



Shell Canada Energy

Camp Farewell

Environmental, Health and Safety Program

Rev. 1.0

September 2012

IEG Consultants Ltd.



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1 INTRODUCTION

1.1 Background

Camp Farewell (the site) has been in existence and used intermittently by Shell Canada Energy (Shell) since 1969. Camp Farewell is located on the Mackenzie River within the Inuvialuit Settlement Region (ISR) on the northeast bank of Middle Channel near Harry Channel in the Kendall Island Bird Sanctuary (KIBS), NT. IEG Consultants Ltd. (IEG) was retained by Shell to prepare this Environmental, Health and Safety Plan.

1.2 Equipment and Supplies

The following equipment and supplies are typically required at the site:

- nitrile gloves
- Nomex coveralls
- safety glasses
- steel-toed boots
- hard hat
- satellite phone
- bug net/spray

1.3 Worksite Definition

Under the OH&S legislation, a "work site" is defined as, "a location where a worker is, or is likely to be, engaged in any occupation and includes any vehicle or mobile equipment used by a worker in an occupation". Our interpretation of this definition is that the work site includes:

- All drill pads and all roads/trails leading to/from the drill pads, and,
- The site office area.

The worksite is approximately 125 km northwest of Inuvik and approximately 135 km west of Tuktoyaktuk.

The location coordinates are: Latitude 69° 12' 30.0" N, Longitude 135° 06' 04.4" W (UTM 496167.23W 7677487.45N NAD 27)

1.4 Scope of EH&S Plan

The plan described in the following sections is comprised of the following components:

- Project personnel names, affiliations and responsibilities;
- Site Safety Plan;
- Emergency Response plan, including:
 - Contact information for local and regional emergency services;
 - A site map issued to all personnel showing Emergency muster locations;
 - On-site First Aiders;
- Environmental Management plan;
- Hazard Assessment program, including Field Level Risk Assessments; and,
- Personal Protective Equipment requirements.

The safety information in this document does not take precedence over OH&S Regulations. It is recommended that all field personnel should be familiar with the OH&S Act and Regulations.

2 ROLES AND RESPONSIBILITIES

The IEG or Shell Project Manager will be responsible for the day-to-day accountability for the Camp Farewell project. An IEG or Shell representative will carry out the proposed work and be present for field programs, and will be responsible for the day-to-day execution of the EH&S plan, including:

- Ensure correct implementation of the Plan;
- Ensure all Safe Work Practices are followed;
- Identify any hazards and ensure corrective actions are taken prior to commencing any work;
- Be aware of the Emergency Response Plan;
- Report all incidents and assist in subsequent investigations; and,
- Record and document all EH&S-related activities.

The Project Manager and the Safety Coordinator may, at their discretion and with mutual agreement, temporarily amend or allow dispensation from the procedures described herein.

However, any temporary amendment or dispensation must be:

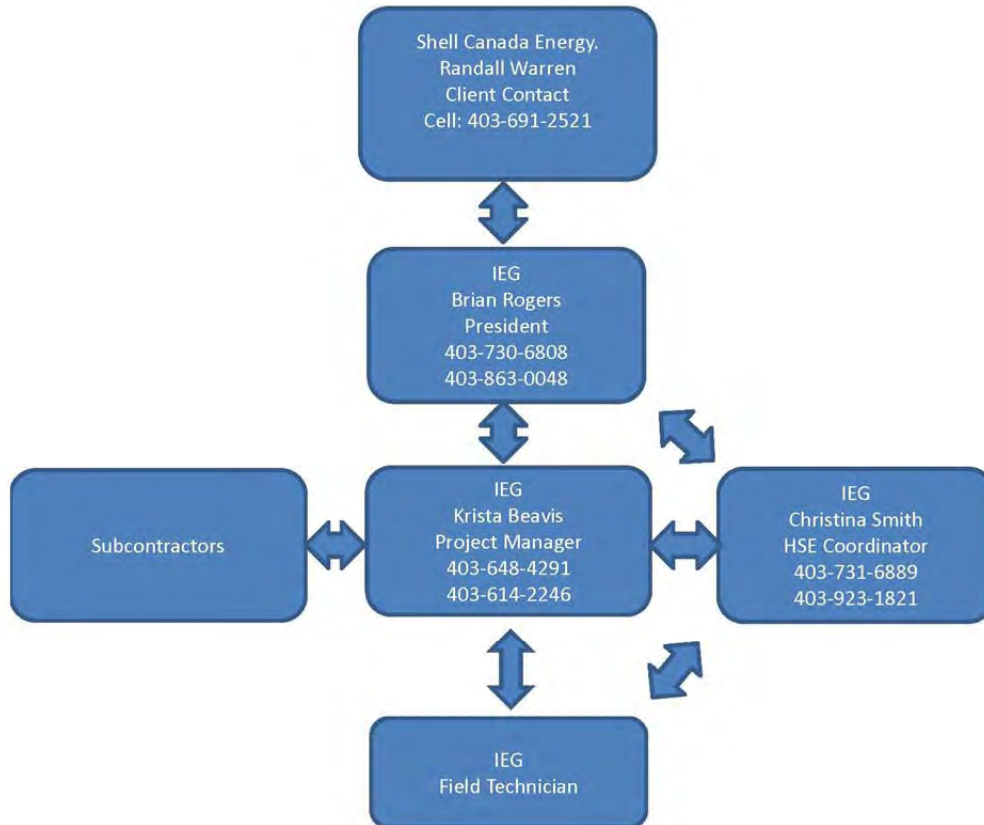
- Without any compromise to the safety of personnel and equipment;
- Properly documented using a Field Level Risk Assessment; and,
- With the approval of the Project Manager.

The field supervisor and IEG or Shell representative is the first point of contact from the field for EH&S issues. The IEG and Shell personnel are listed in Table 1. The organizational chart, showing the lines of communication for the project, is included as Figure 1.

Table 1 **List of Personnel**

Role	Name	Telephone Number
Shell Project Manager	Randall Warren	Cell: 403-691-2521
IEG Project Manager	Krista Beavis	Office: 403-648-4291 Cell: 403-614-2246
IEG Health and Safety Contact	Christina Smith	Office: 403-731-6889 Cell: 403-923-1821
IEG Field Technician	TBD	TBD

Figure 1 Project Personnel Organization Chart



2.1 Site Safety

IEG, along with Shell, will share responsibility for safety on site. The IEG HSE Coordinator is responsible for providing the project team with support relating to health and safety procedures, issues and concerns which may arise during the field program. All contractors are responsible for the safety and conduct of their personnel; the safe operation and proper function of their equipment, and for carrying all designated safety equipment.

Contractors must have their own Company Health and Safety Program in place. A digital copy of the contractor's complete Health and Safety Manual is to be presented to IEG management and made available at the worksite for reference and review. The contractor must ensure that:

- Safe operating procedures are being followed;
- Operating personnel are fully trained and competent in operating the equipment;
- Equipment is in good repair;
- Equipment is maintained as per manufacturer's instructions; and
- All equipment will be inspected prior to the start of work each day.

It is good practice for the IEG field personnel and the Contractor's personnel to meet regularly to review and discuss safety procedures and to remind all workers of the importance of safety.

3 GENERAL HEALTH AND SAFETY

3.1 Safety Planning

Planning of operational safety programs is an integral part of planning fieldwork. Elements of safety planning include:

- Safety orientation for field staff;
- Safety and first aid equipment;
- Jobsite inspections and safety reviews;
- Hazard identification and controls;
- Communication;
- Daily Tool box meetings;
- Managing the interaction of the field program personnel with others on the site; and,
- Written Field Level Risk Assessments (FLRA) must be in place prior to initiating any unusual or extended field programs.

Any EHS planning by the IEG field staff in no way relieves the contractor(s) and/or client of any responsibility for their own safety programs, and the contractor's understanding of this should be confirmed by IEG's representative on-site.

3.2 Work Procedures

All fieldwork will be carried out in accordance with relevant safe work practices indicated by the scope of work and through hazard assessments. Subcontractors will ensure that the Safe Work Practices specific to their area of expertise and equipment used is followed and available on-site. A copy of IEG Safe Work Practices has been included in Appendix II.

3.3 Site Access Requirements

These requirements may change daily as site conditions dictate; please contact the Project Manager or the client contact to verify current requirements:

- **Pre-Access Drug and Alcohol testing.** All those who are driving and/or working on the site must have a Drug and Alcohol (D&A) test *prior* to their arrival.
- **Training required**

- ◆ WHMIS;
- ◆ Ground Disturbance;
- ◆ Standard First Aid.

3.4 Company / Site Rules

IEG require that all persons working on-site adhere to the following Company Rules.

- Wear PPE specific to the task and hazards, as a minimum; life jacket, hard hats, fire resistant coveralls, protective eyewear (goggles) and approved safety boots, must be worn at all times.
- Protective clothing from bugs and adverse weather conditions.
- Report to your supervisor, all unsafe acts and conditions.
- Report all incidents and near misses to the IEG representative and Project Manager immediately.
- Perform all work in accordance with OH&S regulations, safe work practices and your supervisor's direction.
- Maintain good housekeeping in your work area at all times.
- Operate all vehicles and mobile equipment in accordance with site rules and highway regulations.
- Inspect all equipment prior to each use and do not use equipment which is broken.
- Fix any broken or leaking parts immediately.
- The following are prohibited on all company/client property and job-sites:
 - ◆ Possession or consumption of alcohol or illegal drugs;
 - ◆ Possession of weapons unless by an authorized wildlife monitor;
 - ◆ Fighting, horseplay, practical jokes;
 - ◆ Theft and vandalism;
 - ◆ Damaging, disabling or interfering with safety, firefighting or first aid equipment or personnel;
 - ◆ Arriving for work or remaining at work when ability to perform the job safely is impaired.

3.5 Drugs and Alcohol

The following outlines IEG's policy regarding situations which may require a worker to undergo drug and alcohol testing. It is prohibited for any worker to be under the influence, use and or be in possession of any drugs and/or alcohol while on IEG and/or client sites. If it is suspected that a worker on-site is under the influence of drugs and/or alcohol the site supervisor must be notified immediately and the worker involved will be required to leave until an investigation has been conducted.

3.5.1 Possession

A worker must not have any alcohol or drugs in his or her possession on the work premises or consume alcohol or drugs whilst on the premises or during working activities. Any breach of this policy will be regarded as a serious breach of safety by IEG and will involve disciplinary action, which may include being permanently removed from the worksite and possible termination of work contract.

3.5.2 Testing for Drugs and Alcohol

IEG reserves the right to conduct "reasonable cause" drug and alcohol testing. If a worker is observed while working to appear as being under the influence of drugs and/or alcohol that worker would then be removed from work until the completed investigation and testing has been performed and the results are received. Testing of any worker involved in an incident or 'near miss' will also occur as directed by IEG.

Any worker directed by IEG to undertake drug and alcohol test must comply with the direction. Any refusal to comply with a direction to immediately undertake testing will be treated as a breach of this policy.

Reasonable cause includes instances where:

- Drugs and/or alcohol are found in the possession of the worker at the work-site;
- Physical indications are observed of an impairment of the worker; or
- Reasonable grounds exist to suspect the involvement of alcohol or drugs in an incident.

3.5.3 Use of Prescription Drugs

Some over the counter and prescription drugs containing analgesics such as codeine, antidepressants, and sedative antihistamines can impact on a worker's fitness for work.

Workers are required to consult with their medical practitioner or pharmacist about possible side effects of prescription drugs and the impact on their ability to work safely prior to use.

Where there are side effects of prescription medication that may affect a worker's fitness for work, the worker is required to advise their immediate supervisor who will assess the worker's fitness for work and take any necessary action to assess and minimize any identified risk.

3.5.4 Breach

Where IEG has a reasonable suspicion that a worker may be in breach of this policy, the worker will not be permitted to commence or resume work until they have undergone testing and the test indicates that they are not under the influence of drugs and/or alcohol.

3.5.5 Positive Test Result

In the event that the test results are positive, the following may occur:

- The worker would be contacted by the testing provider to discuss if there is anything that may cause a false positive;
- The worker or IEG may ask for another test to be performed in which case the worker would undergo a subsequent test at their own expense to establish their fitness prior to returning to work; and
- All details and documentation related to the incident and circumstances will be maintained in IEG's confidential health and safety files.

3.5.6 Negative Test Result

In the event that a negative test result is returned:

- Worker's will not lose pay for any working time lost as a result of undergoing testing; and
- All details and documentation regarding the incident will be destroyed.

3.5.7 Vexatious Reports

Any person who falsely reports another worker for breaching this policy, without reasonable grounds or for personal gain, may also be subject to disciplinary action.

3.5.8 Confidentiality

IEG is committed to ensuring confidentiality and privacy of workers personal information. Accordingly access to information that is retained regarding breaches of this policy will be restricted to the Health and Safety Department of IEG and the workers Manager only and individual test results is strictly controlled and stored by the testing facility which may only be accessed by the designated administrator (i.e., Health and Safety Coordinator).

Project managers are to inform all affected workers of any testing program and its specific requirements before the worker is included in the project team.

3.5.9 Disciplinary Action

Poor work practices cause or contribute to incidents. While IEG will routinely observe worker H&S performance; there will be occasions that policies and procedures are not adhered to. In these cases, disciplinary action shall be taken.

If a person intentional fails to observe safety rules and safe working procedures that may cause harm to the worker or others at the worksite, disciplinary action shall be taken to ensure corrective action. Actions that warrant discipline include:

- Breach of applicable Health and Safety Legislation;
- Breach of IEG health and safety policies, safe work procedures, practices and instructions;
- Willful and reckless disobedience of or noncompliance with safe working practices thereby placing yourself or others at risk or in danger; and
- Noncompliance with instructions to wear appropriate PPE which has been provided.

