around it. If an attack occurs avoid injury by climbing a tree.

10.3 REPTILES



10.3.1) Poisonous Snakes - Rattlesnakes are the only poisonous snakes in Canada, and are easily identified by the spade-shaped head, thin neck, thick body, and blunt tail tipped by a rattle. Newborn rattlesnakes may not have the noticeable rattles, but are capable of biting and injecting venom (poison).

Rattlesnakes, preferring dry desert-like areas, and range into the southern interior of British Columbia. They are most likely to be found in dry shady places such as the base of rockslides, sagebrush country, or where there are boulders and other cover.

Rattlesnake bites in Canada are rare and rarely fatal but if bitten can produce severe discomfort and inconvenience. If bitten there will be distinct fang marks, usually two. The casualty will feel immediate sharp burning pain, and see swelling at the site within 5 to 10 minutes, spreading rapidly and numbness and tingling of lips, face and scalp 30 to 60 minutes after the bite. These symptoms become more severe and serious as time progresses on without medical aid.

The main objective as first aid to a snakebite victim is to slow the spread of the venom and get the casualty to medical aid. Keep the patient as quiet as possible and a place a bandage on the limb where the bite occurred. This should be loosened 20 to 30 seconds every 15 minutes. The patient must be transported to medical attention as soon as possible.

If it is necessary to walk, walk slowly and rest frequently. The method of making a small incision along each puncture parallel to the limb and applying suction through mouth, gentle message or suction cup should not be used unless the victim is isolated from medical aid. Commercially available snakebite kits are made for this purpose and are a wise precaution if working in rattlesnake country. Further precautions that can be taken when in these areas would be to wear "high cut" leather work boots as strikes are commonly to the lower part of the legs. Be alert to the presence of snakes behind rocks or shady places and avoid them.

10.3.1) Non-Poisonous Snakes – Snakebites from non-poisonous snakes usually occur only if a snake is handled. They will produce only a row of scratches without and fang marks. Scrub them well with soap and water and treat them like any contaminated wound. An injection of tetanus toxoid should be given.

10.4 Insects

In certain locations and at certain times of the year, some insects may carry life-threatening diseases. When in the field, anywhere, always be prepared to deal with insects and, in certain areas, protect yourself from the diseases they may carry. Always carry appropriate medication or an antidote if you have allergies to insect bites and instruct your coworkers on how to administer such things if you were not able to do it yourself.

from the Health files

Ministry of Health and
Ministry Responsible for Seniors

Number 07
July 1998

Rabies: Early Treatment is Essential

Hear this on tape:
Vancouver: 660-2628
Other: 1-877-660-2628
ID# 1057

What is rabies?

Rabies is a disease caused by a virus. It is transmitted through saliva (spit), usually by an animal bite. This disease affects your nervous system. Symptoms include increasing difficulty in swallowing, excessive drooling, muscle spasm or weakness, and strange behavior. If not treated in time, rabies kills almost all of its victims.

How is it spread?

Most humans get infected after being bitten by an infected animal. Dog bites cause most human rabies in developing countries. If you are travelling and are attacked by any dog, see a doctor. Wild animals, domestic pets and farm animals have all been known to carry the disease. In British Columbia, the only common rabies carrier is the bat. In fact, up to 10 percent of bats from B.C. submitted for testing have been infected with rabies.

Where in B.C. is rabies a problem?

Bats with rabies have been found throughout B.C. You should suspect any bat of being a potential source of rabies.

How common is rabies?

Although B.C. has had no cases of human rabies since 1985, over 100 people a year are treated for ***suspected*** exposure to the virus. All bat bites, scratches and physical exposure are considered dangerous. It is rare in B.C. to catch the rabies virus through bites from other animals, but keep in mind that strange behavior in pets and other animals may mean they have rabies.

Animals with rabies often act very strangely. They may attack humans without reason. Symptoms of rabies in animals include paralysis, especially of the hind limbs and throat muscles. Some mammals may become aggressive. Rabid bats may appear normal except for a gradual weakness and loss of flying ability. Avoid contact with any wild or unfamiliar animal

What is the treatment?

If you are bitten or scratched by an animal that you think may have rabies, you should:

1) wash the wound well with soap and water. This lessens the chance of any infection.
2) seek medical attention right away.

If treated in time, rabies in humans can be prevented.

Two products are used to prevent rabies:

- one dose of rabies immune globulin that helps to neutralize the virus before it becomes established; and
- 5 doses of rabies vaccine given over 28 days that help your immune system to make antibodies against the virus.

BRITISH COLUMBIA

Internet – http://www.hlth.gov.bc.ca

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Ministry of Health and
Ministry Responsible for Seniors

09/2000
CP976739

Think you might have rabies?

