APPENDIX 11:

PIN-D ROSS POINT INTERMEDIATE
DISTANT EARLY WARNING (DEW)
LINE SITE REMEDIATION PROJECT

SITE SPECIFIC HEALTH AND SAFETY PLAN (INCLUDES EMERGENCY RESPONSE PROCEDURES AND A SPILL CONTINGENCY PLAN)

E.GRUBEN'S TRANSPORT LTD.

Ross Point, PIN-D DEW Line Cleanup

Nunavut Settlement Area

SITE SPECIFIC HEALTH AND SAFETY PLAN

February 20, 2011

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EMERGENCY AND REGULATORY CONTACTS

Medical Evacuation via Kugluktuk Health Center		**TEL: 867-982-4531**
Alternate Medical Evacuation contact Air Tindi (Yellowknife)		**TEL: 867-669-8200**
Adlair Aviation		**TEL: 867-983-2569**
Cambridge Bay RCMP	**For Emergencies**	**TEL: 867-983-1111**
	General Enquiries	**TEL: 867-983-0123**
Cambridge Bay Health Center		**TEL: 867- 983-2531**
Kugluktuk RCMP		**TEL: 867-982-0123**
Workers' Safety & Compensation Commission		**TEL: 800-661-0792**
		FAX: 866-277-3677
Northwest Territories/Nunavut Spill Line		**TEL: 867-920-8130**
Environment Canada		**TEL: 867-979-3660**
Government of Nunavut – Environmental Protection		**TEL: 867-975-5907**
Department of Fisheries and Oceans		**TEL: 867-975-8000**
I.N.A.C. - Project Manager (Mark Yetman)		**TEL: 867- 975-4733**
I.N.A.C. – Water Resources (Jim Rogers)		**TEL: 867- 975-4550**
I.N.A.C. – Land Administration (Jeff Mercer)		**TEL: 867- 975-4280**
I.N.A.C. – Manager of Field Operations. (Peter Kusugak)		**TEL: 867- 975-4295**
P.W.G.C. -- Project Manager (Matthew McElwaine)		**TEL: 780-497-3690**
		FAX: 780-497-3842
AECOM. Site Representative ( )		**TEL:**

EMERGENCY CONTACT LIST - EGT MANAGEMENT & STAFF

Tuk Base Camp and Night Security	**TEL: 867-977-7000**
	FAX: 867-977-7040

Superintendent of Operations Doug Saunders	**TEL: 867-977-7017** **CEL: 867-678-0045**
Night Security Cellular Phone	**CEL: 867-678-0045**
Safety/Loss Control Manager Randy G. Hein	**TEL: 867-977-7014** **CEL: 403-638-9636**
Site Safety Rep/Hazmat Foreman ( )	**TEL:**
Site Medic ( ) Exploration Logistics (Delia Ward)	**TEL:** **TEL: 403-291-3184**
Chief Executive Officer/Project Manager Russell Newmark	**TEL: 867-977-7008** **CEL: 867-678-0040**
EGT Inuvik Office	**TEL: 867-777-4975** **FAX: 867-777-4374**

OTHER EMERGENCY RESPONSE CONTACT LIST – OUTSIDE AGENCIES

Paulatuk Health Centre	**TEL: 867-982-4531**
Paulatuk RCMP	**TEL: 867-580-1111**
Kugluktuk RCMP	**TEL: 867-982-0123**
Nunavut Manager of Health and Social Services (Donna Rand)	**TEL: 867-983-4552**
Yellowknife Stanton Territorial Hospital	**TEL: 867-669-4111**
Canadian Coast Guard	**TEL: 867-874-5559**
Inuvik Renewable Resources	**TEL: 867-777-7308** **CEL: 867-777-1185**
Inuvik Hospital	**TEL: 867-777-8000**
Inuvik RCMP	**TEL: 867-777-1111**
Aklak Air Ltd.	**TEL: 867-777-3555**
Canadian Helicopters	**TEL: 867-777-2424**

1.0 INTRODUCTION

1.1 Site Specific Nature of Project

PIN-D, Ross Point, is a former Intermediate Distant Early Warning (DEW) Line radar station constructed in 1957 by the Department of National Defense (DND) and was subsequently abandoned in 1963, at which time responsibility for the site was assumed by Indian and Northern Affairs Canada (INAC). The site is located on the south coast of Victoria Island in Nunavut, at 68o35'N, 111o06'W, on the north shore of Johansen Bay overlooking the Coronation Gulf.

The objectives of the project are to cost effectively and safely clean up and restore the Ross Point PIN-D site while minimizing disturbance to its sensitive ecosystem.

Ross Point PIN-D is located approximately 180 km to the northeast of Kugluktuk, Nunavut. The nearest air charter bases are located in Cambridge Bay, 225 km to the east and Yellowknife, located approximately 700 km to the south. All activities associated with the site, and this project, are subject to the terms of the Nunavut Comprehensive Land Claim Agreement (CLCA).

Because of the remote location and of limited transportation options to and from the site, special provisions are required for emergency situations, including medical emergencies, fire response procedures and oil/fuel spill response procedures.

The arctic eco-system is also particularly sensitive to disturbance. Special provisions must be made to protect the environment on and around the site and to minimize the disturbance made by work related activities.

The Ross Point PIN-D area is also an area frequented by varieties of wildlife. It is an area of grizzly bear activity and possibly some polar bear and home of caribou, wolves and musk-ox. Both the safety of site personnel and the safety and preservation of local wildlife particular to the area must be considered.

Due to the particular features of geography, climate and wildlife sensitivity associated with the Ross Point PIN-D area, we have created this Ross Point PIN-D Site Specific Health and Safety Plan as a supplement to E. Gruben's Transport Ltd. Health, Safety and Environment (HSE) Manual, which applies to all EGT operations. The procedures and policies described within the general EGT Health, Safety and Environment (HSE) Manual will continue to apply if not particularly addressed or modified in this Ross Point PIN-D Site Specific Health and Safety Plan.

The types of work and the nature of the materials to be dealt with at Ross Point PIN-D are considered unusual to most EGT day-to-day operations. The particular hazards associated with them require special attention in this Ross Point PIN-D Site Specific Health and Safety Plan.

Infrastructure remaining at the main site includes a fallen communication tower, powerhouse module train, garage, warehouse foundation, POL pad piping infrastructure and airstrip threshold lights. There is scattered debris located at various sites surrounding the main site area, which includes scrap metal, barrels, wood, tires, metal cylinders, propane tanks and various other items.

The PIN-D site conditions in general are typical of its Arctic coastal surroundings consisting of permafrost barren glacial/gravel topography gradually sloping towards the coastline. The PIN-D site however is located a high rock bluff with a steep localized cliff towards the coast. The most significant physical aspects about the site that impact the performance and schedule for work to complete this project are:

- Barge access is required for mobilization and demobilization of the majority of equipment, materials and offsite disposals. The coastal access in this area is only ice free and accessible by existing barge services from August to later September.
- The onsite work requires snow free, thawed and relatively dry conditions that only exist between late June and late September.
- There is only aircraft access to the site. The airstrips are 1000 and 900 meters long and in good condition. Type of aircraft and access is dependent upon good weather conditions. The closest air charter support bases are located at Cambridge Bay to the east and Kugluktuk to the southwest.
- Mobilization to the site will take place via Northern Transportation Company Limited (NTCL) barge in early to late August of 2011. Contract work will be conducted through the summer of 2011 and 2012. Demobilization from the site will take place in September of 2012

Given these project constraints the work window is limited to summer months with limited transportation options. The desired project completion schedule will be critically dependent upon timely barge mobilization, efficient manpower usage and project execution logistics, timely barge demobilization and normal/favorable weather. It will be important to develop a committed barge schedule with the barge service providers and to maintain ongoing good communication and a working relationship with them. This will also apply to the commitment and relationship with the project resupply air charter company. There are alternate air charter companies to mitigate air supply problems.

The remediation work for the PIN-D site requires the handling and disposal of both non-hazardous and hazardous materials. The work has been designed based upon the remedial guidelines and clean-up criteria of the INAC Abandoned Military Site Remediation Protocol. Any hazardous materials encountered on site will be handled according to regulations stipulated by the Canadian Environmental Protection Act (CEPA), Transportation of Dangerous Goods Act (TDGA) and the Nunavut/NWT Guideline for the General Management of Hazardous Waste as applicable. Most of the remediation materials will be managed and disposed of onsite; however there are certain hazardous materials that will require professional and careful handling, packaging and offsite southern transportation and disposal at licensed hazardous waste facilities.

Construction practices at the time of the initial construction of the site included the use of such materials such as asbestos in insulation, PCB and lead paints, PCBs in transformers and ballasts, and mercury in thermostats, which are materials and practices no longer considered acceptable. Asbestos and the use of PCB paints at Ross Point PIN-D were used as well as lead-based paints and primers, which means some high levels of lead and leachable lead will be encountered.

[A complete list we will encounter of known and suspected hazardous materials on site can be found in Appendix A: Hazardous Material Audit.]

These materials and the precautions and procedures required for safe handling, processing, shipping and disposal which are specific to the work at this site will also be addressed in this Ross Point PIN-D Site Specific Health and Safety Plan.

1.2 EGT Policy and Leadership Philosophy

E. Gruben's Transport Ltd. believes that safety, productivity and quality of services are inextricably linked. To be successful high standards must be achieved in all of these areas.

The key to providing a viable, high quality work environment is to encourage employees to embrace the concept of Accident and Incident Prevention.

We will achieve continued improvement in all aspects of our Safety Program by the following key principles:

- Provide strong commitment from management;
- Provide leadership and complimentary management;
- Provide training and skills upgrading for new and present personnel;
- Set and implement performance standards, which involves everyone;
- Measure our safety, productivity and performance;
- Reward superior performance through the presentation of Safety Awards;
- Emphasize sound recruiting procedures;

Education and awareness of safe work procedures and policies and the implementation and enforcement of these procedures and policies in the control of identified job hazards will enable achievement of the Accident and Incident Prevention goal.

1.3 EGT Policy and Leadership Guiding Principles

E. Gruben's Transport Ltd. will integrate the following principles into all aspects of operations:

- All occupational injuries and illnesses are preventable;
- All work shall be conducted in compliance with applicable laws and regulations;
- Safe work performance and protection of the environment in which we work are fundamental values integrated into our business;
- Operations in the Coronation Gulf. area shall be conducted with emphasis on actively protecting the health and safety of our people and the environment;
- Systems and resources are in place to ensure work is conducted safely;
- All personnel, throughout the company, have a personal responsibility to perform their work safely and to protect the environment;
- Everyone has the obligation to stop work when an unsafe act or condition is identified. Corrective action shall be taken to ensure conditions are safe before resuming plans;
- E. Gruben's Transport Ltd. will participate with industry to develop and implement effective emergency response plans;
- E. Gruben's Transport Ltd. will identify and implement improvement opportunities for the health, safety and environment (HSE) program.

The Guiding Principles will be reviewed as part of employer & contractor orientations, training programs and at regular safety meetings.

A safe and healthy work environment for all our personnel is the first priority on every job and task we undertake. E. Gruben's Transport Ltd. will endeavour to protect the health and safety of all individuals who work on or are affected by our activities while maintaining the highest standards of environmental performance.

E. Gruben's Transport Ltd. is committed to providing active leadership and participating in safety, occupational health, and environmental protection and loss control programs. This commitment will be demonstrated by operating in a manner that avoids or mitigates adverse health, safety and environmental impacts.

E. Gruben's Transport Ltd. will ensure that:

- Our operations will meet or exceed the requirements of relevant occupational health and safety legislation, environmental protection legislation, industry standards and corporate policy.
- All our personnel and others employed on our behalf are informed of the requirements to protect themselves and their fellow workers from injury and occupational illness, to protect the environment, and to protect the reputation and assets of the company and its clients; and that they receive the necessary information, training and equipment, and management support to do so.

- We will determine and evaluate risk factors and mitigate the hazardous conditions and environmental impacts of our operations during planning, implementation and operational phases of our projects.
- All levels of our organization will maintain a rigorous commitment to health, safety and the environment and our operations will be subject to ongoing occupational health and safety evaluations to ensure compliance with this policy.
- E. Gruben’s Transport Ltd. will continue improvement practices with the goal of “Zero Accident” performance.

2.0 HAZARD IDENTIFICATION & RISK CONTROL

Hazard identification comes from four basic sources:

- Workers' identification of workplace hazards ("Hazard I.D.'s").
- Observation of worker behaviour at the worksite.
- Observation of work site physical conditions.
- Inspections

2.1 Hazard Identification Reports ("Hazard ID's")

Hazard Identification reports are used to alert site supervisors to any hazardous conditions or unsafe work procedures found by workers and others on the site. The value of observation and involvement of workers in the field cannot be over-emphasized in the identification of hazards. Placing some of the onus for hazard identification on the workers most closely involved helps give participants a sense of ownership and buy-in to the entire HSE program.

Hazard Identification reports fill in the gaps between regular company inspections and help enable supervisors and workers to provide a safer worksite. Hazard I.D's allow greater participation of the workers in their own safety as well as enabling them to easily bring to the attention of supervisors unsafe conditions or practices which have been overlooked through the inspection process.

Employees, contractors & subcontractors are to notify the appropriate supervisor of any hazard observed on the company worksite. Hazard I.D. Reports can be given verbally or in writing. EGT has developed simple Hazard/Near Miss Reports for this purpose.

After assessing the hazards, every effort should be taken to eliminate the hazard. In the event the hazard cannot be eliminated, all potentially affected personnel must be informed of the hazard and the hazard must be immediately marked with any of the following hazard indicators, which is appropriate under the circumstances:

- Danger Sign
- Flags
- Lights
- Alarms
- Barricades
- Fences
- Labels
- Placards

Identified hazards are documented on an "Action Plan to Correct an Identified Hazard" form.

The form outlines the following:

- Date & location of identified hazard (s).
- Description of the hazard (s).
- Name of hazard reporter.
- Corrective action taken and by whom.
- Date to be completed and/or completion date.
- Signed off by: Supervisor, Safety Supervisor and/or Senior Administration.

When a hazard is identified:

- Specify who is responsible to correct the identified hazard.
- Set a deadline date for the hazard correction.
- Complete the E. Gruben's Transport Ltd. form, "Action Plan to Correct an Identified Hazard" and forward to appropriate supervisor.

2.2 Observation of Worker Behaviour

The observation of worker behaviour is a significant aspect of the responsibility of all supervisors (see section 2.4.2 below for a more detailed discussion of supervisor's observation of workers). Peer observation and mentoring are also useful and beneficial means of monitoring the behaviour of workers, especially of workers new to a job or a task.

2.3 Observation of Work Site Physical Conditions

Management, supervisors and all field personnel are expected to observe the work site for hazards which may exist or which may appear. The different perspectives which individual personnel will have of a work site are valuable in the identification of hazards. In particular, they are the clear responsibility of all work site supervisors.

2.4 Inspections

Management is responsible for taking regular tours and inspections of company worksites and reviewing all general health, safety and environmental company responsibilities. Regular inspections will be ongoing; however formal inspections will be conducted monthly or at least once per job, whichever is greater. Upon completion of regular tours and inspections, management will construct a list of specific health, safety and environmental improvements to enhance our goal of excellence in health, safety and environmental performance.

Planned health, safety and environmental inspections are a key management tool that significantly contributes to preventing loss producing incidents. They also provide an opportunity for employees to participate in inspecting their own work area. There are many examples of possible inspection formats, and each of them has a specific purpose.

The intent of any inspection is to identify and correct actual or potential hazards and ensure continued compliance with regulations and company health and safety standards.

Inspections can include:

- Determining if there are deficiencies in tools, equipment, and process controls (for example, dikes, spill containment, storage tank alarms etc.);
- Monitoring the progress of previously identified recommendations;
- Monitoring and correcting unsafe and environmentally damaging conditions;
- Monitoring and correcting unsafe actions of people;
- Determining actual or potential hazards arising from installing or modifying a facility and associated equipment;
- Demonstrating management's commitment to the community's safety and welfare, and to the protection of the environment;
- Identifying health hazards and industrial hygiene concerns; and
- Taking the opportunity to recognize and reinforce positive behaviours.

Inspections enable personnel to help ensure that company safety standards & regulatory requirements are being followed. Inspections enable personnel to identify hazards before they become a problem. The end result of regular inspections will be a list of hazards, potential hazards and corrective measures for these hazards.

Hazard corrections will be documented and will include:

- Corrective measures taken.
- Name of person assigned to correct hazard.
- Deadline date for correction.
- Date correction was completed.

Types of Company Inspections

- Management and Supervisor worksite/jobsite tours.
- Worker observation (At-risk behaviour inspection).
- Work site (Physical conditions inspection).
- Equipment and vehicle inspections.
- Engineering safety inspections involving Engineering Controls:
- Eliminating hazards/enclosing hazards.
- Isolating workers from hazards.
- Reducing transmission of hazards to workers.

2.4.1 General Worksite Inspections

These will include all field and office work sites, yards, mechanical shops, work camps and company recreation areas such as lounges and dining halls.

The frequency of inspections will be scheduled in relation to the category of hazards at the sites and the potential danger of the work and worksite environment.

Work site inspections should assess the following:

- Physical layout and conditions of the site (including location, terrain, season and weather).
- Hazards of materials handled.
- Conditions of equipment and tools used.
- Work practises and behaviour of people at the site. (Including employees, contractors, sub-contractors, visitors and clients).
- The level and quality of supervision given to workers.

Examples of physical hazards, including worksite equipment and materials, which are to be inspected include:

- Slipping and tripping hazards
- Presence of dangerous gases
- Faulty or missing emergency equipment
- Improper or missing signs
- Faulty machinery, cables, tie-downs etc.
- Poor housekeeping
- Confined spaces
- Inadequate or missing PPE
- Blocked exits
- Overhead hazards
- Electrical hazards
- Difficult terrain for vehicular or personal movement
- Flammable, corrosive or explosive materials
- Missing material safety data sheets (MSDS)

2.4.2 Work Practices - Worker Knowledge & Behaviour to Inspect

Employees will be observed and questioned where applicable to ensure that they:

- Know and follow safe work procedures;
- Properly use tools and equipment;
- Correctly use PPE and other safety equipment;
- Are adequately trained to perform their work properly;
- Know emergency response procedures;
- Are competent to supervise and direct workers under their care;

In the event that unsafe work practices and unsafe work sites are encountered, work should be stopped immediately until the problems can be rectified, whether through further instruction, better procedures, or improved engineering controls. Work will be stopped:

- For unsafe behaviour.
- For unsafe work practices.

- For unsafe worksite conditions.

Individual personnel and work groups should also be rewarded by management for safe worker and worksite practices.

2.4.3 Equipment & Vehicle "Walk-Around" – Pre-Trip Inspections

- Daily pre-trip equipment and vehicle walk-around inspections are to be done prior to commencing daily work duties to monitor any wear and tear.
- If there is more than one operator, one will be assigned who will be responsible for equipment and vehicle walk-around inspection.
- Critical checks would include fluid levels, belts, hoses and electrical connections.
- Required emergency survival gear will be checked

2.4.4 Company Inspection Checklist

- Standard checklist will ensure nothing is missed.
- Checklists provide a detailed record of the inspection findings.
- Checklists provide a detailed record of corrective measures needed.
- Include monthly inspections of shop and yard.
- On-going inspections of work practices and work site conditions.

2.4.5 Government Inspections

- Inspect to ensure company meets Regulatory Requirements.
- These inspections may assess records, plans, policies, equipment and/or work procedures.
- The inspectors may interview anyone on the work site.
- They have the right to remove any item from the work site they need to inspect further.
- Anyone on site at the time of the inspection must co-operate with the inspector.
- Stop work orders can be given in any situation which might pose an immediate danger to people or the environment..
- Lesser violations will attract orders to correct the violations or deficiencies.

2.4.6 Inspection and Maintenance of Mobile Equipment

The majority of work that E. Gruben's Transport Ltd. performs involves the use of heavy mobile equipment. It is therefore extremely important that specific attention is paid to the inspection and maintenance of this equipment. The quality and performance of mobile equipment is directly proportionate to the soundness and sustainability of the Shop Preventative Maintenance Program.

E. Gruben's Transport Ltd. management has made improved inspection and maintenance of heavy and mobile equipment a company priority. Modern maintenance facilities, experienced personnel and appropriate equipment for the job are available. In order for

the shop to provide quality, timely support to the equipment fleet, E. Gruben's Transport Ltd. shops are open for business 12 hours/day, 7 day/week in the summer and 24 hour/day, 7 days/week during winter operations.

A senior Shop/Field Supervisor is responsible for selecting proper equipment for projects when ordering new equipment. The senior Shop/Field Supervisor works in concert with the Superintendent of Operations and the C.E.O. of E. Gruben's Transport Ltd. when purchasing new equipment. The right equipment for the job is of paramount importance in attaining continual improvement in performance at the worksite.

Driver Inspections: Drivers are required to do a "Walk-Around" inspection of their vehicles prior to commencing their daily operations. If repairs are required at any time the driver will complete a "Cry Sheet" which lists the problems and repair requirements. Drivers are requested to report deficiencies immediately to the Shop Foreman to prevent serious and time-consuming repairs, which could have safety implications. Well documented and timely "Cry Sheets" make projects more cost effective and inefficient.

2.5 First Time Purchasing Of Hazardous Products

The following steps will be taken:

- Supervisor will contact the safety supervisor and request a MSDS evaluation of new product;
- Safety Supervisor will obtain a MSDS Sheet for the new product;
- A Hazard Assessment will be performed for the new product using the MSDS Sheet and other applicable information;
- A decision will be made to purchase or not purchase the product.

3.0 RULES AND SAFE WORK PROCEDURES

3.1 Process for Developing Standard Work Procedures

1. List all jobs on all the work sites.
2. Create a list of critical jobs.
3. Assess the jobs and list in order of risk.
4. Break high-risk jobs into steps.
5. Determine hazard controls for each step.
6. Describe regulatory requirements.
7. Test procedures in the field.
8. Finalize the written procedures.
9. Train workers to follow the procedures.

1. List all jobs at the worksites.

2. Create a list of critical jobs in which any of the following might occur:

- Serious injuries
- Frequent injuries
- Severe property damage
- Significant interruptions to production
- Public liability
- Government intervention

3. List the jobs in order by the degree of hazards they present and the frequency with which they are performed.

4. Break high risk jobs into steps.

Analyze each job by observing and interviewing workers. Record the following information:

- Job name and location
- Each step of the job and its hazards
- Roles of each worker involved
- Special equipment required
- Applicable regulatory requirements

5. Determine measures needed to control job hazards, such as:

- Engineering controls to eliminate hazards
- Workers training
- Personal protective and safety equipment
- Hazard markings
- Safety meetings

If engineering controls or worker training can be used to permanently or reduce the impact of hazards, implement them.

Prepare the standard health, safety and environmental work procedure by listing the steps of the job, in the order in which they will occur, and the control measures required for each step (excluding one-time measures such as engineering controls and training).

Also describe:

- Regulatory requirements
- Special equipment required
- Specific training requirements for workers (e.g., BOP Level I or journeyman electrician)

6. Test the health, safety and environmental procedure in the field to ensure it:

Is accurate

- Meets regulatory requirements
- Is understandable to workers

7. Finalize the written health, safety and environmental procedures and place it at appropriate worksites.

8. Train workers to follow the health, safety and environmental procedures.

3.2 Enforcement

E. Gruben's Transport Ltd. will hold employees accountable for adherence to all rules, practices and procedures. Supervisors will promote and enforce rules and safe work practices.

Employees must be aware of penalties and the increasing consequences for their actions.

At E. Gruben's Transport Ltd. a progressive discipline system is in place for general disciplinary cases and may be used in the following format in regard to disciplinary action:

First Offence: A verbal warning that is accompanied by a dialogue between the employee and the supervisor shall be given. The supervisor will explain the reason for the warning and how the employee must act or perform in the future. The warning will be recorded so that a record of it exists in the employee's personnel file.

Second Offence: A written warning shall be given. The supervisor will review the facts with the employee as well as the previous warning. They will agree on a resolution to the problem before the employee returns back to work. The supervisor will follow up with a memo to the employee and a submission to his/her file.

Third Offence: A suspension of the employee (with or without pay) shall be given. The supervisor will be firm in asking the employee about their wishes for further employment in the company. The time off will give the employee a chance to consider their actions as well as their intentions for the future.

Fourth Offence: No further warnings – immediate dismissal.

E. Gruben's Transport Ltd. reserves the right to depart from all or a portion of this format in the event that E. Gruben's Transport Ltd. deems it necessary, due to unique circumstances involved in the disciplinary case.-Particularly flagrant offences may be dealt with more severely, such as the consumption and/or possession of alcohol or non-prescription drugs, which are strictly forbidden in the camp or on E. Gruben's Transport Ltd. property. A zero tolerance policy is in effect regarding these items and failure to comply may result in immediate removal from the camp.

3.3 General Safety Rules

Safety rules are established to communicate clear expectations for proper workplace behaviours. Safety rules are written to protect all employees and visitors from known hazards and to ensure E. Gruben's Transport Ltd. meets regulatory requirements.

