PR 304 TO BERENS RIVER ALL-SEASON ROAD ENVIRONMENTAL IMPACT ASSESSMENT

Volume 4

APPENDIX 7.3 – EMERGENCY RESPONSE PLAN

Preliminary Draft October 2009

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

NOTICE TO READER

EMERGENCY RESPONSE PLAN – PR 304 TO BERENS RIVER ASR

Notice to the Reader

This is a preliminary draft of the Emergency Response Plan (ERP) developed for the PR 304 to Berens River All-Season Road.

It is a dynamic living document that will be further updated during the design of the project prior to construction, and will be subject to further revisions or amendments as the Project proceeds through construction and into operation.

1.0 INTRODUCTION

This document provides the Emergency Response Plan (ERP) for ESRA during the construction and operation of the PR 304 to Berens River ASR. The ASR, described in Section 3 - Project Description is also referred to as the "site" throughout the ERP.

The ERP has been developed to provide an appropriate and consistent response to emergency situations that may occur during construction and operational activities. It is a dynamic document which will be updated as the Project proceeds through the Engineering, Tendering and Procuring, and Construction Management phases and as the ASR facilities and activities are better defined.

1.1 Objectives

The objective of the ERP is to continuously ensure the safety and protection of life, environment and property, identifying predetermined course of actions and responsible personnel for emergency situations arising from incidents, release of hazardous/toxic substances, or other emergency situations during the construction and operational period of the ASR.

1.2 Scope

The ERP will be structured to provide easily accessible information in emergencies and to define:

- Individual roles and responsibilities of all response personnel and organizations;
- Internal and external communication;
- Mandatory response actions and procedures to be executed;
- Reporting protocols to be followed; and
- Follow-up actions.

The ERP will cover various emergency response situations that are likely to occur. They include fire, injuries and medical emergencies, spill response, wildlife encounters and whiteout and winter conditions, etc. The ERP is a resource for all personnel, since all personnel share the responsibility for site safety and environmental management.

The ERP will be refined and finalized in preparation for construction permitting, in consultation with communities, and relevant regulatory authorities such as Fisheries and Oceans Canada, Transport Canada, and Manitoba Conservation. The procedures may be revised at any time during construction or should unusual circumstances warrant.

An Operational Phase ERP will be prepared by Government of Manitoba prior to commencement of road operations in accordance with the Manitoba Government

guidelines. This document would focus on road operations and maintenance procedures, with particular emphasis on road safety and spill response attributed to vehicular accidents. It would then be reviewed periodically during operations to particular locational concerns (e.g., accidents/spills, etc.).

1.3 Distribution and Revision

The distribution of the Construction Phase ERP document will be controlled.

Copies of the Construction Phase ERP will be available at strategic locations and will be distributed to stakeholders such as FN, Environment Canada, Fisheries and Oceans Canada, and Manitoba Conservation. This document will be distributed to the following Project personnel:

- Chief Executive Officer ESRA;
- Vice President ESRA;
- Project Manager ESRA;
- General Contractor Construction Manager;
- General Contractor Health and Safety Manager/ Health and Safety Coordinators;
- General Contractor Environmental Manager/ Environmental Coordinators;
- General Contractor Maintenance Manager; and
- Environmental Supervisors of FN Contractors working under the supervision of the General Contractor;
- Environmental Supervisors of Specialty Contractors

The master copy of this document will be kept on site in the safety office(s). The General Contractor's Construction Manager is responsible for updating this document as required and distributing amendments to all stakeholders when required. The Environment, and Health and Safety Managers/Coordinators will assist with updating the plan.

1.4 Organization

1.4.1 Organization Structure

The ERP is structured to provide all personnel with a quick reference for individual responsibilities and communications with internal and external resources during an emergency. It relies on an effective communications network, and response personnel sufficiently trained in their duties.

1.4.2 Emergency Response Organization

The lines of communication and organizational structure, shown on Figure 10-1, will be followed in response to an emergency situation at the site. It should be noted that construction activities will take place at various locations and the response to an emergency will draw upon the Emergency Response Team members working at nearby site locations, as required.

1.4.3 Emergency Command Centre (ECC)

The primary ECC will be at the General Contractor's Construction Management office and, at a minimum, will be equipped with fully serviced satellite telephone and radio communications systems.

The On-Site Coordinator (OSC) may change the location of the Emergency Command Centre at any time during an emergency to be closer to the area of the said emergency.

1.4.4 ECC Equipment and Supplies

The ECC will have all necessary tools for organizing effective and timely response to an emergency, i.e. for dispatching the Emergency Response Team and/or emergency services, directing strategic deployment of emergency resources and equipment, monitoring response efforts and establishing critical communications.