It is crucial to begin treatment for suspected rabies as soon as possible. Rabies typically takes from two weeks to a month before symptoms start. If you wait until the symptoms start to appear, it may be too late to begin effective medical treatment. If there is ***any*** chance that you may have been exposed to the rabies virus, contact your doctor or your local public health authority. They will be able to decide if you need rabies treatment.

Note:

If you are bitten by an animal, the head of the animal may be needed for testing. If rabies is suspected, a postmortem examination of the animal's brain can quickly show whether or not it was rabid. If the suspected animal is a pet, medical authorities will typically keep the animal alive, but under observation, for symptoms.

How can you prevent rabies?

Although human rabies is not a common disease, animal rabies occurs in B.C. — and in other provinces and countries — and that it can be fatal when passed on to humans. The following suggestions will help keep you and rabies a safe distance apart:

- If you have a pet, make sure that it is immunized against rabies and that it's rabies immunization is up to date. Otherwise, your pet could be infected by a rabid animal, and your pet could in turn infect you.
- If you ***do*** find a bat, dead or alive, ***don't touch it!*** The rabies virus can be transmitted by the animal's saliva or blood through a cut on your hand or an open sore, even if you're not actually bitten.
- If you find the animal out in the woods or away from populated areas, just leave it where it is.
- If you find it in your yard, or near your home where your children or pets may find it — and you are sure there has been no human contact — you should just pick it up with a shovel and bury it. Again, ***don't touch it!*** Wash your hands well with soap and warm water afterwards.
- If you can't bury it, pick it up with a stick, (wear disposable gloves) and put it in a plastic bag. Put this bag tin a second plastic bag and seal it tight. Then put it in the garbage (unless prohibited by local by-law). After you have disposed of the stick, or disposable gloves, wash your hands well with soap and warm water.
- If you find a bat in the same room as a sleeping person, an unattended child, or a mentally disabled or intoxicated person, contact your doctor or your local health authority immediately because that person may have been bitten by the bat and not know it.
- Bats should not be allowed to live in or near human habitations or other areas frequented by children, such as schools. If your home is inhabited by bats, seek professional bat control advice. Check the Yellow Pages under "Pest Control".
- If your cat brings a dead bat home, check with your vet about rabies shots for your pet and whether your pet should be quarantined. If you find a dead bat, or any other dead wild animal, you may want to contact the local Ministry of Environment Wildlife Branch, as the local biologist may be interested in examining it. ***Remember, don't touch the dead bat or animal!***

What if you were bitten in another country?

Rabies is not well controlled in many other parts of the world. If you are attacked and bitten by ***any*** animal, especially an unprovoked attack, you should get medical advice about rabies treatment, no matter how long ago you were bitten.

If you have any questions, please ask your local public health nurse or your family doctor.

Rabies Vaccine

In September 2000, a young boy died of rabies in Quebec. This was the first case of human rabies in Canada since 1985. The most likely source of the rabies infection in this boy was an unrecognized bat exposure several weeks before the onset of symptoms. Over the past few years the incidence of bat strain rabies across the country has increased, and of the last five human rabies cases in Canada, four followed exposure to bats.

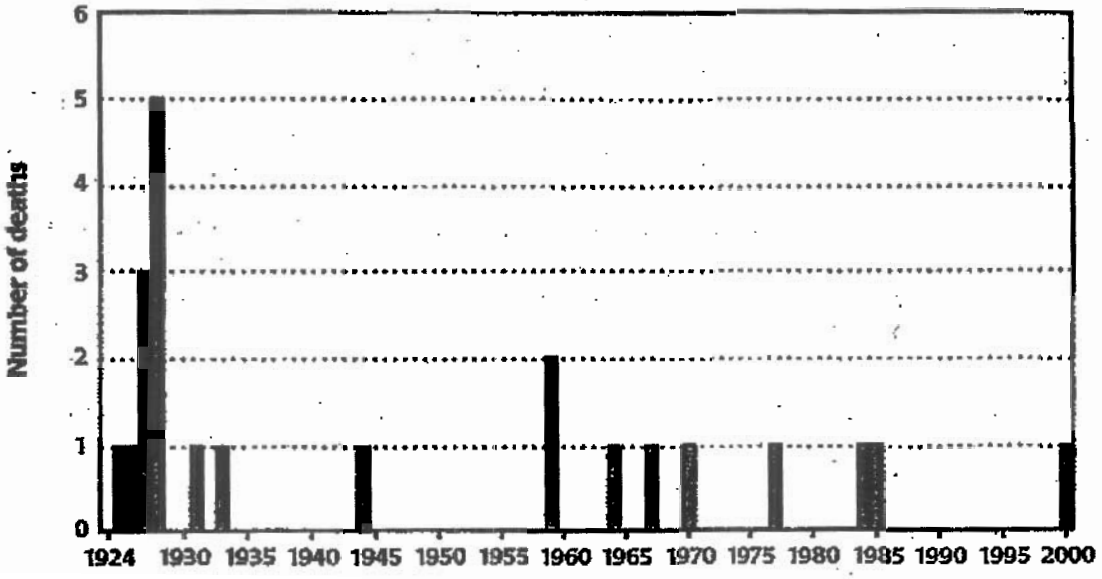
Rabies is a neurotropic viral disease that has two clinical presentations and is almost invariably fatal. After infection, the usual incubation period is 20 to 60 days, although it may vary from several days to years. The more common, agitated (furious) form presents with the classical symptoms of hydrophobia or aerophobia with a rapidly progressing encephalitis and death. The paralytic form of the disease is manifest in progressive flaccid paralysis and has a more protracted course.