To comply with regulatory requirements E. Gruben's Transport Ltd. safety rules must meet or exceed Legislated Standards that apply to all work undertaken by E. Gruben's Transport Ltd.

3.3.1 Communicating Safety Rules

To ensure everyone on the work site knows and understands the safety rules, they must be communicated in a variety of methods and in an on-going fashion.

Ways to Communicate:

- Provide all new and returning employees with worker orientations.
- Make copies of EGT Health, Safety & Environmental Safety Manual available and easily accessible for employee reference.
- Post the safety rules in areas of where staff use frequently.
- Review safety rules at regular safety meetings, management meetings and orientations.
- Distribute copies of the safety rules.
- Discuss safety rules during on-the-job training programs.
- Refer to appropriate safety rules at pre-job meetings.

3.3.2 Reinforcing Safety Rules:

- Workers at-risk behaviour observation will be conducted by supervisors and peers through inspections at worksites. Immediate correction and documentation of the at-risk behaviour correction are vital.

3.4 Legislative Compliance

Safety legislation is designed to protect workers, the public and the environment. Compliance with legislation helps prevent personal injuries, fines and legal actions. E. Gruben's Transport Ltd. will comply with regulatory requirements as a minimum standard for our safety program. Regulatory requirements include all Acts, Regulations, Policies, Practices and Procedures administered by Government and their Agencies. Medical compliance for the wearing and use of respirators will be enforced as per (CSA Z94-04) when applicable.

Relevant Legislation:

A large range of regulatory agencies cover work undertaken by E. Gruben's Transport Ltd. The following list of regulatory agencies represents some of the more prominent legislation whose regulations govern our work:

NWT/NU Environmental Protection Act
Explosives Act
NWT/NU Mines Safety Act
NWT/NU Occupational Health & Safety Act
NWT/NU Workers Compensation Act
Transportation of Dangerous Goods Act
WHMIS Legislation
National Energy Board
Canada Labor Code
Building Code of Canada
Canadian Electrical Code
National Fire Code of Canada

E. Gruben's Transport Ltd., by reason of its geographical location, falls under the statutes of the Northwest Territories/Nunavut Workers Compensation Board, Canada Labor Code Part 2, Oil & Gas Occupational Safety & Health Regulations. The Canada Labor Code, Oil and Gas Occupational Safety & Health Regulations utilize the National Energy Board as its enforcement arm.

The Northwest Territories/Nunavut Workers' Compensation Board Safety Act exercises jurisdiction on Safety Regulations which do not fall under the Canada Labor Code.

3.4.1 Canada Labour Code Regulations

Regulations Respecting Occupational Safety & Health Made Under Part II of the Canada Labour Code

A summary of some specific duties of employers as they relate to E. Gruben's Transport Ltd.

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125 (d) post the Canada Labour Code – Part II – June 1998, at a place accessible to every employee and at every place directed by a Safety Officer.
(i) a copy of this Part,
(ii) a statement of the employer's general policy concerning the safety and health at work of employee's
(e) Keep and maintain in prescribed form and manner, prescribed safety and health records;
(i) ensure that the vehicle and mobile equipment used by the employees in the course of their employment meet prescribed safety standards
(j) provide every person granted access to the work place by the employer with such safety materials, equipment, devices and clothing as are prescribed;
(o) comply with such standards as are prescribed relating to the fire safety and emergency measures;
(p) ensure, in the manner prescribed that employees have safe entry to, exit from and occupancy of the work place;
(q) provide, in the prescribed manner, each employee with the information, instruction, training and supervision necessary to ensure the safety and health at work of that employee;
(s) ensure that each employee is made aware of every known or foreseeable safety or health hazard in the area where that employee works;
(t) ensure that the machinery, equipment and tools used by the employees in the course of their employment meet prescribed safety standards and are safe under all conditions of their intended use;
(u) adopt and implement prescribed safety codes and safety standards
(v) ensure that every person granted access to the work place by the employer is familiar with and uses in the prescribed circumstances and manner, all prescribed safety materials, equipment, devices and clothing; and
(w) comply with every oral or written direction given to the employer by a Safety Officer concerning the safety and health of employees.

125.1 (e) subject to the Hazardous Material Information Review Act, make available, in the manner prescribed, to each of the employees, a material safety data sheet with respect to each controlled product in the work place

126.1 While at Work, every employee shall:
(a) use each safety material, equipment, devices and clothing as are intended for the employee's protection and furnished to the employee by the employer or as prescribed;
(b) follow prescribed procedures with respect to the safety and health of employees;
(c) take all reasonable and necessary precautions to ensure the safety and health of the employee, the other employees and any person likely to be affected by the employee's act or omissions;
(d) comply with all instructions from the employer concerning the safety and health of employees;
(e) cooperate with any person exercising a duty imposed by the Part or any regulations made there under;
(f) cooperate with safety and health committee established for the work place where the employee is employed or, if there is not such committee, with the health and safety representative, if any, appointed for that work place;
(g) report to the employer an thing or circumstance in work place that is likely to be hazardous to the safety or health of the employee, the other employees or other person granted access to the work place by the employer;

(h) report in the manner prescribed every accident or other occurrence arising in the course of or in connection with the employee's work that has caused injury to the employee or to any other person; and
(i) comply with every oral or written direction of a Safety Officer concerning the safety and health of employees.

127.1 Subject to Subsection (2), where an employee is killed or seriously injured in a work place, no person shall, unless authorized to do so by a Safety Officer, remove or in any way interfere with or disturb any wreckage, article or thing related to the incident except to the extent necessary to;

(a) save a life, prevent injury or relieve human suffering in the vicinity;
(b) maintain an essential public service; or
(c) prevent unnecessary damage to or loss of property.

REFUSAL TO WORK IF DANGER

128.1 Subject to this section, where an employee while at work has reasonable cause to believe that:

(a) the use or operation of a machine or thing constitutes a danger to the employee or to another employee; or
(b) a condition exists in any place that constitutes a danger to the employee, the employee may refuse to use or operate the machine or thing or to work in that place

For other questions not covered specifically in the above Employer's Duties, please refer to the document Canada Labour Code – Part II – June 1998. A copy of the Canada Labour Code, Part II will be posted and accessible to all staff on EGT sites.

3.4.2 The Three Workplace Rights

The Right to Refuse
All employees have the legal right to know about the hazards of their workplace. As an employer, EGT has a legal obligation to fully train their employees in all of the hazards of the job those same employees are expected to perform and how to avoid those same risks from having an adverse effect on them.
In all Canadian provinces, territories and in the federal jurisdiction, workers are protected by the Workplace Hazardous Materials Information System.
This WHMIS law requires your employer to:
• Label containers of hazardous materials;
• Provide Material Safety Data Sheets (MSDSs) with additional information;
• Provide education and training so that you will understand

The Right to Know
As an employee of EGT you have the right to be part of the safety process and where applicable, be represented and have full participation on the joint (worker/management) health and safety committee. Any representative on a Health and Safety Committee will participate and assist in formulating the direction of the safety process at EGT.

The Right to Participate
All employees of EGT have the right, and in some provinces the obligation to refuse what is deemed to be hazardous work. When an employee refuses work which they believe is

likely to endanger them, they must immediately report the problem to their supervisor, who in turn must report it immediately to their respective regional safety office. Under no circumstances will that specific work continue until a solution to the problem has been put into place. The worker who originally refused to perform the work can be placed in another work situation until the original situation has been rectified. The worker who originally refused to perform the work cannot be replaced by another worker.

3.5 General Safety Rules

The safety rules listed below are applicable to all personnel. Compliance with these basic rules is mandatory and in the best interest of all personnel:

- Adhere to maximum allowable work hours and rest period as per legislated requirements. Exemptions to requirements must have prior regulatory approval, through obtaining extended hour work permits.
- Use or being under the influence of alcohol or illegal drugs, while on the job, is strictly prohibited.
- Workers taking prescribed medication, which may impair their ability to work, shall not engage in any work activity that may endanger the health and/or safety of themselves or other co-workers and employee's.
- Workers shall advise their immediate supervisor when using prescription medication.
- Smoking is prohibited in all workplaces, except in designated smoking areas. Matches, lighters, cell phones and pagers are prohibited in some work areas.
- Beards or excess facial hair are not permitted on any workers who may be required to wear respiratory equipment, which requires a seal to the face.
- Workers shall not work around moving machinery if they are wearing loose clothing or jewellery, or have long hair, which is not contained.
- Workers shall not engage in practical jokes, horseplay, boisterous conduct, and/or un-necessary running in a work area.
- Firearms are prohibited on company premises except for authorized wildlife monitors. All existing gun laws must be followed.
- Flammable and combustible materials must be stored appropriately and at safe distances from sources of ignition.
- All inside door handles for the entrance of cooler and freezer doors shall be free of defects and open freely.
- Gas lines from propane tanks shall be protected to prevent damage from vehicles or equipment driving over the lines.
- Electrical cords from light plants or cords used for plugging in vehicles and equipment must be protected to prevent damage to the lines.
- Personnel shall be provided with appropriate means of communication as determined by risk assessment.
- Stairs with more than three steps must be provided with handrails.
- Catering service providers shall have printed procedures for safe food handling. Kitchen staff shall familiarize themselves with all employee health and safety procedures that immediately effective them on a day-to-day basis.

- Smoking in the workplace is prohibited by law. Certain exemptions exist for remote work camps. See section 3.11, Smoking in the Workplace, for further details.

3.6 Personal Protective Equipment (PPE)

All employees will have access to PPE and E. Gruben's Transport Ltd. will comply with the Northwest Territories Safety Act S.N.W.T. 1996, c.9 4 (b); wherein, "Every employer shall take all reasonable techniques and procedures to ensure the Health and Safety of every person in his or her establishment".

In addition E. Gruben's Transport Ltd. will, as a condition of employment, require every worker employed with or in connection with E. Gruben's Transport Ltd. to abide by the Northwest Territories Safety Act S.N.W.T. 1996, c.9 5 (b) which states, "every worker employed on or in connection with an establishment shall, in the course of his or her employment, as the circumstances require, use devices and articles of clothing or equipment that are intended for his or her protection and provided to the worker by his or her employer, or required pursuant to the Regulations to be used or worn by the worker."

Workers have the shared responsibility of protecting themselves, and wearing the necessary PPE for the work they are doing.

3.6.1 General PPE Rules

Elimination, substitution, engineering, work practice and administration controls are the preferred means of reducing or controlling hazards which may endanger the health and safety of workers. Residual risks require the use of PPE following the rules listed below:

- Workers shall be responsible for the proper care, maintenance, cleaning and use of PPE that is assigned or loaned to them;
- Supervisors are responsible for ensuring that workers are adequately trained in the proper use and care of, and responsibilities for the PPE;
- Workers shall not use PPE that is defective or unsafe;
- Such articles shall be taken out of service and reported to the supervisor and replaced immediately.
- Visitors to operating areas of work sites will be required to wear all applicable PPE that is required for the work site.

3.6.2 Head Protection

CSA approved hard hats shall be worn by all personnel while engaged in activities where a risk of injury to the head may exist. In addition:

- A hard hat shall never be worn without a properly adjusted suspension;
- Metal hard hats are not permitted due to electrical conductivity and inferior impact resistance to sharp objects; and,
- Off-road helmets must be worn when operating quads and snowmobiles.

Workers have the shared responsibility of protecting themselves, and wearing the necessary PPE for the work they are doing.

3.6.3 Foot Protection

CSA approved safety-toed boots shall be worn by all workers while engaged in activities where a risk of injury to the feet exists. Also note:

- There may be additional requirements for wet, slippery and winter conditions; and,
- Running shoe style safety footwear is not acceptable.

3.6.4 Eye & Face Protection

All employees while engaged in activities where a risk of injury to the eyes or face may exist shall wear CSA approved eye and face protection. Eye and face protection also means:

- Face shields shall be worn in addition to eye protection while using grinding, buffing or striking tools.
- Face shields shall be made available whenever they may be required;
- Goggles shall be worn when handling liquid or powder chemicals where there is a risk of splash hazard;
- In some situations, a face shield shall be used in conjunction with the goggles for additional eye and face protection; and,
- Face shields and goggles shall be provided as required.

3.6.5 Hearing Protection

All work areas where noise levels exceed 85dBA shall be identified by the display of appropriate signs indicating the high noise area and ***"Hearing Protection required".*** Additional hearing protection includes:

- All workers entering or working in areas that are marked as high noise areas shall wear CSA approved hearing protection devices;
- Supplied hearing protection devices may be either of the plug or muff design and shall be supplied.

3.6.6 Limb & Body Protection

All workers shall wear suitable clothing for the existing conditions and the work being performed. This means:

- Where a potential fire and explosion hazard exists, Fire Retardant Clothing (FRC) shall be worn;
- Approved cold weather clothing shall be worn by all personnel working in the Coronation Gulf or while being transported via air transport;
- A luminous vest or reflective tape on front or back of outer garments shall be worn; and,

- Workers shall wear appropriate gloves or mitts to protect their hands from workplace hazards.

3.6.7 Respiratory Protection

All workers working in hazardous environments will be provided with adequate and appropriate respiratory protection for the types of hazards they may encounter at Ross Point PIN-D. These workers will be trained in the use and maintenance of and will be fit-tested. This will include the following.

- Supplied air respirators for internal tank cleaning crews
- Half-mask, full-face mask and powered full-face respirators with HEPA, HEPA/OV and HEPA/general industrial filters for asbestos abatement work as is appropriate for the level of abatement.
- Half-mask respirators with OV filters for boxing of hydrocarbon soils, as deemed required by conditions
- Half-mask respirators for PAP packaging

Further details training and use of respirators can be found in task specific sections below.

3.7 Harassment Policy

Harassment

E. Gruben's Transport Ltd. commitment to providing a safe workplace also includes a commitment to provide a safe and respectful atmosphere where harassment or threats of violence are not tolerated. Disciplinary action may result for anyone who harasses another person, or for any personnel who fail to act properly to end harassment.

No person, whether a manager, supervisor, employee, contractor, or a member of the public, shall tolerate harassment for any reason, at any time. Likewise, no person has the right to harass anyone else at work or in any situation related to employment.

"Harassment" may be defined as any repetitive or occasional conduct, comment, gesture or contact that is directed toward an individual or group that is insulting, intimidating, humiliating, malicious, degrading or offensive, or is of a nature that, on reasonable grounds, could be perceived as placing a condition of a sexual or other nature on employment or on any opportunity for training or promotion.

Harassment is against the law. The *Canadian Human Rights Ac*t and the *Canadian Labor Code* protect workers from harassment. The *Criminal Code* protects workers from physical and sexual assault. All workers have the right to live and work without being harassed.

Filing a Complaint

Every employee of E. Gruben's Transport Ltd. is entitled to employment free of harassment, and we will make every reasonable effort to ensure that no employee is subjected to it. An employee who feels that he/she is a victim of harassment should take the following actions:

- Report the complaint to his/her immediate supervisor. If circumstances do not permit this, the complaint may be brought to the next level of administration;
- Maintain a written record of all relevant details including
    - The name of the harasser;
    - Date(s), time(s) and location(s) of harassment incidents(s);
    - Description of harassing behavior; and
    - The physical, social and/or emotional effects caused by the harassing behavior.

Under the *Fair Practices Act* (NWT and Nunavut), an employer cannot fire or otherwise penalize an employee for filing a complaint about harassment or discrimination at work. Employees are also entitled to make a complaint under the *Human Rights Act*.

Addressing a Complaint

Upon receipt of a harassment complaint, E. Gruben's Transport Ltd. will:

- Conduct an investigation by questioning the:
    - complainant,
    - named aggressor(s), and
    - witnesses;
- Maintain confidentiality with respect to the complainant and the circumstances related to the complaint except where disclosure is necessary for the purposes of investigating the complaint or taking disciplinary action;
- Treat all complaints of harassment seriously, whether they are made formally or informally, and act on all complaints quickly, confidentially and fairly;
- Take disciplinary action against any person under the organization's direction who subjects any employee to harassment, up to and including dismissal; and
- Discipline any personnel who knowingly allow harassment of a co-worker to persist.

Workplace Violence

All workers have the right to work in an environment that is protected from violence or the threat of violence, from workers or non-workers. Violent behavior, fighting and/or disregard for other persons and their property will result in permanent removal of involved workers.

"Violence" is the attempted, threatened or actual exercise by a person of any physical force so as to cause injury to a worker, and includes any threatening statement or

behavior which gives a worker reasonable cause to believe that the worker is at risk of personal injury.

Threats of violence will be handled in the same manner as any other workplace harassment. Criminal proceedings may be used if it is felt that the risk to any worker warrants it.

3.8 Camp Rules

The consumption and/or possession of alcohol or non-prescription drugs are strictly forbidden in the camp or on E. Gruben's Transport Ltd. property. A zero tolerance policy is in effect regarding these items and failure to comply may result in immediate removal from the camp.

All personnel should familiarize themselves with the camp layout and the facilities available, and familiarize themselves with the emergency exits. Camp Fire Procedures and Exit Routes are posted in each room. A Muster Area will be designated for emergency situations.

Do not tamper with the fire/smoke alarms and do not use the fire exits except in the case of an emergency. Exits and fire extinguishers at exits should not be cluttered or covered.

Smoking is permitted only in the "smoking shack" adjacent to the main camp building or other place designated by the Site Supervisor and DR. The smoking area will be well ventilated and not located in an area that will not expose non-smokers to cigarette smoke. Otherwise, smoking is strictly prohibited in the rest of the camp. Candles or any other devices that generate open flame are prohibited within the camp.

Tap water in this camp is NOT considered potable until confirmed by lab testing. Bottled potable water is found in the kitchen and recreation rooms. Try to minimize water use.

E. Gruben's Transport Ltd. is not responsible for personal belongings. Please take time to ensure that your personal items are secure. Insuring personal belongings is the responsibility of each individual.

Coveralls, hard hats, work boots and other work clothing are to be left in the mudroom. Hats may not be worn in the dining room. Bare feet are not permitted outside of the bedrooms and bathrooms.

Please use courtesy and common sense in regards to levels of activity and noise in the camp at all times. Some personnel may work different shift hours than others.

Please do laundry after shift or after confirming camp personnel do not need use of the machines.

Keep rooms and camp tidy. Return plates and cutlery to the kitchen. The camp staff is onsite to clean the facilities not to tidy other peoples' messes.

Prepared snacks and drinks are available in the kitchen in the evenings. Except for catering staff, cooking is prohibited.

No hunting or fishing is allowed at this site. No-one except wildlife monitors may possess firearms. Wildlife monitors will be trained in firearms and wildlife deterrent use. Wildlife Monitors will be required to have a valid Firearm Certificate, transport, handle and store their firearms as per the regulations of the AHJ.

There is no recreational use of ATVs.

3.9 Small Vehicle Policy

E. Gruben's Transport will provide safe, fully-functioning small vehicles of the best quality that can reasonably be purchased. These vehicles will be used to carry out the company's business and to enhance the public and customer image of the company.

Vehicles will be equipped with the following:

- Two-way radio with, at minimum, company local repeater channels.
- First Aid Kit
- Fire-extinguisher
- Reflective triangles/flare kit
- Rotating beacon
- Buggy whips
- Spare tire, jack and wheel wrench

E. Gruben's Transport Ltd. small vehicles will be operated in the following fashion:

- All personnel will have the appropriate license required to operate the vehicles.
- Vehicles will be operated in accordance with the Territorial or Provincial Highway Traffic Act.
- All occupants of EGT small vehicles must wear seatbelts at all times.
- EGT vehicles will not be driven in excess of posted speed limits. Road and traffic conditions may dictate lower maximum allowable speeds.
- EGT vehicles must be maintained in clean condition.
- All personnel are responsible for conducting maintenance checks of fuel, all fluids and tire pressure, and for ensuring that required safety/emergency equipment is present prior to departure.
- All operators are to conduct a thorough walk-around of vehicles prior to departure. Windows and mirrors are to be kept clean and free of obstruction.

3.10 ATV Policy

ATV use will be limited to contract specific work at Ross Point, PIN-D. There will be no after-hours or recreational use of ATV's.

CSA approved helmets must be used at all times when operating ATV's.

No passengers will be allowed to ride on ATV's unless the ATV is designed for passengers. No passengers will be allowed to ride in ATV trailers.

ATV's must be operated safely at all times and driven at appropriate speeds especially in the camp and congested areas.

3.11 Smoking in the Workplace

Legislation prohibits the smoking of tobacco in the workplace. The *Environmental Tobacco Smoke Worksite Regulation* now deals with controlling the smoking of tobacco products in the workplace.

Smoking is prohibited in the workplace. This includes our offices, shops and warehouses, and most of our camp residences.

Smoking is prohibited within 30 meters of any fuel storage or fuel transfer facilities. Smoking can only take place outside of contained work areas, and must take place more than 3 meters (10 feet) from any entrance.

Companies can be fined $5,000 dollars for violating this law and individuals can be fined $500.

We will be providing one "smoking shack" in a separate well ventilated building adjacent to the main camp complex or other place designated by the Site Supervisor and DR for our workers at Ross Point PIN-D.

When in doubt, don't smoke!

3.12 Emergency Response - General Practices

Maintain a Disciplined Approach To An Emergency Situation.
The way in which an emergency is handled can have a great effect on the outcome. When an emergency is encountered, confusion can be the worst enemy. All emergencies must be dealt with in a disciplined manner. At Ross Point, PIN-D, the site superintendent will be advised immediately by radio or other means of communication and will assume command of all emergency situations, supported by the foreman, crew leaders and the onsite EMT medic. All incidents will be reported to the Safety Manager and or the Operations Manager, who will give direction related to investigations and provide support and advice as required. A first aid station will be established in the main camp area; all workers will be made aware of its location during the Site Orientation Seminar and suitably equipped for a medic working at the EMT level.

A disciplined approach to an emergency situation includes the following steps:

Protect yourself by retreating to a safe area.
The most important point to remember when responding to an emergency situation is ensuring your own personal safety first. If you are hurt or incapacitated while responding to an emergency, you are not only escalating the problem but you will no longer be able to take corrective action to address the emergency.

Depending on the nature of the emergency, you may need to evacuate the area, put on personal protective equipment or seek any other appropriate means of self-preservation.

Sound the alarm and call for help.
Ensure that other personnel have a clear picture of the emergency:
What happened?
Where;
When;
Known injuries; and,
Present status.

Always be sure that the information that you have provided has been understood.
Ask for the information to be repeated to ensure it is accurate.

Isolate the emergency area.

Establish who is in command.
If you are not alone, someone must take command of the emergency. The most senior person on site or the most experienced worker is usually the best person to assume command. Be clear and communicate who is in charge. Decisions must be calculated and concise. Orders must be clear and understood.

Assess the situation for hazards.
In an emergency, there can be many variables that pose a threat to safety. An assessment of the situation must be undertaken to identify further potential hazards to personnel and to the public.

Establish a plan of attack, including a determination of people and requirements.
The plan should include consideration for the following:

- Capabilities of responders;
- Safety of responders/rescuers;
- Safety of the public;
- Access of the public;
- Hazards involved and how to eliminate or deal with them;
- Timelines (i.e. consequences of waiting vs. not);
- Availability of resources;
- Personal protective equipment;

- First aid and other medical emergency equipment;
- Firefighting equipment;
- Vehicles for transportation or response to the incident;
- Roadblock kits, barricades and appropriate signage; and,
- Communication equipment including ground-to-air frequencies.

Contain or control of the threat.
Implement the plan of attack plan to contain or control the threat. Worker response actions will default to their training.

Decontaminate, clean up and dispose of waste properly.
Before subjecting personnel to hazardous materials consider decontamination and clean up requirements, including:

- Personal protective equipment for decontamination crew;
- Availability of showers;
- Eye wash stations;
- First aid and medical requirements; and
- Absorbents.

All personnel have the responsibility to dispose of materials and chemicals that can adversely impact the environment or human health in the proper manner in compliance with regulations, policies, procedures and Material Safety Data Sheets.

Consider waste impacts in all decisions.

Document the incident.
Records are to include:

- Plans, actions taken;
- Diagrams;
- Incidents date, time, location;
- Responder's names;
- Observations;
- Materials involved; and
- Diagrams, photos, and/or videos.

Emergency Scenarios for Possible Consideration
E. Gruben's Transport Ltd. operations could potentially involve a variety of possible emergency scenarios, which should be taken into consideration. These could include, but are not limited to:

- Injury or fatality;
- Worker or equipment through ice.
- Vehicle accident;
- Fire or explosion;

- Spill to environment of raw products (oil, salt water) or refined products (diesel, gasoline,);
- Aircraft incident;
- Release of toxic gases;
- Natural disasters;
- Transportation of Dangerous Goods incident;
- Elevated or confined space rescue;

3.12.1 Personal Injury Emergency Responses

Due to the remoteness of the Ross Point, PIN-D site, EGT is required to maintain sufficient levels of medical care to address basic wellness in addition to emergency care. An EMT medic will be deployed with the crew to ensure that medical coverage is accessible and maintained at the site, with a sufficient number of Emergency or Standard First Aid trained workers to provide assistance when necessary.