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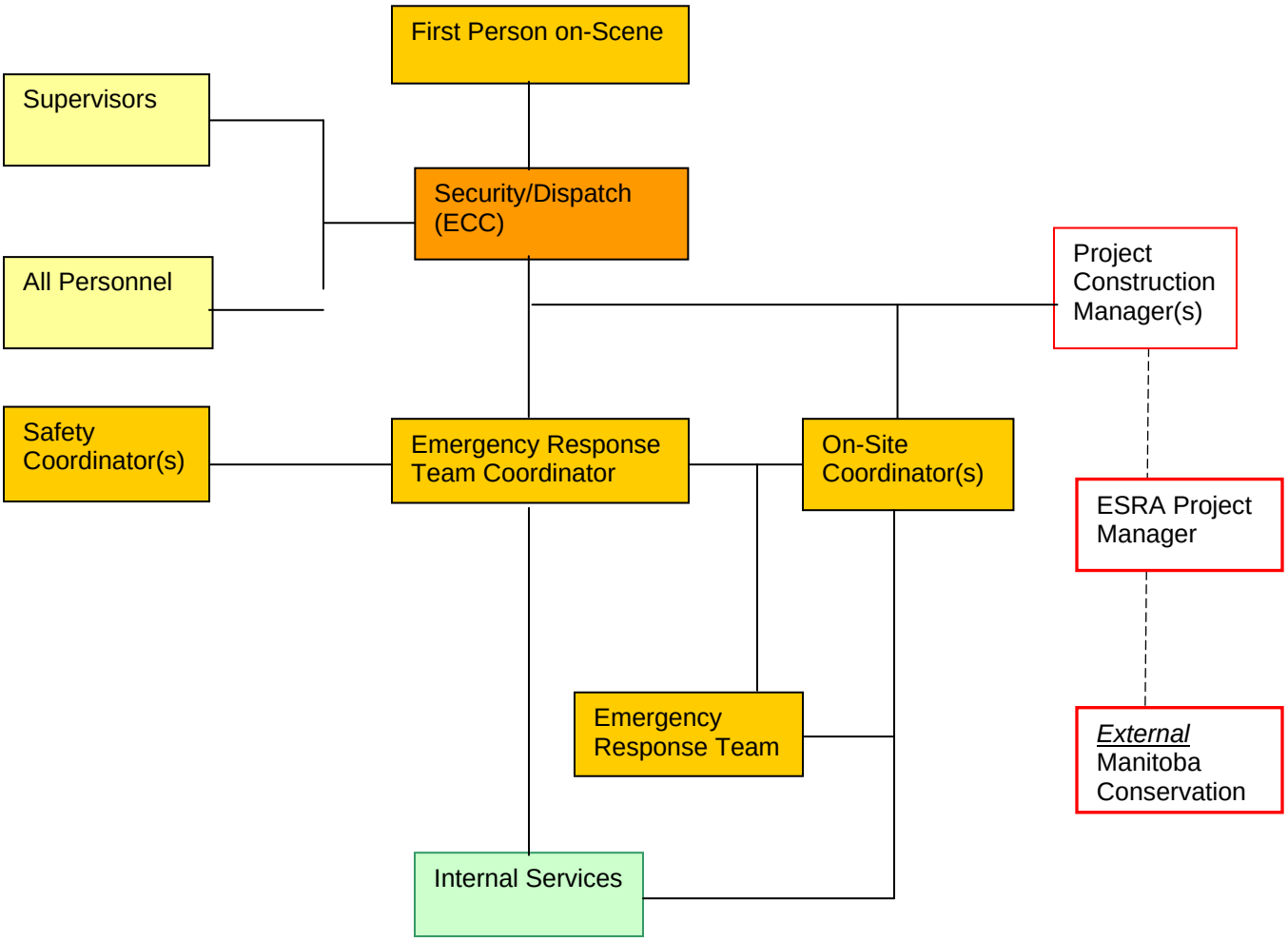
Figure A7 - 1: Emergency Response Communication and Organization Flow Chart:

Construction Phase



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2.0 ROLES AND RESPONSIBILITIES

2.1 General Roles and Responsibilities

The initial stages of any environmental emergency are critical to an effective and timely response that will minimize and prevent an emergency situation from escalating to a higher level. Therefore, all personnel must be fully aware of their individual duties and responsibilities contained in this ERP.

Personnel identified as having key roles in an emergency response include the Emergency Response Team Coordinator (ERTC), members of the ERT, the On-site Coordinators (OSCs), Security personnel, Environmental Manager/Supervisors, Foremen and Construction Manager/Supervisors.

An ERT Status Board will be maintained in the ECC office to ensure the complete assignment of responsibility during an Emergency Response. This board will list all members of the emergency response team, indicating members currently onsite and available for emergency response duties. The ERTC, in conjunction with General Contractors Health and Safety Manager, are responsible for the coordination and update of the emergency response information.

The First Person on the scene of a potential emergency response will contact security, which will trigger the emergency response; with specific responsibilities and duties of designated personnel outlined below.

Employees

One of the most critical steps for an effective and timely response involves the initial notification that an emergency has occurred. Any employee (First Person) involved in, or witnessing an incident, will:

Notify Security via radio Channel (to be decided), and also notify his immediate Supervisor; providing as much information as possible (i.e. location, type of incident, substance spilled etc.);

- Assess and attempt to control the event without causing self harm or harm to others;
- Confirm that the Emergency Response Team has identified the emergency scene and proceed to the designated muster area; and
- Administer Emergency First Aid (if certified), until arrival of medical personnel.

Emergency Response Team Coordinator

The Contractor's Health and Safety Manager or alternate, will be the Emergency Response Team Coordinator (ERTC).

The General Contractor's Environmental Supervisors/Coordinators will provide assistance to the ERTC.

ERTC's Emergency Response Responsibilities

The ERTC, during an emergency response event, will:

- Proceed to the area of the emergency, assess the immediate situation and initiate ERP;
- Order evacuation of the emergency area, as deemed necessary;
- Inform the On-Site Coordinator (OSC) of the situation;
- Ensure that the Emergency Response Team have been notified;
- Secure area with caution tape, posting guards if necessary;
- Implement necessary measures to control or minimize the effects of the emergency;
- Inform and maintain contact with the Contractor's Environmental and Construction Managers; and
- Verify all reported information is accurate and factual.

ERTC's Post-Emergency Response Responsibilities

The ERTC, after an emergency response event, will:

- Ensure that the scene of the emergency is left undisturbed until all investigations have been completed;
- Verify all reported information is accurate and factual;
- Set up and participate in an environmental emergency debriefing session with the On-Site Coordinator;
- Ensure that all ERT equipment is returned to original order (i.e. cleaned or serviced) and/or repaired or replaced to ensure future rapid response; and
- Review incident log and compile a post-response environmental incident report;
- Lead and participate in an audit, in conjunction with the On-Site Coordinator and other involved personnel, of actions taken during the emergency.