Epidemiology

The rabies virus can infect any mammal. In North America, it occurs mainly in certain wild terrestrial carnivore species and is spread by them to domestic livestock and pets. Over the past few years the number of animal rabies cases in Canada has been steadily increasing. There remain regional differences in the prevalence of animal rabies across the country, and the specific species infected in each region vary over time.

Most of the animal rabies reported in Canada is found in Ontario and Manitoba, and the most commonly infected animals across the country are bats, skunks and foxes. Bat rabies is found in all regions except Newfoundland and Labrador, Nunavut and

Rabies – Number of Deaths, Canada, 1924-2000



11. CONTRACTOR SITE SAFETY

11.1) Responsibilities and Rules

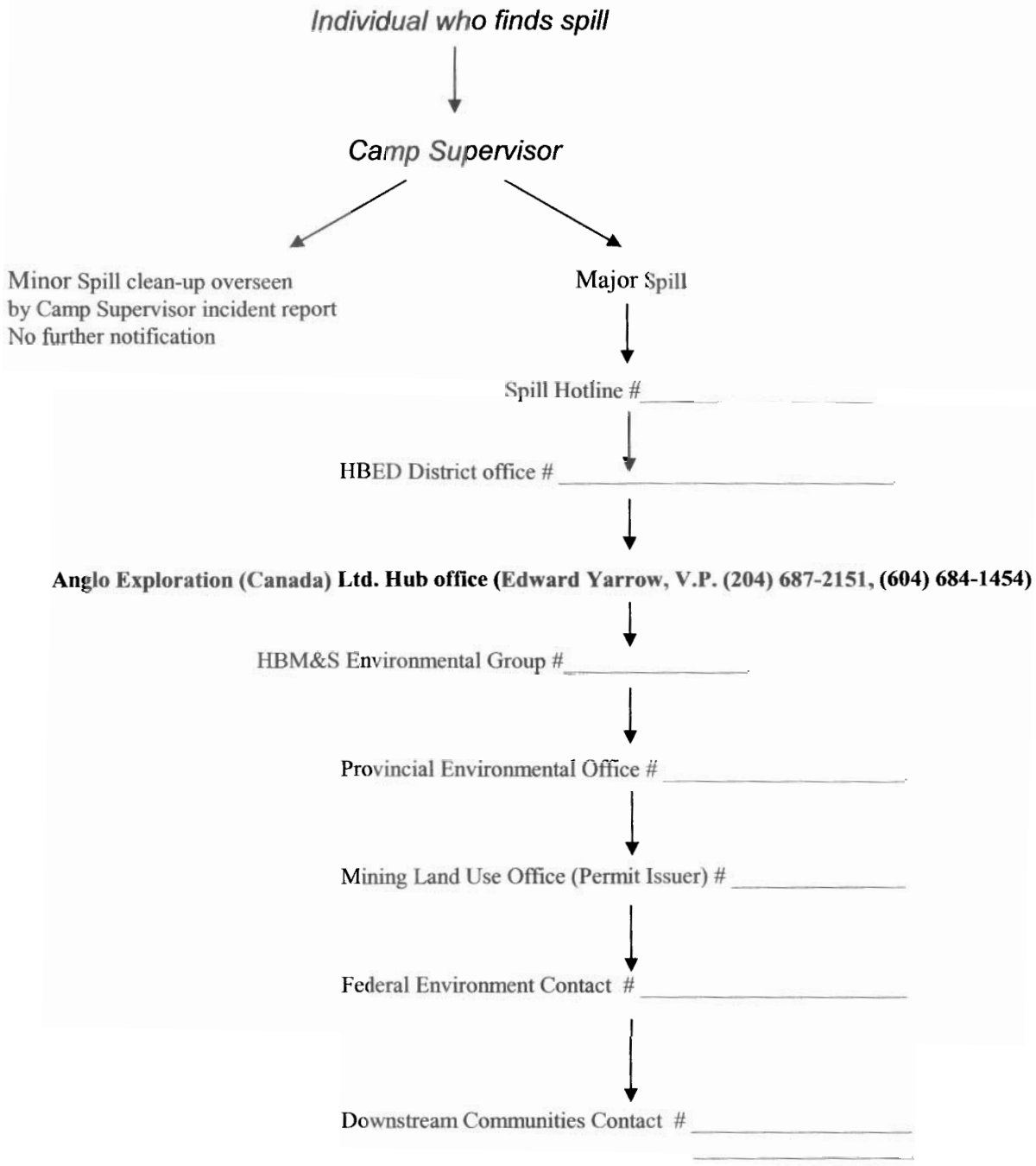
1. Every precaution should be taken to prevent injury to your self and other workers.
2. **All Accidents, injuries and incidents must be reported** to your foreman. Any "close calls" incidents (near misses) are also to be reported to your foreman.
3. Attendance at your crew's weekly Toolbox Safety Meeting is mandatory.
4. Absolutely no materials, tools or equipment is to be removed from the site without the prior written consent of Anglo / HBED.
5. Hard Hats, Safety glasses and Steel toed work boots (all in good condition) meeting CSA requirements must be worn at all times when at the drill site.
6. Appropriate work attire (minimum short sleeved shirts) must be worn at all times. Special clothing may be needed.
7. When required, additional safety equipment and personal protective equipment must be used for each job you are asked to complete. These include; Gloves; Hearing Protection; Respiratory Protection. Common dust masks are not allowed.
8. It is essential that you maintain good communications with supervision, fellow workers and with workers from other contractors. If you use a radio, keep conversations short and to the point. Be on the look out for posted signs and obey them. Signs in construction change constantly - be aware!
9. House keeping: Must be done daily and kept to a high standard. Materials in construction areas must be kept neat and orderly. Scrap materials must not be allowed to accumulate. Garbage must be sorted into; wood, & burnable waste; Plastic; Steel & Metal; and Food waste, then delivered to the appropriate dumpsite.
10. Machinery Guards: All machines & tools or equipment that are sold or come equipped with a guard shall not have the guard removed or modified.