For serious injuries a system must be in place to:

- Provide primary care for the injured worker;
- Consult a physician via radio or phone; and
- Prepare and care for the injured during transport and transferring of the injured to the care of medical professionals.

FOR COMPLETE DETAILS OF THE SITE SPECIFIC MEDICAL RESPONSE PLAN PLEASE REFER TO ATTACHED APPENDIX C.

3.12.2 Fire Emergency Response:

A fire safety program will be implemented at Ross Point, PIN-D that will include fire prevention, fire protection and firefighting capabilities. The focus of which will be to prevent fires and taking precautions to ensure fire extinguishers are readily available at strategic locations in the camp and job site locations to contain and localize fires before they have an opportunity to spread.. A fire response team led by the Site Supervisor will be assembled and given suitable training, which will allow them to appropriately respond to fires, which may be encountered for the duration of the job. The fire safety program will meet or exceed the requirements set out in the Nunavut Safety Act, the National Fire Safety Code of Canada and the Canada Labour Code.

Each work area shall have a fire emergency procedure and all workers shall be made familiar with this procedure.

Regular exercises of fire drills shall be conducted to ensure optimum firefighting and evacuation preparedness.

A smoke detections system will be installed and maintained within the construction camp including auxiliary structures, which complies with the National Building and Fire Codes and as required in the Nunavut Safety Act.

Smoking will not be permitted in hazardous areas and caution will be exercised when using smoking material or open ignition sources in non-restricted areas. Appropriate signage indicating both Non Smoking and Smoking Permitted areas will be installed. Individuals, who violate the smoking policy will be subject to disciplinary action. A smoking shelter will be provided and set up in an appropriate location at least 3 meters away from the camp area.

Rubbish and waste, which could be potential fire hazards will be kept to a minimum through good housekeeping practices. Extreme care will be exercised with reference to the handling and storage of waste oil and other petroleum products. All greasy and oily rags, which are subject to spontaneous combustion, will be disposed of as hazardous material.

FOR COMPLETE DETAILS OF THE SITE SPECIFIC FIRE SAFETY PLAN REFER TO APPENDIX B

3.12.3 Spill Response Plan

E. Gruben's Transport Ltd. will clean up spills and reports spills to the appropriate authorities.

Many small spills are from leaks in parked vehicles and from broken hydraulic lines in cold weather. Other common sources of spills are from the process of re-fuelling equipment and from loosened fuel-filters. Workers are to report any drips or spills to your supervisor and the mechanic immediately. By addressing small leaks before they become major leaks, we can lessen our environmental impact and the effort required to clean up spills. Our supervisors and equipment operators should all carry oil-absorbent rags, bags and shovels in their vehicles. All fuel sloops, fuel trucks and supervisors vehicles also carry fuel spill kits.

Parked vehicles at work sites should be parked over drip-trays. Vehicle walk-around inspections should be conducted daily and after breaks.

Safe fuelling procedures must be followed at all times. No fuel nozzle or open sloop or tank can be left unattended when fuel is being transferred. Designated and competent individuals will refill equipment at all sites. Fuel caps, sloop valves, truck valves and nozzles must be checked to make sure they are closed/off after refuelling. Spill clean-up materials must be available during any refuelling situation.

<u>Responding to a Spill</u>

1. **Assess Situation –** Make sure area is safe for yourself and others.

2. **Minimize –** Use any emergency shutdown device.

3. **Contain –** Use available resources such as shovels, absorbents or heavy equipment.

4. **Secure –** Place appropriate barriers and warning devices.

5. **Report –** Notify your supervisor who will direct the clean-up and report to the NWT/NU Spill Line. as required.

Spills greater than 100 liters on land and 20 liters on water will be reported to the **NWT/NU Spill Line at 867-920-8130** (NWT/NU Spill Line Fax 867-873-6924). NWT/NU Spill Report Forms will be kept in the Site Superintendent's office.

REFER TO THE DETAILED SITE SPECIFIC SPILL CONTINGENCY PLAN ATTACHED AS APPENDIX E.

3.13 Environmental

Environmental guidelines related to the use of the land, waste discharge, fuel handling and storage, surface disturbance and other conditions of site use are primarily addressed in the LAND USE PERMIT and WATER LICENCE. These form part of the Site Specific Health and Safety Plan when available.

Hunting and Fishing

There will be no hunting and fishing by personnel employed at this site.

Other Wildlife

A Wildlife Response Plan is attached as Appendix D.

Camp water

It is expected that the 'Fresh Water Supply Lake' identified on the drawings at PIN-D is capable of providing drinking water that will meet Health Canada Guidelines (HCG) with treatment. EGT has allowed a turnaround time of 21 days for two consecutive confirmatory results of the camp treated water to meet HCG criteria. In the interim drinking and cooking water will be provided by bottled drinking water that meets Health Canada Guidelines. A bulk supply consisting of 200 cases of 24 x 500 ml bottled water and 50 ea. large 20 liter jugged water will be mobilized by barge with the camp to PIN-D. The quantity should prove to be an adequate supply of drinking water for the 2011 season.

EGT estimates the water usage at PIN-D to be 3,500 to 4,000 liters per day. Samples will be taken of the "Fresh Water Lake Supply and after receipt of confirmatory sample results indicating the local water source can be used all camp water requirements will be

obtained from the 'Fresh Water Supply Lake' (Lake). Water will be transported to site from the Lake with a portable tank in which the water will be treated with chlorine per the appropriate guidelines. The Lake water intake will be set up from a float anchored at a distance from the shore so that it can be positioned at a good depth half way to the Lake bottom. The intake hose will be fitted with a micro screen to prevent the suction of fish or other marine life. Once test results of the treated water confirm it meets or exceeds drinking HCG criteria it will be used in place of bottled water. Bottled water will continue to be provided for personnel use if desired.

One of the potential problems given the distance from the water lake to the proposed camp location would be a mechanical failure of a dedicated water truck. EGT will use portable, skid mounted tanks for the transport of the water so as if one unit or another has mechanical trouble the tank could be mounted into a different vehicle in a timely fashion so as not to interrupt the normal camp daily re-supply.

It is not uncommon for problems to be present or develop in meeting the testing requirements for drinking water set by Health Canada. EGT will mitigate the potential for problems in the first season by supplying an adequate amount of bottled water for drinking with it initial mobilization sealift. Should there be problems with the water meeting HCG drinking criteria in the second year of operations, 2012, then additional bottled water will be flown to the site as required.

Camp-generated garbage

Camp garbage will be incinerated in a new two-chamber Westland Environmental CY-2050-FA "D" diesel-fired incinerator. This incinerator will be supplied with a larger than normal 770,000 BTU primary incinerator to achieve temperatures of 1000 degrees C. The secondary chamber should also achieve temperatures in the 850 to 1000 degree C range to satisfy the requirements of Canada Wide Emissions Standards.

Camp garbage will be incinerated throughout the day as required. A metal covered garbage container will be used to store garbage by the incinerator while it awaits incineration. All garbage will be incinerated daily at minimum. Camp garbage consists primarily of cardboard, food waste and paper.

We will separate from general camp garbage containers which can be recycled under the GNWT/NU Recycling Program. Recyclables used in camp operations generally include plastic water bottles, aluminum pop cans and UHT containers. These items will be collected and donated to the Kugluktuk or Cambridge Bay community or other worthy cause. Battery drop-off locations will be designated in the camp and the EGT Site office to keep "disposable" batteries out of the general waste stream. These will be containerized according to TDG regulations and shipped off site to a licensed disposal facility.

The minimal residual ash from the incinerator will be collected in a lined sea-can container and will be sampled and tested prior to final disposal. All ash will be removed

from the site and will be handled according to test results. If testing determines that the ash is a hazardous waste it will be disposed of at a licensed hazardous waste disposal facility and will be shipped subject to Transportation of Dangerous Goods regulations. In the event mechanical problems arise with the incinerator spare parts will be maintained at the site to allow quick servicing and repairs.
The camp maintenance person will be specifically trained in the operation of the incinerator and will be the only person to operate it.

Grey Water/Sewage (Effluent) Water

All camp facility grey water/sewage will be pumped into a single 1,000 liter surge tank adjacent to the camp. The surge tank will be fitted with an industrial grade submersible macerator lift pump controlled by level switches to start and stop automatically as required. This submersible pump will pump the sewage to a sewage lagoon that will be situated at a location 100 meters downwind from the camp, 100 meters from any natural drainage courses and 450 meters from any fish bearing waters as agreed with the Departmental Representative (DR).

The sewage system will consist of two separate lagoons adjacent to each other and constructed to dimensions that will allow for 50 days of capacity in each lagoon. The lagoon base will be excavated approximately 0.5 meters into the existing ground. Perimeter berms will be constructed to a finished height of 2.0 meters allowing for a maximum depth of 1.0 meters and a freeboard of 1.0 meters. The lagoon base excavated material will be used to construct the lagoon berms. The berms will be compacted with the onsite vibratory compactor.

The lagoon sewage pipe from the camp surge tank will feed into the first/closest lagoon. A tee overflow pipe connecting the two lagoons will be placed so that the liquid from beneath the solids/scum layer can pass to the second lagoon.

The camp is fitted with two separate grease traps that will remove visible mineral oil and grease from the camp generated effluent. EGT and our Inuit catering contractor Kitikmeot Catering Ltd. are very experienced in the operation of remote camps, the wastewater discharge criteria, cooking and housekeeping practices and “green” biodegradable products that must be used (as well as those products that must not be used) to ensure that sewage can meet discharge criteria. To improve water conservation all bathroom faucets are self-closing and toilets and shower heads are water saver models.

Some of the potential problems associated with the camp wastewater system could include an unforeseen increase in camp water consumption and/or difficulties meeting discharge parameters. In the event that the sewage lagoons become full prior to receiving confirmatory samples to allow for discharge EGT will construct an additional lagoon as required. EGT will ensure that the primary lagoons are constructed in an area that will allow for the construction of any additionally required lagoons.

The operation, discharge and closure of the lagoons will be in compliance with the water use permit for PIN-D. The effluent will be sampled and tested at an approved third party testing facility (Maxxam Analytics, Edmonton Laboratory) to determine if the required discharge criterion has been met. EGT will take all required steps to ensure samples arrive at the testing location within the allowable time limits. Once testing confirms discharge criterion is met and discharge is approved the effluent will be pumped and released onto the ground at a location as agreed and approved by the DR, that is a minimum of 30 meters from natural drainage courses and 100 meters from fish bearing waters. Other potential waste water generation and handling from specific remediation work activities is described in the relevant sections as required.

3.14 ACTIVITIES SPECIFIC TO ROSS POINT PIN-D

3.14.1 Collection, Containerization and Disposal of Hazardous and Lead-Painted Materials.

All material designated as hazardous will be handled, and documented according to Transportation of Dangerous Goods (TDG) Regulations.

Training Program
Certified HAZMAT Specialists shall instruct and direct all workers with respect to waste management and safety practices. Health, safety and waste management procedures will be covered in the employee orientation and project startup session. Hazardous materials training has previously been provided to most employees scheduled to be involved in the work of removing Leachable Lead and PCB contaminated materials, asbestos, metal and hydrocarbon contaminated soils and batteries. Supplementary training to new hires will be provided prior to the commencement of work at PIN-D. Daily safety meetings will be held on Site. Hazard Assessments and Job Safety Assessments (JSA) will be completed before the execution of critical tasks.
Safety instructions will be emphasized for the following work elements:

- personal protective equipment
- personal decontamination
- work procedures
- equipment decontamination
- emergency response procedures

Personal Protective Equipment (PPE) and On Site Procedures
The personal protection and decontamination procedures for the handling and containerization of hazardous materials will vary depending upon the work activities and the potential risk of exposure by workers' to Leachable Lead, PCBs and other hazardous materials.

Low Risk procedures will be used for the removal of non-hazardous materials and after all hazardous materials have been removed. Personal Protective Equipment (PPE) will include Tyvek coveralls over street clothes, CSA approved rubber boots, hard hats, Nitrile gloves, safety glasses and dust masks. Water buckets and soap will be provided for washing prior to coffee and lunch breaks. A wash station will be provided for complete cleansing of the hands, face, arms, neck and ears at the conclusion of each work day.

Moderate Risk procedures will be used to remove any Leachable Lead and PCB contaminated paint materials. Medium Risk PPE will be similar to Low Risk procedures except that secondary, cotton coveralls will be worn under the disposable Tyvek coveralls, half-face or full-face respirators with organic vapor, HEPA or combination filters, depending upon the hazardous materials being dealt with. All workers will shower at the conclusion of each work day. The cotton coveralls will be washed regularly on Site.

There should be no requirement for High Risk procedures for asbestos, PAP or leachable lead paint at Ross Point PIN-D.

Workers will be provided on a daily basis with the type of respirator and filters required for the work activity. An irritant smoke will be used at the beginning of the project, when a new mask is issued, when a problem is identified or every two weeks at a minimum. Workers will perform a positive and negative fit test every time a mask is donned.

3.14.2 Leachable Lead Painted Materials and PCB painted materials.

Leachable Lead and PAP painted materials will be removed, handled, and packaged in the identical fashion and will be dealt with in the same section below. There are PCB amended painted material identified at Ross Point, PIN-D in Appendix A.

Leachable Lead and PAP painted materials will, however, be segregated from each other and labeled and shipped according to separate requirements of TDG regulations and Environment Canada regulations regarding PCB shipping and labeling. The owner will supply registered PCB labels as per the contract specifications.

Management of all hazardous materials will be supervised by a certified professional qualified in hazardous waste management.
Personal Protective Equipment required for Leachable Lead and PAP paint handling will follow Intermediate Risk PPE requirements as listed above.

Removal of Leachable Lead/PCB Contaminated Paint Materials
Prior to any demolition activity and the removal of PCB contaminated materials, all asbestos will be removed as per the Asbestos Abatement WMP. [See following Asbestos Abatement Methodology]. From demolition tables and hazardous materials inventory it is believed that there is Asbestos and PCB Amended Paint in the powerhouse and the garage. This will be confirmed on site prior to demolition.

All asbestos materials covered with paint containing Leachable Lead over 5 mg/l or PCB's at or over 50 ppm will be removed during asbestos abatement, double wrapped or bagged and stored in the Steel 8' X 8' X 20' Containers as Leachable Lead or PCB Material.

Prior to the commencement of work visible loose or flaked paint will be carefully scraped, swept up and vacuumed using HEPA filtered vacuums. This paint will then be placed in double polyethylene bags and handled as Leachable Lead or PCB Material. The polyethylene bags will then be placed into the Containers.

During the course of the removal activities workers will take proper care and precaution to minimize the disturbance of painted surfaces and the amount of heat that is created near these surfaces. Throughout the course of different activities as loose or flaked paint is encountered it will also be carefully swept up double bagged and treated as either

Leachable Lead or PCB Material. Loose or flaking Leachable Lead paint and PCB paint will be scraped off surfaces with scrapers and wire brushes.

Most Leachable Lead painted surfaces will be removed in their entirety from facilities and walls and minimal cutting will be done to fit sections into Leachable Lead or PAP containers.

Chainsaws, cut-off saws, skill-saws and reciprocating saws will be used to cut Leachable Lead and PAP wood to minimize space in PAP containers as long as work can be conducted without the release of saw-dust and paint chips to the environment. Proper eye protection including goggles and face-shields will be required along with respirators. Chainsaw use will require chainsaw pants, hearing protection and face protector/shield over respirator.

Cleanup and Decontamination

All rubber boots, gloves, tools and small equipment used for the work will be wiped off daily with moist disposable wipes. All wipes, used Tyvek coveralls and other contaminated materials generated as a result of coming into direct contact with hazardous materials will be disposed of and placed in double polyethylene bags. The bags will be treated as Hazardous Materials and stored in sea-cans. The sea-cans will be labeled and inventoried for offsite transport.

Leachable Lead/PAP Containerization

The methodology used for the containerization of Leachable Lead and PAP materials that will be used at Ross Point, PIN-D will be identical to that successfully performed by EGT at BAR-D in 2007 and PIN-1, PIN-M and BAR-4 in 2002. In 2001 Transport Canada changed the requirements for shipping PAP materials and DCC proposed new methodologies for PAP containerization, subject to final on-Site inspections and approvals by Transport Canada. EGT was the pioneer in this methodology working closely with DCC at the PIN-1 Site in 2002 and gaining on-Site approval by Transport Canada representatives. Later in the summer of 2002, EGT was awarded contracts by DCC to perform the same re-packaging of PAP containers stored by DCC at BAR-4 and PIN-M DEW-Line Sites. The current specification reflects this methodology developed at PIN-1 and Transport Canada's subsequent approval of this methodology.

EGT has estimated the number of ISO containers that will be required to containerize Leachable Lead/PAP based upon weights and volumes presented in specification tables. EGT will have a number of extra ISO containers on site for its own purposes which could be converted into Leachable Lead/PAP containers should this number prove insufficient. More ISO containers can also be mobilized to site if it appears that volumes are to be larger than those specified. Sufficient lumber, strapping and intermediate containers will be mobilized to site at initial mobilization to line potential extra containers.

Preparation of Containers

ISO shipping containers for Leachable Lead and PAP shipment will be in new condition and will maintain current Transport Canada certification.

1-1/4” steel strapping will be attached to the bottom fastening loops in the interior of the ISO shipping containers designated for Leachable Lead and PAP transport. The strapping will then be temporarily hung from the top loops of the containers. A layer of 6 mil poly sheeting will be spread over the floor and up the walls of the container at least 400 mm in height and will be glued in place. Sheets of 12.5 mm (1/2”) plywood will be attached to the floor over the poly and 2”x4” framed walls will be constructed on back and side walls to full container height so that all lateral pressure will be supported by the structural frame of the ISO container.

For ISO containers which contain only intermediate Leachable Lead or PAP containers, plywood will not be attached to interior side walls of containers. For ISO containers which contain any materials not entirely contained in intermediate containers, 12.5 mm (1/2”) plywood will be attached to the interior of the wooden wall-framing to a height of 400 mm. Plywood used on framed end walls will be 1.4 m in height.

Loading of Containers

At all times, similar materials (e.g., painted wood, painted metal, painted concrete) will be segregated and packaged together.

Materials that will fit will be placed in intermediate (sea-can) containers, with necessary dunnage to prevent shifting within intermediate containers. These intermediate containers will be placed into the ISO containers with wooden bracing attached to the floor to prevent their movement. The 1-1/4” steel strapping initially installed in the ISO containers will be used to strap containers in place. Intermediate containers within ISO containers now require full TDG labeling on four sides.

Materials that cannot fit into intermediate Leachable Lead or PAP containers will be placed directly into ISO containers either beside or on top of intermediate containers, or on their own, depending on size and circumstances. Materials, where possible, will be bundled together with strapping. Materials will be placed to minimize voids among the materials and gaps between side and end walls, to balance weight loads evenly within the ISO container, and to keep the center of gravity below the half-height of the container. Materials will then be strapped down by the 1-1/4” steel banding initially installed and attached to the container bottom fastening loops.

Closure of Containers

A wooden frame, with 1.4 m height plywood and 6 mil poly liner will be constructed at the opening end of the ISO container to prevent any movement of Leachable Lead or PAP materials.

An inventory and photographic record of the contents of each container will be maintained and submitted to the DR.

Shipping

All ISO Leachable Lead and PAP containers will be clearly marked with contents as per TDG and CEPA regulations and will have the required contractor-supplied and Owner-supplied labels attached. Containers will be locked and placed in the Temporary Storage Area to await off-Site shipment. TDG and required Waste Manifests will also be completed for all regulated waste shipments from Site, including PAP materials. Copies of the Waste Manifests will be forwarded to the NWT authority, Pollution Control Division, Department of Energy and Natural Resource (ENR), Yellowknife, NT.

3.14.3 Tanks and Barrels

All tanks and barrels on Site will be tested, dismantled or crushed.

If on-Site inspection indicates tank cleaning is required:

The tank cleaning procedure is as follows:

- Tank condition and contents will be initially examined through covers on top of tanks.
- Tanks that are empty or near empty will have man-hole covers from sides of tanks removed to allow natural ventilation of fumes.
- Residual fuels/liquids will be drained from tanks for incineration as required.
- LEL/O2 meters will be used to assess air quality in tanks prior to any required cleaning, sludge processing or demolition.
- Tank entry is not expected to be necessary; however if Self Contained Breathing Apparatus entries become necessary depending upon air quality test results and tank conditions, a specific plan will be formulated and only confined-entry certified personnel will be permitted to enter any tank under strict protocols. Work will meet the standards set out in ANSI/API 2015 - 6th Edition August 2001 *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*
- As required, tanks could be washed with steam/hot water, rinsed and wiped by trained and competent personnel; however it is not anticipated that these procedures will be necessary. In cases where it is necessary wash water will be collected and sampled to meet Waste Water Criteria prior to release.

Barrel Processing

Barrel sampling and processing, and the sampling of liquids from fuel storage tanks will follow the protocol outlined in the tender documents. We will have a steamer/sprayer available on Site as required.

Inspections will be conducted by the DR and Contractor; barrels will be opened using non-sparking brass tools and/or remote opening methods if there is evidence of contents under pressure. LEL meters will be used around openings and holes. Barrels will be sampled by the DR. Consolidation, HAZMAT processing, incineration and cleaning options are dependent on sample results.

Barrels containing hazardous materials or consolidated like materials will be processed, packaged and labeled under TDG regulations. Packaging is typically the original drum

placed into an overpack drum lined with absorbent rags with absorbent ("Floor-Dry") pored over and around original drum prior to sealing overpack drum.

Barrel cleaning is conducted using a three-level containment system. Barrels are inverted on a metal rack in a metal wash-berm and are steamed using a wand sprayer and detergent. The water in the wash berm drains through a barrel filter containing absorbent rags. This barrel then drains into a lower barrel filter also containing absorbent rags. Water from this lowest barrel filter is then pumped back to supply the steamer unit. In this way wash water is constantly being filtered and recycled through the system. Absorbent rags are removed throughout the process and will be sampled for potential on-Site incineration. If they cannot be incinerated they will be packaged and shipped off-Site according to TDG regulations. Minimal remaining wash water will be sampled according to Waste Water Discharge Criteria. In previous DEW-Line cleanups this method has always led to minimal water use and successfully meeting discharge criteria.

3.14.4 Other Identified Hazardous Materials

Prior to building demolition, other identified HAZMAT will be removed from buildings. Site HAZMAT will be identified and handled according to type as required.

Batteries, potential PCB containing transformers, light ballasts, PCB ballast in Nav-Aid, unidentified pails of liquids, and acid, which may be encountered will be treated as follows:

All lead-acid batteries will be wrapped with heavy duty poly and placed in a lined sea-can containing absorbent rags and absorbent fill material to cushion load and absorb spills. Containers will be labeled and shipped according to TDG regulations.

PCB light ballasts will be removed, double-wrapped in poly, and packaged for shipping in over pack drums lined with absorbent rags and Floor-Dry to absorb any possible leaks and to cushion load. If PCB-containing transformers are discovered on Site, these will be shipped intact as per ballasts above. All handling of PCBs and suspected PCB containing materials will be conducted using respirators with Organic Vapor filters, disposable coveralls, Nitrile gloves and goggles.

Mercury ballasts/thermostats will be handled, contained, packaged and shipped as per the methodology used for PCB ballasts, except that UN shipping number will change. PPE will be identical to that used for PCBs.

EGT has a great deal of experience in handling and packaging hazardous materials and satisfying TDG requirements for shipping from its many years of experience at DEW-Line cleanups. Almost all HAZMAT can be shipped in either double-lined sea-cans or overpack drums. EGT will have sufficient numbers of sea-cans and overpack drums at site to handle reasonable foreseeable extra unknown hazardous debris. Overpack drums are easily flyable to site during job progress should extra overpacks prove to be required.

3.14.5 Asbestos Abatement

There are a number of areas identified, that contain asbestos material in the Ross Point PIN-D specification. The identified materials in the specifications are in the Module Train, Garage, Site Debris Area 12, Site Debris Area 14, Site Debris Area 15, Site Debris Area 18 and appear to be incorporated in the insulation and building material of pipe wrap, doors, furnace vent and wrap on fan and some asbestos material lying on the ground at the mentioned Site Debris Areas.

Workers involved in asbestos removal at Ross Point PIN-D have over ten years of experience in asbestos removal and hazardous material work. As a minimum requirement, workers will wear ½-mask respirators with HEPA filters, Tyvek disposable coveralls and other normally required PPE including gloves, eye-protection, safety footwear and hardhats. Workers will spray-off and remove disposable coveralls, HEPA filters and gloves and dispose of these items in the same fashion as asbestos containing items.

Workers will comply with the requirements set out in the tender document for the removal of Type 1, Type 2 and Type 3 asbestos. Type 1 materials which are likely to be encountered are asbestos in wall panels, asbestos duct cloth, flue stack covering and vinyl asbestos floor tiles. Type 2 materials will likely be encountered when removing false ceilings, which will be lying on the surface of the false ceilings scheduled for demolition. Type 3 materials will likely be encountered in the demolition and removal of asbestos pipe and duct insulation and the Glove Bag Method will be employed.