On-Site Coordinator

The Contractor's Health and Safety Coordinator or alternate will be the On-Site Coordinator (OSC).

Emergency Response Responsibilities

The OSC, during an emergency response event, will:

- Proceed to the emergency area and assess the immediate situation with the ERTC;
- Initiate the Communication Plan;
- Ensure commencement of Emergency Response support systems from the Emergency Command Centre;
- Request assistance from internal resources;
- Restrict access allowing only authorized personnel;
- Maintain contact with the ERTC and Contractor's Construction Manager;
- Ensure that appropriate internal personnel are notified; and
- Assign persons to satellite telephones/radios, requesting additional personnel if required.

Post-Emergency Response Responsibilities

The OSC, after an emergency response event, will:

- Instruct Security to announce that the emergency has ended;
- Participate in an emergency debriefing session;
- Participate in an audit, in conjunction with all involved personnel, of actions taken during the emergency; and
- Compile a report to management, outlining extent and appropriateness of response measures and areas for improved emergency preparedness.

Security Personnel

The Security Manager or alternate, as indicated on the ERT Status Board, will be the Security Coordinator (SC) and will have the support of other subordinate security personnel.

Emergency Response Responsibilities

Security personnel, during an emergency response event, will:

- Receive initial emergency call and document vital information to be used during emergency response;

- Ensure accurate and concise information collection and recording on a Emergency Notification Log (ENL), and record all emergency calls on the ENL and on tape recorders;
- Relay completed ENL to the OSC;
- Notify response team members by two-way radios based on instructions from the OSC;
- Notify all relevant personnel of emergency evacuation;
- Ensure all evacuated personnel are directed to the muster station;
- Report status to the OSC and ERTC at the Emergency Command Centre and await further instruction;
- Maintain open radio communication;
- Coordinate internal and external services support, as directed by the OSC;
- Document all actions and decisions; and
- Maintain ERT Status Board.

Post-Emergency Response Responsibilities

Security, after an environmental emergency response event, will:

- Participate in post-emergency debriefing as directed by the OSC; and
- Participate in an audit, in conjunction with the ERTC and OSC and other involved personnel, of actions taken during the emergency.

2.2 Specific Responsibilities

2.2.1 General Contractor's Environmental Manager

Emergency Response Responsibilities

The General Contractor's Environmental Manager (CEM), during an emergency response event, will:

- Proceed to the scene of the environmental emergency;
- Provide support to the ERTC;
- Communicate the details of the emergency situation and maintain contact with the ESRA's Environmental and Project Managers, and the Contractor's Construction and Health and Safety Managers; and
- Request assistance from internal resources.

Post-Emergency Response Responsibilities

The General Contractor's Environmental Manager, after an emergency response event, will:

- Participate in post-emergency debriefing;
- Assist in the accident/incident investigation and complete report;
- Communicate the details of the emergency situation to the ESRA's Environmental Manager and the Contractor's Construction Manager;
- Participate in an audit, in conjunction with the OSC and other involved personnel, of actions taken during the emergency; and
- Participate in the preparation of incident documentation for external agencies.

2.2.2 Emergency Response Team

- The Emergency Response Team (ERT) will comprise members specially trained to respond to emergencies. They will, during an emergency:
- Proceed to scene; and
- Take and continue corrective action to regain control.

Emergency Medical Personnel

Medical personnel, during and after an emergency response event, will:

- make all medical-related decisions;
- act as team leader to the ERT during medical emergencies;
- assess, administer and delegate emergency medical care;
- advise the OSC of the number and condition of injured or ill personnel, and the necessity for external services (e.g. medivac);
- obtain additional medical support or advice from external agencies, as necessary; and
- assist the OSC with liaison with any such external agencies.

Medical personnel, after an emergency response event, will participate in post-emergency debriefing and an audit.

2.2.3 Maintenance Manager(s)

Environmental Emergency Response Responsibilities

The Contractor's Maintenance Manager or alternate, during an emergency response event, will:

- Report directly to the scene of the emergency;
- Mobilize necessary equipment and personnel to implement measures to control or minimize the effects of the emergency;
- Provide technical information and advice to, and maintain contact, with the OSC; and
- Document all actions and decisions.

Post-Emergency Response Responsibilities

The Contractor's Maintenance Manager, after an environmental emergency response event, will:

- Participate in post-emergency debriefing as directed by the OSC; and
- Prepare and submit investigation reports as required by the OSC.

2.2.4 Construction Foremen

Emergency Response Responsibilities

Foremen, during an emergency response event, will:

- Assess the situation and take immediate corrective action if possible;
- Ensure that the ERTC and OSC are notified;
- Verify all reported information is accurate and factual;
- Ensure that all personnel have evacuated the emergency area;
- Assist in emergency activities, both immediately and after, as directed by the OSC;
- Assist in regulating the conduct of employees while at the muster station; and
- Document all actions and decisions.

Post-Emergency Response Responsibilities

Foremen, after an emergency response event, will:

- Assist in securing the area, after directive from the OSC;

- Assist in accident/incident investigation as may be required by the OSC; and
- Participate in post-emergency debriefing as directed by the OSC.

2.2.5 Contractor's Construction Manager/Supervisors

Emergency Response Responsibilities

The Contractor's Construction Manager, during an emergency response event, will:

- Provide support for additional supplies and resources;
- Request assistance from external resources;
- Advise and maintain contact with ESRA's Management;
- Advise external agencies; and
- Coordinate Contractor/ESRA documentation.