3.5.10 Procedures

The following procedures are a guide to an appropriate course of action following breaches of safety. However, each breach normally must receive separate consideration:

- For a minor breach, an informal talk should be given by the supervisor outlining the breach, the corrective action and why it should be adopted by the worker, with note being taken that instruction has been given.
- For a more serious breach, where the risk of injury to the worker or others is likely, an immediate reprimand should be given by the supervisor. The worker should be made aware of the reasons for the breach and of the corrective action which is to be taken.
- An 'Incident Report' form must be completed by the Supervisor and sent to H&S for follow-up within 24 hours. These forms are available in Appendix II.
- The worker may be removed from that particular duty for their own protection, with all the relevant facts and information being recorded.
- If the worker is required to perform these duties as part of their job statement and continues to ignore safe working rules and/or procedures, the worker will be removed from the site.
- The matter will then be referred to the workers Manager for further action. It should be ensured that all relevant information and facts are included in the report.

3.6 Safety Orientation & Training

All individuals requiring access or working on the site must review and understand the Environmental, Health and Safety Plan for the program. This plan will be onsite and available to the project team prior to the beginning of work activities.

Each person will be briefed by the Project Manager or IEG representative in a field program kick-off meeting at the outset of work. The briefing must stress proper safety attitudes and the importance of safety. The Project Manager must ensure that all field staff is familiar with:

- The site activities of all other contractors;
- Emergency reporting procedures and telephone numbers;
- Location of first aid supplies/first aid attendant;
- Use and maintenance of Personal Protective Equipment;
- Critical safety aspects and safe work procedures on the site;
- Workplace responsibilities;

- Specific boat safety procedures, where applicable; and,
- Location of emergency meeting points.

Prior to engaging in any fieldwork, all project personnel will have received training in Standard First Aid.

3.7 Safety Meetings

Toolbox or tailgate meetings will be held daily at the start of each shift. In addition Field Level Risk Assessment (FLRA) should be done at the beginning of every new task or when site conditions change.

3.8 Site Safety Inspections

To ensure that all equipment remains in good condition with no defects that may compromise the safety of people, property or the environment, a planned inspection process will be followed and documented using a standard checklist. A Safety Inspection Checklist form is provided in Appendix I.

In addition, the contractor's EHS Plan is to include a standard Safety Inspection process that is documented with a copy presented to the Project Manager for review and archiving. At all times, any safety concerns discovered are to be reported immediately to the Project Manager.

3.9 Contractor Equipment Inspection

To ensure that all contractor equipment arriving on the worksite is in safe and suitable working order, an inspection will be carried out prior to their use on the project. A checklist to document this process is provided in Appendix I.

In addition, the contractor's Company Health and Safety Manual shall include an Equipment Maintenance Program that is documented with a copy presented to the Project Coordinator for review and archiving. At all times, any equipment concerns discovered are to be reported immediately to the Project Manager.

3.10 Incident Reporting

In the event of an incident all work must stop and be reassessed to determine if it is safe to continue. Once it has been deemed safe to continue a safety meeting will be held prior to the restart of any work activities.

Every incident and Near Miss is to be reported immediately to the Project Manager. The Project Manager is responsible for contacting the client contact and IEG's HSE Coordinator as soon as possible after being notified. An incident report will be submitted within 24 hours of the incident. The HSE Coordinator will lead the incident investigation. The form for Incident Reporting is provided in Appendix I

In certain instances, incidents must be reported to appropriate government agencies.

Following an incident, the Project Manager and/or the Client will decide whether to have the party or parties involved undergo drug and alcohol testing.

3.11 Safety and First Aid Equipment

All field staff must wear personal protective equipment (PPE) appropriate for the site conditions. The minimum PPE required for this field program includes:

- Fire Resistant (Nomex) coveralls with reflective striping;
- CSA or ANSI approved hardhat;
- CSA approved steel-toed work boots and/or steel-toed rubber boots;
- CSA approved Safety glasses or goggles;
- Hearing protection, ear muffs must be worn on or around any drilling operations;
- Work gloves appropriate to the task; and

Special clothing and skin protection may be required for work in harsh climates, or at sites containing hazardous materials, or specific tasks, including:

- Latex gloves;
- Non-toxic particle mask;
- Respirators;

- Chest waders;
- Rain suit;
- Sun screen;
- Insect repellent; and,
- Mosquito netting.

3.12 Site Access Management

Access to the site is via boat. Travelling by water has specific hazards which must be communicated by the boat operator prior to embarking and all necessary controls must be in place and adhere to at all times. Personnel must wear personal flotation devices or life jackets at all times will travelling in a boat or working near bodies of water.

Appropriate signage is necessary to identify key locations:

- Safe work zones;
- Emergency Muster Locations; and,
- Main access roads.

Hazards associated with working on or near water are listed in Section 4 of this HSE plan.

3.12.1 2nd and 3rd Party Interaction

There must be good access for emergency evacuation or, failing that, communication equipment to request emergency assistance. Suitable fire extinguishers and first aid kits must be available for any heavy equipment such as drill rigs (contractor's responsibility).

The Site Manager has the information concerning the day-to-day plans of each of the contractors working on the site. The Site Manager must co-ordinate communication among all parties involved and initiate, chair, and document any meetings required to ensure on-going optimization of access issues.

Figure 2 – Camp Farewell Site Location Map



4 HAZARD ASSESSMENT

4.1 General

IEG acknowledges the importance of correctly and thoroughly identifying the hazards or potential hazards that can exist on construction projects. At the beginning of a new project, the project manager and/or field supervisors are to perform a detailed hazard assessment. This assessment needs to address the following four components:

- Personnel hazards, which refers to employees, contractors, suppliers, and visitors and the level of skill, work practices and orientation that are required;
- Environment hazards, which refers to existing site hazards, site conditions, site restrictions, and housekeeping;
- Material hazards, which refers to storage and handling of materials that are regulated under the Transport of Dangerous Good (TDG) Act and the Workplace Hazardous Materials Identification System (WHMIS) guidelines; and;
- Equipment hazards, operating equipment applications and tool applications and maintenance of each.

If working conditions or tasks being performed change frequently at a job site, the need for regular hazard assessments is required.

4.2 Field Level Risk Assessment (FLRA)

A vital link in any effective EH&S management system is a process that encourages workers to identify, assess and control risks that have the potential to result in losses to people, property or the environment. Workers must use the FLRA process described below for medium and higher risk jobs where an approved procedure does not exist:

- Identify the tasks to be performed;
- Identify 'day-of-the-job' hazards associated with the work;
- Assess the risks; and,
- Identify measures to control the hazards to an acceptable level.

The FLRA process involves a five-step risk assessment cycle as shown in Figure 3 below:

Figure 3 - Field Level Risk Assessment (FLRA)



1. Stop and Think.

2. Look Around and Identify Hazards.

- ◆ Do I clearly understand my task?
- ◆ Am I physically and mentally prepared to do the task?
- ◆ What could go wrong?
- ◆ Is there a risk to others or myself?
- ◆ What can change that could create a new risk?
- ◆ Could other teams, workers or conditions pose a problem?

3. Assess Risks.

- ◆ How bad could this be?
- ◆ How likely is it to happen?

4. Control Risks.

- ◆ Who should I contact for help?
- ◆ Are permits, written practices, procedures, etc. required?
- ◆ What can I do to control the risk?

- ◆ Will the control affect another part of the task being done?
- ◆ Do I need to tell anyone else?
- ◆ Are emergency response plans required?

An FLRA form is attached in Appendix VI


4.3 Hazard Identification

Workers and Management are jointly responsible for identifying and reporting hazards, unsafe acts, and/or unsafe conditions utilizing the hazard identification cards so as to avoid Incidents and/or Losses. The identification of hazards is therefore one of the most important field safety instruments to both the Worker and to Company Management.

- The worker must **write down** any and all hazards observed. Even a perceived hazard becomes a valuable observation and learning experience;
- Writing a hazard identification is a requirement and therefore creates greater awareness by the worker for any unsafe acts and/or conditions;
- All hazard types are to be reported in this manner - including, but not limited to:
 - ◆ Environmental Hazards and Spills;
 - ◆ Near Miss incidents;
 - ◆ Property/vehicle damage; and
 - ◆ Job Observations, both negative and positive.
- The job observation is to be given to the Project Coordinator who will;
- promptly investigate any unsafe acts and/or conditions; and
- take steps to see it corrected at the earliest possible time so that it can be recorded and “closed”.
- Records are forwarded to the IEG HSE Coordinator where their information is analyzed and used to add, replace, or modify written operating procedures.

An example of the Job Observation Card is shown in Figure 4. The information these cards contain is treated as the confidential property of IEG. No such information is to be disclosed to any third party outside the IEG operations without expressed written permission.

Figure 4 - Hazard Identification Card (Front & Back side)



Hazard Identification Card

Hazard Near Miss Job Observation
 Prop. Damage Spill or Environmental Incident

Date: _____ Time: _____

Reported by: _____

Company: _____

Immediate Supervisor: _____

Location of Incident: _____

Description of Incident: _____

(FRONT)

Cause(s) of Incident: _____

Procedures Not Followed Environment
 Equipment PPE Missing
 Communications Human Error

Recommendations & Actions Taken: _____

To be completed by the Site Safety Department

Risk Severity:
 Minor Moderate High Critical

Risk Frequency:
 Remote Occasional Probable Frequent

Date Closed: _____

Safety Coordinator: _____

(BACK)

4.4 Hazard Identifications and Controls

4.4.1 Beards and Long Hair

Workers must be clean shaven when:

- Working in an restricted area;
- If a respirator (such as an SCBA) might be required.

Where there is a danger of contact with moving part or machinery, workers must wear their hair above the shoulders, tied back or in a hair net.

4.4.2 Clothing and Accessories

Workers must not wear:

- Loose clothing around machines;
- Clothing that will melt when exposed to heat;
- Rings or other jewellery if it may present a hazard;
- Saturated clothing, which can cause dermatitis. Clothing saturated with hydrocarbons also creates a fire hazard.

4.4.3 Smoking

Workers may only smoke in designated smoking areas. Confirm these locations with the Project Coordinator.

4.4.4 Fire Extinguishers

Workers must check their fire extinguishers on a regular basis and ensure that:

- The fire extinguisher is undamaged;
- It is easily accessible and not obstructed by materials or equipment;
- It is tightly secured if in a vehicle;
- It indicates the appropriate pressure; and
- It is checked every month and marked accordingly on the tag.

4.4.5 Cellular Phones

Drivers must not use a cellular phone for placing outgoing calls, checking messages and receiving incoming calls except when the vehicle is properly parked:

- A “turn-out” or rest area;
- Designated Parking Area;
- **Passengers** may use cellular phones only if the conversation is not distracting the driver.
- **Drivers** who are assigned a two-way radio and on duty or on call are required to leave their radios on are permitted to briefly respond to incoming calls while driving.

5 SITE SPECIFIC HEALTH AND SAFETY HAZARDS

The potential health and safety hazards that have been identified for the site, or are associated with activities that could take place on site include but are not limited to the following:

- Wildlife
- Working within/near Bodies of Water
- Rough/Uneven Terrain
- Heavy Equipment (Drill Rigs)
- Working alone or remote locations
- Hazardous Materials (including fuel) and WHMIS
- Noise
- Climate – Environmental Hazards (heat, cold, sun exposure, insects, etc.)

IEG adheres to the Klohn Crippen Berger (KCB) Health and Safety Manual which addresses safe work practices and pertinent job procedures relevant to each of these potential health and safety hazards. Relevant safe work practices are included in Appendix II. In addition to the list above, site specific health and safety hazards should be identified by the field supervisor or Project Manager, discussed and reported at the hazard assessment and tailgate safety meetings.

5.1.1 Wildlife

To ensure the safety of people and wildlife care and caution is to be taken when working in an area where wildlife may be present. Employees must not approach and or feed any wildlife and dispose of litter and food items properly by bagging and taken with them when they leave site or disposing of in appropriate waste receptacles. Sightings of wildlife should be reported.

5.1.2 Grizzly Bears

Although rare, encounters with bears could present a serious threat. Although most bears are shy and will flee if they come across people, aggressive encounters occasionally occur,

especially with females with cubs. Bears may also be provoked if they become used to eating human food. Site personnel are to be equipped with a bear horn and bear spray. Although the latter should be considered as a last resort since it is only effective at close range. For more information on what to do in the event of a bear encounter see Appendix IV.

5.1.2.1 Bear Encounters

- **Never Run.** You cannot outrun a bear and running may excite the bear and cause an attack;
- Do not harass or chase the bear;
- Get in your vehicle as quickly as possible;
- Move away from any bear cubs in the area;
- **Slowly back away** from the bear. Drop your hardhat or other belongings if the bear continues towards you – this may distract it.
- Climbing a tree is an option but offers no guarantee as black bears are excellent climbers.
- In an encounter with a bear or a bear with cubs you should appear passive; **do not raise your voice.**
- Finally remove **any and all garbage from the site** to minimize the risk of bear encounters.

Project personnel will comply with Safe Work Practice 126 Wildlife included in Appendix II.

5.1.3 Small Boat Operation

Travelling by boat on open water has inherent risks. These risks can be managed with proper planning and training. The two most common dangers of water are the risk of drowning and hypothermia. Drowning can occur even in shallow water. Hypothermia occurs when the body core temperature drops due to exposure to cold air or cold water. As such, it can develop in temperatures well above freezing, and is a risk throughout the year.

Check the local weather taking into consideration any seasonal changes in the area and review any available marine charts or maps of the area to determine and mark local hazards. The person that is navigating or otherwise in charge of the boat's operation should be fully familiar with the particular water course or water body on which the boat is being operated.

For more information on Small Boat Operation SWP 116 see Appendix II.