Regulatory Notification

Prior to the commencement of asbestos abatement work, the Northwest Territories/Nunavut Workers' Compensation Board will be notified. The Asbestos Abatement Methodology will be supplied for their review. A copy of the notification will be supplied to the DR. NWT/NU WCB do not issue approvals for asbestos work: however must be notified in writing utilizing a Notice of Asbestos Abatement Form.

See APPENDIX I for the Safe Work Practice for Asbestos Abatement.

Health Canada
Occupational & Environmental Health Services
Suite 845 – Canada Place
9700 Jasper Avenue
Edmonton, AB, T5J 4C3

Human Resources Development Canada
Labor Branch
302, 10109 106 Street
Edmonton, AB, T5J 3L7

Regulatory Requirements

All asbestos abatement activities will be governed by the regulatory requirements of:

- NU/NWT Safety Act – Asbestos Safety Regulations
- Canadian Environmental Protection Act
- NU/NWT Guidelines for Removal of Materials Containing Friable Asbestos
- Federal Transportation of Dangerous Goods Act (TDGA)
- NU/NWT Renewable Resources --- Guidelines for Asbestos Disposal
- NIOSH and OSHA Guidelines for Hazardous Waste Site Activities
- PWGSC practices as specified in tender documents

Safety and Training

Established industry protocols will be used by all workers during abatement activities. A certified asbestos abatement specialist will be at the job Site during abatement activities and will supervise abatement activities. All workers will have adequate training to ensure compliance with established regulatory requirements.

Supervision

The asbestos abatement specialist will have as minimum requirement of a 48 hour Asbestos Abatement Course and at least 2 years of experience in Type 1, Type 2, Type 3 and Glove Bag Removal techniques and will be experienced in safety training. Local Inuvialuit and/or Inuit crew leaders and asbestos laborers who have conducted asbestos abatement at previous DCC DEW-Line cleanups will be utilized as much as possible. Proof of Supervisors' training will be provided to the DR prior to the commencement of asbestos abatement work.

Safety Training

Prior to the commencement of work, the asbestos abatement specialist will provide refresher training to experienced asbestos workers and will train new workers. Instruction will include:

- Asbestos abatement methodology review
- Hazards of asbestos and health education information
- Proper use of respirators (including types, limitations, inspections, maintenance, decontamination and disposal, filter type and selection)
- respirator fitting and fit-testing
- other personal protective equipment requirements
- decontamination
- safe handling, labeling and containment requirements
- emergency response plans

For the protection of workers who may be working near asbestos abatement work areas, all personnel will receive an overview of the hazards associated with asbestos in the worker orientation seminar.

Documentation of asbestos training for workers will be provided to the DR prior to the commencement of asbestos abatement work.

Fit Testing

Asbestos crew personnel will be instructed and fitted with respiratory protection using qualitative fit testing methods. An irritant smoke test will be used at the beginning of the job, when a new mask is issued, when a problem is identified or every two weeks at a minimum. Workers will perform positive and negative fit test every time the mask is donned. Workers will be provided with non-powered, half-face respirators with HEPA cartridge filters for minimum and intermediate precaution work and with powered air respirators for work requiring greater levels of respiratory protection. All workers will be required to fill out a Respirator Fit Test Record. Documentation proving fitting and testing will be provided to the DR prior to the commencement of asbestos abatement work.

Other Submittals

In addition to the submittals listed in previous sections, prior to the commencement of asbestos abatement work, EGT will also provide to the DR proof of Contractor's Asbestos Liability Insurance, product documentation for encapsulates, amended water and slow-drying sealer, and necessary permits for the transportation and disposal of asbestos waste.

Equipment, Materials and Small Tools

Asbestos abatement work is extremely labor intensive and will be completed primarily with small non-powered hand-tools including screwdrivers, knives, scrapers, pliers, hacksaws, vice-grips, pry-bars, and garden and paint sprayers. Small power tools such as reciprocal saws and drills are also employed.

Special tools for dust suppression and control such as HEPA vacuums and Negative Air units will also be utilized.

Reinforced poly tarps, 6 mil poly sheeting, duct tape and spray glue are used extensively to provide isolation and containment of work areas, barriers in ISO containers during temporary storage and shipping, along with dedicated asbestos bags and, wrapping of asbestos waste.

A stand-alone generator will also be utilized to provide required power for lighting, power tools, vacuums, negative-air units and power for the decontamination facility.

A full decontamination facility could be mobilized to the Site by barge and fabricated on site. This Decontamination Facility (Decon) consists of an equipment (Dirty) Room, a Shower Stall and a Clean Room. The three areas are completely sealed from each other with a 6-mil polyethylene airlock and with double curtained doorways. All movement from Equipment Room to the Clean Room will be through the Shower Stall. There will be one access to the Clean Room and one to the Equipment Room. No eating or smoking will be allowed in the Clean Room. The Decon will be cleaned and inspected daily. Wastes from the Decon, including used coveralls, respirator-filters and wipes, will be bagged and treated as asbestos waste. All shower water will be filtered through a 5-

micrometer filter prior to discharge. At 5 previous DCC DEW-Line Cleanups requiring a decontamination facility, discharge criteria have always been met.

Site Preparation

Preparation of Permits and Equipment

No work will begin until all necessary preparatory steps have been taken, including:

- obtaining all permits, regulatory approvals or authorizations
- required equipment, tools and waste receptors are in place or available
- decontamination facilities are set up and ready for use
- asbestos abatement worker training has been completed
- a Site inspection has been conducted with the DR to verify remediation limits, and
- the approved final draft of the Asbestos Abatement Methodology has been reviewed with the DR.

Building Preparation

Prior to commencement of the asbestos abatement program, all buildings will be prepared for the asbestos work crew. All non-hazardous furnishings, walls, doors, carpets, materials, which can be easily removed without disturbing asbestos-containing materials, will be removed from the building. Personnel will be provided with Tyvek coveralls and fitted half-face respirators with HEPA filters for these activities, where deemed necessary by the Asbestos Specialist. Any liquids remaining in tanks, piping which require asbestos removal will be drained and collected for proper disposal. Air handling and ventilation systems in buildings to be demolished will require being isolated/blocked.

Exclusion Zones and Signage

Appropriate Asbestos Warning signs will be conspicuously placed at work area access locations including the decontamination facility and material transfer stations. In addition, it may be necessary to establish exclusion zones and buffer zones through the use of white Asbestos Warning tape, red Do Not Enter tape and yellow Caution tape.

Air Monitoring

A sampling pump and phase contrast microscopy (PCM) analysis or a fibrous aerosol monitor (FAM) will be used to monitor air both inside and outside of asbestos work area enclosures. The air within the clean and dirty rooms of the Decon will be monitored daily. Levels in excess of the NWT/NU Safety Act and Regulations (0.05 fiber/cc) will be addressed immediately with appropriate action.

Negative Pressure System

A negative Pressure System will be used to extract air from the Work Area, filter it through a HEPA filtering system and discharge it to the exterior of the building. The system will maintain a differential of 5 Pa and will have a capacity capable of complete air exchange in the work area every 15 minutes.

Asbestos Removal

Building Occupation and Closure

No buildings which contain asbestos will be used as temporary accommodations during the cleanup. No buildings will be occupied by personnel other than the asbestos crew during removal activities (i.e. There will be no partially occupied buildings). All openings such as corridors, doorways, windows, ducts, grills, etc. will be sealed off with poly and sealed with tape or supported with wood framing as necessary.

Dusting

Dust on surfaces likely to be disturbed will be removed with a HEPA vacuum. The top of the ceiling systems, light fixtures, etc. in proximity of ceiling entry will also be vacuumed.

Duct Cloth, Flue Stack Coverings and Wall Panels

Duct cloth, flue stack coverings and asbestos wall panels will be removed intact. Screw holes and/or fasteners will be wetted prior to removal. If materials are accidentally broken, they will be wetted immediately and double bagged. Surrounding areas will be cleaned with the HEPA vacuum. Removed wall panels, if intact, will be wiped or vacuumed and wrapped in poly for transport and disposal. During asbestos removal operations, a continuous cleanup, wetting and disposal program must be in place to prevent any unnecessary accumulations of dust and materials. After work is completed, drop sheets and containment barriers must be wetted, folded to trap dust prior to removal, and be disposed of as ACM waste.

Friable Asbestos

Friable asbestos will be removed using amended water spray. Following removal, all surfaces will be vacuumed or wiped down, then double bagged. Where friable asbestos is removed in-situ, small moderate risk containment will be constructed. The containment will be large enough for one man and will facilitate complete removal. A HEPA vacuum will be utilized to supply negative air pressure within the containment; it will be exhausted into the asbestos work area. A personal sampling pump and PCM analysis or FAM testing will be done during this type of removal, to ensure the respiratory protection used is adequate.

Piping and Tanks

Asbestos from piping, elbows and tanks will be removed using a technique as follows:

- Delineate into work areas.
- Seal each Work Area with an access/egress at one end and an equipment decontamination/bagging room at an exit at the other end.
- Locate the Decon near the access/egress of each Work Area. Demarcate the area between the Decon and the Work Area as an Asbestos Hazard Area.
- Perform background air quality monitoring prior to commencing work in each Phase. Perform the removal progressively in each work area starting from the furthest point away from the Decon.

- Using an “open glove bag” technique, one worker will cut the asbestos, slowly remove it and lower it into the bag while another mists the air and as it is exposed. After removal, the exposed ends of the pipe will be sealed with duct tape. Once the bag is half full it will be sealed.
- After removal the asbestos will be taken to the bagging room where it will be cleaned, double bagged and taken to the disposal transfer area.
- Periodic air quality monitoring will be done during removal.

Completion

After the complete removal and post cleaning of each phase, a final air quality clearance sampling event will be completed. Once an air clearance has been obtained the entire phase will be sealed with a post-removal sealer. A final air sample will be drawn using the FAM or sampling pump with PCM analysis. No building will be entered until air monitoring shows the area to be safe. If safe, asbestos signage will be removed and demolition procedures will continue. If unsafe, additional abatement will be undertaken by the asbestos crew.

Transport and Storage

Packaging

All asbestos material removed will be double-bagged in pre-labeled polyethylene bags or wrapped in polyethylene sheeting of a minimum 6-mil thickness. Friable asbestos will be sprayed with a wetting agent prior to bagging.

Containerization

All asbestos material, with the exception of PCB painted asbestos materials > 50 will be double-bagged. The asbestos material that has been double bagged will be classified as Non-Hazardous mater and will be placed in the onsite Non-Hazardous Waste Landfill. Asbestos materials painted with PCB >50 ppm will be double-wrapped in polyethylene, taped with duct tape and placed in wood or steel containers segregated from other asbestos waste and from other PAP materials before being transported to the Temporary Storage Area for off-Site shipment.

Record Keeping

A daily log will be kept of all asbestos abatement activities, particularly those related to workers, shifts, safety issues and breaches of safety protocols, air sampling results and confirmation of asbestos removal. A minimum of two photographs will be taken from two viewpoints for each clean-up / construction operation. A daily record of enclosure inspections will be kept as well as a final record of volume estimates and storage information, including location, depth and description of specific demolition materials, including asbestos-containing materials.

3.14.6 Disposal

All hazardous materials covered under this Section will be disposed of as per contractual documentation.

Permits for transportation and disposal of Asbestos Containing Materials, and proof of Disposal will be provided to the DR upon completion of the project.

See the Safe Work Practice for Asbestos Removal in APPENDIX I

3.15 Collection and Disposal of Non-Hazardous Materials Including Non-Leachable Lead Painted Materials.

Management/Supervision of all non-hazardous waste will be conducted by the Site Superintendents and their Foremen. The EGT Site Superintendent and Foremen will have successfully completed the 40 hour (HAZWOPER) training course in compliance with OSHA 1910.120. EGT also has many experienced HAZMAT workers and supervisors who will be conducting much of this non-HAZMAT work. Unless otherwise specified, all waste in this section will be transported to the Contractor's Designated Non-Hazardous Waste Facility.

Personal Protective Equipment

Work conducted under the heading of Collection of Non-Hazardous Waste will vary according to the location and type of work. Basic required PPE for any Site work will include hard hats, CSA approved work boots, gloves, coveralls, and safety glasses. Any work involving grinding or chipping requires full-face shields. Chainsaw use is limited to experienced approved chainsaw operators and requires the use of chainsaw pants, hearing protection and a chainsaw face-shield.

Any cutting work using oxygen/acetylene cutting torches will be conducted by certified and experienced cutters. Welding gloves, leather chaps, and a welding mask will be required. PCB- Amended painted materials or galvanized metal will not be heated or cut. There are certain types of work, which will require the use of respirators. The use of cutting torches to cut or dismantle facilities containing painted materials is not permitted unless the paint has been removed from the areas to be cut. The use of heat to remove loose paint materials is not permitted. Landfill Excavation work will require CSA approved rubber boots, Nitrile gloves, disposable coveralls, head and eye protection and, potentially, respirators.

All work 3 meters and above will involve procedures for working at heights and fall protection. All working at heights will follow the Northwest Territories/NU Safety Act and Regulations and all other applicable regulatory requirements.

POL Tanks and POL Piping

Tanks and piping at Ross Point PIN-D will be inspected prior to demolition/removal to confirm contents and the extent of cleaning required. An LEL monitor will also be employed to ensure that tanks and piping do not contain explosive gases. Solids, sludge and liquids will be bulked in drums and stored as hazardous material for disposal. All tanks will be cut into sections or crushed and transported for disposal at the landfill site. The Workers' Compensation Board of the NWT/NU has indicated to EGT that cutting of tanks with lead paint by use of oxygen/acetylene torches is permissible if workers are adequately protected with respirators and if leachable lead levels are not above hazardous waste criteria. However mechanical means of demolition using shears and rotary cutting blade saws would be the preferred method employed.

Utility Poles

All utility poles that cannot be pulled from the ground will be cut of below ground level and the holes filled with granular fill. Creosote-stained material dug from the holes around the poles and the cuttings from any creosote poles will be collected as Tier II soils. Poles will be moved to the landfill for disposal. The creosote poles will be wrapped in poly at the landfill prior to disposal.

Fallen Radio Tower

The fallen radio tower and communication components will be cut from their support structures with torches. The sections will be cut up into manageable sections, hauled to the landfill and buried.

Other Miscellaneous Materials

Other miscellaneous material including demolition material will be buried in the non-hazardous landfill,, burned or containerized if they are suspected to contain PCB materials as per specifications or as directed by the DR.

3.16 Excavation, Treatment and/or Off Site Disposal of Contaminated Soils

Contaminated soils at the PIN-D site have been categorized into four separate designations based on contaminant, location, and disposal/treatment options. The types of contaminated excavation are identified below:

- Type B Near shore PHC F1/F2 – Beach Area (onsite treatment);
- Type B Far Shore Total Petroleum Hydrocarbons (TPH) – Station Area (onsite treatment);
- Type A PHC F3/F4 (onsite disposal);
- Tier I (onsite disposal); and
- Tier II (offsite disposal)

The description of how each of these types of contaminated soils will be handled and disposed of is provided in the following individual subsections.

3.16.1 Contaminated Soils Methodology and Excavation

Management of all handling, excavation and on-site transportation of contaminated soils will be supervised by EGT's Hazardous Waste Specialist qualified in hazardous waste and contaminated soils management. The EGT Hazardous Waste Specialist will be trained and certified for TDGA, possess many years of waste management experience on numerous DEW Line Cleanup Projects and will have successfully completed the 40 hour training course in compliance with OSHA 1910.120.

3.16.2 Training and Personal Protective Equipment (PPE)

The Hazardous Waste Specialist, Site Superintendent and Crew Foremen will instruct and direct all workers with respect to Contaminated Soil management and safety practices. Health, safety and waste management procedures will be covered in the employee orientation and project startup session. Daily safety meetings will be held onsite. Hazard Assessments and Job Safety Assessments (JSA's) will be completed before the execution of critical tasks.

Safety instructions will be emphasized for the following work elements:

- personal protective equipment
- personal decontamination
- work procedures
- equipment decontamination
- emergency response procedures

Personal Protective Equipment (PPE) for the handling of contaminated soil include Tyvek coveralls over street clothes, CSA approved steel or composite toed rubber boots, hard hats, nitrile gloves, safety glasses and dust masks when dust is visibly present.

3.16.3 Excavation

After the equipment and camp mobilization has been completed in late August 2011, and the site facilities and services has been set-up and commissioned, additional essential project work initiation personnel will be mobilized to site to commence work activities. These will include the surveyor crew. The surveyor will be to layout all contaminated soils excavations upon arrival as per the drawings and specifications which will be verified by the DR.

Excavation activities will be dependent on local site conditions, such as standing water or excess rain. Any surface debris removal will have been completed as per the Non-Hazardous Debris Collection protocol prior to excavation. Standing water will be removed prior to excavation.

Standing water will be removed using a 2" gas powered trash pump with a suction hose. Standing water to be pumped will be sampled in-place to determine if treatment is required prior to discharge. If the water does not pass discharge criteria it will be treated through liquid phase granular activated carbon (GAC) filters that will remove dissolved petroleum contaminants from the water as it passes through the filter. Any water requiring treatment will be stored in a storage tank or lined pond where samples will be collected to make sure treatment objectives have been met. The water will be held until analytical results determine if the water is below the Wastewater Discharge Criteria and can be discharged at a location acceptable to the DR.

Soils will be carefully excavated to avoid damage to any surrounding tundra using an excavator, and shovels where necessary. Gross excavation will be achieved with the

excavator and fine excavation with shovels to dimensions and depths established in the drawings and as marked by the surveyor. If the ground access to the excavation site is soft and rutting might occur then Swamp Mats will be placed to prevent damage. Immediately following excavation, the DR will be advised so that soil excavations can be tested at the side walls and floor of the excavation by the DR's representative. These samples will be submitted to the DR's analytical laboratory for analysis. The excavation will remain open until the samples confirm that no soils over criteria remain. Appropriate signage and barriers will be in placed to prevent onsite workers and/or equipment from accidentally entering the excavated area. Following confirmation, the excavated area will be backfilled and graded with Type 3 granular fill to match the surrounding terrain. An inventory of all boxed contaminated soils will be maintained and provided to the DR on a weekly basis.

3.16.4 Decontamination

It is not anticipated that any of the contaminated soil operations will require special personal decontamination. But in the event they are required, the following procedures will be followed:

- rubber boots and gloves will be wiped off with rags and solvent, or moist disposal wipes after each location is completed and washed off with soapy water or solvents at the end of each work day;
- outer wear, including coveralls, rain suits, hard hat, gloves and so on will be stored outside the lunch/coffee room so as to prevent the movement of contaminant dust into clean areas;
- wipes, dust masks and disposable coveralls will be disposed of into an overpack drum appropriately labeled;

All excavating equipment will be cleaned of soil and lumps prior to exiting the excavation area using track shovels, scrapers and brushes to decontaminate digging implements and tracks. Wherever possible, contaminated soil excavation will take place with the equipment placed on clean ground adjacent to the contaminated soils. Final decontamination will utilize rags and solvent, or soapy water rinse if required. Any wash water and solvent will be collected in a metal tray and tested and handled as per the specifications. Test results will be provided to the DR.

3.16.5 Details of Containerization, Transport and Disposal

<u>Tier II and Hazardous Soil</u>

All Tier II or Hazardous soils will be loaded at the excavation locations into TDGA approved, intermediate, 1.2 m x 1.2 m x 1.83 m wooden seacans mobilized to site, lined with either hydrocarbon resistant liner or poly liner, dependent on contaminant type. Once filled the seacan lids will be steel banded in place with four band wraps. These seacans will then be labeled as to type of contaminated soil and location and Hazardous soils manifested as per all applicable TDGA regulations and amendments.

Tier II and Hazardous soil seacan containers will be loaded onto the barge at the end of site activities using the onsite loader. The TDG manifesting will show the containers being shipped to the CCS Landfill located at Ft. Nelson, BC, for final disposal. Once the barge reaches Inuvik the seacans will be off loaded and either loaded directly onto flat deck trucks to be transported to the CCS Landfill at Ft. Nelson, BC, or placed a temporary storage yard located in the EGT yard until trucks are available to transport them to CCS landfill at Ft. Nelson, BC. All highway trucks and trailers will be inspected as per routine service inspections to ensure good operating condition prior to being loaded. All driver TDGA certificates will be verified current and copied. All personnel involved in the loading operations will be trained and certified for TDGA handling.

Disposal of the Tier II and hazardous soils will be completed at CCS Midstream Services, Northern Rockies Landfill, Ft. Nelson, BC provided the testing analysis confirm they are within the CCS acceptance criteria. If they exceed the CCS criteria they will be disposed of at Earth Tech Canada Inc. Swan Hills Treatment Centre at Swan Hills, Alberta s, CCS Midstream Services and Earth Tech Canada Inc. have confirmed their ability to accept and dispose of the Hazardous and Non-Hazardous materials generated by the PIN-D project.

It is expected that final disposal at CCS Ft. Nelson, BC landfill will occur in late October 2012.

Copies of the Waste Manifests will be forwarded to the Nunavut's waste authority.

Tier I and Type A Hydrocarbon Soils

Both the Tier I and Type A Hydrocarbon contaminated soils are to be excavated and disposed of as intermediate fill in the Non-Hazardous Landfill (NHL) at PIN-D. The NHL is to be constructed in September 2011 as described in the previous Land Fill Construction Section. Tier I/Type B soils at PIN-D will be transported to the NHL from the excavation site in Terex Trucks.

Type B Hydrocarbon Contaminated Soil

Type B soils from Petroleum Hydrocarbon Contaminated (PHC) excavations at PIN-D will require treatment within a landfarm constructed at the site and will ultimately be disposed of onsite. Once the landfarm has been constructed and is ready to accept soil, the contaminated soils will be excavated and hauled by Terex trucks to the landfarm area for treatment. Construction and operation of the landfarm is discussed in the following Section. Once treated to the far shore criteria of 2500ppm TPH as identified in the project specifications and the INAC 2009 Abandoned Military Site Remediation Protocol for PHC in Soilid met, the soil will be reshaped within the landfarm area to blend in with the surrounding terrain.

3.16.6 Potential Excavation Risks and Risk Mitigation

Table 1 indicates potential risks that may arise during the excavation of all contaminated soil areas and the mitigation strategies for each identified risk.

Table 1 Potential Soil Excavation Risks and Risk Mitigation Strategies

Risk	**Risk Mitigation**
Contaminated soils are in permafrost.	Excavate with frost bucket to get the excavation to depth.
Excavation fills with groundwater prior to confirmatory sampling.	Sample the water within the excavation, dewater the excavation, and treat and store for confirmatory testing if required.
Groundwater becomes excessive	Construct treatment sump/storage with contingency liner on site (ref. 'Hazgard' liner info at end of this section)
Excavation walls collapse/sloughing	Cut back excavation wall to stable angle.
Surface runoff enters excavation.	Divert surface water runoff where possible and install silt fencing, containment dyke, or drainage channels.
Access to excavation becomes too soft.	Place 'Swamp Mats' to access excavation to drive on.

During all aspects of the contaminated soil excavation work, as with all work onsite, all efforts will be made to minimize environmental disturbance adjacent to the work. Should access conditions to an excavation area be soft, wet or unstable then "Swamp Mats" mobilized to site on the barge in 2011 will be laid out from the closest stable access point for access.

It is planned to start the excavation of contaminated soils as soon as possible in order to collect samples in a timely fashion. Given the succinct timeline for onsite work any additional delays due to sample analysis turnarounds would have a significant impact. EGT may backfill after the second round of excavation depending on site circumstances to avoid extensive permafrost degradation or if the site is approaching 2011 shutdown so as not to leave an excavation open.

3.16.7 Landfarm Construction and Operation

Landfarm Construction

As described above there is the requirement at PIN-D and to construct a Landfarm for the treatment of Type B soils from Petroleum Hydrocarbon Contaminated (PHC) excavations at PIN-D. Construction of the Landfarm is one of the primary work items to be completed at PIN-D and will be commenced as soon as possible during 2011.

After the equipment and camp mobilization has been completed in late August 2011, and the site facilities and services have been set-up and commissioned, additional project personnel will be mobilized to site to commence work activities. The early project personnel will include the survey crew. The surveyor will stake out the Landfarm location and the monitoring well locations as per the specifications and drawings.

At the same time the drill crew will be mobilized to PIND to commence drilling and installation of the monitoring wells. Due to the near surface bedrock conditions at PIND, an air rotary drill rig will be used for monitoring well installation. This equipment was successfully used to install monitoring wells in similar ground conditions at PIN-2. Upon installation and completion of the monitoring wells they will then be protected by the erection of barricades and all clearly painted with fluorescent orange paint.

PHC soils will not be placed into the Landfarms until the monitoring wells have been installed, commissioned and accepted by the DR.