Post-Emergency Response Responsibilities

The Contractor's Construction Manager, after an emergency response event, will:

- Participate in an audit, in conjunction with other involved personnel, of actions taken during the emergency; and
- Review recommendations, with the Contractor's Health and Safey and Environmental Managers, from the accident/incident investigation and audit.

3.0 COMMUNICATIONS

General Guidelines

Only minimal and preferably no radio discussion will take place take place during the emergency. Radio discussions are limited to only absolutely necessary communications. Confidentiality must be maintained by avoiding conversations capable of being intercepted by scanners.

Two Way Radio Communication

The radio communications system will have 2 major functions, namely:

- On the job; and
- Emergency.

During emergencies, security must always be notified via two-way radio using a channel (to be identified). All radios, except those assigned for specific tasks, must be switched to the selected radio channel.

Radio silence is required, and only direct calls will be answered.

Two-way radio channels will be identified for use.

External Communication

Any reporting to the public or media regarding emergency response events or actions is done by ESRA. All reporting is in accordance with the Communication Plan (to be developed by ESRA), which will outline protocols for dealing with media and external agencies.

Satellite Phones

Satellite phones will also be used as a means of communication by employees working at the site to report accidents or incidents that may be encountered.

4.0 Emergency Response Situations

Typical emergency situations that may occur, include:

- Whiteout and winter conditions
- Fire/Explosion
- Equipment or People Falling Through Ice
- Injuries
- Vehicle or equipment upset
- Forest fires
- Person Overboard
- Wildlife Encounter
- Spills

4.1 Whiteout and Winter Conditions

Severe winter conditions and storms can occur during any winter season. During a snowstorm or winter windstorm, whiteout conditions may occur that will limit visibility. During a whiteout, project personnel will:

- Cease outdoor physical work;
- Remain within shelter until whiteout has passed; and
- If inside vehicle, park vehicle and wait for the whiteout conditions to subside.

Wilderness survival training will be provided to all vehicle operators using the road. The consequences of an unexpected delay, breakdown or accident while traveling in this isolated area can be life threatening, therefore adequate clothing, fuel to reach the destination, vehicle and survival equipment, satellite phone and radio communication will be supplied in every vehicle. Vehicle operators will be responsible for keeping any time-sensitive medication (e.g., insulin) on their person for their own use as medically necessary. Vehicle survival kits are located in each vehicle.

4.2 Fire/Explosion

Fire or explosion could result from natural events and/or construction or operation activities associated with the ASR. Fire drills will be held on a periodic basis to keep personnel aware of the fire procedures.

In the event of a fire or explosion, the Supervisor and Health and Safety Manager will report to the scene. All other personnel should report to the muster station for roll call by supervisors. A muster station will be identified for each major work area.

Upon discovery of a fire or explosion, project personnel:

- Remain calm;
- Extinguish small fires if it is safe to do so and using appropriate equipment; ensure there is a safe exit or retreat and that you fight a fire from fresh air;
- If unable to extinguish fire, sound the alarm by using the radio or any other means necessary;
- Report the fire to your Supervisor immediately and provide the following: Your name, Your location, The location and size of the fire, and The Muster Station you are going to;
- Warn people of danger/fire, explosion;
- Evacuate all persons to the Muster Station;
- At the camp, feel all doors before you open them – if they are hot, use another route. If no other route is available, return to closest safe place and close the door;
- Report to the Muster Station; and
- Hold a roll call and confirm everyone is accounted for.

If you are able to extinguish the fire yourself, make sure the fire is completely out before leaving the scene. Radio the site supervisor and/or Health and Safety Manager to inform them of the details. If there is a chance that the fire may start again, maintain a fire watch until the fire is out completely.

Once all personnel are accounted for, arrange a temporary shelter if required. The shelter should be in a suitable location away from the affected area and be supplied with rations, blankets, a heat source and a communication link with areas outside of the mine.

The fire-affected area will remain evacuated until the Construction Manager and/or Health and Safety Manager gives the All Clear signal.

or any fire or explosion situation, the first action by the person discovering the fire is to put it out if it is safe to do so and then report the incident. If the person cannot safely put the fire out, it must be reported as quickly as possible.

Incident reports are to be filed detailing the cause and response to the fires. This information will be used by the Health and Safety Manager or designate in subsequent fire prevention activities.

4.3 Injuries

Emergency medical response procedures will be followed when a medical emergency is discovered. In the event of serious injury, it may be necessary to move the injured person, from the source of the danger and to administer emergency first aid. The on-site first aid attendant will be notified immediately in order to take charge of the situation and

to ensure safe removal of the injured person to the first aid room at the medical station if possible. If required, the first aid attendant will make immediate contact with the Construction Manager and regional hospital in Winnipeg for instructions and possible emergency evacuation.

4.4 Medivac Procedure

In the event of an injury, the first aid attendant will:

- Stabilize injured/ill person;
- Notify the Construction Manager;
- Provide direction and supervision for assistants; and
- Notify one of the medical evacuation services listed in Table 10-12.

Referral Procedure

- Contact Construction Manager and one of the emergency medical evacuation services listed in Table 10-12 to arrange for an aircraft;
- Inform that air transportation is required. Give the name of the person requesting the Medivac and provide the following information: patient's name, birth date, health care number; The medical problem and treatment initiated; Advise if stretcher or ambulatory; and Equipment that will be required i.e., intravenous, oxygen.
- Arrange for Supervisor to meet aircraft;
- Make further flight arrangements to Winnipeg:

If the injury leads to a fatality on site, the Construction Manager will contact the required external authorities.