5.1.4 Rough and Uneven Terrain

When working in areas where rough and uneven terrain exist employees must wear protective footwear with ankle support and watch their footing. Ensure all tripping hazards are removed from the work area and good housekeeping is maintained. If working adjacent to or on steep slopes ensure a safe distance from the edge or if it is necessary to transcend the slope a lifeline should be worn.

5.1.5 Drilling and Safe Work Zones

Many different types of drill rigs are used for the purposes of site investigation including: mud rotary, solid and hollow stem auger, and percussive type rigs. In general drill rigs are large, heavy and generally slow moving units. They are complex machines and their operation requires high levels of knowledge and skill. The safe use of a rig is heavily dependent on a high standard of maintenance, as well as correct operation. The following safe work practice pertains to technicians, inspectors and engineers, and should be considered by all persons working in the vicinity of drilling operations.

The safe zone and recommended work area for personnel other than drill operator and assistants when working around rotating drilling equipment and/or during drill winching operations is 5 meters or the height of the mast whichever is greater. This also includes parking of vehicles other than drilling contractors required vehicles

Daily tailgate meetings will identify drilling hazards and the restricted areas and safe work zones are to be communicated. Restricted areas and safe work zones may require increased controls such as signage, barriers or markers.

Employees will comply with Safe Work Practice 107 Drilling and Safe Work Zones. Please see Appendix II.

5.1.6 Ground Disturbance

A ground disturbance is an excavation or construction activity (other than hydrotrench or hand exposure) that results in penetration of the ground to a depth of 30 cm or greater.

IEG employees are to be trained in Ground Disturbance methods as instructed by leading experts. Hazards commonly encountered during ground disturbance result from hitting underground facilities (e.g., pipelines and utilities):

- Hazardous atmospheres may be generated if a pipeline transporting toxic material is ruptured.
- Electrocutation may result from contacting a high voltage powerline.
- Costly damage may be incurred if a communications line is disrupted.

Note a ground disturbance permit, including a waiver of liability form) should be completed.

Employees will comply with Safe Work Practice 117 Ground Disturbance. Please see Appendix II.

5.1.7 Working in Remote Locations

There are significant safety concerns or hazards related to working in remote locations, where immediate medical assistance or basic amenities are not available. Some locations may require hours to get to medical assistance and therefore extra caution should be exercised. Please refer to the following guidelines:

- Inform the contact person on the project site the location of your destination and your expected return. If there are no personnel on the site, inform your immediate supervisor and/or project manager.
- Familiarize yourself with the area by reviewing maps, wildlife reports and weather conditions.
- Carry a cellular phone, handheld radio or satellite phone (which will work in the area). If you are away alone for extended periods, make sure you have a call procedure set up so that you are calling your supervisor twice a day.
- Ensure your vehicle is operating properly, the spare tire is properly inflated and you have sufficient fuel, spare oil and fluids.
- Make sure you are wearing appropriate clothing and have spare clothing with you.
- Carry drinking water, a small supply of food, flashlight and waterproof matches, and an emergency first aid kit
- Have a compass or if possible a personal locator beacon (PLB) with Global Positioning System (GPS) aerial photographs and topographic maps. Ensure that you are trained on the use of the PLB/GPS and that the infrastructure is in place for its proper use.

Employees will comply with Safe Work Practice 120 Working Alone & in Isolation. Please see Appendix II.

5.1.8 Hazardous Materials and WHMIS

The field supervisor will ensure that all controlled products entering the work site will have proper labels and identifying symbols attached to each container, and furthermore, ensure that Material Safety Data Sheets (MSDS) are available and circulated to the proper personnel.

All subcontractors will have the Material Safety Data Sheets applicable to any chemicals used in their operations and have the appropriate spill kits available.

5.1.9 Climate – Environmental Hazards

The project site can be susceptible to rapid and severe changes in weather (precipitation, temperature, and wind). The following precautionary measures must be in place:

- Ensure adequate protective clothing from the changing conditions;
- Dress in layers when appropriate to adjust to warmer or colder temperatures;
- Ensure adequate water is on-hand to prevent de-hydration. Replacing electrolytes as well as drinking adequate amounts of water is key to preventing heat exhaustion/stroke;
- Wear breathable natural fibers;
- Site personnel should carry an extra change of clothing.
- Site personnel should have with them insect repellent, bug netting and sun screen (if required).

6 EMERGENCY RESPONSE PLAN

Workers will be given instruction on the site specific Emergency Response Plan prior to mobilizing personnel for transport on the boat. A client specific protocol for Emergency Response Procedures can be found in Appendix IV. This EHS plan and all emergency contacts will be located on-site and in an easily accessible highly visible area. Workers will be provided with a copy of this plan.

In general every Emergency Response Plan should address in some form the following four key components:

- Means of getting to the injured;
- Means of providing first aid to the injured;
- Means of providing transportation to medical aid of the injured; and,
- Means of promptly contacting the outside agencies for assistance (i.e. local police, RCMP, ambulance, fire department, etc).

6.1 Training and Exercises

The success of any emergency response plan depends on adequately trained personnel. The level of training has to be tailored to the functions to be performed and the skill levels of the individual.

Training on this emergency response plan will be provided to all project team members, prior to commencement of field operations. Exercises are equally important to the success of any emergency response plan implementation.

The purpose for implementation of the exercises is to reinforce the formal training through tabletop exercises and mock drills. They are intended to evaluate the ability of the team to carryout key roles within the emergency response plan and identify additional training requirements.

Prior to the commencement of field operations, appropriate emergency exercises will be carried out, and documented, on potential incident scenarios related to the following:

- Illness/injury;
- Fire; and,
- Spill.

6.2 First Aid Treatment

Finding someone (or several people) injured and in need of emergency medical aid can be a stressful and potentially confusing situation. One must be calm and stay focused on providing the best of care.

Recognize the Problem:

- Remain alert to the environment around you and where your fellow workers are.
- It is important to be able to recognize early that a situation exists requiring emergency medical attention.

Evaluate the Hazards:

- It is important that you take the time to ensure that you and others responding do not become victims...Is It Safe!
- What are the hazards?
- Identify resources required to eliminate or control hazards that threaten ones ability to respond.
- How many patients are there?

NOTE: These two initial steps are done visually and very quickly in a matter of seconds!

Take Control:

- Take immediate control of the situation to calm and effectively direct others responding.
- Secure from a secondary incident occurring (for example warning / directing oncoming traffic).
- Eliminate or control those hazards identified as hampering your ability to respond to the injured.

Call out for Help:

- Delegate someone to make the necessary calls and arrangements out from your location for support as needed and have them return to you with any updates and to assist. If no one is available, you may have to provide initial “critical” first aid and leave your patient temporarily to obtain help yourself.
- Depending on the situation, calling for help may only mean calling for the on site First Aider and equipment or it may mean contacting the nearest hospital, arranging for an ambulance or helicopter.
- Have all patient and location (directions) information ready.
- Depending on your location, this is where it becomes critical knowing ahead of time whether there is 911 service within your area of operations or if you need a specific phone number. You must be aware of “dead zones” in the area if a cell phone or radio is used?

Take Action:

- First aid is provided only to the responder’s level of training.
- Priorities are the ABC’s, A – airway, B – breathing, C – circulation (bleeding).
- Identify and evaluate other potential complications affecting treatment, such as level of consciousness, spinal injuries, internal injuries / bleeding, cardiac (heart) etc.
- Treat for shock: Continuously monitor for shock. A patient that appears stable can easily and quickly slip into shock. Keep patients calm and warm and continually monitor ABC’s. If shock is a concern, transport.
- Transport: Rapid transport is important and should be considered during initial patient assessment. The decision to transport will depend on your ability to move the patient without causing further complications, time, location, distance, weather and other factors. If you have to move the patient ensure that all precautions have been taken.

Follow up:

- Depending on the situation the employer must make the appropriate regulator contacts, such as Workplace Health and Safety as soon as possible in the case of serious injuries, and WCB within 72 hours.
- Toward identifying causes and preventing recurrence, immediately following the incident as much information as possible must be collected and a thorough accident/incident investigation conducted.

- Although personal details may be confidential, take the time to discuss the event with all employees as a learning opportunity and a fundamental step toward preventing recurrence.

6.2.1 Isolated Work Site

First Aid Equipment Requirements

- 10 – 19 Workers per Shift
 - ◆ 2 Standard First Aiders
 - ◆ No. 3 First Aid Kit
 - ◆ 3 Blankets, stretcher & splint
 - ◆

First Aid Role Designations

At the beginning of the project the following roles will be assigned:

- meet ambulance/helicopter – will be assigned at the scene
- identify best trained staff in First Aid treatment
- ensure list of training is current

Role of the First Aider / Care Provider

As a “First Responder”, you are in charge of the scene and your primary responsibility is for the safety of yourself, those assisting you and for the care of your patient(s) until the next higher level of care takes over. Using whatever resources you have available items to remember are:

- Ensure hazards associated with the scene are eliminated or controlled and monitor for any potential new hazards.
- As soon as your assessment of the situation is complete, get help on the way.
- If there is a fatality, RCMP and Workplace Health and Safety must be immediately contacted.
- For purposes of a thorough accident/incident investigation nothing is to be moved or disturbed at the scene of the accident unless it is absolutely necessary for the safety of people or equipment at the scene.

- Caution the patient(s) not to move. If spinal injury is suspected have someone stabilize the head.
- If an ambulance is needed, delegate someone to make the appropriate arrangements.
- Obtain as much information as possible as to “what happened” from the patient, and/or bystanders.
- Conduct a “primary survey” for life threatening injuries and integrity of ABC’s. Follow up with a “secondary survey” to identify all other injuries.
- Shock and hypothermia can progress rapidly, continually monitor for signs of shock and hypothermia the key sign of both being decreasing level of consciousness. In this condition, rapid transport must be considered.
- Treat non-life threatening injuries (bandaging / splinting) as time and priorities permit.

Requesting Helicopter Evacuation

Any decision to initiate a helicopter evacuation is made through the EMS / 911 operator.

To assist in that decision, all appropriate and accurate information must be provided to the operator.

If there is no 911 coverage, the closest hospital would be the first alternative access to the “emergency medical system” (EMS) in requesting a helicopter.

The caller must be prepared to relay the following information:

- Location of the accident / incident. Caller should indicate clearly the degree of remoteness or isolation where applicable. Legal location or GPS information should be provided.
- Any access issues / blockages that would impede a ground response.
- Any of the following conditions that would indicate the need for rapid transport:
 - ◆ Altered / decreased level of consciousness.
 - ◆ Difficulty in breathing.
 - ◆ Cardiac (heart) condition.
 - ◆ Serious head injury.
 - ◆ Suspected spinal injury.

- ◆ Upper leg (femur) fracture(s).
- ◆ Severe bleeding (unable or difficult to control).
- ◆ Suspected internal bleeding (abdominal bruising, swelling and tenderness).
- ◆ Severe burns (2nd or 3rd degree, or burns to face, throat or neck).
- ◆ Severe shock, trauma, hypothermia.
- ◆ Serious H2S exposure.
- ◆ Anaphylactic shock – an allergic reaction as a result of an exposure (i.e. bee sting, food, chemicals, etc.)
- ◆ Poisoning

Remember that most helicopter services in are limited in their ability to respond by:

- Daylight (visual) flying restrictions. (Less available flying time during winter months.)
- Weather conditions.

6.3 Emergency Muster Locations

The muster point for the site will be determined prior to work commencing during the safety tailgate meeting and will be communicated to all site personnel.

6.4 Incident Reporting

The injured party or the person(s) at the scene contacts using a cell phone (1) the Project Coordinator, (2) the Site Manager, (3) the Site HSE representative. The individual will provide the following information:

- Location of the injured party;
- Nature of the injury; and,
- Best meeting point.

After evacuation of the patient is completed, the Site Safety Coordinator immediately commences the incident investigation process

6.5 Fire Prevention and Response

All workers are required to report immediately any fire (wildfire, equipment or structure) discovered within a forested area. Employees will follow SWP 150.

Recognize the Problem

- What type of fire is burning? (wildfire, equipment fire, structure fire, chemical/fuel spill)
- If it's a wildfire, is it burning in standing timber, slash, grass or a mixture of fuels?
- The type of action taken on the fire will depend directly as to what type of fire it is... "What's Burning"?

Evaluate the Hazard

- Identify and evaluate any potential hazards or problems associated with actioning the fire. Are there any power lines or fuel supplies? Will the wind and weather hamper fire action or control of the fire?
- Identify any other potential losses of resources, structures or developments exposed to or threatened by the fire. Are evacuations necessary?

NOTE: These two initial steps are done visually and very quickly. In this particular case however, the time it takes and how thoroughly it is done will depend on your knowledge of the area! Pre-planning will have played a key role here.

Take Control (If safe to do so)

- Notify the immediate supervisor and the rest of the crew.
- Communicate an ALL STOP of operations.
- Identify what immediate and follow up resources are required.
- Identify a SAFE ZONE from which to organize men and equipment.
- Have immediate / on site resources brought to the scene.

Call out for Help

- "COLLECT" to 310-FIRE (3473).
- Depending on the situation, (within M.D., settlement area, community boundaries, etc.) the local fire department may need to be called instead of or in addition to the forest service through 911.

Take Action (small fires only, large fires evacuate the area)

- To the crew's level of ability immediate action must be taken toward controlling or suppressing the fire.
- Fire action should continue until the forest service or fire department arrives on site to take over.
- Once outside resources arrive to take over the fire, your assistance may still be required.
- Depending on the situation, your only course of action may be to coordinate an orderly evacuation of the area.

Follow Up

Particularly where the fire was the result of a work related accident / incident, a thorough investigation may be required toward identifying contributing factors and preventing recurrence. Consequently, as much information, documentation of actions and corresponding time should be collected. Where it was not your incident but you discovered, reported and took initial action, this same information would be important to the agency following up.