Concurrent with the Landfarm survey layout, EGT will commence borrow source development to supply the Type 2 material required for construction of the short access roads to and interior bases of the Landfarm and the Type 4 granular material for the construction of the Landfarm berms. Borrow source selections will be made in consultation with the DR after inspection of the sources available, site location and access and any other project considerations for final Borrow selection approval.

The PIND Landfarm location was viewed during the site visit, and is located on dry, good stable granular mixed sub soils. There does not appear to be any issues with access to the Landfarm site. Traffic volumes will be limited to managing the individual Landfarm soil volumes and traffic requirements so that there is no surface degradation or rutting.

Use of the low ground pressure, articulated Terex trucks will assist in minimizing ground disturbance and affects. A short access road of approximately 90 meters at PIN-D will be graded and/or constructed from the West Beach access road to the location of the Landfarm.

At the selected borrow source, the D6R Cat dozer will stockpile the Type 2 gravel and the excavator will load it into the Terex trucks for transportation to the Landfarm sites. The Komatsu D31 dozer will spread any gravel required onto the access road. Compaction of the access road will be achieved by use of the onsite self- propelled vibratory packer.

After the access road is completed the site will be leveled and graded with the Komatsu D31. The articulated trucks will then begin hauling Type 2 for use in construction of the interior base. The base will be constructed as per the survey layout, 0.3 meters compacted depth with a 2% slope as per the drawings. Type 4 will then be hauled for construction of the berms of the Landfarm. As shown on the drawings, the berms will be constructed to a compacted height of 1.5 meters with 2H:1V slopes. The size and maneuverability of the

small Komatsu D31 cat dozer makes it an ideal piece of equipment to build the Landfarm berms. During final shaping the interior down gradient water collection ditch will be constructed as detailed on the Drawings sloping both directions to the water collection sumps. Concurrent with the berm construction, an access ramp up onto the berm and down into the Landfarm will be constructed on the up-gradient side of the Landfarm to allow access for placement of the PHC soils. Diligent care will be taken to minimize the environmental disturbance of any surrounding areas.

Based upon the borrow source information and estimated quantities as described in the PIN-D Remedial Action Plan, EGT is confident that there will be sufficient quantities of Type 2 and Type 4 granular materials at the sites

Other potential problems beyond those discussed above that could potentially be encountered include a late mobilization to the site by the barging company. This would either delay completion of the Landfarm until later in the 2011 schedule or, in an extreme case, could delay the construction of the Landfarm to 2012. If this occurred, EGT would consider moving up the mobilization and start-up in 2012 by 7 to 10 days to allow for the construction of the Landfarm at the earliest possible date in 2012. In both cases EGT could also intensify Landfarm construction activities by possibly moving quarry development and gravel hauling operations from one shift to two shifts. The current schedule also allows a potential additional 4 to 6 week work season cushion at the end of the 2012 season with which to allow potential schedule adjustment if absolutely necessary.

Landfarm Operation

Once the Landfarms have been constructed and are ready to accept soil, the PHC soils will be excavated and hauled by the Terex trucks to the Landfarm for treatment.

Management of all PHC Landfarm activities will be supervised by EGT's Hazardous Waste Specialist qualified in hazardous waste and contaminated soils management, trained and certified for TDGA and possessing at least five years of hazardous waste management experience. All site activities will be supervised by the Site Superintendent. The Hazardous Waste Specialists and the Site Superintendents will have successfully completed the 40 hour training course in compliance with OSHA 1910.120.

Training and Personal Protective Equipment (PPE)

The Hazardous Waste Specialist, Site Superintendent and Crew Foremen shall instruct and direct all workers with respect to PHC Soil management and safety practices. Health, safety and contaminate soil management procedures will be covered in the employee orientation and project startup session. Daily safety meetings will be held onsite. Hazard Assessments and Job Safety Assessments (JSA) will be completed before the execution of critical tasks.
Safety instructions will be emphasized for the following work elements:

- personal protective equipment

- personal decontamination
- work procedures
- equipment decontamination
- emergency response procedures

Personal Protective Equipment (PPE) for the handling of contaminated soil include Tyvek coveralls over street clothes, CSA approved steel or composite toed rubber boots, hard hats, nitrile gloves, safety glasses and half-mask respirators if there is dusty conditions or potential chemical exposure from the soil.

Treatment of PHC Contaminated Soils

In addition to the conventional Landfarm treatment process for PHC contaminated soils described in the specifications, EGT proposes to augment this treatment process utilizing an Allu bucket soil aeration process that we have employed on numerous recent DEW Line and other arctic PHC remediation projects. Details of the Alluing methodology are provided later in this section.

This method has been proven successful in southern Canada and by EGT in the Arctic at sites including the PINB, Clifton Point, NU, Johnson Point, NT, and BAR-D, Atkinson Point, NT, remediation projects. Details of successful soil remediation using alluing to aerate soils containing PHC F1 and F2 fractions at two of these arctic sites by EGT include:

- PINB, Clifton Pt., NU, 2010, 2400 m3 of PHC contaminated soils were successfully treated in one field season; and,
- At BAR-D in 2007, 2400 m3 of PHC contaminated soils were successfully treated in one field season;

Soil aeration involves repeatedly turning over and screening the contaminated soil. This technique essentially aerates and dries the soil, whereby hydrocarbons are volatilized. While there may also be some biological activity to reduce concentrations using this technique, it has been observed (e.g., bench scale studies) that the majority of the hydrocarbon reduction is due to volatilization through exposure to heat and/or the evaporative energies of the air and sun.

Given the success of active aeration at our above mentioned projects, it will be recommended that this method be used for PIND contaminated soils identified in conjunction with the Landfarm treatment process described in the specifications if required.

To aerate the soils, it is proposed that an Allu Bucket, attached to an excavator (Figure 1) be used.

Figure 1 Allu Bucket Attached to Excavator

The Allu bucket is attached to an excavator and operated hydraulically by the excavator. The Allu bucket is configured with rotating drums that are controlled by the excavator operator. The drums break up and aerate the excavated PHC contaminated soil. PHC soils will initially be placed in the Landfarm in windrow(s) from which the excavator with its Allu bucket will scope and then aerate the PHC soil depositing these aerated soils in a trailing treated windrow. The excavator with Allu bucket will continue treating the PHC soils cycling the length of the windrow(s). Given the PIN-D PHC soil characteristics as described in the Tender documents, it is estimated that an Allu bucket could treat approximately 100 cubic meters of PHC soil per hour.

One Allu bucket will be mobilized with the excavators to PIN-D site to treat and aerate the PHC soils. Given the above rates, it will take approximately less than 1 day at PIN-D. for the excavator with Allu bucket to make one treatment pass to aerate the entire volume of PHC soils required to be treated at PIN-D as per the specifications. EGT proposes to Allu process the PHC soils at least once in 2011 between their placement into the Landfarm and site closures at the end of September. The PHC soils will be left in windrows to allow for any bioremediation continuing over the winter. Samples will be taken prior to site closure to help determine a course of treatment in the next season.

Upon site recommissioning in June of 2012, the PHC soils will be Allu treated two more times by early July. At this time the soils will be sampled again. Depending on the results of this sampling the remediation plan will be analyzed in discussion with the DR to establish if and how much nutrient should be applied. Although EGT believes that the Allu process will remediate the soils to within the specified criteria, if results do not approach the remediation criteria by early 2012, the Allu bucket will be utilized for mixing the specified volume of nutrients into the PHC soils and then the soils will be spread to a maximum thickness of 400mm by the excavator/Allu as opposed to placement back into windrows. The nutrient volume as specified in the RFP documents will be

mobilized to the site with the initial mobilization in 2011. Water will be supplied to the Landfarm by the site water truck and sprayed onto the PHC soils while the Allu is mixing in the nutrient if required to reach the specified 5% moisture content. The Allu will then be used to perform subsequent regular Landfarm tillings. The Allu can perform this mixing and tilling work much more effectively than any other heavy equipment as it thoroughly blends 100% of the soils and can reach the full 400mm PHC soil depth with minimal disturbance to the Type 2 sub-base with precision.

Contact Water

If there are appreciable volumes of contact water in the collection sumps, it will be sampled where it sits in the sumps at the ends of the down gradient ditches within the Landfarm and sent for testing as per the specifications. If analytical results indicate that the contact water concentrations are below the wastewater discharge criteria it will be dewatered using a trash pump and will be discharged to a location approved by the DR. If the analytical results do not meet discharge criteria it will be pumped through either a barrel treatment system containing sorbent material or through a granular activated carbon (GAC) filter system.

Sampling and Reporting

During treatment, as agreed after discussions with the DR, a composite soil sample will be collected for every 100m3 of treated soil, by compositing nine subsamples collected at different locations and depths within the windrow and field tested with a photo-ionization detector (PID) and Petroflag field test. In addition, the composite sample may be submitted for laboratory analysis if deemed appropriate by the PHC soil remediation specialist for hydrocarbon constituents prior to treatment to evaluate initial PHC soil concentrations and to evaluate the correlation between field readings and laboratory concentrations. These results will be used to track the treatment progress. A weekly and monthly report will be submitted to the DR which describes the volume of PHC contaminated soil excavated, the treatment schedule, the average percentage of hydrocarbon degradation, volume of treated soil, summary of field tests, dates and volumes of nutrients added, and climate data and contact water testing results. When the field sampling program indicates that treatment is sufficient, the DR will be notified to collect the confirmatory samples.

2012 Recommissioning

After mobilization of the crews and the re-commissioning of the PIND site in mid-June of 2012 the Landfarm will be inspected to determine its condition following the winter. Any collected snow will be removed and water still remaining in the Landfarm will be tested and handled as described above and per the specifications. Should any problems develop with the berms sinking they will be regraded and releveled, if necessary, by the Komatsu D31 cat dozer.

Closure

Once treated to the far shore criteria of 2500ppm TPH as identified in the project specifications and the INAC 2009 Abandoned Military Site Remediation Protocol for PHC in Soil, the DR will be notified of the planned Landfarm closure. The dozer will push the Landfarm berms towards the interior remediated PHC the soils filling the treatment area perimeter catchment ditch and voids. It will also push berm material outward. The entire Landfarm will be regraded and packed to blend with the surrounding natural terrain, promote positive drainage and ensure that ponding does not occur. Surveyed location reference points of the remediated PHC soils will be provided to the DR.

Equipment Decontamination

All excavating equipment will be cleaned of soil and lumps prior to exiting the Landfarm area using track shovels, scrapers and brushes to decontaminate digging implements and tracks if required. As described above, wherever possible excavation will take place with the equipment working from clean ground adjacent to the potential contaminated materials. Final decontamination will utilize rags and solvent, or soapy water rinse if required. Any wash water and solvent will be collected in a metal tray and tested and handled as per the Specifications. Test results will be provided to the DR.

Personnel Decontamination

It is not expected that contaminated soil or hazardous substances that would require special personal decontamination will be encountered during Landfarm operations. Human contact with the Landfarm materials will be limited in nature as the majority of work will involve heavy equipment. However, in the event that decontamination is required, the following procedures will be followed:

- rubber boots and gloves will be wiped off with rags and solvent, or moist disposal wipes after each location is completed and washed off with soapy water or solvents;
- outer wear, including coveralls, rain suits, hard hat, gloves and so on will be stored outside the lunch/coffee room so as to prevent the movement of contaminant dust into clean areas;
- wipes, dust masks and disposable coveralls will be disposed of into an overpack drum appropriately labeled;

Additional site-specific decontamination measures may be required depending on the characteristics of the soil being excavated.

Potential Problems and Mitigating Measures

In addition to the work procedures and solutions described in this section to address the site specific work challenges and specific problems, and the potential problems and mitigating measures described in this section, other potential problems could be

encountered. The majority of potential problems will be issues that can be addressed and solved on site by the EGT site superintendent and experienced crew in consultation with the DR if required. However, some other potential problems and the mitigating measures that should be considered are as follows.

The commencement of the monitoring well drilling work as soon as possible after site mobilization will facilitate the soonest available use of the Landfarms to accept PHC soils excavated during 2011 and will allow for a time cushion to respond to any major repair issues to the drill equipment. The drill equipment will be mobilized with a complete set of parts and consumables. Should an unusual breakdown or repair be required the time cushion in the 2011 program will allow repair parts to be flown to site. Alternatively, the drill equipment from another site (PIN-E) can be flown to PIN-D should the repairs not be possible at that time. Should unforeseen extreme difficulties be experienced with the drilling work/equipment, additional time beyond the 2011 work schedule work window will be provided over the winter and upon 2012 mobilization to further address and complete required repairs to ensure the monitoring well installation work is completed without delaying the project schedule and the subsequent 2012 placement of non-hazardous waste in the Landfarm.

Given the geology, topography and drainage of the PIN-D site it is not expected that variable or unforeseen weather conditions will present a serious risk to the construction of the Landfarm. Tarps mobilized to site may be required if wet weather is encountered for either the Allu aeration and/or the Landfarm nutrient/tilling processes. The amount of contact water in the Landfarm sumps will be monitored constantly and handled as required.

Throughout all aspects of the work covered in this section, as with all work onsite, efforts will continually be applied to minimize environmental disturbance adjacent to the work. Should access conditions to a work area be soft, unstable and/or wet then “Swamp Mats” mobilized to site during 2011 will be laid out from the closest stable access point to drive on.

Unusually wet weather can impede the Allu aeration process. The initial PHC soil windrows could be covered with tarps brought to site to prevent precipitation from penetrating the soils and avoid potentially contaminated runoff.

The Allu bucket could have a serious mechanical failure that could not be repaired onsite in a timely manner. In this situation having another Allu bucket in operation at the other PIN-E site at the same time will allow for that Allu bucket to be flown between the sites to serve as a backup for the other.

Similar to other aspects of the Project, other major factors which could be potential problems and affect the contaminated soils work and the overall schedule include: barging availability and timing, site weather conditions, ground thaw variances from norms in excavation areas, lab sample turnaround times and mechanical breakdowns.

Any significant potential delays due to sampling and analysis can greatly impact project work and schedule. All efforts should be made by both EGT and PWGSC to expedite shipping and return of results as soon as possible. If this is causing delays then expedited lab service will be requested.

With respect to the specific tasks required to collect, containerize and dispose of the contaminated soils the most significant potential problem could be the discovery of major quantities of unknown contaminated soils from excavation areas. This could cause delays in the work by creating large amounts of samples to be taken and larger quantities of contaminated soils to manage and containerize than has been planned.

EGT has discussed the potential of having additional flights to site with its air services subcontractor if for example additional containers are required to deal with unforeseen additional quantities of contaminated soils.

The Allu and Landfarm treatment process may take longer than expected to reach criteria for closure. In this case the treatment work will need to continue and if required be extended into the 2012 fall “cushion” operating period described below.

As further described in the Scheduling Section, EGT has taken numerous steps to mitigate potential schedule problems. These include conservatively estimating the duration of work tasks and activities, having surplus equipment onsite and available, having extra beds available in the camp if required for the intensification of site activities or introduction of 24 hour operations, Scheduling an extra 4 to 6 week “cushion” at the end of 2012 if extra work is required and having extensive consultations with the proposed subcontractors to ensure that they fully understand the importance of meeting the project schedule.

EGT is confident it can respond to any potential problems encountered during the Excavation and Off Site Disposal of Contaminated Soils.

4.0 TRAINING

E. Gruben's Transport Ltd. recognizes the value of establishing Training Programs in order to provide higher levels of safety in the workplace, higher levels of personnel competence and confidence, opportunities for personal advancement, greater levels of satisfaction amongst personnel in our employ, as well as to satisfy regulatory requirements. We also believe greater and broader training amongst all levels of our personnel will help us produce a higher quality of work for our clients and will result in greater opportunities for the company to gain new work and new clients.

E. Gruben's Transport Ltd. will provide and/or support includes both formal and informal training, on-the-job and classroom training, safety-specific and skill-specific training.

Training and skills-assessment will begin on hiring. New employees will receive basic orientation on safety standards and procedures which are standard procedures for company operations.

Basic Safety Program training, WHMIS, First Aid and TDG programs will be carried out periodically in house as required. As well, programs in Safety Program Supervision, Hazard Identification and Control and Incident Investigation will be provided to supervisory personnel at minimum, in order that such information and developed procedures can be passed down to all personnel through safety meetings.

Programs such as HAZMAT, Wildlife Monitor, ATV Safe Operation, Light Duty Vehicle Operator, Heavy Equipment Training, Class 3 and Class 1 Driving Courses, Contaminated Soils and PCB Hauling, and Asbestos Abatement Courses will be offered as operations require.

Many subjects related to new tasks and procedures, or to address newly identified hazards, will be addressed at safety meetings and daily tailgate meetings.

Much of the training which takes place falls under the general heading of On The Job Training.

4.1 On the Job Training (OJT)

The purpose of on-the-job training (OJT) is to address the development of on-going job skills. With a disciplined approach to OJT, the worker is provided with the practical knowledge and skills required to perform a job task in a safe, efficient manner that complies with company procedure.

<u>OJT Procedures</u>
OJT must be provided as a means of transferring task knowledge from competent workers to workers who do not have operational experience to conduct the task safely.

Personnel competent in work site and related job tasks must provide on-the-job training as prescribed in documented procedures.

Basic Steps for OJT include:

- Provide written procedures and demonstrate to the trainee how you want it done;
- Observe the trainee as he/she does the task;
- Correct any mistakes made by the trainee in a professional manner – be patient;
- Have the trainee repeat the task until he/she does it right – to your satisfaction; and,
- Have the trainee do it one more time for good measure to reinforce the memory of how to do it correctly.

OJT can also be an effective follow-up to reinforce classroom instruction.

OJT Record Keeping
A record of OJT must be signed by a supervisor and the worker to acknowledge task competency and is maintained on file within the company.

4.2 Mandatory Certification Training

Federal, Provincial and Territorial legislation stipulates mandatory certification training requirements for operations under their specific jurisdiction. The following outlines requirements for Transportation of Dangerous Goods (TDG) and Workplace Hazardous Materials Information System (WHMIS) training.

Other mandatory training specific to operation may be required. Supervisors will refer to the pertinent legislation that applies to their operation to ensure compliance to legislated training requirements.

4.2.1 Workplace Hazardous Materials Information System (WHMIS)
All personnel at Ross Point PIN-D will have received WHMIS training.

4.2.2 Transportation of Dangerous Goods (TDG)
Personnel who will be required to handle or package Dangerous Goods for shipping will be TDG certified. EGT will provide this training during worker orientations or in the field as required.

4.2.3 Training Specific to Ross Point PIN-D

All personnel working at Ross Point PIN-D will have received the Site Specific Worker Orientation, will have received WHMIS training and any training required for their particular tasks at the site. All training records will be available on site. This may include:

- Confined Space Certification
- Asbestos Worker Training
- First Aid
- Working at Heights

Confined Space Certification
There should be no requirement for workers to enter confined spaces at Ross Point, PIN-D; however EGT do have competent workers trained and available to undertake these type operations as needed.

Asbestos Worker Training
This training is outlined in Section 3.14.5

First Aid
First Aid training for EGT employees will be conducted to ensure that all regulatory requirements are met or surpassed and will be provided as required.

5.0 COMMUNICATION

5.1 Role of Communication

The important role that communication plays in health, safety and environmental protection cannot be overemphasized.

Important messages need to be communicated numerous times in different ways to ensure the people listen and understand. To make communication effective the organizational climate must encourage people to listen actively. This means encouraging people to check their interpretations, ask when they do not understand, voice their opinions, and let people know they have been understood.

Being a good corporate citizen is supported by open and honest communication with your workforce, the local communities and your business partners.

This section emphasizes two critical communication areas:

1. Management communication; and,

2. Company Safety Meetings such as:
    - Regular weekly management meetings
    - Regular monthly management meetings
    - Daily health, safety and environment meetings
    - Daily tailgate meetings

The more employees and contractors know about the HSE program, the better able they will be to support it.

In initiating communications, management makes itself more accessible to others working within the company. This will ultimately result in greater participation of workers, contractors and subcontractors in the development and maintenance of HSE programs. It will also lead to higher morale and improved health, safety and environmental performance along with improved workplace productivity.

5.2 Communication Frequency

Regular communication with employees, contractors and subcontractors should include describing the company's commitment to HSE performance and explaining why health, safety and the environment are important and whom the affect.

These communication opportunities will be held when senior managers and the majority of employees, contractors and subcontractors are present.

It is important for management and supervisors to tour work sites, observe work practices and talk to workers about HSE issues. The frequency of tours will vary according to our type of operations and locations of our sites.

Conducting safety orientations, providing instruction and practice with experienced guidance and meeting mandatory training requirements are part of a good communication process.

Special programs like the new worker program, and specialized training and information sessions will demonstrate the commitment EGT has for their workers, the environment and the communities in which we work.

5.3 Management Communication

Management will communicate clearly and regularly the company's commitment to excellent HSE performance to all workers, contractors, subcontractors, suppliers, clients, and other stakeholders.

5.4 Communication of Expectations

Establishing expectations with people requires regular communication of the following topics:

- HSE program goals and performance expectations;
- Why HSE is important and who it affects;
- Hazardous conditions and corrective measures;
- Allocation of HSE responsibilities;
- Best practices;
- Incident and accident reporting procedures; and,
- Regulatory issues.

5.5 Types of Communication

To communicate company commitment to health safety and environmental excellence, management will do any or all of the following:

- Go to work sites to observe operations and engage workers in discussions of HSE matters;
- Send motivational letters or memos to employees;
- Participate in committees and meetings;
- Include HSE topics as regular agenda items in meetings;
- Highlight HSE accomplishments at company functions;
- Provide detailed job instruction for new, transferred or temporarily assigned personnel;
- Hold regular safety meetings for all staff;
- Recognize workers who work safely; and,

- Provide regular feedback to all employees on safety performance or concerns.

5.6 Site Specific Communication

Site specific communication systems and procedures will be set up to accommodate work or situations, which fall outside the camp, especially those in isolated locations. The journey management system will be employed for any work conducted outside of general camp and work locations or when individuals are required in unusual circumstances to work alone. The working alone policy will be followed in all situations where these circumstances exist. No one will travel outside of the general camp areas without the permission of the supervisor and they must be accompanied by a wildlife monitor. See Appendix E for Wildlife Response Plan.

6.0 MEETINGS

To bring people together on a regular basis to hear and talk about the different HSE programs, procedures, and topics will help to set clear expectations and foster commitment to incorporate what workers learn into their day-to-day activities.

The communication guidelines contained below are not intended to be exhaustive, but are representative of HSE directives.

6.1 Regular or Start-Up Health, Safety & Environmental Meetings

All operator work groups engaged in northern operations shall participate in regularly scheduled safety meetings at least monthly or weekly for construction. Additional specific meetings are called as required (i.e. pre-job and tailgate meetings).

It is essential that site leadership attend and participate in as many safety meetings as possible.

Safety meetings are held to ensure that all personnel understand the operational steps and protective measures pertaining to the potential hazards of the job. The specific purposes of these meetings can include:

- Comprehensive identification of safety issues;
- Pre-job and/or task analysis for hazard prevention;
- Establishing protocols; and,
- Emergency response requirements at the beginning of a project or scope of work.
- Areas of concern and opportunities for improvement;
- Review of hazards and potential risks;
- Identify “next steps”;
- Set time and date for next meeting; and,
- Identify possible issues to be covered in the next meeting.

6.2 Pre-Shift Meetings

Pre-Shift Meetings shall be held before:

- Starting work each morning;
- Starting a new shift; and,
- Undertaking of non-routine jobs.

Additional meetings are also held when:

- There has been a significant change in the way work is being carried out; and
- The supervisor deems it appropriate.

The objectives of the pre-shift meetings are to:

- Keep all members of the work team informed of the day-to-day opportunities and challenges for working safe;
- Inform workers of the forecasted daily activities;
- Identify the unique hazards and required control measures to prevent injuries;
- Review basic safe work practices;
- Inform workers of the activities of the other workers and how their activities will interact; and
- Allow a shift supervisor to assess the emotional and physical capacity of crew and ensure all are prepared for work.

The pre-shift meeting allows the shift supervisor to:

- Ensure all on site personnel are appropriately trained to carry out their assigned duties;
- Ensure certifications and permits are valid and current;
- Identify possible human hazards such as:
    1. Physical and/or emotional fatigue;
    2. Use of medication;
    3. Stress;
    4. Emotional distress; and
    5. Effects of drugs or alcohol.;
- Identify interpersonal issues among the team;
- Manage new or green workers in order to identify to the rest of the crew;
- Ensure that new workers have completed pre-job orientations and required safety training; and
- Identify and control work site visitors.

During the pre-shift meeting emergency response procedures are reviewed including:

- Current activities;
- Meeting area in case of an emergency;
- Procedures to account for all employees, visitors and contractors;
- Assigned roles of all personnel;
- Response protocol specific to the area of activity;

- Location of safety stations on site (firefighting equipment, first aid, eyewash, and communications)
- Emergency escape procedures and routes;
- Shut down procedures;
- Rescue and medical duties for assigned employees; and,
- Procedures for reporting an emergency.