A complete accident description and investigation from is required to be submitted as soon as possible. The accident description and investigation form will be completed and submitted by the Construction Manager or designate. Unless some action is required to remove an immediate hazard, the site of any serious accident will be cordoned off and remain unchanged until clearance is received from the Construction Manager.

4.5 Equipment or People Falling Through Ice

The following procedures will be followed in response to people falling through ice:

- Ensure the area and personnel involved are safe;

- Radio the site First Aid Attendant and/or Health and Safety Manager for aid and provide the following information: Your name; Your location; and Description of incident;
- Note that ice tends to fracture for a considerable distance away from any hole, a ladder or long plank may be require to spread the weight of any rescuers over a wider area;
- Any person(s) attempting to rescue any other person(s) who have fallen through the ice will be secured by a rope to a point well removed from the hole;
- Use a rope to assist person(s) to climb out of water;
- Immediately treat for hypothermia by: Moving them out of the wind; Wrapping the person in warm clothes; Wrapping the person(s) in a blanket; Using a second person to provide body heat; and arranging for medical attention as soon as possible.

The following procedures shall be followed for response for equipment falling through ice:

- Ensure the area and personnel involved are safe;
- Radio the site Supervisor and/or Health and Safety Manager for aid and provide the following information: Your name; Your location; and Description of incident;
- For partially submerged vehicles, ensure that leaks of fuel or engine oils are minimized wherever possible by deploying oil containment booms. Fuel should be pumped into a separate container if it can be safely accomplished without danger of a spill;
- If the vehicle is still accessible, arrange for it to be lifted or towed out as soon as possible;
- For fully submerged vehicles, follow the steps outlined in Appendix 7.2 - Best Management Practices (Spill Response for hydrocarbon spills).

4.6 Vehicle or Equipment Upset

This emergency situation may exist if a vehicle i.e. van, crew truck, pick-ups, ATVs, heavy equipment, which provides seating for more than one person/operator), is involved in an accident or collision with either a stationary or mobile obstruction.

When a vehicle upset presents risk of injury and/or environmental spill, the preservation of life and health will be first priority. In case of an incident involving vehicle and employee(s), and after the emergency notification procedure has been initiated, the ERT will comply with the following procedures:

- assess the situation and determine if personnel can be immediately extricated from the vehicle without further injury or immediate first aid requirements;
- call the site ambulance;
- ensure that the vehicle is stable, if unstable, secure with appropriate wedging for stability;
- extricate person(s) under the direction of the medical personnel, who will immediately commence medical treatment;
- medical personnel will determine extent of medical services necessary;
- if on-site, transfer injured person(s) to site medical station, or
- if off-site, request transport services and offsite services (e.g. medivac);
- contain any leaks or spills; and
- begin spill recovery, upon vehicle stabilization and extrication of person(s).

4.7 Forest Fires

The risk of forest fires is usually at its highest during the summer months due to dry conditions. Activities related to construction may cause a forest fire, potentially spreading to the surrounding area. The Emergency Response Team Coordinator or designate will coordinate all activities and request required assistance from the On-Site Coordinator for fighting bush fires. In the event of a bush fire, the following procedures will be followed:

- after notification of a fire emergency, Security personnel will notify the Emergency Response Team and announce the emergency on all radio channels and on the telephone intercom system;
- approximate size, location and proximity of the brush fire to facilities and flammable or combustible substances will be relayed to the On-Site Coordinator;
- On-Site Coordinator will call for appropriate resources (heavy equipment, water trucks, and personnel, etc.) to remain on stand-by;
- ERTC will determine if the fire is not manageable and/or if people, facilities and the environment are at risk. This will be relayed to the On-Site Coordinator, who will request assistance from external firefighting resources;
- area of the bush fire will be immediately evacuated and all personnel evacuating will report to the muster station; and
- ERT Fire Response team will conduct firefighting activities until the fire is extinguished or if deemed necessary, until the arrival of external firefighting services.

4.8 Search and Rescue

In the event of a person(s) missing, the Emergency Response Team Coordinator, Security Coordinator and the Construction Manager will be notified immediately. The On-Site Coordinator will assess the emergency situation and initiate and assign responsibility for the following actions, where required:

- mobilize rescue personnel and equipment, ensuring sufficient communications equipment;
- divide search areas into quadrants and assign Quadrant Leaders;
- establish routine call-in times; and
- coordinate search process with off-site services, should efforts of internal services be unsuccessful.

4.9 Person Overboard

In the event of a person(s) falling overboard in a sizeable water body, the Emergency Response Team Coordinator, Security Coordinator and the Construction Manager will be notified immediately. The OSC will assess the emergency situation and initiate and assign responsibility for the following actions, where required:

- mobilize rescue personnel and equipment, ensuring sufficient communications equipment;
- establish routine call-in times; and
- coordinate search process with off-site services, should efforts of internal services be unsuccessful.

Upon sounding alarm that a person is overboard and mobilization of rescue personnel and equipment, the following actions will be undertaken:

- Throw life ring to person in water;
- Manoeuvre vessel for recovery of the person in the water;
- Keep the person in the water in sight (If safe to do so, proceed to the bow of the vessel as it turns to pick up the person in the water, physically pointing to the person in the water. The "pointer" should continue pointing to the person in the water until released by the Captain);
- Turn the bow to the side the person is located and when approaching the person in the water, throttle back engine to idle approximately one boat length from their position and drift the final distance;
- Recover the victim, using boarding ladder or a mooring line if necessary;
- Give treatment to the victim if he is injured, and only send a member of the response team into the water as a last resort. However, when another person enters the water, there are potentially two victims requiring assistance.

The person entering the water must be:

- Physically fit and a good swimmer;
- Properly dressed for the water conditions (e.g. wet suit);
- Wearing a life jacket and hand tethered to the rescue vessel; and,
- Upon recovery of the victim, examine and treat for injuries, hypothermia, shock, as necessary.