6.6 Accidental Spill

Recognize the Problem

Releases of controlled products (fuels) and hazardous waste (used motor oil) has the potential of having an "Adverse Effect" on our environment. "Adverse Effect" is defined as "impairment of or damage to the environment, human health or safety or property". Spills or releases of this nature may have various reporting requirements and may require a rapid and complex response toward minimizing any potential adverse effect.

Evaluate the Hazards

- Identify and evaluate any potential problems that may be associated with control, containment, or cleanup of the spilled / released product(s).
- Location, access, contamination into a flowing water body or muskeg, product characteristics such as being a controlled product vs. a hazardous waste, flammability, toxicity, corrosive etc.

- Refer to MSDS for product characteristics and PPE requirements.

Take Control

- It is important that someone take immediate control of the situation once discovered to:
 - ◆ shut down adjacent operations,
 - ◆ ensure fellow workers are notified,
 - ◆ if possible, stop the source of the spill,
 - ◆ eliminate ignition sources etc.
 - ◆ identify the resources required toward taking initial or perhaps sustained containment and clean up action.

Call out for Help

The hazards and factors identified earlier toward control, containment or cleanup will determine the type and level of help required.

- Prior to making any call, have as much information as possible about the spill “in hand”.
- Where the spill is likely out of one’s immediate capability to control, and/or there is a possibility of an “Adverse Effect” on the environment, the Project Coordinator must be contacted and consulted with immediately. He will provide initial response direction and based on the information provided to them, will assist in the decision as to whether they themselves need to respond and what resources are required.
- Notify Site Manager.

Take Action

- Within the limits of your ability and the resources on hand, take action to minimize the spread and the impact of the spill until additional resources and expertise arrive.
- Specific PPE may be critical and must be provided for. (Refer to MSDS).
- Utilize spill response equipment on hand, including heavy equipment where suitable.
- Contain the spill.
 - ◆ block off drains, culverts and ditches.
 - ◆ surround the spill with earth, peat, straw, sand, commercial booms and sorbents.

Follow Up

As with any incident, the objective is to prevent recurrence. An “Incident Investigation” must be conducted as soon as possible. Once the incident is over all pertinent information must be collected together and a thorough investigation conducted that focuses on identifying both “root” causes and clear follow up actions. In the event of an incident on-site personnel will freeze the scene, gather relevant information, ensure the area is secured and the safety of others on-site. All incidents are to be verbally reported to the project manager as soon as it is safe to do so. A NT-NU spill report must be completed and submitted to the contact number provided on the emergency contact page of the Health and Safety Plan (hazard assessment). Additional, a written KCB incident report must be submitted within 24 hrs in addition.

A copy of the NT-NU Spill report has been provided in Appendix V.

7 ENVIRONMENTAL PROTECTION PLAN

Environmental Issue	Management Plan	Responsibility
<p><u>Waste Management</u></p> <p>General construction waste.</p> <p>Office waste, including food waste.</p> <p>Special waste/hazardous materials waste.</p> <p>Recycling.</p>	<p>Follow Project Waste Management Plan</p>	<p>Site Coordinator</p>
<p><u>Soil Management</u></p> <ul style="list-style-type: none"> • Soil Salvage (clearing of undisturbed/reclaimed area). 	<p>Surface soil and vegetation will be windrowed to the side of any trails, roadways, etc. No more than 15 cm of subsoil should be mixed with surface soil.</p> <p>Drill pads will be cleared of vegetation and surface soil windrowed to one side.</p> <p>If cut and fill is required, subsoil must be segregated and</p>	

Environmental Issue	Management Plan	Responsibility
<ul style="list-style-type: none"> • Erosion Control Plan. • Project Soil Salvage Plan 	<p>windrowed into a separate pile from surface soil.</p> <p>Soil cutting will be left on the drill pads with any oil bearing soils removed and disposed of in a designated waste disposal area.</p> <p>Cleared drill pads will have topsoil replaced once all activities are completed.</p>	
<ul style="list-style-type: none"> • <u>Water Management</u> • Groundwater dewatering, including seepage. <p>Storm water and snow melt runoff.</p> <p>Water usage, including hydrotest fluids.</p> <p>Equipment wash water.</p>	<p>Water utilized for drilling will be extracted from a source identified by Shell. All quantities extracted will be recorded and reported weekly.</p> <p>Groundwater will be extracted from the monitoring wells during well development. All wells will be located within the MSL and will be screened within overburdens aquifers. Groundwater will be discharged to surface.</p>	

Environmental Issue	Management Plan	Responsibility
Surface water body protection. Groundwater body protection. Water Quality Protection. Project Water Management Plan/regulatory requirements.	Volumes of groundwater extracted will be recorded and reported weekly.	
<u>Air Quality</u> Dust control <ul style="list-style-type: none"> • Other emissions, including vehicle/equipment 	Water truck to be utilized to water down access road if excessively dry, dusty conditions are expected. Equipment and vehicles not in use and not required to remain running will be turned off.	
<u>Spill Prevention and Containment</u> Spill prevention/control	Spills 1L or greater and any spill regardless of amount within 33 m of a water body will be reported to a Shell	

Environmental Issue	Management Plan	Responsibility
	<p>supervisor immediately.</p> <p>All fuelling will be conducted with the use of spill trays.</p> <p>Spill kits will be available at each fuelling station.</p> <p>Any spill will be absorbed with spill pads and if necessary, contained with soil berms to avoid the contaminant spreading out.</p> <p>Contaminated soil will be removed from site and disposed of in a designated disposal area.</p>	
<p><u>Wildlife</u></p> <p>Interaction between workers and wildlife</p>	<p>Wildlife is not to be approached or fed.</p> <p>All garbage is to be removed from the work location daily and disposed of in the designated waste bins.</p> <p>No food or garbage to be left out or unattended at any</p>	

Environmental Issue	Management Plan	Responsibility
	<p>time.</p> <p>All wildlife sightings to be reported to the field coordinator.</p> <p>If nuisance or aggressive animals are encountered, workers are to relocate to a safe position and report the incident to the field coordinator.</p> <p>All wildlife sightings and occurrences will be collated and reported to Shell supervisor by the field coordinator.</p>	
<p><u>Hazardous Materials</u></p> <p>Storage/containment</p>	<p>Hazardous waste disposal areas to be identified and provided by Shell.</p> <p>Material Safety Data Sheets (MSDS) sheets to be provided by each contractor if using hazardous materials on site.</p>	<p>Field supervisor</p>

Environmental Issue	Management Plan	Responsibility
Shell Approval Process		
<u>Tree/Shrub Clearing</u> Regulatory Requirements Timber Salvage	<p>Drilling locations will be optimized to reduce the amount of tree clearing required.</p> <p>All timber meeting dimensions of 15 cm at the butt and 10 cm at the top must be salvaged.</p>	
<u>Compliance Monitoring</u> Inspections Audits Documentation	<p>Schedule</p> <p>List of documentation available on site.</p>	
<u>Other</u> Equipment	<p>All equipment must arrive to site free of soil or any other</p>	

Environmental Issue	Management Plan	Responsibility
	<p>contaminants. Equipment must be pressure wash prior to mobilization to prevent the spread of noxious and restricted weeds.</p> <p>Equipment must be in good standing order.</p>	

APPENDIX I

Health & Safety Forms



224: WORKING ALONE OR IN ISOLATION

Tool to help mitigate hazards and implement emergency response protocol when working alone or in isolation

Prerequisite Checklist

Action Required	Done (✓)
1. A comprehensive assessment of the hazards associated with this working alone or extremely remote location work activity is in place, and control measures to mitigate the identified hazards established.	<input type="checkbox"/>
2. The above (Item 1) hazard assessment and control measures are documented in the KCB "Field Level Risk Assessment" form.	<input type="checkbox"/>
3. Person/team has, in their possession, suitable electronic communication equipment (e.g., cell phone, satellite phone etc.) that will consistently transmit and receive throughout the work location.	<input type="checkbox"/>
4. Person/team has, in their possession, spare batteries and/or battery charging capability for electronic communication equipment.	<input type="checkbox"/>
5. KCB home office Primary and Secondary Contact persons are assigned (normally project manager and division manager).	<input type="checkbox"/>
6. Designated KCB Primary and Secondary Contact persons have, in their possession, the call number(s) to contact the person/team at the work location.	<input type="checkbox"/>
7. The KCB designated person has, in their possession, the call number(s) to contact the person/team at the work location.	<input type="checkbox"/>
8. Person/each team member has a plasticized card on their person containing the following information: <ul style="list-style-type: none"> - Name and mailing address; - Family/next of kin contact person(s) name, residence/work/cell phone number, and mailing address; - KCB Primary and Secondary Contact persons name, work/cell/residence phone number, and office mailing address; and - Phone number and mailing address of police, fire, ambulance or other related emergency services (e.g., coast guard, medevac) in the work area. 	<input type="checkbox"/>
9. Designated KCB primary and secondary contact persons have, in their possession, copies of the above (Item 8) plasticized card carried by the person/each team member.	<input type="checkbox"/>
10. Copies of the above (Item 8) plasticized card carried by the person/each team member are in the possession of the designated KCB person.	<input type="checkbox"/>
11. A step by step routine contact and emergency response procedure established (see below).	<input type="checkbox"/>
12. Step by step routine contact and emergency response procedure is in the possession of the person/each team member.	<input type="checkbox"/>
13. Step by step routine contact and emergency response procedure is in the possession of the KCB Primary and Secondary contact persons.	<input type="checkbox"/>
14. Step by step routine contact and emergency response procedure is in the possession of the KCB designated person.	<input type="checkbox"/>
15. Call in log in place at the designated person's desk (e.g., caller name and time of call).	<input type="checkbox"/>



Step by Step Routine Contact and Emergency Response Procedure

Activity

1. Between 8.30 am and 9.00am each day, person/team will call designated person and advise as to the following:
 - Health and safety status;
 - Current location; and
 - Work location(s) for the day.

NB: The designated person will log all calls.

2. Between 4.00 pm and 4.30 pm each day, person/team will call designated person at and advise as to the following:
 - Health and safety status;
 - Current location; and
 - Anticipated time of return to office/hotel/residence.

NB: The designated person will log all calls.

3. If no calls received by 9.00am or 4.30pm, the designated person will attempt to make contact with person/team in the field.
4. If unable to make contact with person/team by 9.30 am or 5.00 pm, the designated person will inform KCB home office contact person accordingly.
5. KCB home office contact person will attempt to make contact with the person/team in the field.
6. If unable to make contact with person/team by 10.30 am or 6.00 pm, KCB home office contact person will make contact with the emergency services in the last known work area to report and request assistance in locating person/team.

KCB home office contact person will inform HR or predetermined point of contact (H&S representative, Project Manager, Regional Office Manager).

7. Manager will initiate the "Missing Persons" element of the project specific emergency response plan.



KCB guidelines are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

221: SMALL BOAT INSPECTION CHECKLIST

To be completed when using any watercraft for fieldwork operations.

Project Name:		Project No.:	
Client Name:		Date:	
Vessel:		Operator	
Time Out:		Time In:	
Engine Hours Out		Engine Hours In	
Employee Name:	Boat Certification:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Employee Name:	Boat Certification:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Employee Name:	Boat Certification:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Project Location: (include latitude, longitude, altitude and Country)			
COMPLETED?	WALK AROUND	ACTIONS TAKEN / COMMENTS	
<input type="checkbox"/>	Perform inspection of boat – general condition	_____	
<input type="checkbox"/>	Any loose fittings – have they been tightened?	_____	
<input type="checkbox"/>	Anchor and Line	_____	
<input type="checkbox"/>	Ensure controls operate smoothly	_____	
<input type="checkbox"/>	Ensure throttle and other cables move smoothly	_____	
<input type="checkbox"/>	Horn, Bell or Whistle	_____	
<input type="checkbox"/>	Winch (where applicable)	_____	
<input type="checkbox"/>	WEATHER	ACTIONS TAKEN / COMMENTS	
<input type="checkbox"/>	Check local weather forecast	_____	
<input type="checkbox"/>	Check marine charts or maps of the area	_____	
<input type="checkbox"/>	Consider any seasonal changes	_____	
<input type="checkbox"/>	OIL AND FUEL	ACTIONS TAKEN / COMMENTS	
<input type="checkbox"/>	Check level of oil (ensure adequate amount)	_____	
<input type="checkbox"/>	Check level of gasoline in fuel tank (ensure adequate amount)	_____	
<input type="checkbox"/>	Make sure proper fuel is used	_____	
<input type="checkbox"/>	Extra Gas Line	_____	
<input type="checkbox"/>	SAFETY EQUIPMENT	ACTIONS TAKEN / COMMENTS	
<input type="checkbox"/>	Flotation Devices, #_____	_____	
<input type="checkbox"/>	Flares	_____	
<input type="checkbox"/>	First Aid Kit	_____	
<input type="checkbox"/>	Oar	_____	
<input type="checkbox"/>	Bailing Bucket or Scoop	_____	
<input type="checkbox"/>	Boat Hook	_____	
<input type="checkbox"/>	Survival Rations	_____	
<input type="checkbox"/>	Charged Fire Extinguisher	_____	
<input type="checkbox"/>	Water proof maps of area	_____	
<input type="checkbox"/>	Paddle float (kayak)	_____	
<input type="checkbox"/>	Pump (kayak)	_____	
<input type="checkbox"/>	Spray skirt (kayak)	_____	
<input type="checkbox"/>	Spare paddle (kayak)	_____	
<input type="checkbox"/>	TOOL KIT	ACTIONS TAKEN / COMMENTS	
<input type="checkbox"/>	Ensure tool kit/repair kit is carried with boat	_____	