6.3 Tailgate Meetings

Tailgate meetings occur as and when needed and are the responsibility of all workers.

Supervisors or workers can initiate tailgate meetings when the need arises in order to identify a safety issue or review the appropriate work or safety procedure associated with a work assignment. Tailgate meetings should be called whenever the conditions of the job change (for example, for changing weather, different available equipment, change in personnel) or whenever the task itself changes. They should be called when new potential hazards are identified. They should also be called whenever workers or supervisors feel that more complete communication and understanding of the task at hand is desirable.

6.4 Orientations

Pre-job and pre-employment orientations provide the opportunity to present an overall picture of the company's HSE program and commitment, the rights and responsibilities of both workers and management, the company's expectations and policy's, as well as details of particular contracts and client requirements. This also provides the opportunity for new employees to complete employment sign-up procedures and the gathering of required employee information for employee files.

The orientation, because of its in-depth approach, can set the overall tone for the entire term of a new employee's employment, as well as reinforce attitudes and policies for returning employees, and introduce new procedures and policies.

The orientation may be the first opportunity the company has to thoroughly indoctrinate and thoroughly warn an employee about the work situation he or she is entering.

It is critical that all new employees should receive an orientation and that all long-term employees should receive a new orientation at the beginning of every major work season.

7.0 ACCIDENT/INCIDENT INVESTIGATION & REPORTING

7.1 Introduction

Investigation and reporting are critical steps in preventing a similar incident or accident from recurring. The investigation is intended to determine the root cause or causes of an incident or accident as opposed to finding fault. Incidents will be reported on accident/ incident forms, and supervisors are to submit these reports to their head office within 48 hours of an incident. Superintendents shall then determine the need for and, if necessary, direct detailed investigations with the assistance of the Safety Manager or their designate. All incidents will be reported to the DR at PIN-D, who will take whatever action they deem necessary.

Incident and accident reporting is also useful because it helps identify:

- Training Needs;
- Problems with work procedures;
- Problems with work site conditions;
- Needs for Personal Protective Equipment PPE, Safety & Emergency Equipment;
- Failures in communication

It also helps collect information necessary for completing insurance reports, for complying with regulatory requirements and for gathering statistical information used to calculate statistics and identify incident trends so that the effectiveness of the HSE program can be measured.

The steps in developing an investigation analysis procedure should include:

- Implementing an incident reporting system;
- Preparing investigation procedures;
- Establishing a progress to ensure required corrective actions are completed; and
- Sharing the lessons learned from the incident investigations with workers to prevent a recurrence.

7.1.2 Types of events to investigate and report include

- Fatalities;
- Injuries or occupational illnesses that prevent a worker from performing regular tasks;
- Injuries that can be treated at the work site and injuries that require treatment by a medical professional;
- Any emergency or loss, such as a motor vehicle accident, fire, explosion, vandalism;
- Environmental damage or loss; and,
- Near misses;

Supervisors will manage the response to the event and notify the appropriate authorities where necessary.

7.1.3 When to prepare reports

Reports of an incident should be prepared immediately after the event has occurred and kept on file to ensure requirements for regulatory compliance have been met.

In the case of serious accidents and environmental incidents, the accident/incident scene should be preserved to ensure important evidence is not lost or disturbed and details are not forgotten. The law mandates this for a serious injury accident or fatality.

To ensure incident reporting is consistent, appropriate report forms should be available at all work sites as required by regulatory agencies and company policy.

7.1.4 Implementation

All E. Gruben's Transport Ltd. personnel must be encouraged to report all incidents and must be informed that this is part of their responsibilities as employees.

E. Gruben's Transport Ltd. has developed incident report forms and has provided training for senior management and job supervisors to complete investigations and complete the required paperwork.

7.1.5 Incident Investigation and Follow-Up

Incident investigation and follow-up assists in determining root causes of incidents and helps prevent incidents from recurring. This can only be done with proper investigation and analysis.

Job Supervisors are initially responsible for the investigation of all incidents, regardless of their severity. Depending on the actual or potential severity of the incident an alternate investigation leader may be appointed. The E. Gruben's Transport Ltd. Safety/Loss Control Officer will provide assistance as required, as will any members of the senior management team. Senior management will also review all Incident Investigations.

Findings from investigations may to the recommendation that changes be made to work procedures, methodologies, management systems and corporate policies.

7.1.6 Training

Superior quality can be delivered to an investigation if the investigation team leader has been trained in investigation techniques. Depending on the severity of the incident, insurance investigators or government authorities may also be required to conduct an investigation and/or may require information provided by in-house investigations.

There is a benefit in training work site supervisors in investigation techniques and providing them with a logical approach in determining the underlying or root causes of incidents. E. Gruben's Transport Ltd. has provided Incident Investigation training to all its senior management and job supervisors, and will continue to provide training as new supervisors come into the system. These skills are transferable and can be used to evaluate hazardous job site situations to prevent incidents.

7.1.7 Investigative Purpose

The purpose of investigations is to identify direct and underlying factors that contributed to an incident and the root causes behind those factors.

7.1.8 Investigative Procedure

After being notified of an incident, the on-site supervisor should survey the area to determine if the work must be stopped to prevent injuries and preserve evidence. The on-site supervisor notifies his management and an investigation leader is appointed. The following decisions must be made:

- Determine if government authorities and insurance investigators should be called; and
- Determine if legal advice is required;

The investigation leader directs the gathering of evidence, which is to include:

- Interviewing witnesses and the people involved;
- Photographing the site to record evidence and damage; and
- Creating scale drawings and diagrams.

If insurance investigators or government or other regulatory authorities are called in, the investigation leader will assist them as required.

Once evidence has been collected, then the investigator can complete the investigation process, which includes:

- Determining the immediate and root causes of the incident;
- Completing the investigation report;
- Developing recommendations to prevent a recurrence;
- Prioritizing a list of corrective actions identifying responsible parties and target dates for completion;
- Submitting completed reports and recommendations to management and, if required, to the insurance company and government;
- Discussing the report and recommendations with everyone who was working on the site at the time of the incident and with all other employees that are affected by the incident; and,

Consideration should also be given to circulating any learning and recommendations throughout industry.

Individuals who are assigned action items then carry out the investigator's recommendations and provide feedback to management on a monthly basis until all actions are completed and signed off. Once there is verification that all recommended corrective actions have been completed, the incident report will be closed out.

7.1.9 Incident Statistics

Incident statistics are compiled for use in the company's HSE performance assessment and for third party use.

Frequency of lost-time injury incidents (including fatalities) and severity of lost-time injury incidents are calculated quarterly.

Calculations are based on the following:

Lost Time Injury Frequency = Number of lost-time injuries x 200,000/Number of hours worked.

Recordable Injury Frequency = Number of lost-time injuries + Number of medical aid injuries Number of restricted work injuries x 200,000/Number of hours worked.

Injury severity = Number of lost days x 200,000/Number of hours worked.

Rates are a better measure than simply counting the number of incidents because they take into account the level of worker activity. Therefore, a comparison of performance between time periods is valid.

7.1.10 Incident Reporting & Investigation Summary

Proper incident reporting and investigation processes will ensure that E. Gruben's Transport Ltd. is:

- Accountable for any actual or potentially serious events;
- Better able to determine the root cause of the incident; and
- Enabled to make the changes necessary to avoid any re-occurrences.

This process also enables the company to demonstrate its responsibility to the workforce, their families, and the communities in which we work.

7.2 Accident/Incident Investigation Procedures

Accident/incident investigation is a vital part of E. Gruben's Transport Ltd. Health and Safety Program. No other activity produces quicker results than the prompt reporting and investigation of accidents and "near miss" incidents. Therefore, we provide the following written procedures and guidelines for use in the completion of Accident/Incident Investigations:

Investigation of an incident or accident involves much more than filling out a report form. It is a process of gathering factual information and drawing conclusions; the report form is only the documentation and the summary of that process.

The purpose of an accident investigation is to determine the causes and put corrective measures in place to prevent a recurrence. It is not to find fault or fix blame. Serious accidents or incidents with a high potential for injury or damage will require an in-depth investigation but every incident is a signal of problems that need to be corrected.

7.2.1 Understanding Accidents

Many theories and models exist that explain how accidents happen. How an accident investigation is conducted will, in many cases, depend on the investigator's beliefs about the causes of accidents. A particular accident theory can strongly influence the organizations investigation process and can provide direction to its entire occupational health and safety management system. It is important therefore to explore our understanding of accident causation.

7.2.3 Incident

In order to better understand the investigation process, it is important to clarify our definition of the terms "accident" and "incident". These can include:

- Injury, illness or disease or fatality;
- Damaged tools, equipment or machinery; and
- Damaged material or property, including environmental damage.

This differs from dictionary definitions of "accident" which tend to emphasize factors such as "happening without observable cause" "arising from unknown causes" etc. This leaves the perception that accidents just happen and that they cannot be prevented.

In the HSE environment, the term "incident" is used in a broad sense to include accidents and other unplanned events which, under slightly different circumstances, could have resulted in harm to people or damage to equipment, machinery or property. These are often referred to as "near misses" or "close calls".

This then is the unplanned event that precedes the loss or close call. It is the exposure to the hazard or the contact that could result in harm or damage. Incidents are commonly classified as follows:

- Struck against (running or bumping into);
- Struck by (hit by a moving object);
- Fall to lower level (either the body falls or the object falls and hits the body);
- Fall on same level (slip and fall, top over);
- Caught in (pinch and nip points);
- Caught on (snagged, hung);
- Caught between (crushed or amputated);
- Contact with (electricity, heat, cold, radiation, caustics, toxics, noise); and

- Overstress/overexertion/overload

7.2.4 Immediate Causes

These are the hazards that existed immediately prior to the occurrence of an incident or accident. A hazard is defined as any unsafe practice or unsafe condition that has the potential to cause injury, illness, disease or damage to property, equipment and the environment. Immediate causes are usually easily identified and they are broken down into two types.

These are Unsafe Practices and Unsafe Conditions.

7.2.5 Unsafe Practices

These are the hazardous practices and behaviors that permit the occurrence of an incident, for example, failure to lock out equipment, failure to wear eye protection, overloading, poor driving practices, etc.

7.2.6 Unsafe Conditions

These are hazardous conditions that permit the occurrence of an incident, for example, inadequate guards or barriers, defective tools, poor housekeeping, weather conditions, etc.

Many investigators have a tendency to focus only on the immediate causes of an accident. But in order to prevent a repetition of what happened, you must dig deeper. It may be tempting to pin the accident on something a worker did or did not do and let it go at that. However, there is rarely, if ever, a single cause behind an incident or accident. Even the simplest incidents occur from a combination of causes.

Immediate causes are also called direct causes. They are the symptoms of deeper problems and the investigation must go beyond the immediate causes to identify the underlying causes.

7.2.7 Underlying Causes

These are real causes behind the symptoms; the reasons why the immediate causes existed. The underlying causes are not as apparent as the immediate causes. They are also referred to as root causes, basic or indirect causes.

Underlying causes can be identified by asking probing questions about the unsafe practices and unsafe conditions identified as the immediate causes. Here are some examples:

- Why was the equipment not locked out? Is there a lockout/tag-out procedure in place? Are workers aware of the procedure? Are workers trained in using the procedure?

- Why did the worker not wear eye protection? Is eye protection available? Is the wearing of eye protection enforced by the supervisor? Was the worker aware of the need for eye protection?
- Why did the worker remove the guard? Was there a lack of maintenance? Is the machine poorly designed? Was the worker aware of the hazard?
- Why was debris on the floor? Was this a rushed job? Is there any individual accountability for clean-up?
- Analysis of the answers to these probing questions will lead to the identification of underlying causal factors in two main categories – personal and work environment:

Personal Factors:

- Inadequate physical capability
- Inadequate mental capability
- Physical stress
- Mental stress
- Lack of knowledge
- Lack of skill
- Improper motivation

Work Environment Factors:

- Inadequate leadership/supervision
- Inadequate engineering
- Inadequate purchasing
- Inadequate maintenance
- Inadequate tools and equipment
- Inadequate work standards
- Wear and tear
- Abuse/misuse

Management System Defects:

Underlying causal factors can be linked to defects in the health and safety management system. There are three key areas to consider:

- System Components: The system may be lacking some important elements.
- System standards: The standards are not clear or specific enough. They may be inappropriate.
- Conformance with System Standards: People in the organization are not following or complying with the established standards.

7.3 Why Investigate?

Accidents are caused. They don't just happen. The causes of accidents can be determined through proper investigation; therefore injuries can be prevented if the causes of accidents are corrected. Unless the causes are corrected, the same thing could happen again and again.

The most important reason for investigation accidents is to prevent injury and illness to workers. There are other reasons to consider such as the costs of accidents and the legal requirements to investigate.

7.4 Legal Requirements

7.4.1 Occupational Health and Safety Act:

The NWT/NU Safety Act applies whenever there is a serious injury on a worksite, or an incident that has the potential for causing serious injury to occur. If an injury or incident listed below occurs at a worksite, the employer responsible for the worksite must notify a Workplace Health and Safety Inspector as soon as possible. Examples include:

- An injury or accident that results in death;
- An injury or accident that results in a worker being admitted to an unplanned or uncontrolled explosion, fire or flood that causes a serious injury or that has the potential of causing a serious injury;
- The collapse or upset of a crane, derrick or hoist; or
- The collapse or failure of any component of a building or structure necessary for the structural integrity of the building or structure.

In addition, the employer is required to investigate any other serious injury or any other incident that has the potential for serious injury. Since these “other” serious injuries and incidents are not defined in the Act it is important that E. Gruben's Transport Ltd. investigation policy clearly identify them.

7.4.2 Workers’ Compensation Act

While E. Gruben's Transport Ltd. will be dealing primarily with the NWT/NU Safety Act, there are other obligations and responsibilities under the Workers’ Compensation Act whenever a worker suffers personal injury on the worksite, or is entitled to medical aid as a result of an accident. If the accident is likely to disable the worker for more than the day of the incident, E. Gruben's Transport Ltd. is required to:

- Report the accident to the Worker’s Compensation Board within 72 hours;
- Notify the Board within 24 hours of learning that the worker has returned to work or is able to do so;

The Workers’ Compensation Act contains additional details about what E. Gruben's Transport Ltd. is required to do, and to make available in regard to accident investigations. E. Gruben's Transport Ltd. must be familiar with the Workers’ Compensation Act and what is expected in case of an accident.

7.5 What Should Be Investigated?

It is obvious that accidents resulting in death or serious injury must be thoroughly investigated.

However, studies show that for every accident resulting in death or serious injury there were a large number of similar accidents and incidents (unplanned events) resulting in property damage, minor injuries with no injuries at all. Therefore, minor injury accidents, near-miss incidents and property damage accidents with the potential for serious injury should be investigated to identify and mitigate root causes.

7.6 Who Should Investigate?

The supervisor should investigate the accidents and incidents in his or her area of responsibility. As discussed earlier, E. Gruben's Transport Ltd. as an employer; has a legal requirement to investigate those incidents defined in legislation. A definition of employer in the Act is “any person designed by an employer or his representative”. This could be the foreman, the lead hand, the superintendent, etc.

A team approach is recommended and whenever possible the supervisor should be assisted in the investigation by a safety committee member or the AHJ health and safety coordinator (if one exists). Safety is a line function; therefore the prime responsibility for accident/incident investigation lies with the supervisor.

7.7 Reporting of Accidents/Incidents

Prompt reporting of an accident/incident to the supervisor is essential. This enables the supervisor to carry out an investigation while the events are still fresh in the minds of those involved.

7.7.1 Failure to Report an Accident/Incident

Workers fail to report accidents or incidents for some or all of the following reasons:

- Fear of discipline;
- Concern for their own safety record;
- Concern for reputation;
- Fear of medical treatment and/or medical personnel;
- Desire to avoid work interruption;
- Desire to keep a clear record;
- Desire to avoid “red tape”;
- Concern for the reaction of other workers (peer pressure); and
- Lack of understanding of the importance of reporting.

Supervisors can encourage reporting by:

- Reacting positively to the report;
- Training employees in reporting procedures and emphasizing its importance;
- Acting promptly on the report;
- Providing feedback; and
- Following up with corrective measures.

7.8 Investigation Preparation

Preparation for an investigation begins with the development of an investigation process described in E. Gruben's Transport Ltd. investigation policy. The policy outlines the intent of the investigation and the procedures E. Gruben's Transport Ltd. uses in reporting an accident or incident and proceeding with investigation. Areas that are included in the policy are:

- What types of incidents and accidents are to be investigated;
- Notification procedures and contact list (i.e. OH&S, Emergency Response, family members, etc.);
- People involved in the investigation team;
- What report form(s) are used for various investigations; and
- The review process after the investigation is complete.

Most supervisors do not conduct many investigations in their career, which makes the investigation procedures a seldom performed task within many organizations. A regular review of the AHJ investigation policy and procedure will assist in prompt and correct response by front line supervisors at the worksite.

Before undertaking an investigation, the supervisor must have the necessary tools to do the job, including:

- Training in accident investigation techniques;
- Safety equipment clothing for the area(s) likely to be entered;
- Required permits and notification forms;
- An Investigation kit which should include the following
    1. Investigation Report Forms
    2. Investigation guide or checklist
    3. Writing material for notes, statements, sketches, etc.
    4. Pencils, pens
    5. Photographic or video equipment, if appropriate (cannot be used in an explosive atmosphere)
    6. Testing equipment
    7. Measuring tape
    8. DO NOT ENTER tape

APPENDIX A

Ross Point, PIN-D Hazardous Material Audit

The following materials have been identified as hazardous waste materials at the Ross Point, PIN-D Site. More detailed inventories may be found in Appendices A and B of the tender documents.

- Asbestos
- Lead Paint
- Petroleum Distillates, including free product that may be recovered during contaminated soil excavation work
- Tank Sludge
- Soils and paint chips containing PCB's at concentrations in excess of 50 parts per million
- Material, including waste water, ground water and surface water, identified to be hazardous as a result of testing
- Miscellaneous Hazardous Materials defined as those materials not classified above, but are suspected to fall under the definition of Hazardous Wastes and Materials.

Other hazardous materials that may be encountered on the site or in landfill excavations include:

Waste oil	Ocillators	Meters
Asbestos	PCB transformers	PCB Capacitors
Sewage	Copper wire	Transmission fluid
Lead-based paints	1-1-1-trichloroethane	PBX telephone equipment
Radioactive tubes	Mercury vapor rectifier tube	Paint thinner
Scrap metal	Batteries	Chlorinated hydrocarbons
Radar components	Corrosion inhibitors	Lye
Fuel drums	Corrosives	Paper
Lime	Plastics	Solvent
Antifreeze	Dynamite	RF interference filters
AVGAS (Aviation fuel)	Generators	Scopes
Sulfamic acid	Vehicles	Rubber fuel bladders
Cathode-ray tubes/screens	Filtron tubes	

EGT will bring the following products to Ross Point PIN-D in order to carry out contract work.

EGT will provide and keep on-site MSDS for all of these products and any other WHMIS regulated products we bring to the site.

- Diesel fuel

- Gasoline
- Grease
- Lubricating oils
- Transmission Fluid
- Methyl Hydrate

- Compressed oxygen and acetylene
- Compressed propane
- Compressed medical oxygen
- Compressed helium
- Antifreeze
- Liquid bleach
- Isobutylene (calibration gas)
- Spray Paint
- Spray Adhesive
- Camp cleansers and disinfectants

APPENDIX B

ROSS POINT PIN-D FIRE SAFETY PLAN

Fire, especially a fire in our camp structure, is potentially the most catastrophic event which could occur on this project. Because of our inability to pump significant amounts of water Fire Prevention practices take on even greater significance and must be strictly adhered to.

Muster Station - A muster station will be designated at the site in order to gather all personnel and conduct a head-count should a camp evacuation be required. Personnel lists and bed–assignment lists will be updated daily/as-and-when site personnel change. The Medic, the Site Superintendent and a designated member of the camp staff will have copies of updated rosters and updated rosters will be posted in the muster station. The head count will be conducted by the member of the camp staff.

Smoke Detectors - Smoke detectors will be tested and in place in all bedrooms, recreation areas, kitchen and camp storage areas and office facilities.

Camp Alarm System - Because the camp complex will be comprised of a number of separated buildings, the alarm systems in the main camp buildings will not set off the alarm systems in the other. Instructions for the use of pull-stations will also require use of vocal warnings in combination with compressed-gas signal horns, which will be placed by camp exits. This will be reinforced in site orientations, safety meetings, fire drills and posted Camp Response Procedures.

Fire Extinguishers - Fire extinguishers will be inspected and placed at all camp entrances, in the kitchen, the generator building/shop and in all of the camp out-buildings as well as at fuel storage tanks. All pickups and heavy-equipment on site will also be equipped with ABC fire extinguishers. Containment areas will be required to have ABC extinguishers easily accessible within containment. Any use of gasoline powered tools, welders, cutting torches and sparking tools such as grinders will require that extinguishers be on hand.

Exit/Emergency Lighting - All exits will be marked with battery-backed “EXIT” lights. Emergency battery-backed flood lighting will be in place in all hall-ways and common areas.

Signage - All extinguishers and pull-stations will be clearly marked. Every bedroom and common room will have a camp-plan posted with marked primary and secondary evacuation routes. Every bedroom and common room will also have Camp Fire Response Procedures and Camp Rules posted.

Fire Response Team - A Fire Response team will be designated by the Site Superintendent and will be led by the Site Superintendent. The Fire Response team will be responsible for evacuation and systematic room and bed checks, fire isolation and suppression and muster-site head counts.

Camp Fire Response Procedures - Camp Response Procedures will be posted throughout the camp facilities. A copy of Camp Response Procedures is attached.

Smoking and Open Flame - Smoking will only be allowed in the designated "smoking shack". This is a small building equipped with high-powered exhaust fans separated from the main camp building but part of the camp complex. Smoking will be prohibited in all other camp areas. No candles or other sources of open flame will be permitted in the camp complex. Smoking will also be prohibited within 30 meters of any fuel storage, re-fueling operations and gasoline powered tool storage and operation.

Cutting and Welding/Hot Work Permits - Cutting and welding anywhere outside of the shop area or by anyone other than the site mechanic will require daily task-specific "hot-work" permits. "Fire watch" personnel with extinguishers may be designated as part of the hot-work permitting process. All use of gasoline powered tools and sparking tools within containment areas will require daily permitting.

Orientation and Training
The Ross Point, PIN-D Fire Safety Plan and Camp Fire Response Procedures will be addressed and reinforced during the Worker Orientation Seminar, at on-site orientations and at weekly safety and daily safety/tailgate meetings. Fire drills will be practiced once the camp is operational.

Emergency Rations and Clothing
The Site Supervisor and Medic will coordinate and place emergency rations, equipment and clothing in a safe and secure place away from the main camp area, which could be used in emergency situations. The camp roster will be updated and placed at this location as required.

CAMP FIRE RESPONSE PROCEDURES

1. **If you notice a fire in the camp or if a smoke alarm activates, pull the nearest Alarm Pull Station. Call out "FIRE! FIRE! FIRE!"**

2. **Ensure your own safety. Begin to evacuate personnel from camp, beginning in rooms closest to fire and moving away from fire. Notify personnel in other camp buildings and trailers (well-site offices, labs and "smoke-shack") using a constant blast on compressed gas signal horn mounted at building exits and/or verbal warnings.**

3. **If the fire is small and isolated, attempt to extinguish using fire extinguisher. If the fire is beyond control attempt to isolate and evacuate immediately to the Muster Station for head count.**

4. **Personnel not directly involved in room-checks or fire suppression should move directly to the Muster Station.**

5. **The Site Superintendent or his designate will take control of fire suppression activities.**

We have a minimal ability to pump water to fight fires in this camp. We must **PREVENT FIRES**.

1. Observe camp prohibitions on smoking and open flames.

2. Become familiar with emergency exit routes.

3. Keep exits from being obstructed.

4. Keep fire extinguishers and emergency pull stations from being obstructed.

5. Do not tamper with, remove or disengage smoke detectors, alarm systems or fire suppression equipment.

6. Actively participate in safety meetings, training and fire drills.

APPENDIX C

MEDICAL EMERGENCY RESPONSE
Ross Point PIN-D Cleanup

The Site Medic will take charge of all medical emergency situations. The Site Superintendent will provide and arrange for assistance, help arrange potential medical evacuations ("med-evacs") and will assume control of the situation at the direction of the Medic.

In the case of a medical emergency the alarm should be raised to the Medic and the general site population by calling on the radio, "MEDIC! MEDIC! MEDIC!
[Three blasts of a compressed gas horn will also be considered an emergency signal.]

All other radio communication must immediately cease. All other site work must immediately cease and personnel must stand-by for instruction. The Medic will respond to the radio call, will gather relevant information, and will direct the appropriate response. The Site Superintendent and other supervisory personnel will stand-by to assist.

First Aiders at the site of the incident/injury will provide First Aid until the Medic arrives on scene.

Emergency medical equipment on-site will include burn kits, Medic First Aid supplies, back-board/stretcher, individual/vehicle First Aid kits, medical oxygen, eye-wash stations.