4.10 Wildlife Encounters

When wildlife pose a threat at the site, the first priority will be the safety of workers. After measures have been taken to minimize risk of injury to people, consideration must be

given to minimize impact to wildlife. Response actions for the situation will be determined by the Environmental Manager in consultation with Health and Safety.

Emergency Response measures to control problematic animals, include:

- Use of pyrotechnic deterrents that include crackers and bangers. These will be tried before lethal means are used. Note that the use pyrotechnic deterrents is not permitted in or near fuel or explosive storage areas; and
- Use of a firearm, in a situation that may warrant killing an animal, i.e. immediate threat or attack of a person, or encountering an injured or sick animal.

All personnel must immediately report all sightings of wildlife on the site to Health and Safety.

4.11 Spill Response

Spill Response Action Plans will be developed to cover the following hazardous materials that will be handled, in fairly significant quantities, during construction at the ASR:

- Diesel, Hydraulic Oil, Lube and Waste Oil;
- Gasoline;
- AN (Ammonium Nitrate);
- Sewage (untreated).

The roles of the Spill Response Personnel upon arrival at a spill are:

- Approach from upwind,
- Assemble the necessary personnel and equipment required to contain the spill; Spill Response kits are located adjacent to each fuelling facility. Smaller vehicle spill kits are located in each light vehicle;
- Proceed to the scene with the Response Team and coordinate the overall containment/clean up and/or repairs;
- Secure the area from public access;
- Assess the possibility of any danger to life, property or equipment;
- Attempt to determine the extent of the damage, volumes, types etc., and proximity to watercourses;
- Determine if any product is escaping and eliminate ignition sources;
- Take necessary action, if safe to do so, to stop/reduce/contain any further product from escaping;

- Determine extent of spill, whether any material is still escaping and the containment necessary (dykes/berms, sorbents etc);
- Prevent material from entering waterways by containment (dykes/berms, sorbents); and
- All contaminated materials are to be removed and disposed of according to individual response plans, or as directed by appropriate regulatory personnel.

The potential for a spill exists with both petroleum products and chemical (ammonium nitrate) used at the Project. A spill may be in liquid form as in petroleum products, or solid form as AN.

Spills may occur in one location or in a combination of the following areas; land, snow, ice and water. Various proven practical methods of containment and recovery are well documented for use in colder climates and are summarized below.

The first initial response is to prevent any direct health risk to response personnel. Persons not directly associated with the clean-up operation will be directed to leave the immediate area. The area will be isolated and limited to traffic as directed by the response team personnel.

4.11.1 Spills on Land

Petroleum products spilling onto frozen snow covered ground may be contained by the construction of snow dykes. For a fast initial containment of smaller spills the dykes can be built manually with shovels. Larger spills may require the use of heavy equipment such as graders and bulldozers.

The impermeability of dykes can be ensured by lining them with a polyethylene plastic liner, plastic tarpaulin or similar synthetic material. Alternatively, in freezing temperatures, water may be sprayed or poured over the dykes to further enhance the barrier against the spilled material. This method assumes that water is available or may be accessible from the spill site. Synthetically lined dykes are more effective than just snow or snow and ice-lined dykes.

During warmer months, containment dykes may be constructed using sand or gravel when these materials are available in an unfrozen state. For smaller spills, dykes can be built manually with shovels where larger spills may require trucks or other heavy equipment such as front-end loaders to transport and handle sand and gravel.

Trenching or ditching can be used as a method for containing and/or intercepting the flow of liquid spills on land. Ice, snow, loose sand, gravel and surface layers of organic material can usually be scraped or dug away until the underlying frozen substrate is reached. This can be effective in re-directing the flow or simply containing the substance prior to pumping or absorbing it. Trenching in solid frozen ground or rocky substrate is normally neither practical nor possible.

Some precaution with regard to wind-blown dispersion may be required with lighter materials such as AN. In these cases, a layer of snow placed on top of the spilled

material will suffice until removal to appropriate disposal is arranged. In summer months, minor containment berms will be required when there is moisture or rain present or if precipitation is likely to occur.

4.11.3 Spills in Water

The area of primary concern for open water release is at the rivers and creeks during the transfer of fuel to the fuel tanks. Prior to off loading the fuel, spill containment equipment and heavy equipment is to be made available for spill response.

A spill occurring on or into open water is very difficult to contain, therefore every effort should be made to prevent the material from entering the water. In the case of petroleum products, the material floats, thus immediate deployment of surface booms should take place to control its spread. Pumping is the method of choice for removal of contained material.

In the instance of a spill in open water, containment includes the use of heavy equipment, oil booms and boats.

A boat will be permanently located at the major rivers for the purpose of spill containment and will include a mobile spill kit

4.11.4 Spills on Snow

Containment on snow can be effective due to its absorbent quality. Liquid spills (petroleum) will become immobile within the snow pack and can be removed and transported for recovery or disposal. Snow can be used in construction of snow dykes/dams. Whenever possible, the snow pack should be left in place to avoid contaminating the underlying substrate.

4.11.5 Spills on Ice

Spills that occur on ice, either directly or from migration to ice are greatly affected by the strength of the ice. If the spill does not penetrate the ice, and the ice is safe to work on, then the methods of containment are similar to that on land. Where the spill has penetrated the ice, the situation should be handled similar to that on open water. If, as in petroleum spills, the material floats, then every effort should focus on the recovery of the material using pumping/suction methods, and absorbents.

4.11.6 Spill Recovery

Spilled petroleum products contained within a dyked or trenched area should be recovered by pumping into a portable storage tank or drums, dependent on the volume involved. Pump and suction hoses should be screened to prevent snow, ice or other debris from clogging the line or pump.