11. Welding or burning: When welding or burning it is your responsibility to prevent injuries/damage to people or equipment below. Ensure that plywood and/or fire blankets are immediately below and a fire watch or rope off area is below the work. When there is a danger of an arc flash to other workers a welding screen must be used. Ground cables must attach to the work, not just the building or structure. Flashback arrestors must be used at the bottles when cutting.
12. Fall Protection: All workers are to be tied off using a five point harness and shock absorbing lifeline while working 10' above grade when other forms of fall protection are not provided. They must also be worn below 10' where there is a danger in the place where the worker may fall.
13. Ladders: Must be securely tied off or held at the bottom.
14. Scaffolds: Must be erected properly in accordance with established practices. Ensure that this includes; Lock pins in place; Scaffold is level and stable; above 10' the scaffold is secured; etc.

15. Platforms: Must be at least 18" wide and be supported at least at 7' intervals. Full guarding/railing protection is required above 5'. Planking must be able to take 3 times the load applied.
16. Back Strain: To avoid strain when lifting, workers should keep the back as upright as possible. Use leg muscles for lifting instead of back or stomach muscles. Be sure there are enough individuals.
17. Lifting Device: When working around cranes or other lifting equipment, ensure that proper signals are used. Operators must carry appropriate certification with them. Tag lines are to be used when hoisting or lowering materials. No worker will enter under a load until the bottom of the load reaches shoulder level.
18. Heavy Equipment: When working around heavy equipment always make eye contact with the operator and make sure that he knows you are in the area. When ever possible, work facing the heavy equipment.
19. Hand Tools: Under no circumstances shall workers use inadequate tools or equipment. Defective tools and equipment must be tagged and removed from service immediately.
20. Power Tools: All electrical power tools used in wet or outdoor locations must use Ground Fault Circuit Interrupters (GFCI's). Air powered tools often require hearing protection. All operators of power activated tools must be licensed.
21. Post No Hunting signs on access routes to camp and work site, during hunting season.

In addition to the above noted rules, all the applicable rules and regulations, and Anglo / HBED policy must be followed. Rules and regulations will be enforced.

Hunting by any Anglo / HBED employee's or contractor's while working on a company property can warrant immediate dismissal.