All vehicles must carry First Aid kits.

All medical evacuations must be arranged through the Kugluktuk Health Center at: 867-982-4531 and/or Adlair Aviation: 867-983-2569

Alternate medical evacuation can be arranged by contacting Air Tindi: **867-669-8200**

Yellowknife Stanton Territorial Hospital – 867-669-4111

Other Emergency Contact numbers	
Aklak Air Ltd.	867-777-3555
Canadian Helicopters	867-777-2424
E. Gruben's Transport Ltd. (TUK)	867-977-7000
EGT after-hours	867-678-0045

See complete list of Emergency Contact Numbers in front of Site Specific Health and Safety Plan. Emergency Contact Number list will also be posted in EGT Site Office, Other Site Offices, Medic's Room and beside each outside phone line.

In the event of a serious accident the Workers' Safety and Compensation Commission must be contacted immediately. WSCC Accident/Incident Reporting line: 867-669-4439 or 1-800-661-0792. All minor incidents must also be reported to WSCC within 48 hours.

It will be the responsibility of the Site Superintendent, with the assistance of the Medic, to follow up on all accident/incident reporting. All medical emergency situations will be investigated according to Accident Investigation Procedures in EGT HSE manual.

APPENDIX D

OPERATION AND MAINTENANCE OF AN AED

Operation of an Automated External Defibrillator (AED)

An **automated external defibrillator** or **AED** is a portable electronic device that automatically diagnoses the potentially life threatening cardiac arrhythmias of ventricular fibrillation and ventricular tachycardia in a patient, and is able to treat them through defibrillation, the application of electrical therapy which stops the arrhythmia, allowing the heart to reestablish an effective rhythm.

An automated external defibrillator is used in cases of life threatening cardiac arrhythmias which lead to cardiac arrest. The rhythms that the device will treat are usually limited to:

1. Pulseless Ventricular tachycardia (shortened to VT or V-Tach)
2. Ventricular fibrillation (shortened to VF or V-Fib)

In each of these two types of shockable cardiac arrhythmia, the heart is active, but in a life-threatening, dysfunctional pattern. In ventricular tachycardia, the heart beats too fast to effectively pump blood. Ultimately, ventricular tachycardia leads to ventricular fibrillation. In ventricular fibrillation, the electrical activity of the heart becomes chaotic, preventing the ventricle from effectively pumping blood. The fibrillation in the heart decreases over time, and will eventually reach asystole.

AEDs, like all defibrillators, are not designed to shock asystole ('flat line' patterns) as this will not have a positive clinical outcome. The asystolic patient only has a chance of survival if, through a combination of CPR and cardiac stimulant drugs, one of the shockable rhythms can be established, which makes it imperative for CPR to be carried out prior to the arrival of a defibrillator.

Effect of Delayed Treatment

Uncorrected, these cardiac conditions (ventricular tachycardia, ventricular fibrillation, asystole) rapidly lead to irreversible brain damage and death. After approximately three to five minutes, irreversible brain/tissue damage may begin to occur. Research indicates for every minute that a person in cardiac arrest goes without being successfully treated (by defibrillation), the chance of survival decreases by 10 percent.

Requirements for use

AEDs are designed to be used by laypersons who ideally should have received AED training. This is in contrast to more sophisticated manual and semi-automatic defibrillators used by health professionals, which can act as a pacemaker if the heart rate

is too slow (bradycardia) and perform other functions which require a skilled operator able to read electrocardiograms.

Preparation for operation

Most manufacturers recommend checking the AED before every period of duty or on a regular basis for fixed units. Some units need to be switched on in order to perform a self-check; other models have a self-check system built in with a visible indicator.

All manufacturers mark their electrode pads with an expiration date, and it is important to ensure that the pads are in date. This is usually marked on the outside of the pads. Some models are designed to make this date visible through a 'window', although others will require the opening of the case to find the date stamp.

It is also important to ensure that the AED unit's batteries have not expired. The AED manufacturer will specify how often the batteries should be replaced.

Mechanism of operation

The use of easily visible status indicator and pad expiration date on one model of AED

An AED is external because the operator applies the electrode pads to the bare chest of the victim, as opposed to internal defibrillators, which have electrodes surgically implanted inside the body of a patient.

Automatic refers to the unit's ability to autonomously analyze the patient's condition and to assist this, the vast majority of units have spoken prompts, and some may also have visual displays to instruct the user.

When turned on or opened, the AED will instruct the user to connect the electrodes (pads) to the patient. Once the pads are attached, everyone should avoid touching the

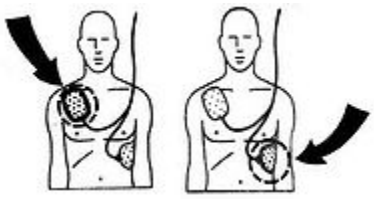
patient so as to avoid false readings by the unit. The pads allow the AED to examine the electrical output from the heart and determine if the patient is in a shockable rhythm (either ventricular fibrillation or ventricular tachycardia). If the device determines that a shock is warranted, it will use the battery to charge its internal capacitor in preparation to deliver the shock. This system is not only safer (charging only when required), but also allows for a faster delivery of the electrical current.

When charged, the device instructs the user to ensure no one is touching the patient and then to press a button to deliver the shock; human intervention is usually required to deliver the shock to the patient in order to avoid the possibility of accidental injury to another person (which can result from a responder or bystander touching the patient at the time of the shock). Depending on the manufacturer and particular model, after the shock is delivered most devices will analyze the patient and either instruct CPR to be given, or administer another shock.

Many AED units have an 'event memory' which store the ECG of the patient along with details of the time the unit was activated and the number and strength of any shocks delivered. Some units also have voice recording abilities to monitor the actions taken by the personnel in order to ascertain if these had any impact on the survival outcome. All this recorded data can be either downloaded to a computer or printed out so that the providing organization or responsible body is able to see the effectiveness of both CPR and defibrillation. Some AED units even provide feedback on the quality of the compressions provided by the rescuer

AEDs (manufactured after late 2003) have tended to utilize biphasic algorithms which give two sequential lower-energy shocks of 120 - 200 joules, with each shock moving in an opposite polarity between the pads. This lower-energy waveform has proven more effective in clinical tests, as well as offering a reduced rate of complications and reduced recovery time

Simplicity of use



Usual placement of pads on chest

Unlike regular defibrillators, an automated external defibrillator requires minimal training to use. It automatically diagnoses the heart rhythm and determines if a shock is needed. Automatic models will administer the shock without the user's command. Semi-automatic models will tell the user that a shock is needed, but the user must tell the machine to do so, usually by pressing a button. In most circumstances, the user cannot override a "no shock" advisory by an AED. Some AEDs may be used on children - those under 55 lbs. (25 kg) in weight or under age 8. If a particular model of AED is approved for pediatric use; all that is required is the use of more appropriate pads.

All AEDs approved for use in the Canada use an electronic voice to prompt users through each step. Because the user of an AED may be hearing impaired, many AEDs now include visual prompts as well. Most units are designed for use by non-medical operators. Their ease of use has given rise to the notion of public access defibrillation (PAD), which experts agree has the potential to be the single greatest advance in the treatment of out-of-hospital cardiac arrest since the invention of CPR.

Maintenance of AED

The status indicator must be checked daily. You must look for a flashing black hourglass, which means that the device is all set for use. If you cannot see a flashing black hourglass on the automated external defibrillator, you must notify an authorized person that will check your device. A trained person must perform these checks each day.

A check must be carried out on a monthly basis, and this should be done by an AED Coordinator. After having used an AED, the AED Coordinator will have to restock any used electrode pads, replace the batteries, PC cards and kit gloves. The unused supplies must be checked so as to be intact and within the expiry dates. The batteries must be replaced and a battery insertion test (BIT) must be carried out before putting the AED back in use - this is a key factor in AED maintenance procedures.

Automated External Defibrillator Maintenance Tips

You have to make sure that the cover has no fissures or loose components. All the cables of the device must be without fissures, cuts or broken wires. The exterior and the connector must be cleaned and disinfected to prevent any contamination with unnecessary bacteria. A cleaning of the whole AED unit may be done. Take a look in the User's guide to find a suitable cleaning agent. Check the status indicator after each use to see if it is ready for use. Also check the energy delivery, ECG analysis results, the indicators and if the voice or audible prompts still function. Make sure the emergency AED kit contains all the equipment needed for intervention. It is highly important that these devices are kept in proper conditions and checked regularly so that no incident will take you by surprise. There are also maintenance-free AEDs available on the market.

The Good Samaritan Law and AEDs

When facing an AED intervention, you must be ready to perform CPR, and you will also have to be ready for blood exposure. In Canada there is the good faith policy that functions in emergency intervention cases. This means that any person using an AED in emergency falls under the Good Samaritan Laws. So the person performing resuscitation using an AED kit will not be held responsible for the harm or death that might be the consequence of an AED intervention.

This is regarded as non-intentional harm and therefore the person who has failed to bring the patient back to life cannot be held legally responsible. So in Canada the Good Samaritan Law provides protection both for the trained and untrained AED users. However, inattentive use of an AED may cause involuntary manslaughter and sometimes may end up with legal charges. This gives us even more reasons to consider AED maintenance as an important task.

APPENDIX E

Ross Point PIN-D Wildlife Response Plan

EGT as part of the overall objective to provide a safe working environment for all personnel, EGT has developed a wildlife management plan for the remediation of the PIN-D site. This plan will define the frequency of patrols, rules for onsite storage of firearms, terms of use for firearms, record keeping, reporting procedures, training requirements related to firearms, wildlife deterrent methodology, safe ATV operations, and radio operations.

The Ross Point PIN-D site is a traveling and hunting ground for Grizzly bears and possibly polar bears, depending on season and proximity of sea ice. We would expect that grizzly bears may be encountered at any point during the work season.

Caribou, musk ox, arctic fox, squirrels, lemmings and an assortment of water fowl are known frequent the area around Ross Point, PIN-D.

E. Gruben's Transport Ltd. plan is based primarily on avoidance and deterrence for the protection of both our personnel and wildlife. Our practices will be designed to not attract wildlife to the worksite, to avoid contact when possible, to deter contact when necessary, to report potential problems to the relevant authorities, and only as a last resort to destroy a particularly troublesome bear when human life is in danger.

Site Cleanliness/Garbage

Site cleanliness will be emphasized regularly at daily safety meetings and at orientations. Camp garbage will be incinerated daily at minimum and garbage awaiting incineration will be kept in a covered metal container or will remain within the camp complex until it can be incinerated.

Wildlife Monitors

EGT will maintain one (1) full time wildlife monitor at the PIN-D site during all times that camp and site operations occur. EGT will provide additional wildlife monitors on-site at PIN-D as required. The wildlife monitors will be on-site at all times from the initial mobilization phase and throughout the duration of the construction season. Wildlife monitors will be sourced through our Inuit prime subcontractor, Kikiak Contracting Ltd. and will be hired from the communities of either Kugluktuk or Cambridge Bay. Wildlife monitors will be experienced hunters and marksman with personal knowledge of the PIN-D area and environment.

Each wildlife monitor will possess; a valid FAC, a properly functioning rifle of no less than 30 caliber, ample supply of ammunition, mobile handheld radio, and a properly functioning ATV. Bear deterrent "screamers" and "bangers" will be supplied to the Wildlife Monitor for use if necessary. Wildlife Monitors will accompany any workers

working away from immediate vicinity of camp/construction areas. They will make regular patrols prior to and after work activities and as directed by the Site Supervisor to ensure personnel are safe. In the event that PWGSC personnel or EGT/Kikiak crew need to travel a distant from the camp where radio communications may not function properly one of the two handheld satellite phones being kept onsite for use as back-up phones will be utilized.

Monitors will keep a log of all wildlife sightings and report to the DR as required. Wildlife monitors will be rotated every 2-3 weeks. Copies of all training plans and wildlife monitor certifications will be submitted to the DR.

Handling of Firearms

Wildlife Monitors will handle all firearms in accordance with the Canadian Firearms Act.

Firearms Act Section 15 - An individual may load a firearm or handle a loaded firearm only in a place where the firearm may be discharged in accordance with all applicable Acts of Parliament and of the legislature of a province, regulations made under such Acts, and municipal by-laws.

Storage of Non-Restricted Firearms

Wildlife Monitors will store all firearms in accordance with the Canadian Firearms Act.

Firearms Act Section 5 (1) - An individual may store a non-restricted firearm only if
(*a*) it is unloaded;
(*b*) it is
(i) rendered inoperable by means of a secure locking device,
(ii) rendered inoperable by the removal of the bolt or bolt-carrier, or
(iii) stored in a container, receptacle or room that is kept securely locked and that is constructed so that it cannot readily be broken open or into; and
(*c*) it is not readily accessible to ammunition, unless the ammunition is stored, together with or separately from the firearm, in a container or receptacle that is kept securely locked and that is constructed so that it cannot readily be broken open or into.
(2) Paragraph (1)(*b*) does not apply to any individual who stores a non-restricted firearm temporarily if the individual reasonably requires it for the control of predators or other animals in a place where it may be discharged in accordance with all applicable Acts of Parliament and of the legislature of a province, regulations made under such Acts, and municipal by-laws.
(3) Paragraphs (1)(*b*) and (*c*) do not apply to an individual who stores a non-restricted firearm in a location that is in a remote wilderness area that is not subject to any visible or otherwise reasonably ascertainable use incompatible with hunting.

Transportation of Non-Restricted Weapons

Wildlife Monitors will transport all firearms in accordance with the Canadian Firearms Act.

Firearms Act Section 10 (1) - An individual may transport a non-restricted firearm only if
(*a*) except in the case of a muzzle-loading firearm that is being transported between hunting sites, it is unloaded; and
(*b*) in the case of a muzzle-loading firearm that is being transported between hunting sites, its firing cap or flint is removed.
(2) Subject to subsection (3), an individual may transport a non-restricted firearm in an unattended vehicle only if
(*a*) when the vehicle is equipped with a trunk or similar compartment that can be securely locked, the non-restricted firearm is in that trunk or compartment and the trunk or compartment is securely locked; and
(*b*) when the vehicle is not equipped with a trunk or similar compartment that can be securely locked, the non-restricted firearm is not visible from outside the vehicle and the vehicle, or the part that contains the non-restricted firearm, is securely locked.
(3) If, in a remote wilderness area that is not subject to any visible or otherwise reasonably ascertainable use incompatible with hunting, an individual is transporting a non-restricted firearm in an unattended vehicle that is not equipped with a trunk or similar compartment that can be securely locked, and the vehicle or the part of it that contains the non-restricted firearm cannot be securely locked, the individual shall ensure that the non-restricted firearm
(*a*) is not visible; and
(*b*) is rendered inoperable by a secure locking device, unless the individual reasonably requires the non-restricted firearm for the control of predators.

Perimeter Trip Wire Alarm Fence

If bear become problematic and are regularly sighted or observed in the vicinity of the camp by the monitors, a wildlife perimeter trip wire alarm system will be available with the camp facility. I could be erected around the camp if required. All site personnel will be trained in the use and risks of this system should it be activated.

Hunting

No hunting will be allowed by any personnel employed at the work-site. No personnel other than the Wildlife Monitors will be allowed to possess firearms at the site.

Training

The Worker Orientation Seminar will include training on what to do if a bear is sighted, the role of the Wildlife Monitors, the hunting and firearms restrictions on site, wildlife harassment, the importance of site cleanliness and correct garbage handling, and the operation of the perimeter trip wire alarm. Some of the consequences of a shot bear will

also be explained including that a bear shot is a bear that comes off quota for local or sports hunters and that no-one gets to keep the shot bear.

Training for Wildlife Monitors will include safe ATV use, safe storage and handling of firearms on ATV's and in the camp complex, bear response pre-planning, use of bear deterrent "screamers" and "bangers" and detailed field responsibilities when conducting general site inspections and when accompanying field workers.

Reporting

Wildlife Monitors will report all bear sightings to the Site Superintendent who will assist the Wildlife Monitors in completing the Bear Sighting Reports kept on file in the Site Superintendent's office. These files will be maintained so that a history of sightings/incidents can be developed in case a bear needs to be removed or, in the worst case, destroyed.

APPENDIX F

Site Specific Spill Contingency Plan
Ross Point, PIN-D Cleanup

Introduction

The project objective is to cost effectively remediate and restore the remote Arctic intermediate DEW Line Site known as PIN-D, Ross Point while minimizing disturbance to the sensitive arctic ecosystem.

PIN-D, Ross Point, is a former Intermediate Distant Early Warning (DEW) Line radar station constructed in 1957 by the Department of National Defense (DND) and was subsequently abandoned in 1963, at which time responsibility for the site was assumed by Indian and Northern Affairs Canada (INAC). The site is located on the south coast of Victoria Island in Nunavut, at 68o35'N, 111o06'W, on the north shore of Johansen Bay overlooking the Coronation Gulf. It was one in a string of defense radar sites stretching across the Arctic from Alaska to Greenland, operated jointly by Canada and the US as "intermediate sites" between the alternating larger DEW Line Sites.

Ross Point, PIN-D is located approximately 180 km to the northeast of Kugluktuk, Nunavut. The nearest air charter bases are located in Cambridge Bay, 225 km to the east and Yellowknife, located approximately 700 km to the south.

E. Gruben's Transport Ltd. (EGT) of Tuktoyaktuk is the prime contractor responsible for the cleanup of the Ross Point PIN-D site. Responsibility and authority for the remediation of the PIN-D Site is currently retained by Indian and Northern Affairs Canada (INAC). To achieve the goal of site remediation and restoration INAC has retained the services of Public Works and Government Services Canada (PWGSC) to provide technical support, contract administration and Site supervision. The site is located within Nunavut Territory and subject to the terms of the Nunavut Comprehensive Land Claim Agreement (CLCA).

The remediation work for the PIN-D site requires the handling and disposal of both non-hazardous and hazardous materials. The work has been designed based upon the remedial guidelines and clean-up criteria of the INAC Abandoned Military Site Remediation Protocol. Any hazardous materials encountered on site will be handled according to regulations stipulated by the Canadian Environmental Protection Act (CEPA), Transportation of Dangerous Goods Act (TDGA) and the Nunavut/NWT Guideline for the General Management of Hazardous Waste as applicable. Much of the remediation materials will be managed and disposed of onsite; however there are certain hazardous materials that will require professional and careful handling, packaging and offsite southern transportation and disposal at licensed hazardous waste facilities.

Work on the site will include upgrading of site roads and airstrips to facilitate construction activities; demolition, construction and closure of an on-site Non-Hazardous Waste Landfill; collection, sorting, on-site transport and incineration of non-hazardous,

unpainted, untreated combustible waste; collection, sorting, off-site transport from PIN-E to PIN-D, and disposal of PIN-E nonhazardous waste within the PIN-D Non-Hazardous Waste Landfill; collection, sorting, on-site transport and disposal of PIN-D non-hazardous within the PIN-D Non-Hazardous Waste Landfill; excavation and disposal or treatment of Contaminated Soils, as required; construction, operation and closure of a Landfarm at PIN-D; excavation of buried debris, segregation of debris into waste streams (hazardous and non-hazardous), transport and disposal of waste; off-site transport and disposal of designated contaminated soil to a Designated Waste Disposal Facility; collection, excavation, sorting, containerization and off-site transport to the Designated Hazardous Waste Disposal Facility all hazardous demolition, hazardous debris, hazardous soils and hazardous liquids; collection, cleaning and disposal of barrels and contents and on-site incineration of barrel contents that meet the DLCU Barrel Protocol criteria including solid and liquid non-hazardous wastes; dewatering and re-grading of site works and backfilling and grading of all excavated areas using local borrow material.

Mobilization to the site will take place via Northern Transportation Company Limited (NTCL) barge early to late August of 2011. Contract work will be conducted through the summer of 2011 and 2012. Demobilization from the site will take place in Seotember of 2012.

Spill Prevention

EGT emphasizes the prevention of spills through training, refueling procedures and the provision of adequate and appropriate equipment.

Diesel P-50 fuel will be delivered to PIN-D via sea-lift (barge). Upon arrival the fuel will then be transferred by properly trained and certified personnel into a tandem axle fuel truck and delivered to the appropriate on-site tanks. The storage tanks that EGT intends to use will be registered with Environment Canada on the “Federal Identification Registry for Storage Tank Systems” (FIRSTS) database and mobilized to PIN-D empty during the initial project mobilization.

Each tank will be set up in accordance with the “Environmental Code of Practice for Above Ground Storage Tank Systems Containing Petroleum and Allied Petroleum Products Guidelines”. The tanks will be fully certified tanks that meet the CEPA (1999), and the “Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations SOR/2008-197”.

Gasoline for PIN-D will arrive at the site with the initial mobilization barge. Due to the small amount of gasoline required at the PIN-D site, gasoline will be shipped and stored in 205 liter steel drums. The gasoline drums will be individually identifiable, labeled to industry standards and all information necessary for health, safety and environmental purposes will be made available. Appropriate MSDS will be maintained at site. All barrels will be stored in accordance with the land use permit, and labeled with INAC’s name and EGT’s name, stored on pallets in an upright position and banded to said pallets. All fuel storage will be in an area that complies with all applicable regulations and

approved by the Departmental Representative. Both EGT and the marine transport company have very specific written barge fuel transfer procedures which will be strictly followed during loading and offloading work. Site storage tanks will be filled to 85% capacity to allow for expansion of fuel as it warms.

All fueling activities will be conducted by properly trained staff, and only those personnel authorized will be permitted to dispense fuel. Fuel usage records will be maintained on-site and will be kept to track individual unit usage as well as task usage.

Fire extinguishers, emergency spill equipment, including appropriate personal protective equipment, a minimum of two fuel pumps, empty drums, and absorbent materials sufficient to cleanup a 1000 liter spill will be positioned at all fuel storage sites. Smoking will be strictly prohibited within 100 meters of this area and No-Smoking signs will be posted. Spill mats or spill trays will be utilized under all mobile fueling containers. All mobile fuel equipment will be equipped with spill kits.

Contractor's fuel storage tanks will be located adjacent to the camp generator building. Fuel storage tanks will be located greater than 30 meters from the closest body of water.

There will be no bulk storage of oils, lubes, antifreeze in containers larger than 45 gallon drums. All will be supplied to site in 45 gallon drums and 5 gallon (22.5 l) pails or smaller containers. All drums will be new.

Propane will be used onsite for the camp facilities and will be stored in 1000 lb. propane tanks and 350 lb. "pig" tanks. Propane for shop use will be supplied in 100 lb. and 20 lb. cylinders.

Tanks, drums and cylinders belonging to EGT will be clearly marked with spray paint and stencils to distinguish them from tanks, drums and cylinders belonging to others on site.

MSDS will be available for all consumable products on site and all EGT personnel will have received WHMIS training. All handling and transport of dangerous goods will be supervised by TDG certified personnel.

Vehicles will be parked over drip trays.

The Equipment Foreman will inspect all fuel storage tanks daily. Wildlife monitors will also be required to conduct daily checks of fuel storage facilities as part of their normal rounds of inspection.

See attached fueling and fuel transfer procedures.

Spill Response

All pick-ups and heavy equipment will carry small “equipment” spill kits. The foreman’s truck, the generator shack, fuel storage tanks and refueling areas will have more substantial “drum” spill kits. All vehicles will carry a small quantity of oil absorbent rags. All mobile equipment will have company frequency “truck-to-truck” radios, as will the EGT site office and the Medic.

All spills will be reported and recorded for internal records. Minor spills will be reported to the Equipment Foreman by radio. The Equipment Foreman will assess the situation, including the potential risks to personnel, will decide on the most appropriate immediate response and will report to the Site Superintendent. This may simply involve applying sorbent pads or shoveling of granular materials into plastic bags for transfer to the PHC soils treatment area for on-site treatment or possibly boxing soils in 2.3 cu. m. sea-cans with hydro-carbon resistant liner.

A larger, more catastrophic spill would result in Emergency Response Procedures. The same emergency radio procedures will apply as for a medical emergency. The person who discovers the spill will use the radio call, “MEDIC! MEDIC! MEDIC!” This will signal all site personnel to cease any other radio use, cease other work and stand by for further direction. The Medic will take charge of all medical emergencies on site, but in this case pass control of the situation to the Equipment Foreman and/or Site Superintendent as soon as the emergency situation has been identified as a fuel spill.

The response to a larger spill may involve allocating heavy equipment and/or allocating personnel to the task. Appropriate PPE for the task will be checked and a Job Safety Analysis. The hazard assessment with reference to the applicable MSDS will be conducted prior to the cleanup effort.

Containment and Recovery

The safety of all personnel will be the first consideration in any containment and recovery operations.

Containment may be performed by hand or with the use of heavy equipment. Sand or soil berms can be constructed and booms can be deployed. Leaks can be plugged using patches, plugs and plugging compounds. Product can be pumped out or suctioned out of leaking containers when applicable.

Recovery of spilled/leaked product could involve pumping, direct suction into vacuum tank on truck or pumping into suck-on tank mounted on the bed truck, shoveling of contaminated soil by hand or with heavy equipment, transfer to portable tanks or drums or to fixed tanks.