Any remaining material may be absorbed by using sorbents, rolls etc.

4.11.7 Other Concerns Related to Spills

Fire

In the event that the spill is in combination with a fire, extinguishing the fire may be required prior to initiating efforts to stop the spillage. In order to control the resulting runoff (in cases where water is used), and the subsequent spreading of the spilled material, slopes away from the area of the spill should be dyked for containment.

Petroleum and chemical fires have the potential to generate toxic fumes. Approaching to deal with any fire from upwind is recommended. Caution should be exercised so that the vapours generated from the fire are not inhaled. All project personnel will have access to the proper Personal Protective Equipment (PPE).

In any case where AN is the material involved the following action should be taken:

- Rope off the area and control entry;
- Evacuate the area and do not attempt to fight the fire;
- The AN, or any resulting solution (fire in winter on snow or ice) must be prevented from entry to bodies of water, especially flowing streams/rivers; and
- Fires involving small quantities of AN may be fought using water, however if the fire is not a hazard to persons and/or the surrounding environment, it is generally acceptable to allow the material to burn off before initiating clean-up measures.

Spill kits will be located in a shelter adjacent to each fuelling facility.

5.0 Emergency Equipment and Materials Inventory

An inventory will be maintained of equipment for use during emergency response activities. The Contractor will be responsible for provision and maintenance of an inventory of equipment that must comply with their work requirements, to be used during initial the emergency response period. At minimum, a spill response and first aid kit will be maintained.

Medical and fire equipment inventories are the responsibility of the Contractor during construction and maintenance of existing equipment and provision of additional equipment is the responsibility of the Health and Safety Inspector. All of the following equipment listed will be reviewed every quarter during construction and revised to reflect any changes made to the emergency response equipment inventory.

5.1 Emergency Equipment

The equipment required to immediately respond to emergencies is extensive and includes the following:

- Ambulance(s);
- Pickup Trucks;
- ATVs;
- Excavators;
- Loaders;
- Bulldozers;
- Graders;
- Haul trucks;
- Lighting units;
- Vacuum truck;
- Mobile cranes and hoists;
- Winch Trucks;
- Generator Sets;
- Portable pumps;
- Fuel Trucks;

In addition to the above, the following is provided and maintained at major water crossings when construction activities are currently at that location:

- Life rings (2) with reflective tape, one with a float line attached strobe light and the other with a waterproof, floating strobe light.
- A boat, with two 75-HP engines, along with a minimum of three (3) persons trained to navigate such a vessel;
- Blanket and first aid kit; and
- Sorbent boom.

5.2 Medical Supplies

Medical supplies for emergency response will be maintained by the medical station. In addition to the full inventory of consumable medical supplies, the medical station is equipped with the following:

Table A7 - 1: Medical Supplies for Emergency Response

Quantity	Item
2	Basic Trauma Life Support Kits for Field Emergency
3	Oxygen Kits for Field Emergency
3	Stretcher Kits for Field Use
2	Advanced Life Support Kits
2	Advanced Cardiac Life Equipment (including defibrillator)
1	Oxygen Transport Kit
2	Mass Casualty Incident Kits

5.3 Spill Containment Materials

A complete list of items for spill response is included below:

- Oclansorb Peat Moss
- Sorbent Roll
- Sorbent Pads
- Socks (3"x4')
- Socks (3"xI0')
- Pillows (9"x9"x2")
- Epoxy Putty Patchstick
- Warning Sign
- Fire Extinguishers
- 175 L Drum Response Kits with lids
- POL resistant gloves

- POL resistant goggles
- Disposable respirators
- dust masks
- Disposal Bags
- Spill Response Boom
- TDS -108 Skimmer
- Pump
- Shovels
- Booms; 10ft.
- Safety approved 2 gallon gas container
- 2" hoses
- 45 gallon drums (no lids) for collection of contaminated materials
- 100 ft. rope
- 4 lb sledge
- Safety hip waders (size 9 and 10)
- Chemical Reference Guidebook

In addition to the above, the camp will maintain a supply of the smaller items such as absorbent pads, shovels, and dust masks which will be available if required.

5.4 Vehicle Survival Kits

Vehicle survival kits will be located in each vehicle during winter, and will contain:

- Blanket / sleeping bag;
- Candles;
- Shovel;
- Mirror or other reflective device;
- Rope;
- Tarp or reflective blanket for shelter;
- Food (freeze dried);
- First aid kit;
- Whistle;
- Container or cup for melting snow; and
- Flashlight.

6.0 EMERGENCY RESPONSE TRAINING

Training is important to the effectiveness of an emergency response plan. For each type of emergency response, it is necessary that employees and primarily ERT members are aware of actions required. Effectiveness of emergency response relies heavily on training and instruction to ensure that all aspects of the plan are communicated, understood and implemented safely and efficiently. This is achieved by comprehensive hazard communication programs including container labelling and other forms of warnings, material safety data sheets, and employee training. Specific training programs will be developed to ensure a thorough understanding of tasks required.

6.1 Training Responsibility

The Contractor will be responsible for ensuring that all training requirements are undertaken for all related emergency preparedness and response.

6.1.1 Employees

Training for each type of emergency response is necessary so that employees know what actions are required. Training will be provided to all employees including contractors, and training sessions will include:

- Types of potential emergencies;
- Emergency response preparedness and capabilities of the ERT;
- Emergency notification procedure;
- Basic emergency response;
- Evacuation procedures;
- Radio and satellite telephone communication;
- Emergency muster areas;
- Workplace Hazardous Materials Information System (WHMIS); and
- Names and contact information of supervisory and emergency response personnel.