KCB guidelines are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

<input type="checkbox"/> <input type="checkbox"/>	PERSONAL PROTECTIVE EQUIPMENT Personal Flootation Devices, #____, make sure sizes are correct Make sure everyone on board has the appropriate clothing (wet, warm and sun) for protection from the weather. All extra gear should be stored in waterproof bags	ACTIONS TAKEN / COMMENTS <hr/> <hr/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	SAFETY PLAN Appropriate qualifications/ licenses to operate boat Have site specific Health and Safety Plan (HSP) Complete a Hazard Assessment Review Emergency Procedures and Responsibilities Check out before leaving. Have a cell phone or VHF radio Make sure all equipment is secure Check in with person originally informed in accordance with HSP on regular basis	ACTIONS TAKEN / COMMENTS <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

ADDITIONAL COMMENTS:
Supervisor Name/Signature:
Date: (yyyy-mm-dd)



KCB guidelines are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

220: OFF-ROAD VEHICLE INSPECTION CHECKLIST

To be completed when using any off road vehicle for fieldwork operations

Project Name:	Project No.:		
Client Name:	Date:		
Employee Name:	ATV Certification:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Employee Name:	ATV Certification:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Employee Name:	ATV Certification:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Project Location: (include latitude, longitude, altitude and Country)

COMPLETED?	WALK AROUND	ACTIONS TAKEN / COMMENTS
<input type="checkbox"/>	Perform pre-driving inspection of vehicle – general condition of ATV	_____
<input type="checkbox"/>	Ensure tires, wheels and/or tracks are in good condition	_____
<input type="checkbox"/>	Ensure boogie wheels are in good condition	_____
<input type="checkbox"/>	Ensure brake controls operate smoothly	_____
<input type="checkbox"/>	Ensure throttle and other cables move smoothly and snap closed	_____
<input type="checkbox"/>	LIGHTS AND SWITCHES	ACTIONS TAKEN / COMMENTS
<input type="checkbox"/>	Check condition of ignition switch	_____
<input type="checkbox"/>	Ensure engine stop switch works	_____
<input type="checkbox"/>	Ensure all lights are in working order	_____
<input type="checkbox"/>	OIL AND FUEL	ACTIONS TAKEN / COMMENTS
<input type="checkbox"/>	Check level of oil (ensure adequate amount)	_____
<input type="checkbox"/>	Check level of gasoline in fuel tank (ensure adequate amount)	_____
<input type="checkbox"/>	Make sure proper fuel is used	_____
<input type="checkbox"/>	ENGINE	ACTIONS TAKEN / COMMENTS
<input type="checkbox"/>	Inspect chain for proper adjustment and lubrication – if applicable	_____
<input type="checkbox"/>	Check for leaks on drive shaft – if applicable	_____
<input type="checkbox"/>	Check condition of belts – ensure spare is available	_____
<input type="checkbox"/>	Inspect nuts and bolts and tighten when necessary	_____
<input type="checkbox"/>	TOOL KIT	ACTIONS TAKEN / COMMENTS
<input type="checkbox"/>	Ensure tool kit is carried with ATV	_____
<input type="checkbox"/>	PERSONAL PROTECTIVE EQUIPMENT	ACTIONS TAKEN / COMMENTS
<input type="checkbox"/>	Ensure all personnel are wearing ATV helmet	_____
<input type="checkbox"/>	Ensure all personnel are wearing work boots	_____
<input type="checkbox"/>	ARGO	ACTIONS TAKEN / COMMENTS
<input type="checkbox"/>	Ensure plugs are in place	_____
<input type="checkbox"/>	Ensure chains are lubricated appropriately	_____
<input type="checkbox"/>	Ensure flywheel is lubricated appropriately	_____
<input type="checkbox"/>	Ensure floor is secure	_____

ADDITIONAL COMMENTS:

KCB SITE SUPERVISOR

Name: _____ Signature: _____

KCB requirements are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

213: WORKSITE SAFETY INSPECTION

Date: _____ **Site Location:** _____ **Inspector:** _____

Step 1 – Consider Consequences:

What are the consequences of this hazard occurring? Consider what is the most probable consequence (below) with respect to this work hazard/incident:

- Minor
- Moderate
- Major
- Severe

Step 3 – Calculate Risk

1. Take Step 1 rating and select the correct column.
2. Take Step 2 rating and select the correct line.
3. Use the risk score where the two ratings cross on the matrix.

Step 2: Consider Likelihood

What is the likelihood (below) of the hazard consequence in Step 1 occurring:

- **Rare:** only in exceptional circumstances
- **Moderate:** could or "have heard of it happening"
- **Likely:** known to occur or has happened
- **Common or Repeating Occurrence**

Step 4 – Allocate Action Timeframe

Allocate a due date to the action based of the risk level identified in previous

		Consequences				
		Minor	Moderate	Major	Severe	Catastrophic
Likelihood	Almost certain to occur.	High	High	Extreme	Extreme	Extreme
	Likely to occur frequently	Moderate	High	High	Extreme	Extreme
	Possible & Likely	Low	Moderate	High	Extreme	Extreme
	Unlikely but could happen	Low	Low	Moderate	High	Extreme
	Rare	Low	Low	Moderate	High	High

	Priority	Timeframe
L	To be addressed (not a priority)	Within 1 month
M	Should be done as a priority	Within 1 week
H	Must be addressed immediately	Within 24hrs
E	Stop Work	Stop work until rectified

Inspection Checklist

Item Identified	NA	Yes	Action Required (Y / N)	Risk Assessment (L/M/H/E)	Improvements Recommended	Responsible Party	Action Due By
Processes and Communication:							
Hazard Assessment/H&S Plan completed prior to work?							
H&S plan reviewed by site personnel?							
Are all the appropriate controls in place and followed?							
Company safety rules available/posted?							
Has Incident Reporting process been communicated?							
Pre-start Meetings Completed?							
Applicable forms available?							
Applicable SWP's available?							



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Inspection Checklist

Item Identified	NA	Yes	Action Required (Y / N)	Risk Assessment (L/M/H/E)	Improvements Recommended	Responsible Party	Action Due By
Copies of KCB H&S manual and the OH&S code on-site and available?							
Do site workers have all applicable training certificates?							
Are certificates valid and current?							
Are copies for all workers available on-site?							
Adequate lighting is available?							
Housekeeping – Is the worksite kept clean and organized?							
Work area clear of slip/trip/fall hazards?							
Proper waste disposal available on-site?							
Emergency Management / Fire Prevention:							
Smoking/No Smoking Rules visible.							
Emergency Response Plan communicated and displayed							
Emergency Shut-off/Alarm							
Muster Point Identified							
Fire Extinguishers							
First Aider onsite and identified.							
First Aid Kits Available							
Mock Drills have been conducted.							

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Inspection Checklist

Item Identified	NA	Yes	Action Required (Y / N)	Risk Assessment (L/M/H/E)	Improvements Recommended	Responsible Party	Action Due By
Hazardous Materials:							
Is there a MSDS for the chemicals present on-site?							
Are all chemicals stored appropriately as identified on the MSDS?							
Are chemicals labeled in accordance with WHMIS?							
Equipment:							
Tools inspected prior to use							
Are they readily available?							
Is maintenance up to date?							
Back-up Alarms on equipment.							
Vehicle walk around checklist completed as required.							
Other (specify)							
Personal Protective Equipment:							
Hard Hat							
High Visibility Vest							
Safety Boots							
Safety Glasses/Goggles							
Long Sleeve Shirts / Long Pants							
Respiratory Protection							
Work Gloves							

KCB requirements are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

Inspection Checklist

Item Identified	NA	Yes	Action Required (Y / N)	Risk Assessment (L/M/H/E)	Improvements Recommended	Responsible Party	Action Due By
Fire Resistant Coveralls							
Other: (Specify)							

General (deficiencies not identified in the checklist)

Item Identified	NA	Yes	Action Required (Y / N)	Risk Assessment (L/M/H/S)	Improvements Recommended	Responsible Party	Action Due By

Review

Inspectors Name: _____ Signature: _____ Date: _____ Time: _____

Outstanding Corrective Actions

Date:

Date:

Date:

Status of Corrective Actions

Have all Corrective Actions been Completed? _____ Date completed: _____

Reviewed By:

Manager _____ Date: _____

Office Use

Health and Safety _____ Date: _____

TYPE OF INCIDENT <i>(Mark with an X)</i>				
Personnel		Breach of Safety Procedures		Occupational/Biological Exposure
Equipment		Wildlife		Ergonomics
Material		Ground Disturbance		
Environment		Security		
Environmental/Spill		Vehicle		
CLASSIFICATION				
Injury/Illness		Damages		Near Miss
INCIDENT DETAILS <i>(Include Photos)</i>				
Date of Incident:		Time of Incident (24hrs):		
Date Reported:		Time Reported (24hrs):		
Reported By:		Photos Attached:		
Business Unit:		Central Office Location:		
Project Number:		Project Manager:		
Client Name:		Site Location:		
Site Conditions:				
Brief Account of Near Miss / Incident:				
People Involved: <i>(Note: please include any witnesses, contractors or clients involved and their details)</i>				
Persons Name	Position	Company	Contact Details	
RECOMMENDATIONS / CLOSE OUT DETAILS				
Internal Immediate Corrective Actions Taken &/or Any Recommended Corrective Actions:				
REVIEWED BY:				
Name:		Signature:		
Position:		Date:		

208: DAILY TAILGATE MEETING



Klohn Crippen Berger

REGIONAL OFFICE: _____

Date: ____ / ____ / ____ (YY/MM/DD)

Project #: _____ Task #: _____
 Project Name: _____
 Client: _____
 Site Location: _____
 Location co-ord: _____
 Weather / Site Condition: _____

DISCUSSION CHECKLIST

- Introduction to personnel and responsibilities
- Scope of project
- Work area layout
- Location of high traffic or restricted work areas (and trespassing implication)
- Project schedule and hours of work
- Driving safety (e.g., traffic, road conditions, wildlife, on-coming traffic, road crossing)
- PPE requirements
 - Steel toe boots
 - Respiratory protection
 - Hearing protection
 - Fire resistant coveralls
 - High visibility
 - H2S Monitor

- Hard hat
- Gloves
- Safety glasses
- Fall prevention
- Weather protection

- ARE YOU ENTERING A CONFINED SPACE NOT PREVIOUSLY IDENTIFIED? - DO NOT PROCEED WITHOUT ENTRY PLAN**
- Personnel medical conditions (e.g., back problems, severe allergy)
- Remote work site call in / communication procedures
- Evacuation point
- First aid station / fire extinguishers / eye wash / shower
- Emergency Response Plan (ERP quick reference page)
- H2S Alarm Procedures
- Emergency contacts / procedures
- Review of client safety procedures
- Review of Hazardous Task Analysis
- MSDS Required
- Safety certificate check
 - H2S
 - WHMIS
 - First Aid
 - List Other: _____

EMERGENCY RESPONSE PLAN

ERP reviewed/tested? N/A Yes No Date: _____

Health and Safety Plan

Is there a Health and Safety Plan Yes No Date: _____
 Have you reviewed the H&S Plan Yes No

HAZARD IDENTIFICATION AND MITIGATION

<u>HAZARD</u>	<u>RISK ASSMT</u>	<u>MITIGATION</u>
Site Hazards		
<input type="checkbox"/> Multiple Crews & Simultaneous Tasks	_____	_____
<input type="checkbox"/> Overhead Hazards	_____	_____
<input type="checkbox"/> Underground Hazards	_____	_____
<input type="checkbox"/> Wildlife / Water Crossing	_____	_____
<input type="checkbox"/> Weather Related	_____	_____
<input type="checkbox"/> Extreme Temperature	_____	_____
<input type="checkbox"/> Dangerous Pressure	_____	_____
<input type="checkbox"/> Electric Shock	_____	_____
<input type="checkbox"/> Rough Terrain / Steep Slope / Soil Stability	_____	_____
<input type="checkbox"/> Open Excavation	_____	_____
<input type="checkbox"/> Poor Lighting	_____	_____
<input type="checkbox"/> Other	_____	_____
Work Related Hazards		
<input type="checkbox"/> Heavy Equipment	_____	_____
<input type="checkbox"/> High Risk Positioning or Confined Space (DEVELOP JSA)	_____	_____
<input type="checkbox"/> ROW Prep / Brush Clearing	_____	_____
<input type="checkbox"/> Housekeeping	_____	_____
<input type="checkbox"/> Pinch points, lifting	_____	_____
<input type="checkbox"/> Other	_____	_____
Hazardous Materials		
<input type="checkbox"/> Contaminated Material / Soil / Water	_____	_____
<input type="checkbox"/> Chemical Contact (MSDS)	_____	_____
<input type="checkbox"/> H ₂ S or other Hazardous Vapour Levels	_____	Monitors (circle) - H2S %LEL CO2 O2
<input type="checkbox"/> Flammable / Explosive Materials	_____	_____
<input type="checkbox"/> Other	_____	_____

LEVELS OF RISK ASSESSMENT (Number,Letter)

1 Imminent Danger	3 Minor	A. Probable	C. Remote
2 Serious	4 Negligible	B. Reasonably Probable	D. Extremely Remote

HAZARD ASSESSMENT AND TAILGATE MEETING FORM

Other Hazards and Additional Mitigation Measures

<u>HAZARD</u>	<u>RISK ASSMT</u>	<u>MITIGATION</u>
<input type="checkbox"/> Short Service Worker	_____	_____
<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____
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<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____
<input type="checkbox"/> _____	_____	_____

LEVELS OF RISK ASSESSMENT (Number,Letter)

<i>1</i> Imminent Danger	<i>3</i> Minor	<i>A.</i> Probable	<i>C.</i> Remote
<i>2</i> Serious	<i>4</i> Negligible	<i>B.</i> Reasonably Probable	<i>D.</i> Extremely Remote

<u>COMPANY</u>	<u>ATTENDEES REPRESENTATIVE (print)</u>	<u>SIGNATURE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
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_____	_____	_____
_____	_____	_____
_____	_____	_____

VERIFICATION

I have verified the above stated hazards and the referenced safety controls and procedures as required to perform the task to the best of my knowledge.