As well as a supply of heavy equipment (3 excavators, 2 loaders, 2 cats, 2 rock trucks, 1 body job dump truck, bed truck and pickup trucks) and a ready and plentiful supply of labor, we have at the site considerable other materials and equipment for the purposes of our contract work which could be used for spill containment and recovery. These include:

Drum Spill Kits: Polyethylene overpack drum containing 2 ea. 10’ socks, 5 ea. 4’ socks, 1 lb. pre-mixed plugging compound, 50 pads, 5 pillows, 1 drain cover, 1 caution tape, 2 pairs of nitrile gloves, 2 ea. safety goggles, 2 coveralls, 10 disposal bags.

Equipment Spill Kits: Nylon carry bag containing 1 ea. 10’ sock, 30 pads, 1 pillow, 1 lb. pre-mixed plugging compound, 1 lb. dry plugging compound, 1 pr. nitrile gloves.

50 bundles (100 ea.) sorbent pads,
10 polyethylene overpack drums
50 bags floor-dry sorbent
50 2.3 cu. m. wooden 2.3 sea-cans surplus to identified contract needs
50 hydrocarbon resistant sea-can liners surplus to identified contract needs
100 6 mil poly sea-can liners surplus to identified contract needs
Steel garbage sloops
Fuel transfer pumps
Steel barrel wash tray
Empty steel drums
Sorbent booms, shovels, 6 mil poly bags, respirators

Training

Site personnel will be trained on refueling procedures and on spill response. Spill response training will include site layout and identification of storage areas, how to initiate the spill response system, safety concerns related to spills including fire and explosion, personal exposure risks to potentially hazardous materials and the PPE which may be required to handle spills, environmental risks to both ground and waterways, approaches and options to containment and cleanup utilizing the various materials and equipment available onsite, the deployment of booms and other absorbents, the use of spill kits and their contents including the use of plugs and plugging compounds, reporting requirements

Reporting

All fuel spills will be reported and recorded internally.

Spills greater than 100 liters on land and 20 liters on water will be reported to the **NWT/NU Spill Line at 867-920-8130** (NWT/NU Spill Line Fax 867-873-6924). NWT/NU Spill Report Forms will be kept in the Site Superintendent’s office.

The Site Superintendent will be responsible for all reporting and incident investigation requirements.

Other useful contact numbers include:

GNU, Environmental Protection		867-975-6000
	(Fax)	867-975-6099
GNU, Water Board		867-360-6338

	(Fax)	867-360-6369
GNWT, Environmental Protection		867-873-7654
	(Fax)	867-873-0221
INAC, Yellowknife		867-669-2500
	(Fax)	867-669-2709
Environment Canada		867-669-4700
	(Fax)	867-873-8185

E.GRUBEN'S TRANSPORT LTD

FUELING UP EQUIPMENT AND VEHICLES

When approaching fueling station you must first observe the area for any unusual appearances.

- **Fuel on the ground**
- **Hoses and nozzle on the ground**
- **Nozzle torn off hose**
- **Hose torn off pump or tank**

If you notice anything like that, immediately report it to your supervisor, before fueling up.

- **Before you begin fueling procedures shut off engine.**
- **Put drip pan into place.**
- **Clean around fill cap (dust, mud, snow, ice, etc.).**
- **Open filler cap carefully, a vacuum might be present.**
- **If filler cap can't be reached from the ground and you must climb onto the equipment, use extreme caution, especially during adverse conditions (wet, mud, snow and ice. If no steps or platforms are available use an appropriate ladder.**
- **Avoid going up steps or ladder with hose**
- **Turn pump on if so equipped and / or open valve at tank.**
- **Begin fueling, don't leave nozzle unattended. NEVER rely on automatic shut off.**
- **Don't overfill tank leave room for expansion.**
- **When finished reverse procedure.**
- **Use three point contact when ascending or descending.**
- **In case of a spill protect yourself, fuels can cause severe eye and skin irritations, contain the spill if possible, report the spill.**

READ LABELS OR MSDS, in particular FIRST AID MEASURES

- **Make sure pump and / or valves are turned off and hose put back in proper place.**
- **Don't forget to put cap back on**

This Job procedure is to be utilized as a guide only. Worksite practices and/or worksite conditions may necessitate change to the content, or order, of task steps in order to complete the job safely & efficiently.
Common sense should prevail

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FLUID TRANSFER GUIDELINES

Many spills occur during routine fueling, pumping, and other fluid transfer operations. Most of these spills can be avoided by paying attention and taking simple precautions. EGT has developed field-wide fluid transfer guidelines, which are summarized below.

- **Do not operate equipment unless trained by a competent person.**
- **Check all vehicles and equipment. If a leak is apparent, or there are other obvious problems with the equipment; stop the job and have repairs done. Surface liners or drip pans may be used to contain leaks for a short time during critical operations; however, liners are not an acceptable substitute for maintenance.**
- **Park vehicles and equipment away from water bodies, tundra, and wildlife habitat. Do not park on the edges of the pad.**
- **Position equipment so that valves, piping, tanks, etc., are protected from damage by other vehicles or equipment.**
- **Verify that adequate surface liners and absorbents are on hand.**
- **Make sure all equipment is properly grounded.**
- **Inspect hoses, connections, valves, etc., before starting any fluid transfers. Be sure that valves are in proper position and each connection is tightened properly.**
- **Before starting, check all tank and container levels, valves, and vents to prevent overfilling or accidental releases.**
- **Surface liners or drip pans are required under all potential spill points.**
- **Maintain a constant line-of sight with critical components throughout fluid transfer procedure. Be prepared to stop the transfer immediately if you notice any leaks. Do not attempt to fix a leak while fluid is being transferred. Never leave fluid transfer operations unattended. After transfer is complete, continue to take precautions while breaking connections. When finished, check the area for spills. Report all spills immediately to your supervisor and the 24-hour Spill Report Line (867) 920-8130.**

This Job procedure is to be utilized as a guide only. Worksite practices and/or worksite conditions may necessitate change to the content, or order, of task steps in order to complete the job safely & efficiently.
Common sense should prevail.

APPENDIX G

Land Use Permit
(When Available)

APPENDIX H
WATER LICENSE FOR PIN-D

(WHEN AVAILABLE)

APPENDIX I

ASBESTOS ABATEMENT

APPLICATION(S): The purpose of this procedure is to establish a standard for the safety of workers involved with asbestos abatements. This procedure will identify potential hazards and the minimum requirements to be followed while entering, exiting and working in and around an asbestos abatement. All employees involved with asbestos abatements must be protected against hazards which have the potential to cause injury or death, such as, fire and explosion, engulfment, exposure to asbestos. Asbestos Abatements can have many different applications. Some of these different applications could be as follows :

• Building Exteriors (Siding panels, roof panels, thermal spray on overhangs, stucco brick and block mortar)
• Flooring (vinyl tiles, sheet vinyl flooring, floor leveling compound)
• Ceilings (ceiling tiles, acoustic finishes, drywall jointing materials)
• Walls (drywall jointing materials, stippled finishes, thermal spray, cement panels)
• Service Areas (insulation in boilers, vessels, incinerators; insulation on pipes, ducts chillers, walls, floors, ceilings)
• Structural (fireproofing spray)
• Pipes (insulation on exposed or concealed pipes, gaskets in flanged pipe joints)
• Miscellaneous (wire insulation, fume hoods, lab counters, fire dampers theatre curtains welding blankets/screens duct tape)
• Outdoor

This document is intended for the purposes of reference and review for the members of the work crew(s) that will be expected to perform this specific task at the job site. In all cases the work crew that is to perform the required task should initiate or review and then sign-off on a separate work site / task specific Job Safety Analysis (JSA) prior to performing the work.

STANDARD REFERENCE PROCEDURES

PROCEDURES

1. Define Job Requirements

• Hold pre-job meeting with all workers that will performing duties on the work-site (includes all & sub-contractor's workers)
• Review the specific techniques & methods for all the job-processes to be carried out at this work-site
• Determine the level of abatement required
• Complete the Daily Tailgate Meeting, Job Safety Analysis (JSA), The Emergency Response Plan (ERP)

2. Establish A Specific Safety Perimeter To The As Defined Asbestos Abatement Area(S) – An Actual Physical Barrier Or Warning Tape May Be Used.

• Ensure that a safe restrictive distance from any public access is controlled, identified & always maintained
• Define the controlled access entry to both the general & specific entry areas of the asbestos abatement

3. Set Up A Designated Decontamination Facility
• The facility must have a clean, shower and dirty area.

4. Gather & Inspect All The Equipment To Be Used In The Asbestos Abatement
• All equipment must be in acceptable working condition

5. Perform Air-Quality Testing, if required
• Initial testing may be required prior to beginning the asbestos abatement
• A regular schedule for testing should be finalized & maintained throughout entire process, if required

6. Set-up Asbestos Abatement Enclosures / Equipment – Review Work Procedures & Emergency Response Plan (ERP)
• Documented procedures & plans must be reviewed & signed-off by all those workers involved in performing tasks

7. Enter Into The Enclosure
• Dependent on vertical or horizontal application(s) - the as documented entry procedures must be followed

8. Perform Required Procedures In The Enclosure
• All required procedures are to be documented & must be followed
• Any specific work required to be performed during this operational task - must have a further hazard assessment completed on it. (e.g.: Torch-Cutting operation would require a Hot Work Permit, etc…)

9. Exit The Enclosure and Decontaminate
• Regardless of what type of Abatement Procedure was followed (low, moderate, high) anyone exiting the enclosure must decontaminate themselves.

10. Decontaminate All The Equipment That Was Used In The Asbestos Abatement Procedure
• All equipment is to be prepared / dismantled for storage & must be inspected for improprieties or breakage
• Where rejected equipment is found – it must be “Locked or Tagged Out”, With the equipment being removed from service / use until properly repaired or replaced.

11. Dismantle the Abatement Enclosure
• Wet the enclosure material as it is being folded into itself during the dismantling procedures
• Ensure the enclosure is treated as asbestos contaminated materials

12. Secure Work-site Area(s) To The As Specified Post-work Safety Status

• Finalized worksite inspection should be completed
• Site to be left in agreed upon physical state

Areas of Risk	Mandatory Protective Methods/Measures	Additional Measures
HEAD	CSA certified & approved hard hat. The hard hat is to be worn in the manner the manufacturer suggests - with the peak facing forward. The exterior of the hard hat will be maintained in a clean condition. Only required stickers will be on the hard hat.	Chin straps may be required as per the actual requirements of use. Seasonal liners may be used as they are required.
EYE / FACE	CSA certified & approved safety eye glasses. Prescription eye wear must also be CSA approved complete with side-shields or they can be covered using a standard issue pair of safety glasses. CSA approved goggles can also be used as main or alternate protection	An approved face shield may be used for additional protection but CSA approved eye wear must still be worn underneath.
RESPIRATORY	Workers individually & personally issued / fitted ½ mask respirator must be available on the worksite. Where applicable a risk assessment for respiratory protection will dictate the need for mandatory use & type of respirator that would be required.	A full-face respirator is available for use. Any newly issued mask must be fit-tested before being used by the operator.
BODY	Standard issue reflective coveralls are to be worn on the worksite by workers. Where dictated by being on petroleum based worksites, coveralls must be of the fire-rated NOMEX type. When on nonpetroleum based worksites, cotton coveralls are acceptable to wear.	When acceptable – a florescent vest with approved reflective striping may be worn as a minimum requirement.
HAND	Standard issue leather-palmed gloves must be on the worksite & readily available to the worker(s). Where dictated these same style of gloves	Seasonal & many other styles of chemical resistant gloves can be made

	may be required to be kept on the workers person once they have entered onto the worksite.	available to workers.
FEET	CSA certified & approved safety boots must be worn. Boots must have leather uppers & measure a distance of 6 inches minimum, from the ground. This policy applies to all boots - including any type of rubber or winter style of boots worn for seasonal protection.	Boots must be maintained in acceptable condition. Any worn holes or cuts to the outer shell of the boot are not acceptable.
CHEMICAL	Chemical resistant gloves (SOLVEX & NITRILE) along with TYVEK outerwear suits & personal respirators will be made available on the worksite. Where identified - in the as dedicated exclusion zone(s) the appropriate protective clothing must be worn.	When chemical protection rules are in effect, the appropriate decontamination facilities must also be in place.
FIRE / BURNS / EXPLOSIONS	When working on any petroleum based worksite all sources of ignition must be maintained under control at all times. The appropriate & dedicated fire extinguishers must be available on site at all times. Smoking is allowed only in the as designated area(s).	An emergency response plan including firefighting procedures will be documented & posted on the worksite.
ENVIRONMENTAL	At least one (1) standard issue EGT spill kit will be located on the worksite at all times. Any on site fuel or chemicals will be properly stored & maintained to prevent any spilling of materials. Proper berms, cabinets or spill pallets can be utilized for this purpose.	An onsite MSDS binder or data system will be available for immediate reference for any substance as required for environmental protection
TASK SPECIFIC	A full body harness with “D” ring and attached lifeline is to be worn at all times by all those entering into the designated area. This full body harness shall be properly worn by the designated personnel.	Life jackets shall be worn if the workers are exposed to falling into liquid of sufficient depth for drowning.

If required, air quality monitoring of the abatement area must be maintained throughout the entire process.

JOB SAFETY ANALYSIS

BASIC JOB STEPS	IDENTIFIED & POTENTIAL HAZARDS	HAZARD MITIGATION/CONTROLS
1. Define Job Requirements • Hold pre-job meeting with all workers that will performing duties on the work-site (includes all subcontractor's workers) • Review the specific techniques & methods for all the job-processes to be carried out at this work-site • Determine the asbestos abatement as being either a low, moderate or high risk activity • Complete the Daily Tailgate Meeting, Job Safety Analysis (JSA), The Emergency Response Plan (ERP). • Ensure a proper decontamination facility is available.	• Inexperienced / untrained workers • Improper PPE, tools or equipment • Injury to EGT, subcontractor or third-party workers on and adjacent to - the actual work-site • Damage to equipment, structures, vehicles or other equipment located on the actual work-site • Equipment failure	An experienced supervisor is to be on the work-site at all times, while all the required job-specific work is in process • Supervisor to ensure all required work is executed in compliance with all permits & governmental regulations • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Physical inspection of all worksite areas (includes the removing / identifying of specific hazards & related areas) • Completion of the Daily Tailgate Meeting • Ensure that a Job Safety Analysis (JSA) for the entire job-task is completed. All members of the work crew required to perform the job task must review and sign-off on having read and understood the specifics of the JSA in question • Complete ERP • Daily (Pre-use) inspection procedures of all equipment / tools (Equipment Log) • Use of Field Level Risk Assessment Cards • Review all on-site Safety program applications • All personnel entering worksite will receive a site-specific orientation

**** NOTE **** **The hazard assessment specific to this asbestos abatement will be detailed in the JSA. This JSA process must be completed & signed-off prior to anyone entering into the designated exclusion zone**		
2. Establish A Specific Safety Perimeter To The As Defined Asbestos Abatement Exclusion Zone – An Actual Physical Barrier Or Warning Tape May Be Used • Ensure that a safe restrictive distance from any public access is controlled & always maintained • Define the controlled access entry to both the general & specific entry areas of the abatement area	• Slips, trips & fall hazards • Uneven ground areas • In-experienced worker(s) • Unexpected fall from a height • Equipment failure	• An experienced supervisor is to be on the work-site at all times, while all the required job-specific work is in process • Supervisor to ensure all required work is executed in compliance with all permits & governmental regulations • Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Physical inspection of all worksite areas (includes the removing / identifying of specific hazards & related areas) • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s)
3. Gather & Inspect All The Equipment To Be Used In The Confined Space Entry • Where applicable all / any equipment	• Slips, trips & fall hazards • Uneven ground areas • In-experienced worker(s) • Unexpected fall / entry into confined	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)

that requires certification must be inspected & validated as being certified • All equipment must be in acceptable working condition	space • Pinch-points • Muscle strain / injury to workers from lifting / carrying equipment	• Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified & as designated areas • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations. • When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs. • A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.
3. Gather & Inspect All The Equipment Used In The Asbestos Abatement • Where applicable all / any equipment that requires certification must be inspected & validated as being certified • All equipment must be in acceptable working condition	• Slips, trips & fall hazards • Uneven ground areas • In-experienced worker(s) • Unexpected fall from a height • Pinch-points • Muscle strain / injury to workers from lifting / carrying equipment	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified & as designated areas • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations. • When required to lift - use the proper

		lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs.
4. Perform Air-Quality Testing (if required) • Initial testing must be completed prior to anyone entering the abatement area • A regular schedule for testing should be finalized & maintained throughout entire process, if required.	• Slips, trips & fall hazards • Uneven ground areas • In-experienced & untrained worker(s) • Unexpected fall from a height • Equipment failure • Exposure to the atmospheric hazard	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Tyvek coveralls, Nitrile gloves (sealed to the coverall) and rubber boots (sealed to the coverall) are required to be worn in the containment area • A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.
5. Set-up Containment Area, Removal Procedures & Emergency Response Plan (ERP) • Documented procedures & plans must be reviewed & signed-off by all those workers	• Slips, trips & fall hazards • Uneven ground areas • Pinch-points • Muscle strain / injury to workers from lifting / carrying equipment • In-experienced & untrained worker(s) • Unexpected fall	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • A stand-by worker must always : remain present at the Containment Area point of entry when someone has entered into the containment area - Have suitable

involved in performing tasks **** NOTE **** **Stand-by worker at Containment Area point of entry must be available onsite during the time workers are in the containment area**	from a height • Equipment failure • Exposure to the atmospheric hazard	means of communicating an emergency situation to the emergency response contact - Have a suitable means of direct communication with workers who entered into the containment area • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified & as designated areas • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Tyvek coveralls, Nitrile gloves (sealed to the coverall) and rubber boots (sealed to the coverall) are required to be worn in the containment area • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations • When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs.
6. Enter Into The Confined Space • Dependent on the determined risk activity - the as documented entry procedures must be followed	• Slips, trips & fall hazards • Muscle strain / injury to workers from lifting / carrying equipment • In-experienced & untrained worker(s) • Equipment failure • Exposure to the	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • A stand-by worker must always : remain present at the Containment Area

	atmospheric hazard	point of entry when someone has entered into the containment area - Have suitable means of communicating an emergency situation to the emergency response contact - Have a suitable means of direct communication with workers who entered into the containment area • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Tyvek coveralls, Nitrile gloves (sealed to the coverall) and rubber boots (sealed to the coverall) are required to be worn in the containment area • Entry into the Containment Area is prohibited if the worker is not wearing a respirator and the required task specific PPE • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations. • When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs. • Air quality checks must be maintained on a regular basis throughout the entire period of entry into the containment area if determined they are required.
7. Perform Required Procedures In The Confined Space • Dependent on the	• Slips, trips & fall hazards • Muscle strain / injury to workers from lifting / carrying	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned

determined risk activity – the as documented entry procedures must be followed **** NOTE **** **Any specific work required to be performed during this operational task – must have a further hazard assessment completed on it. (e.g.: Torch-Cutting operation would require a Hot Work Permit, etc…)**	equipment • In-experienced & untrained worker(s) • Equipment failure • Exposure to the atmospheric hazard	tasks (for the applicable job specific requirements on the necessary work procedures) • A stand-by worker must always : remain present at the Containment Area point of entry when someone has entered into the containment area - Have suitable means of communicating an emergency situation to the emergency response contact - Have a suitable means of direct communication with workers who entered into the containment area • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Tyvek coveralls, Nitrile gloves (sealed to the coverall) and rubber boots (sealed to the coverall) are required to be worn in the containment area • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations. • When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs. • Air quality checks must be maintained on a regular basis throughout the entire period of entry into the containment area if determined they are required.
8. Exit The Confined Space • Dependent on the	• Slips, trips & fall hazards • Muscle strain / injury to workers	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around

determined risk activity – the as documented entry procedures must be followed	from lifting / carrying equipment • In-experienced & untrained worker(s) • Equipment failure • Exposure to atmospheric hazard	• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • A stand-by worker must always : remain present at the Containment Area point of entry when someone has entered into the containment area - Have suitable means of communicating an emergency situation to the emergency response contact - Have a suitable means of direct communication with workers who entered into the containment area • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Tyvek coveralls, Nitrile gloves (sealed to the coverall) and rubber boots (sealed to the coverall) are required to be worn in the containment area • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations • When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs. • Air quality checks must be maintained on a regular basis throughout the entire period of entry into the containment area if determined they are required.
9. Decontamination	• Slips, trips & fall hazards	• Awareness of the existing ground surfaces & other previously recognized

Procedures • Controlled access to the contamination area must be continually maintained • Entrance / Exit to decontamination area(s) must be clearly identified • Appropriated separate “Sanitary / Clean“ & “Unsanitary / Dirty“ must be maintained in the decontamination area	• In-experienced & untrained worker(s) • Exposure to atmospheric hazard through inhalation during the decontamination procedure • Further cross contamination with other ‘clean’ area(s) associated with the worksite	hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Ensure all exclusion zones have been appropriately identified & that access to all identified areas is both restricted & controlled • The appropriate cartridge respirator – ½ mask or full face mask & Tyvek disposable suits, gloves must be worn by all those that are required to perform any work that is required to be carried out inside of the designated exclusion zones or unsanitary / dirty areas • Decontamination area must be clearly identified with “Sanitary / Clean” & “Unsanitary / Dirty” entrances / exits clearly marked. • Appropriate wipe cloths & disposal containers for used clothing & materials must be clearly identified at the decontamination trailer location. • A clean water source must be maintained on site at the decontamination area
10. Dismantle the Asbestos Abatement Containment Area • All equipment used in the containment area is to be prepared for storage, cleaned & must be inspected for cleanliness • Where rejected equipment is found – it must be re-cleaned to prevent exposure of other workers to asbestos	• Slips, trips & fall hazards • Uneven ground areas • In-experienced & untrained worker(s) • Unexpected fall from a height • Pinch-points • Muscle strain / injury to workers from lifting / carrying equipment • Exposure to atmospheric hazard	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general & specific area(s) • Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified & as

• All equipment used to construct the Containment Area must be wetted and folded into itself in preparation for disposal.		designated areas • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Tyvek coveralls, Nitrile gloves (sealed to the coverall) and rubber boots (sealed to the coverall) are required to be worn • Where equipment has come in contact with asbestos or some other type of contaminated materials, all equipment in question must be properly and thoroughly decontaminated of the offending materials before they leave the worksite. • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations. • When required to lift - use the proper lifting techniques : lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs.
11. Re-gather & Inspect All The Equipment That Was Used During The Asbestos Abatement • All equipment is to be prepared / dismantled for storage & must be inspected for cleanliness, improprieties or breakage. • Where rejected equipment is found – it must be re-cleaned and/or “Locked and Tagged Out” With the equipment being	• Slips, trips & fall hazards • Uneven ground areas • In-experienced & untrained worker(s) • Pinch-points • Muscle strain / injury to workers from lifting / carrying equipment	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified & as designated areas • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Where equipment has come in contact with asbestos or some other type of contaminated materials, all equipment in question must be properly and thoroughly

removed from service until properly repaired.		decontaminated of the offending materials before they leave the worksite. • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations. • When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs.
12. Disposal of Asbestos Contaminated Materials Gathered During the Abatement Work	• Slips, trips & fall hazards • Uneven ground areas • In-experienced & untrained worker(s) • Pinch-points • Muscle strain / injury to workers from lifting / carrying equipment • Improper Transportation of Dangerous Goods	• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified & as designated areas • All asbestos containing materials must be enclosed in plastic bags (6 mil thicknesses) or other as designated appropriate containers. Containers / bags must be labeled as per the Local Guidelines for Working With Asbestos and / or Transportation of Dangerous Goods Regulation • A ½ mask, full face or power air purifying respirator must be available on site & worn when required (minimum requirement = 1 unit for every entrant , 1 unit for every designated rescuer) • Where equipment has come in contact with asbestos or some other type of contaminated materials, all equipment in question must be properly and thoroughly

		decontaminated of the offending materials before they leave the worksite. • Ensure workers know & understand their own personal limitations when they are required to perform any manual lifting operations. • When required to lift - use the proper lifting techniques : lift with legs, keep back straight, position load close to body, do not twist when lifting & get assistance if weight is more than 50 lbs.
13. De-Brief Work Crew • Meet with all members of the work crew(s) involved – input & feedback is required from all & must be documented	• Improper information gained or omitted for any future reference procedural verifications or improvements to process	• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)
14. Secure Work-site Area(s) To The As Specified Post-work Safety Status • Finalized worksite inspection should be completed • Site to be left in agreed upon physical state	• Slips, trips & fall hazards • Uneven ground areas • In-experienced worker(s)	• Awareness of the existing ground surfaces & other previously recognized hazards that workers are required to travel over / around • Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures) • Complete a final physical inspection of all the entire worksite area(s). Documentation & photos of completed work area(s) should be taken.