Other training provided to employees on as needed basis, includes:

- First Aid; and
- Wildlife Awareness Training.

6.1.2 ERT members

The ERT is the first line of defence in emergencies. Prior to assigning personnel to the ERT, the Contractor will ensure that they are physically capable of performing the duties that may be assigned to them.

ERT members will be trained in the types of possible emergencies and the corresponding emergency actions to be performed. They will be informed about special hazards to which they may be exposed during spills, fire, explosion and other emergencies.

Training for all ERT members and all personnel (ERTC, OSC) responsible for supervising the ERT members includes:

- Use of Material Safety Data Sheets (MSDS);
- WHMIS;
- Transportation of Dangerous Goods (TDG);
- Internal/external communication systems;
- Spill control procedures;
- Response procedure including initial action, cleanup procedures, storage and disposal;
- Available internal/external resources (access and deployment of equipment, Emergency Response Teams, spill cleanup materials);
- Dealing with adverse weather conditions;
- Response organization;
- Use of various types of fire extinguishers and incipient-stage firefighting;
- Personal protective equipment use;
- Use of self-contained breathing apparatus (SCBA); and
- First aid and cardiopulmonary resuscitation (CPR).

Refresher training is provided biannually and emergency response mock exercises will be held for all ERT members at least quarterly. An evaluation of performance is conducted immediately by Contractor management and ERT members. Drills will include groups supplying outside speciality services.

6.1.3 Training Frequency

Employees

Training programs will be provided to employees as follows:

- Initially when the ERP is developed;

- For all new employees;
- When new equipment or materials are introduced;
- When new processes are adopted;
- When procedures have been updated or revised;
- When exercises show that member performance must be improved; and
- At least biannually.

Training and updates will be recorded and individual training will be tracked. Regular drills and mock exercises will be conducted for all personnel, at random intervals at least quarterly, and an evaluation of performance conducted immediately by management and employees. Drills will include groups supplying outside speciality services.

ERT Members

Training programs, are provided to ERT members, as follows:

- Initially when the ERP is developed;
- For all new members;
- Introduction of new equipment or materials;
- Adoption of new processes;
- Procedures have been updated or revised;
- Exercises show that member performance must be improved; and
- At least biannually.

Regular drills and mock evacuations are held for all ERT members, at random intervals at least quarterly, and an evaluation of performance conducted immediately by management and ERT members. Drills will include groups supplying outside speciality services.

7.0 EMERGENCY RESPONSE REPORTING

7.1 Internal Reporting

Upon encountering a failure of a petroleum spill, every employee is responsible for immediately reporting the situation to their supervisor, or if unavailable, report directly to the Construction Manager.

Once the incident has been reported to the supervisor and an assessment has been made, the spill reporting will be handled as an incident by the Construction Manager. Upon proper notification by the personnel, remedial action will commence in accordance with the corresponding response plan.

7.2 External Reporting

Spills above 100 litres need to be reported. Reporting of the spill to the Manitoba Spill Line (204-945-4888) and the ESRA Project Manager, will be carried out by the Construction Manager. The Environmental Manager or designate must complete a Detailed Spill Report no later than 30 days after the initial report of the spill.

7.3 Formal Review

A formal review of accidents/incidents and near misses will be conducted with 24 hours of such events and will be attended by the Contractor, and will include:

- Parties involved;
- Investigation details and findings;
- Incident description;
- Conclusions with root causes; and
- Risk assessment/follow up action.

An “Incident Report” will be completed for all incidents.

8.0 EMERGENCY CONTACTS

8.1 Emergency Services

Table A7-2 identifies the emergency contact numbers for the ASR Project during the design and construction phase of the Project

Table A7 - 2: Emergency Contact Numbers

Phone List (Numbers to be determined prior to construction)

ESRA CEO…… TBD
ESRA Vice President ……TBD
ESRA Project Manager……..TBD

Contractor
Security ……TBD
Construction Manager.....TBD
Health and Safety Manager .....TBD
Environmental Manager.....TBD
Emergency Response Team …….. TBD
Medical Service.....TBD
Maintenance Manager .....TBD

The list will be updated on an as needed basis and kept current by the Health and Safety Manager.

8.2 Emergency Telephone Number List (External)

This section lists the government agencies involved and outlines the types of events that must be reported to these agencies under the direction of the Construction Manager. This list will be updated as the Project advances. Table A7-3 lists the external emergency contact phone numbers in the event of an on-site emergency.

Table A7 - 3: External Emergency Contact Phone Numbers

Spills Response	Contact Number
Manitoba Conservation	(204) 945-4888
Emergency	
Police	(204) 986-6222
Fire	(204) 986-6380
Medevac Service	
Lifeflight operates out of the Government Air Services Hangar T5 located at 900 Ferry Road, Winnipeg. The aircraft is stationed here with the duty flight nurse and pilots on 24 hour standby, 7 days a week.	24-Hour Air Ambulance: (204) 945-8990
Fast Air MedEvac provides 24-hour air ambulance service from bases in Norway House, Thompson and Winnipeg.	24-Hour Air Ambulance: 1.888.982.7245
Perimeter Aviation AeroMed Air Ambulance Services Perimeter operates four medevac bases throughout northern Manitoba including; Thompson, Cross Lake, Gods Lake Narrows, and Island Lake.	1-866-MEDEVAC (633-4822)
Hospitals In Winnipeg	
St Boniface General Hospital - *www.sbgh.mb.ca* -	(204) 233-8563
Winnipeg Health Sciences Centre *www.hsc.mb.ca* - HSC is comprised of Winnipeg General Hospital, Women's Pavilion, Children's Hospital, Manitoba Rehabilitation Hospital, the DA Stewart Centre (Respiratory).	(204) 787-3661