KCBL Representative (print): _____

Position: _____

Signature: _____ Date: _____

APPENDIX II

Safe Work Practices

150: Wildfires

General

Unlike many natural disasters, most wildfires are caused by people—and can be prevented by people, too. Our weather, vegetation, and geography all combine to make fires inevitable and a natural part of the landscape. Workers in fire-prone areas should plan ahead and prepare to evacuate with little notice.

Preparation for Working in Areas known for Wildfires

Some of the things that you could do before working in an area with the potential of wildfires are:

- Confirm access to emergency communication devices for outside contact and vice versa;
- Learn how to use fire extinguishers and know where one is located near your work place;
- Prepare emergency kit (Flashlights, portable radio, first aid kit, food and water etc);
- Know the emergency response plan and how to properly communicate in case of emergency;
- Have fire resistant clothing on hand if possible; and
- Wildfires spread quickly and often begin unnoticed. You can reduce your risk by preparing, before the wildfire strikes.

Determine the Fire Risk

- Identify the current risk rating for a fire in your proposed work area.
- Check to see if there are any current concerns in the area.
- Learn about the history of wildfire in your area.
- Be aware of recent weather. A long period without rain increases the risk of wildfire.
- Determine your site's ability to respond to wildfire. Are roads leading to your property clearly marked? Are the roads wide enough to allow firefighting equipment to get through?

Prevention of a Wildfire

- Contact your local fire department (911 in North America, 000 or 112 in Australia or 105 in Peru), or the park service if you notice an unattended or out-of-control fire.
- Never start fires in areas unless safe to do so.
- Never leave campfires unattended. Completely extinguish the fire by dousing it with water and stirring the ashes until cold before sleeping or leaving the campsite.
- Take extra precaution when using and fueling gases, lighters, matches, or when welding.
- Do not discard cigarettes, matches, and smoking materials anywhere. Be certain to completely extinguish cigarettes before disposing of them. Smoke in designated areas only.
- Do not drive over dry grassy areas.

What to do During a Wildfire

- Have a source of communication to alert others and alert emergency personnel.
- Remove combustible items from around your workplace if it is safe to do so.
- Shut off any natural gas, propane or fuel oil supplies at the source.



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- You cannot outrun a fire. Crouch in a pond or river. Cover head and upper body with wet clothing. If water is not around, look for shelter in a cleared area or among a bed of rocks. Lie flat and cover your body with wet clothing or soil.
- Breathe the air close to the ground through a wet cloth to avoid scorching lungs or inhaling smoke.

If You Are Trapped in a Building

If you do find yourself trapped by wildfire inside a building, stay inside and away from outside walls. Close doors, but leave them unlocked.

Post-Wildfire

Take care when re-entering a burned wild land area. Hot spots can flare up without warning. Fires can re-spark even several hours after they seem to be controlled. Maintain a fire watch.

Evacuation Tips

- If advised to evacuate, do so immediately.
- Know your emergency response procedure and prepare an evacuation checklist and emergency supplies.
- Wear protective clothing and footwear to protect you from flying sparks and ashes.

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131: WORKING WITHIN, ON, OVER OR NEAR WATER

This Safe Work Practice provides the guidance on personal safety while conducting work in close proximity to open water or from work within the water. Close proximity is considered within one body length. Its intent is to minimize hazards and prevent injury or fatality from falling into water.

Examples of this include but are not limited to the following: discharge measurements, water sampling, fish sampling, traversing through creeks, water level surveying, making observations on earthworks and structures and barge drilling. This procedure may also be applicable working around very soft sands and muds.

Types of Water Ways

Water can include work in, on, over, or adjacent to:

- Sea water;
- Rivers or streams;
- Lakes or lagoons;
- Ponds; and
- Water storage areas.

Hazards

The two most common dangers of working on or near water are the risk of drowning and hypothermia. Drowning can occur even in shallow water. Hypothermia occurs when the body core temperature drops due to exposure to cold air or water. As such, it can develop in temperatures well above freezing, and is there for a risk throughout the year.

Additional hazards to personnel may include;

- Injuries from falling;
- Scalding; or
- Exposure to toxins.

Responsibilities

KCB are responsible:

- Provide measures to identify and control hazards as per Safe Work Practices of work in, on, over, or near water; and
- Provide tools and equipment, including PPE, where required to complete the task safely.

Supervisors are responsible:

- To facilitate and/or provide proper instruction to their workers on protection requirements and training;
- Oversee the completion of a hazard analysis of tasks; and
- Confirm, where required, all permits and licences are in place.

Employees are responsible:

- To follow Safe Work Practices and/or Job Safety Analysis' for tasks completed;
- To report any hazardous work environment (condition or act) encountered to their Supervisors; and

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- If not comfortable, contact your Project Manager or supervisor (Ask questions if you have them).

Job Planning and Assessing Risks

- a) All work that is near, over or in water must be planned and the hazards assessed. Risk assessments or job safety analysis as a minimum will be completed and reviewed with the project manager and work crew. The task risks shall be treated in the following hierarchy of control measures: eliminate, substitute, engineer, administrative and PPE.
- b) Where possible use elimination, substitution and engineering to avoid working near water. Possible controls that reduce risks of working near water are fixed guard rails at sampling points, establish permanent survey markers.
- c) Points to consider when planning work near water:
 - Is there safe access to the water
 - Is there edge protection. Is there a risk of working at heights
 - Is the structure / bank / platform sufficient for the task.
 - Are there trip hazards
 - Is there a risk that other people or jobs in the area could affect the task being performed. Is there a risk of being push into the water?
 - Duration of task being performed
 - Tools and Equipment being used.
 - Are there special notifications that need sending out or permits obtained? For example to Safety advisor, Emergency Response Team, permit to work.
 - Weather conditions including wind and temperature.
 - Effects of flowing water. Is there the possibility of surging water or swift currents
 - Can the worker swim?

Key Points

- a) Elimination and Mitigation
 - If access to water is not required but work must occur near the water then barriers shall be erected. Depending on the risk and separation distance barriers may vary from delineation of a safe working distance through to protective barricades. Use signs to warn of dangers.
 - Consider installing fixed line lines especially where there is flowing water.
- b) Exposure
 - Water may be either extremely hot or cold water at site.
 - Waste may be toxic with biological or chemical hazards.
 - There may be submerged hazards in water.
 - If a person gets wet they may be at risk of hypothermia. Plan for the welfare of personnel with warm up and changing facilities.

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c) Changing Water Level

- Be aware if the body of water can suddenly change level. Consult with the area authority the nature of the body of water and if isolations are required.
- Plan work so not to get stranded if there is a change of water level.
- Water surges, changes in currents and boat wake are potential hazards.

d) Drowning Hazards

- If working within 8m (25') of water and there is danger of drowning a personnel flotation device (PFD) must be used.
- Only people who can swim shall perform work where there is a drowning hazard.
- No person will work alone.
- The work site shall be well lit. Have communication devices available.
- Always have rescue equipment available. Possible devices include life rings, throw ropes, pole and hooks.
- If working over water, the fall risk must also be considered and appropriate fall protection systems used in combination with lifejackets or PFD.
- Life jackets and PFD should be approved by local requirements. Life jacket or PFD must be properly fitted to the user.

e) Work Area and Access

- Establish a work area that has safe access and egress.
- Eliminate tipping hazards and slippery surfaces
- Avoid working on slopes greater than 3H:1V
- If working in mud have appropriate footwear and use a walking pole to aid balance.
- Have a plan for carrying tools, equipment and samples.
- Be aware of hazards on earth banks such as erosion, undercutting and possible collapse.

f) Tools, Equipment and Clothing

- Plan carefully when using power near water and eliminate electrocution hazards.
- Have means of carrying tools, equipment and samples if both hands are required for access / egress.
- Be aware that tools may weigh a person down if they fall into water. Heavy clothing and gumboots will weigh a person down when wet or filled with water.
- Wear all compulsory PPE and job specific PPE.

g) Working from Boats, Barges, Rafts, Pontoons

- All work from boats must be done to KCB or Client Safe Work Practices.
- Only approved personnel will operate boats.

h) Working on Top of Ice

- A comprehensive plan and risk assessment will be done before any work is performed on top of ice.

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- Points to consider: thickness of ice? Is it possible to determine the thickness and strength of ice? How deep is the underlying water? Is there a current?

i) Working in Water

- A comprehensive risk assessment will be done before any work is performed in water.
- Addition PPE and controls may be required such as waders and lifelines

Personal Protection Equipment and Measures

The following Personal Protection Equipment shall be worn during work in or near water, dependent on task being completed and risk assessment completed:

- Approved PDF / Life Jacket;
- Non-slip footwear;
- Waders;
- Safety Glasses;
- Hard Hat;
- Approved Steel Toed Safety Boots;
- Hearing Protection;
- Gloves;
- Proper Clothing (ie: warm weather gear, immersion suits); and
- Sunscreen.

Additional safety control measures include:

- Buddy System (always work with somebody nearby);
- Guard Rails;
- Maintain visual and auditory contact as consistently as possible;
- Life Line/Buoy/Rings - Keep a buoyant throwing line nearby, and make sure it is stacked properly;
- Know your roles and responsibilities for tasks near open water;
- Consider emergency scene management and how you would respond. Not all sites are the same. Not all responses will be the same;
- Avoid walking backwards, and be aware of your surroundings;
- Be aware of possible locations for slips and trips;
- Do not carry out tasks carelessly;
- Rescue Boat;
- What is the ratio of trained first-aid responders to non-trained; and
- Plan accordingly.

Work On, Over, or Near Water

Examples of work on, over or near water ways include:

- Barge Drilling;
- Inspection of bridges, dams, retaining walls, dykes, etc; and
- Fish Sampling;



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Mitigation Measures to Control Hazards

Primary aim is to prevent employees from falling. Should they fall in the water, the secondary aim shall be to prevent drowning.

Given the focus of control, the following considerations shall be taken:

- Never work alone near water (ie: employ a buddy system);
- All working platforms near water must be properly constructed including required guard rails;
- Ensure there is a clear passage for access and egress routes;
- Pontoons shall be properly loaded, stable, and securely moored;
- Embark only at suitable landing areas;
- Prepare and implement an emergency response procedure;
- Ensure all rescue equipment is regularly inspected and maintained; and
- Where safety boats are provided, they should be continuously manned by a trained and competent person.

Note: for more detail on Barge Drilling, please refer to Safe Work Practice: Barge Drilling.

Work within Waterways

Examples of work within water ways include:

- Crossing Creeks;
- Water Sampling; and
- Fish Sampling.

Mitigation Measures to Control Hazards

Use extreme caution in entering and crossing water ways. Falls and slips in mid-stream can be disastrous. The type of danger that can be anticipated will vary with the characteristics of the body of water being entered and/or the stream being crossed.

To minimise and control the hazards:

- Work in minimum of pairs;
- Choose the place with care;
- Make sure there are no hazards downstream;
- Plan for the worst;
- If you are carrying a heavy pack, undo the hip belt and chest strap so you can drop the pack quickly if you fall;
- Avoid entering fast stream above your knees (water depth above your mid-thighs can easily sweep you off your feet);
- Use of waders or gators when traversing through water (dependent of the depth);
- Muddy water may obscure sudden change of depth;
- Shorter team members should lead the way to ensure safe crossing;
- Be aware of hazards such as trees being swept downstream; and
- In colder environments - Remove socks and replace boots.

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126: WILDLIFE

General

Employees in the field may encounter many varieties of hazardous wildlife. These include the larger animals, such as bears and moose, to smaller creatures such as snakes and spiders.

The type of animal that may be encountered is dependent on the location of the work. Project Managers shall communicate these potential hazards and employees shall consider these hazards prior to heading to the field.

Bear Safety

General

Bears emerge from their den anywhere from March to April depending upon regional weather patterns and the spring thaw. Cubs are usually born in late January or February and emerge with the mother in April or May.

Identifying a Bear in the Area

The following bear signs may indicate bear activity in an area depending upon freshness and frequency of the signs:

- Tracks
- Tree Markings: Both black and grizzly bears make tree markings. These are usually found along well-established travelled bear trails. The animal bites, claws, and rubs against the marker tree producing bear markings.
- Digging: The practice of digging for small mammals, roots, and tubers is primarily the activity of the grizzly bear.
- Scat: Bear droppings are usually found along their travel corridors, feeding areas, and bedding sites.
- Carcasses: Evidence of mammals killed by bears is most often encountered in the spring and fall.
- Bedding Sites: The bedding sites of bears are usually selected based upon weather, season, and visual advantage. Bears will often select bedding areas offering a good view of the area so as to see any intruders approaching

Preventative Measures

- Plan Ahead: As with most safety issues, preparation for a trip into bear country begins before you leave the office. Being well versed in the issues of bear identification, habitat, and feeding patterns.
- Noise and Noise Making Devices: In most cases, bears want to avoid confrontation with humans. Bear Bells, loud talking, etc help deter the bear and provide it with prior warning of one's approach.
- Travel slowly when travelling along areas of running water: Along these watercourses the sound is very effectively masked. It is very important to travel slowly, stopping regularly to shout and alert the bears to your presence, especially where bear signs are encountered.
- Care of Food and Refuse: Proper containment of food and disposal is essential to stop the potential lure of the animal to the work/camp site.