Spill Reporting Flow Chart



Environmental Incident Report

1. LOCATION OF SPILL_____

2. SOURCE OF SPILL_____

3. MATERIAL AND ESTIMATED QUANTITY_____

4. TIME_____DATE_____DURATION

5. CAUSE OF SPILL

6. MEDIUM AFFECTED SOIL / AIR / WATER
7. AREA AFFECTED_____
8. SPILL REPORTED BY_____
9. SPILL SITE COORDINATOR _____
10. HBED PERSONNEL NOTIFIED (NAME/DATE) _____

    (NAME/DATE)_____

    (NAME/DATE) _____

11. GOVERNMENT AGENT NOTIFIED (NAME/DATE)_____

    (NAME/DATE) _____

    (NAME/DATE) _____

12. ACTION TAKEN (CONTAINMENT/CLEANUP METHOD)

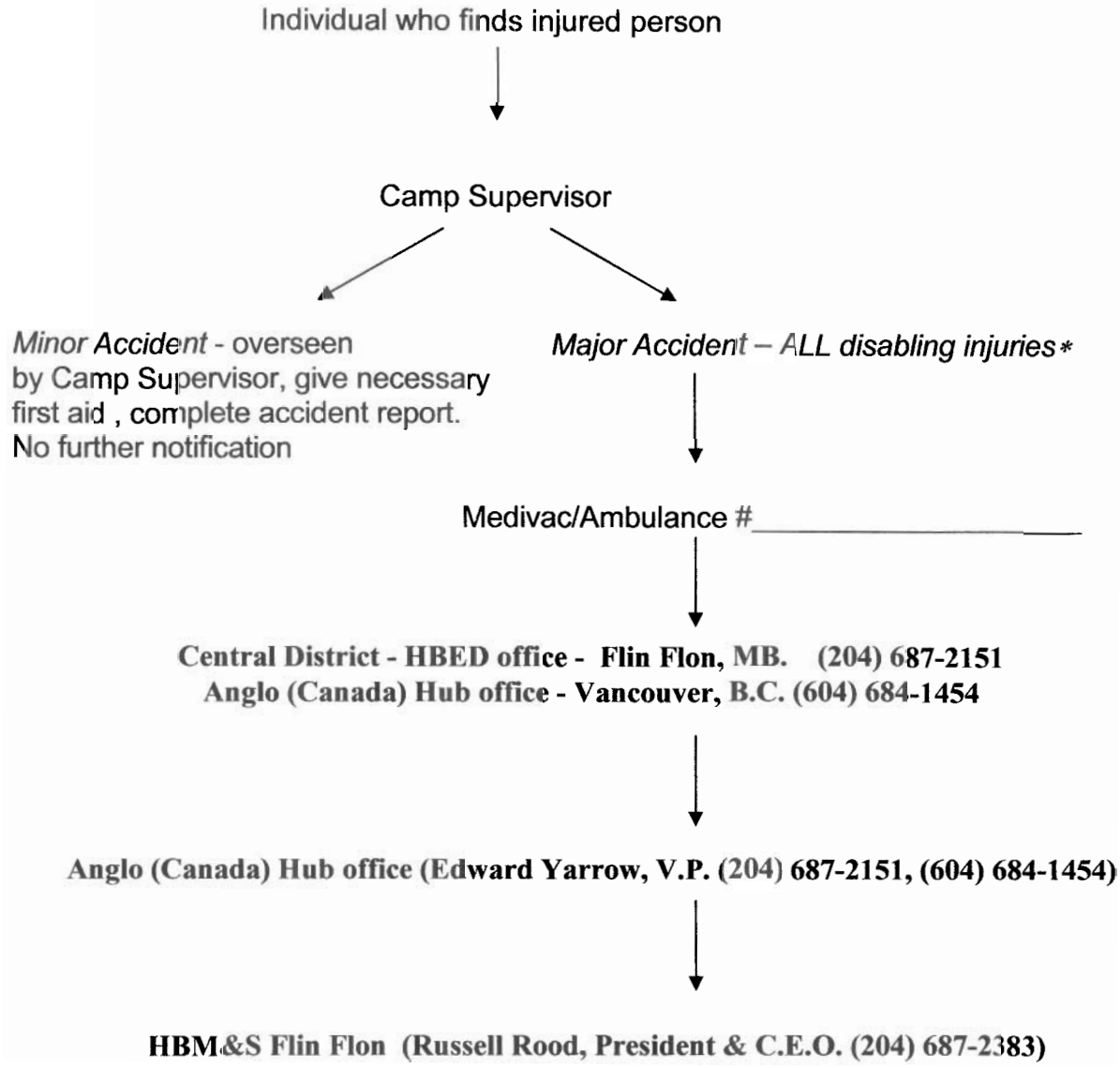
_____

_____

13. INCIDENT UNDER CONTROL YES / NO
14. REPORT COMPLETED BY: _____DATE _____

_____

Accident Reporting Flow Chart



*A disabling injury is one that does not allow an employee to return to his regular duties the day after an accident (this includes broken limbs, serious burns, Anglo / HBED or contractor employee's lost in the field, death).

ANGLO AMERICAN

Anglo American Exploration (Canada) / HBED Field Form for Workers

The purpose of this form is threefold:

- **Ensure all people working in bush camps on Anglo and or HBED projects have read and understood the company Health, Safety and Environmental Orientation Manual (SHE).**
- **Identify any allergic reactions to food, so the cook can make adjustments to the camp menu.**
- **Identify any medical conditions or illnesses that could assist first aid givers in the evident of an accident or illness.**

Note: This information will be kept confidential, except for information for the cook and information for the medical caregivers if necessary. Completing form is voluntary.

Part 1: Identification

Name:_____ **Phone:**_____

Address:_____

Contact:_____ **Phone:**_____

Drivers Licence #:
Certificates (First Aid, FAC, Staking etc.):

Part 2: Any Allergies (Identify any allergies: food, insect bites, or drugs):

_____

_____

_____

_____

Part 3: Medical History (Medical conditions, doctor, medical #, or other):
Doctor_____ **Medical #**_____
Blood type_____ **Medications:**_____
Medical conditions:_____

_____

_____

Part 4: I acknowledge that I have read the HBED SHE Orientation Manual

_____

Signature **Date**

ANGLO AMERICAN

ENVIRONMENTAL IMPACT SURVEY FOR DIAMOND DRILL HOLES
HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LTD.

HOLE NUMBER :_____ PROPERTY :
CLAIM(S) :_____ PROJECT # :
LOCATION :_____ PROVINCE :_____UTM
EASTING :_____ UTM NORTHING :_____NTS
NUMBER :_____ NTS SHEET NAME :
Drill supervised by :
Drill site checked by :_____ Date:

Drill site checked **before** or **after** the drill was removed from the site.
*If the site was **not** checked after the drill was removed provide a memo stating why.*

Drilling Company :_____ Drill Foreman :
Please check all that apply to the drill hole and elaborate where necessary.

1. The drill site is located on :
   - lake
   - swamp
   - burn
   - other
   - heavy timbered land
   - clear cut

2. The drill was moved to the site by:
   - skidder
   - buggy
   - other
   - nodwell
   - helicopter

3. Describe how access was gained to the drill site (eg. highways, logging roads, bush roads, aircraft, etc.). *Provide a map with the drill site location and route taken to the drill site beyond highways and provincial roads.*

_____
_____
_____

ANGLO AMERICAN

ENVIRONMENTAL IMPACT SURVEY FOR DIAMOND DRILL HOLES
HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LTD.

4. Were new roads made to the drill site? Yes No

If yes, did these roads require special permits? Yes No

How many kilometres of roads were made? _____

Were streams and/or lakes crossed?

Were bridges or culverts required? Yes No

Were proper stream crossing permits obtained? Yes No

Briefly describe how the roads were made, what bodies of water were crossed, the condition of the terrain the roads were built through, and whether further cleanup is required.

5. The drill site is approximately _____ metres by _____ metres and was cleared using

6. Have the following been removed from the drill site?

	Yes	No	Does not apply
fuel drums			
garbage			
drill equipment			
timbers on lake			
spilled fuel/ oil			

7. Has the drill site been photographed? Yes No *If yes, attach photo(s).*

8. Was the hole making water? Yes No

Was the hole plugged and cemented? Yes No

Has the casing been removed? Yes No

Briefly describe the cementing procedure and whether further cleanup is required.

ANGLO AMERICAN

ENVIRONMENTAL IMPACT SURVEY FOR DIAMOND DRILL HOLES
HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LTD.

9. Are there other drill sites on the claim not covered by this or any other Anglo/HBED environmental check list?

Yes No Unsure

If yes or unsure, comment on condition of these drill hole sites on an attached memo.

10. Are there any old mines or workings on this claim including tailings and/or abandoned buildings?

Yes No Unsure

If yes, describe the condition of these workings and any cleanup action which may be required in the future.