Reminders if Encounter a Bear

When encountering bears, remember these don'ts:



KCB guidelines are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

- Do not run as you cannot out run a bear.
- Do not throw objects at the bear unless an attack is imminent as this may be viewed as a sign of aggression.
- Do not turn your back to the approaching bear; always face the animal. This way you will be able to see and anticipate their actions.
- Do not make eye contact with the approaching bear. This may be viewed as aggression and you do not want to appear threatening or provoke an attack.
- Do not approach bear cubs. The mother will be close by and this will be perceived as a threat.
- Do not attempt to climb trees unless the following conditions are available:
 - The approaching bear is an adult grizzly. Black bears of all ages are exceptional tree climbers, as are juvenile grizzlies.
 - The tree is large enough to support your weight and will withstand aggressive pushing by a grizzly bear.
 - The tree is tall enough to allow you to climb at least 4 metres (16.5 feet) from the ground. Large grizzly bears can reach and jump to lesser heights.
 - You have over 100 metres of distance between the bear and yourself and the climbing tree is immediately available. This is necessary because a grizzly can cover this 100 metre distance in just over 6.5 seconds.

Moose

Moose can be found throughout much of Canada.

Preventative Measures

Like most wildlife, it is recommended to give them their distance, being careful not to startle one! Additional tips to remember when traveling in moose country include:

- Do not approach a moose. Moose -especially cows with calves, or bulls during the fall rutting season- can be aggressive and need plenty of room.
- Pay attention to a moose body language if encounter. A moose that has stopped feeding, walking, or resting, has its ears up and is looking at you, has noticed you and is curious. A stressed moose has its ears back, the hair on its neck is raised, and it may even lick its lips. This moose may charge.
- Give a curious or stressed moose room by retreating from the area quickly.
- Do not feed moose. It is both dangerous and illegal.
- During hunting season (these measures apply to all hunting areas)
 - Determine potential hazards with regards to hunting seasons and zones prior to entering the field.
 - Inform where able that workers are in the area to nearby personnel.
 - Erect signage where able.
 - Wear high visibility clothing or vest when working in hunting areas.

Cougars

General Information

- Most conflict with cougars occurs in rural communities, where people live in isolated settlements.
- Cougars are predators - the top of the food chain - and their actions are often unpredictable. The following general guidelines aim at increasing awareness and reducing the risk of cougar conflict.



KCB guidelines are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

- The cougar, also called mountain lion or panther, is Canada's largest cat. Cougars have long tails which may be one-third of their total body length.
- An adult male cougar weighs between 63 and 90 kg (140-200 lbs), and a female cougar, between 40 and 50 kg (90-120 lbs).
- The cougar's primary prey is deer. It will also feed on wild sheep, elk, rabbits, beaver, raccoons, grouse, and occasionally livestock.
- Cougars are most active at dusk and dawn. However, they will roam and hunt at any time of the day or night and in all seasons.
- During late spring and summer, one to two-year old cougars become independent of their mothers. While attempting to find a home range, these young cougars may roam widely in search of unoccupied territory. This is when cougars are most likely to conflict with humans.

Preventative Measures

- Hike in groups of two or more. Make enough noise to prevent surprising a cougar.
- Refrain from remote work at dusk and dawn, in particular during late spring and summer.
- Carry a sturdy walking stick to be used as a weapon if necessary.
- Watch for cougar tracks and signs. Cougars cover unconsumed portions of their kills with soil and leaf litter. Avoid these food caches.
- Cougar kittens are usually well-hidden. However, if you do stumble upon cougar kittens, do not approach. Leave the area immediately, as a female will defend her young.
- Never approach a cougar. Although cougars will normally avoid a confrontation, all cougars are unpredictable.
- If you encounter a cougar:
 - Always give a cougar an avenue of escape.
 - Do not run. Try to back away from the cougar slowly. Sudden movement or flight may trigger an instinctive attack.

Snakes and Spiders

Snakes are active during both the day and night and can be extremely venomous. There are several venomous snakes whose bite can result in death, as with spiders. If bitten by several of these species the results can be fatal.

To avoid snake and spider bites the following measures should be taken:

- DO NOT ATTEMPT TO RELOCATE THE SNAKE.
- Always treat snakes and spiders with respect.
- Avoid contact.
- Be aware – keep an eye out.
- If you see a snake, keep an eye on the snake; do not go where you can not see it.
- If you see a snake, keep calm and remain still until it leaves.
- Wear appropriate footwear and trousers.
- Be cautious when picking items up off the ground, under rocks, etc.
- Be familiar with snake / spider bite First Aid procedures; refer to the first aid procedures provided in the Field First Aid Kit.
- Be aware that snakes are often attracted by vibration, and can commonly come into contact with plant machinery such as drill rigs and vehicles.



KCB guidelines are not intended to interfere or conflict with legislation. Legislation supersedes any and all conflicts.

What to do if bitten by a snake / spider:

- Stay calm.
- Follow first aid procedures in Field First Aid Kit.
- Take mental note of what the snake looked like, colour, length, head shape, body thickness.
- Call for emergency medical assistance.

Note: In the event that help is delayed, activate the personal EPIRB and wait for emergency services.

Additional Hazardous Wildlife

Other potentially hazardous animals include elk, coyotes, wolves, dingoes, crocodiles, or illness carrying insects such as mosquitoes or ticks.

References

Information obtained from:

AME BC: Exploration Safety Manual

BC Parks: Wildlife Guidelines - http://www.env.gov.bc.ca/bcparks/explore/wild_gen.html

116: SMALL BOAT OPERATION

General

A boat or “floating vessel” may be propelled by paddling, rowing or a motor (electric or gas). The method for propelling should be suitable for the boat and the water body. Examples of work conducted from or using a boat could include but are not limited to the following: discharge measurements, water sampling, sediment sampling, fisheries studies and navigation.

Working from a boat on open water has inherent risks. These risks can be managed with proper planning and training. The two most common dangers of working on or near water are the risk of drowning and hypothermia. Drowning can occur even in shallow water. Hypothermia occurs when the body core temperature drops due to exposure to cold air or cold water. As such, it can develop in temperatures well above freezing, and is a risk throughout the year.

Before using a boat on a project, review the Canadian Coast Guard regulations, develop a site specific Health and Safety Plan, and make sure that you do not work alone. Leave a float plan with a responsible person when going out in a boat. The float plan details your intended time of departure and return, intended route, weather details, contact information, persons on board, and any other important information. Check the local weather taking into consideration any seasonal changes in the area and review any available marine charts or maps of the area to determine and mark local hazards. The person that is navigating or otherwise in charge of the boat’s operation should be fully familiar with the particular water course or water body on which the boat is being operated. This includes familiarity with particular risks including, underwater hazards, sandbars, unusual currents, cascades/falls, tides, freighter/marine transport routes/corridors, wildlife, etc. Such risks should be stated in the site specific Health and Safety Plan (HSP).

All operators of motorized boats are required to have and carry a Proof of Competency. Make sure that the boat is appropriate for the job, and is large enough to carry the supplies that you will need. Over loading a boat can cause swamping or tipping of the boat.

Ensure that the boat has enough Personal Floatation Devices (PFD) of the correct size for each person in the boat (all occupants of the boat are required to wear them at all times) and depending on the size of the boat is equipped with at least one buoyant heaving line no less than 15 m in length. If it is a kayak then a paddle float, pump, spare paddle and spray skirt are also required. If it is a motor boat, ensure that you have paddles on board in case of an emergency. **Also see the Small Boat Checklist.**

After inspecting the boat and before leaving, review any emergency procedures and practices. Review each passenger’s responsibilities, show everyone where equipment is stored, and make sure that the equipment is easily accessible.

Have enough fuel for the trip. Follow the rule of thirds (one third to reach destination, one third to return and one third for emergencies). Have a means of communication like a cell phone, satellite phone or VHF radio with you. Make sure everyone on board has the appropriate clothing for protection from the weather including wet weather clothing, warm clothing, sunscreen, hat, and glasses. All extra gear should be stored in waterproof bags.

Make sure that you sit while in the boat, and be aware of possible locations for slips and trips. If you must stand avoid stepping backward.

When returning, make sure that you check in with the person originally informed in your Health and Safety Plan or Float Plan.

APPENDIX III
Shell Camp Farewell
Emergency Response Plan



CAMP FAREWELL EMERGENCY RESPONSE PLAN

December 2000

AMENDED OCTOBER, 2002

AMENDED MAY, 2003

AMENDED JULY, 2003

Amended January 2006

Copy # _____

FAREWELL EMERGENCY RESPONSE PLAN

This is a controlled document.

This general emergency response plan includes spill contingency plans for liquid, sewage and solid materials. It is effective from November 1, 2005 to October 31, 2008 or until an amendment is issued whichever is sooner. It applies to Camp Farewell which is located in the Northwest Territories along the east shore of the Mackenzie River – Middle Channel, 50 km downstream from Tununik Point at Longitude 69°-12'-30" and Latitude 135°-06'-04". License number from Northwest Territories Water Board is N7L1-1762 License type B

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Randall Warren
Shell Canada Limited
P.O. Box 100, Station M
400 4th Ave. SW
Calgary, Alberta
T2P 0J4

FAREWELL EMERGENCY RESPONSE PLAN

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FAREWELL EMERGENCY RESPONSE PLAN

1.0 PURPOSE

The following document is intended to serve as a template for use in the development of Site-Specific General Emergency Response Plans (ERP's) within the Wells, Approvals and Seismic Operations (WA&SO) Department within Shell Canada Limited E&P.

ERP's are to be continually revised and updated to include relevant site-specific emergency response information. Revisions / updates to the ERP will be completed prior to initiating any phase of a program (i.e. Construction, Drilling, Well Services, Seismic Operations, etc).

2.0 SCOPE

All emergencies other than H₂S gas (sour gas) related emergencies are addressed in this ERP template. For projects where sour gas has been determined as a potential threat (see 3.0 Hazard Assessment) the ERP for this specific threat shall be covered in separate Site-Specific Sour Gas Drilling, Completions, Testing ERP.

WA&SO's Site-Specific General ERP is to be used in conjunction with the E&P Model ERP. The E&P Model ERP contains supporting information and forms that can be used in conjunction with this document.

3.0 HAZARD ASSESSMENT

Prior to developing a Site-Specific General ERP, a hazard assessment shall be conducted to determine potential emergency scenarios (hazards / threats). There are several activities within WA&SO that can provide information regarding potential emergency scenarios. Determine which activities are applicable to the project that will aid in determining potential emergency scenarios.

- HSE&SD Process
- DWOP
- CWOP
- Planning Meeting
- Pre-Spud Meeting
- _____
- _____

Section 11.0 shall be revised to reflect the emergency scenarios identified in the hazard assessment.

FAREWELL EMERGENCY RESPONSE PLAN

4.0 PUBLIC CONSULTATION AND COMMITMENTS

WA&SO conducts an extensive public consultation program as part of the licensing and approval process for all projects. Information regarding to public commitments related to emergencies and special resident needs shall be included in the WA&SO Site-Specific General ERP. New information shall be captured in the space provided below.

<p>4.1 Public Consultation and Commitments</p>	<p>Note: Public data shall be kept strictly confidential. Access to this information is on a need to know basis only.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
--	---

5.0 GENERAL EMERGENCY RESPONSE EQUIPMENT

Emergency Response Equipment requirements shall be identified based on the realistic potential emergency scenarios identified in the Hazard Assessments. It is important to ensure that the equipment provided meet the requirements to effectively manage an emergency.

<p>5.1 Emergency Response Equipment</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> first aid kit Level / Type-<i>determine based on # personnel on site.</i> <input checked="" type="checkbox"/> first aid room <input type="checkbox"/> resuscitator <input checked="" type="checkbox"/> stretcher <input type="checkbox"/> high angle rescue equipment <input checked="" type="checkbox"/> emergency conveyance vehicle <input checked="" type="checkbox"/> fire extinguishers <input checked="" type="checkbox"/> burn kit <input checked="" type="checkbox"/> eye wash stations <input checked="" type="checkbox"/> shower facilities <input type="checkbox"/> flares / flare gun <input checked="" type="checkbox"/> communication equipment <input type="checkbox"/> _____ <input type="checkbox"/> _____
---	---

FAREWELL EMERGENCY RESPONSE PLAN

6.0 MEDICAL INFORMATION

All workers should provide personal medical information to be used in the event of a medical emergency. All workers, upon arrival onsite, will fill out the medical information form (Appendix II) to be submitted to the Medic. If a Medic is not available, the Onsite Shell Representative shall keep the sensitive information in a sealed envelope. Medical information is to be kept strictly confidential and will be destroyed at the end of each project. By signing the form, the worker is authorizing this information to be released to the Medic or other medical personnel during a medical emergency. For further information, refer to Shell's Privacy Policy.

7.0 TRAINING

Emergency Response training requirements shall be fulfilled prior to work to ensure an effective response to potential emergency scenarios. Training will include the use of/and maintenance of emergency response equipment, contact information, roles and responsibilities, communication equipment, etc. Each person's qualifications shall be verified.

7.1 Training	<input checked="" type="checkbox"/> emergency first aid	Name: _____
	<input type="checkbox"/> standard first aid	Name: _____
	<input checked="" type="checkbox"/> EMT-P	Name: _____
	<input checked="" type="checkbox"/> Incident Command System	Name: _____
	<input checked="" type="checkbox"/> fire fighting (dry chem.)	Name: _____
	<input type="checkbox"/> confined space	Name: _____
	<input checked="" type="checkbox"/> spill response	Name: _____
	<input type="checkbox"/> _____	Name: _____
	<input type="checkbox"/> _____	Name: _____

8.0 TRAVEL INSTRUCTIONS

Directions to the worksite need to be documented and posted throughout the worksite to ensure the safe and timely arrival of emergency support equipment and personnel (i.e. ambulance, fire-fighting equipment, etc.). The Emergency Contact Information Sheet (Section 9) will have an area designated for directions. The directions shall be clear and concise.

Contact information shall be specific to the working area of the project. Specific numbers shall be verified to ensure the proper response can be asserted.