11. Check off any of the following that are located on the claim, or located within 1 km of the claim boundaries that may be affected by noise, dust, effluent, etc :

houses
cottages
farms
businesses
water wells / reservoirs
septic fields
campsites
recreation areas
none of the above

12. Are there known surficial mineral occurrences on this site?

Yes No Unsure

If yes, check off all that apply:

sulfides
arsenides
chlorides
radioactive minerals

13. Check off any of the following that are known to be within 2 km of the drill site

Indian reserve
native land claims
archaeological sites
virgin forest /wilderness area
parks / trails
wildlife refuge
other sites of historic / scientific / environmental interest

ANGLO AMERICAN

ENVIRONMENTAL IMPACT SURVEY FOR DIAMOND DRILL HOLES
HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LTD.

14. Was the drill site checked by a government agency (e.g. conservation officer)?

Yes No Unsure

If yes, provide the persons name and department, and elaborate on any recommendations as necessary. Attach a copy of the inspection report if available.

For additional comments, please attach a memo.

Attachments photos maps memos other _____

Project Geologist : _____ Date : _____
Signature Required

Drill foreman : _____ Date: _____
Signature Required

(Insert Photos Here)

ANGLO AMERICAN

Anglo American Exploration (Canada) & Hudson Bay Exploration and Development Co., Limited

Surface Diamond Drilling Safety Checklist

Date: Foreman:

Drill Type: Crew:

Contract/Job: Inspected By:

Is the contractor in compliance with the following standards?

	YES	NO
1. Travel way to drill site is clear and safe		
2. Adequate entrance way into drill i.e. clear of debris, suitable steps		
3. Emergency door is free from obstacles		
4. Drill well anchored. Mast guy wires and stiff leg installed properly		
5. Safety chains properly installed		
6. Helpers platform in good order, with guard rail and safety lanyard		
7. Drill floor free from ice and grease. Work area free from obstacles.		
8. Tools cleaned, good working order (guards in place) & stored properly.		
9. Good general Housekeeping		
10. Fuel cache/storage-minimum distance of 4 metres from drill shack (not including drill fuel).		
11. Stove properly installed-sheet metal on back, roof and at stovepipe exist		
12. Propane properly stored upright. Regulators in place on torches & coil stove		
13. Wire line, hoisting cables *appear* to be in good working order (visual inspection)		
14. Protective sheaths on high pressure hydraulic hoses		
15. Water supply pump and coil installed properly		
16. Electrical cables *appear* in good condition (visual inspection). Light bulb protectors installed		
17. Emergency Procedures posted		
18. Accident Procedures posted		
19. Emergency phone numbers posted		
20. Communication system		
21. WHMIS book, material requiring WHMIS labels		
22. First Aid Kit (complete)		
23. At least one crew member holds a valid first aid certificate		
24. Personal Protective Equipment in use-Safety Signs Posted, re: Hard Hat, safety glasses, steel toe boots, hearing protection and gloves (CSA Approved)		
25. Fire Fighting Equipment present–Placards posted re: fire extinguisher in drill Shack, at water supply pump and on mobile equipment. Fire season equipment Present (pack pumps/shovels)		
26. Environmental supplies present i.e. spill kit with absorbent sheets, booms		
27. Roadways/road construction was kept to a minimum		
28. Site was clean- garbage, surface debris picked up		

* Note: Placards / signs must be posted re: Safety Equipment required at site and all fire extinguisher locations

Contractors to report ALL spills and complete incident report covering the following items:

1. Time of incident.
2. The Quantity of spill.
3. How the spill occurred and how to avoid this occurring in the future.
4. What actions were taken for the clean up.

HBED Representative

Contractor Representative

AAplc draft policy on Emergency and Crisis Reporting

ALL Managers must be aware of the attached reporting procedure required by AAplc.

E. Yarrow (VP Exploration) is to be informed of any potential LTA accident to an employee or contractor and any significant environmental / community incident.

This document is a draft of Oct 2002 and according to the SHE policy unit - no further changes are expected. [It will appear as an appendix to the updated SHE Management Guidelines when published].

Policy on Emergency and Crisis Reporting

Emergencies and crises are broadly defined as follows:

- Fatal accidents.
- Major environmental incidents (hazardous spills, tailings dam problems, gas leaks, etc). (See also SHE Database definition)
- Material events (including legal proceedings, and major near-miss events) likely to lead to adverse national publicity.

IN THE EVENT OF SUCH AN EMERGENCY OR CRISIS:

Company management must alert their responsible Executive Director by phone, fax or e-mail as promptly as possible. Similar messages should be communicated to W A Nairn, M W Spicer, A.Dunn, N K von Schirnding, J D G Groom and C Lotter, as well as the Secretary to ExCo, G F Young (see contact details below).

Electronic reporting of fatal accidents:

In the case of a fatality, Company management should alert the responsible Executive Director as promptly as possible.

In addition, the SHE database has a facility for prompt and consistent reporting of fatal accidents. This should be used to generate automatic notices to those listed above and responsible Executives as required. This facility comprises a standard template that is to be completed to provide the necessary minimum information regarding the fatality. Use of this facility will also result in the automatic capture of fatality statistics in the SHE database.

In the case where this facility cannot be accessed, the following procedure must be used.

In the case of major environmental incidents and other material events (and for "manual" fatality reporting):

Company management must alert the responsible Executive Director by phone, fax or e-mail as promptly as possible. Similar messages should be communicated to those listed above. This should be followed within 24 hours by a short report using the template on page 20.

This report will cover:

- Name of operation or mine.
- Date of incident.
- In the case of a fatality, the name and occupation of the deceased, and personal particulars, i.e. age, family status, etc. as well as whether contractor, employee or Third Party.
- Direct cause of the incident, if known. In the cases of a fatality report, use the categories listed.
- Facts of the incident, including a diagram if necessary.
- Other injuries, if any.
- What steps have been taken to address the incident and to prevent a recurrence, including brief details of containment and clean-up, or other appropriate actions to manage the situation.
- What lessons have been learnt?
- Has a press statement been issued? If so, it should be attached.

SHE DATABASE DEFINITIONS

The definition used in the SHE database for major environmental incidents and other material events, reads as follows. It is provided as a guideline to operations in forming a judgement about the severity of an incident.

Level 3 Incidents

Incidents that resulted in:

- a significant impact on the physical or biological environment (air, land, water or habitats) with extensive or long-term impairment of ecosystem function or surface/ground water resource; AND/OR
- an impact to unique or protected species or habitats; AND/OR
- an inconvenience/disturbance/disruption/annoyance (including odour, dust, noise, traffic problem, loss of water supply) of long duration or with long-term effect on the community; AND/OR
- a release of material (gas, liquid, solid) or energy which causes chronic illness, permanent disabling injury, fatality or extensive property damage to the public; AND/OR
- irreparable damage to highly valued structures or sacred locations; AND/OR
- public or national/ international media outcry AND/OR
- instances where stack tests have been outside the permitted limit, or water samples taken by or for the Regulator, or to check legal compliance, have been outside the permitted limits and resulted in prosecution.

- An incident is an unplanned occurrence, or event.

ANGLO AMERICAN

12) EMERGENCY TELEPHONE NUMBERS

13. ***NOTE:*** **Contact phone numbers need to be customized for each job and location.**

Medivac Service _____ ***Ambulance*** _____
AirTransportation _____ ***Police*** _____
Regional Hospital _____ ***Search and Rescue*** _____

Location

Location Name _____ **Field/Project Manager** _____
Latitude _____ **Longitude** _____ **Satellite Phone #** _____
Northing _____ **Easting** _____ **Mobile Phone #** _____
Directions _____

Environment, Health and Safety Contacts:

Spill Reporting (24hr. Emerg. #) _____ Environmental Officer _____
Water Resources Officer _____ Conservation Officer _____
Mine Inspector _____ ***Health Services (Potable Water)*** _____

HBED / ANGLO (CANADA) CONTACT NUMBERS:

Central District - Flin Flon, MB	*Office*	*Home*	*E-Mail*
V.P EXPLORATION: E. Yarrow	*(204)687-2031*	*(604)535-4833*	*eyarrow@angloamerican.ca*
CHIEF EXPL. GEOLOGIST : T. Lewis	*(204)687-2292*	*(204)687-2493*	*tlewis@hbms.ca*
HEALTH, SAFETY & ENVIR. : D. Hancock	*(204)687-2588*	*(204)687-3966*	*dhancock@hbms.ca*
RECEPTION: W. DONALDSON	**(204) 687-2151**		**wdonaldson@hbms.ca**

HBED CELL PHONE (24 hr. Emergency #) ***(204) 687-0660***

HBM&S (24 hr. Emergency #) ***(204) 687-2291***

Anglo (Canada) Hub Office - Vancouver, BC			
V.P. EXPLORATION: E. Yarrow	*(604)684-1454*	*(604)535-4833*	*eyarrow@angloamerican.ca*
NORTH AMERICAN MANAGER: D. Cass	*(604)684-1454*	*(604)736-8883*	*dcass@angloamerican.ca*
CHIEF ADMIN. GEOLOGIST : E. Brown	*(604)684-1454*	*(604)*	*ebrown@angloamerican.ca*
RECEPTION: L. New	**(604) 684-1454**		***hbed@angloamerican***

LOCAL COMMUNITIES CONTACTS NUMBERS

FIRST NATION CHIEF AND COUNCIL _____
MUNICPAL CONTACT _____