FAREWELL EMERGENCY RESPONSE PLAN**9.0 EMERGENCY CONTACT INFORMATION SHEET**

PROJECT: Farewell Camp & Stockpile
 LOCATION : 110 kms NW of Inuvik, NWT

LAT : 69° 12' 35.09"
 LONG : 135° 06' 17.29"

DIRECTIONS : By Air 110kms NW of Inuvik or by Ice/Water using East & Middle Channels of the Mackenzie River. Turn left at Bar C.

RADIO FREQUENCIES : Receive Transmit
 AIR TO GROUND: 130.275 MHz

NOTE: FAREWELL IS CURRENTLY SHUT DOWN AND NOT OCCUPIED- THEREFORE NO LOCAL PHONE NUMBERS.

WORKSITE CONTACTS	NAME	PHONE	FAX
On Site Shell Supervisor 1		867 777-	867 777-
On Site Shell Supervisor 2		867 777-	867 777-
Camp Supervisor		867 777-	867 777-
Yard Supervisor		867 777-	867 777-
MEDIC		867 777-	867 777-

PRIMARY OFFICE CONTACTS		PHONE	FAX
Shell Canada Limited		1 800 661-7378	
Shell Office Based Supervisor		403 [b]	403 269-7948
	Cellular	403 [c]	403 269-7895
	Residence	403 [r]	
DAR/Construction Manager	Randall Warren	403 691-2521[b]	403 269-7948
	Cellular	403 813-0408[c]	403 269-7895
	Residence	403 230-2662[r]	
HSE Team Leader	Roger Leadbeater	403 691-3295[b]	403 269-7948
	Cellular	403 519-4138[c]	403 269-7895
	Residence	403 285-1923[r]	
FOR OTHER WA&SO NUMBERS, SEE WA&SO PHONE LIST			

FAREWELL EMERGENCY RESPONSE PLAN

HOSPITAL			
INUVIK	867 777-8161 Emergency Room	867 777-8000 Switchboard	867 777-8062 Fax
RCMP			
INUVIK	867 777-1111		
FIRE			
INUVIK	867 777-2222		
AMBULANCE			
INUVIK	867 777-4444		
AIRCRAFT SUPPORT			
Canadian Helicopters	Inuvik	867 777-2424 or 867 678-0091	867 777-3448[f]
Aklak Air	Inuvik 24hr Office Hours	867 777-3555 or 867 777-3777	867 777-3388[f]
INFORMATION SERVICES			
Alberta Poison Center		1 800 332-1414	
CANUTEC		1 613 996-6666 Emergency	1 613 992-4624 Information

WORKPLACE HEALTH AND SAFETY			
NWT WCB	24hr	1 800 661-0792 1 867 920-3888	1 866 277-3677[f] 1 867 873-4596[f]
ENVIRONMENTAL REPORTING			
NWT Spill Reporting	24hr	867 920-8130	867 873-6924[f]
EMERGENCY MANAGEMENT			
INDIAN & NORTHERN AFFAIRS			
Inuvik Office		867 777-3361[b]	867 777-2090[f]
ENVIRONMENT CANADA			
Spill Response - Canadian Wildlife Service	24hr Pager	867 920-5131 Leave message	
ENVIRONMENT AND NATURAL RESOURCES - NWT			
Environmental Protection Division	General	867 873-7654	867 873-0221[f]
Wildlife Division - Inuvik	Manager – Wildlife & Fisheries	867 777-7230[b] 867 777-1185[c] 24hr	867 777-7321[f]

FAREWELL EMERGENCY RESPONSE PLAN

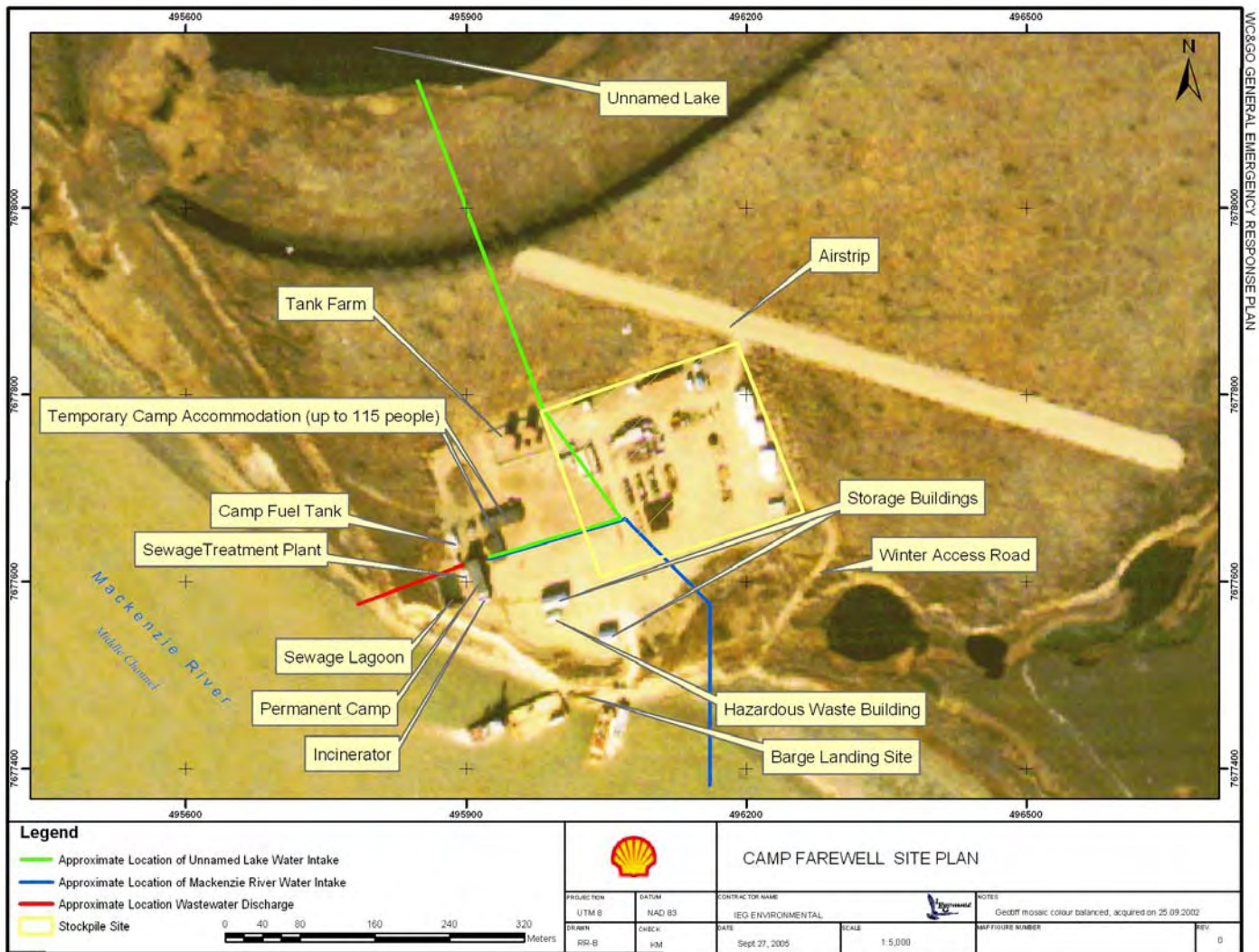
TRANSPORTATION SAFETY BOARD / NATIONAL ENERGY BOARD			
Transportation Safety Board	THE TSB WILL NOTIFY NEB OR OTHER APPLICABLE DEPT.	1 819-997-7887	
NEB General Inquiries		1 800 899-1265	
FISHERIES & OCEANS CANADA			
CCG Regional Operations Center (ROC)		1 800 265-0237 24HR	

SHELL CRISIS MANAGEMENT TEAM (CMT)			
E&P Crisis Manager	1 888 361-8055 [Pager #44204]		
E&P Core CMT (Crisis Management Team)	1 888 361-8055 [Pager #44298]		
SHELL OPERATIONS TECHNICAL ADVISORY CENTRE			
Shell Centre, Calgary, Room 902	403-691-3104 [b]		
WA&SO HEAD OFFICE CALGARY			
Manager, WA&SO David Todd	403-691-2700 [b]	403-660-6900[c]	1-888-361-8055 [PAGER #44202[
PUBLIC AFFAIRS			
Adrienne Lamb	403-691-4978 [b] 403-606-4205 [C]	1-888-361-8055 [PAGER #44262[403-269-8031[f]
Laurieanne Lynne	403-691-3892 [b] 403-680-2654 [C]	1-888-361-8055 [PAGER #44290]	403-269-8031[f]

SHELL EMERGENCY COMMUNICATIONS TRAILER			
CUSTODIAN : C&V – Trailer Yard, Calgary	Doug Delorme	403-620-0442 24hr	403-279-7451 Message
COMMUNICATIONS			
OPERATOR:	Clearing lines or line interruption	0	
Shell Contact :	Ian Lucas	403-691-4049 [b] 403-542-4755 [c]	403-691-3985 [f]
NewNorth Networks	Tom Zubko	867 777-2111 [b] 867 777-6190 [c]	867 777-3412 [f]
SPILL SERVICES			
Mackenzie Delta Spill Response Corp. (MDSRC)	Spill Response Advisor (Linda Manka)	403 296-4014	403 296-5147[f]
Western Canada Spill Services (WCSS)	Equipment Coordinator Mark Miller	403 250-0897 403 803-6065	403 291-9408[f]
OILFIELD FIRE SERVICES			
HSE Integrated	Calgary	1-888-346-8260 24hr	
Firemaster Oilfield Services Inc.	Red Deer	403-342-7500 24hr	

FAREWELL EMERGENCY RESPONSE PLAN

10.0 FAREWELL SITE PLAN



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WCS&SO GENERAL EMERGENCY RESPONSE PLAN

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FAREWELL EMERGENCY RESPONSE PLAN

11.0 EMERGENCY RESPONSE PROCEDURES

Below are templates designed to assist in the development of detailed procedures for Site-Specific emergency response scenarios. Note that each of these steps could require modification during any phase of the project. Refer to Section 404 of the E&P Model ERP

11.1 INJURY INCIDENTS

<p>11.1.1 Emergency Response Procedures (Injury Incidents)</p>	<p>Procedure:</p> <ol style="list-style-type: none"> 1. Ensure personal safety. Consider the following prior to responding: <ul style="list-style-type: none"> • evacuate area • determine safe approach • no approach • determine what happened • don personal protective equipment 2. Isolate the area and restrict / deny entry as required to prevent additional injuries: <ul style="list-style-type: none"> • establish a parameter • isolate / shut off energy sources, stabilize (high pressure, electrical, unstable objects, ignition sources etc.) 3. Notify appropriate personnel: <ul style="list-style-type: none"> • supervisor • rescue team • bystanders 4. Muster in designated area: 5. Determine individual roles and responsibilities: <ul style="list-style-type: none"> • assign incident command system roles as resources become available • add to the ICS chart provided • do not rush into anything 6. Provide medical attention as required: <ul style="list-style-type: none"> • remove victim from danger or danger from victim • provide medical attention as required 7. Transport victim for advanced medical treatment as required. Consider to following:
---	---

FAREWELL EMERGENCY RESPONSE PLAN

	<ul style="list-style-type: none">• medical conveyance via ground• air medivac <p>8. Conduct incident "De-brief"</p> <p>9. Serious and dangerous occurrences shall be reported to the WCB's 24-hour Accident Reporting Line. See Emergency Contact List. Complete Worker's Report of Accident and Employer's Report of Accident.</p>
--	---

FAREWELL EMERGENCY RESPONSE PLAN

11.2 ILLNESS

<p>11.2.1 Emergency Response Procedure (Illness Incident)</p>	<p>Procedure:</p> <ol style="list-style-type: none"> 1. Provide onsite medical / first aid treatment 2. Notify the patient's supervisor and medic (if available) immediately <ul style="list-style-type: none"> • the onsite supervisor/medic will consult the patients medical information form for medical information purposes 3. Contact medical care facility for instructions regarding treatment options and transportation 4. Stabilize patient for transport to medical care facility as required
--	---

11.3 WEATHER RELATED EMERGENCIES

<p>11.3.1 Emergency Response Procedures (Weather Related Emergency)</p>	<p>Procedure:</p> <ol style="list-style-type: none"> 1. Notify all personnel of the weather related emergency <ul style="list-style-type: none"> • contact internal and external parties 2. Secure equipment from the effects of the wind / snow build-up, etc. 3. Suspend operations as deemed necessary <ul style="list-style-type: none"> • consider a travel ban until weather improves maintain communications with remotely located operations (i.e. seismic workers, surveyors, etc.) 4. Muster in designated area
--	--

FAREWELL EMERGENCY RESPONSE PLAN

11.4 FIRES AND EXPLOSIONS

<p>11.4.1 Emergency Response Procedure (Generic Fire & Explosion)</p>	<p>Procedure:</p> <ol style="list-style-type: none"> 1. Ensure personal safety. Consider the following prior to responding <ul style="list-style-type: none"> • evacuate • don personal protective equipment 2. Isolate the area and restrict / deny entry as required to prevent injuries <ul style="list-style-type: none"> • establish a safe parameter 3. Notify appropriate personnel <ul style="list-style-type: none"> • sound the alarm • supervisor • rescue team 4. Muster in designated area 5. Determine individual response roles and responsibilities <ul style="list-style-type: none"> • assign incident command system roles as resources become available 6. Assess the hazard. Determine whether or not to fight the fire. Is there a need to fight the fire? Consider: <ul style="list-style-type: none"> • identify / isolate fuel sources if safe to do so • the type of fire and the equipment available to fight the fire. • are personnel trained to fight the fire 7. Utilize appropriate protective equipment <ul style="list-style-type: none"> • fire retardant clothing • call for backup equipment 8. Establish / adjust control perimeters (hot, warm, cold) <ul style="list-style-type: none"> • identify additional hazards and assess the risks
--	---

Refer to E&P Model ERP Section 403 for additional fire response strategies.