COMPANY SAFETY MANUAL

2023

ENERSON GEOPHYSICAL EXPLORATIONS LTD., CO.

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Contents

1.0 COMPANY SAFETY POLICY

Enerson Geophysical Explorations Ltd., Co. is committed to preventing injury to our employees, to preventing damage and loss to our physical assets and to minimizing the environmental impacts of our work.

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

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

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

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

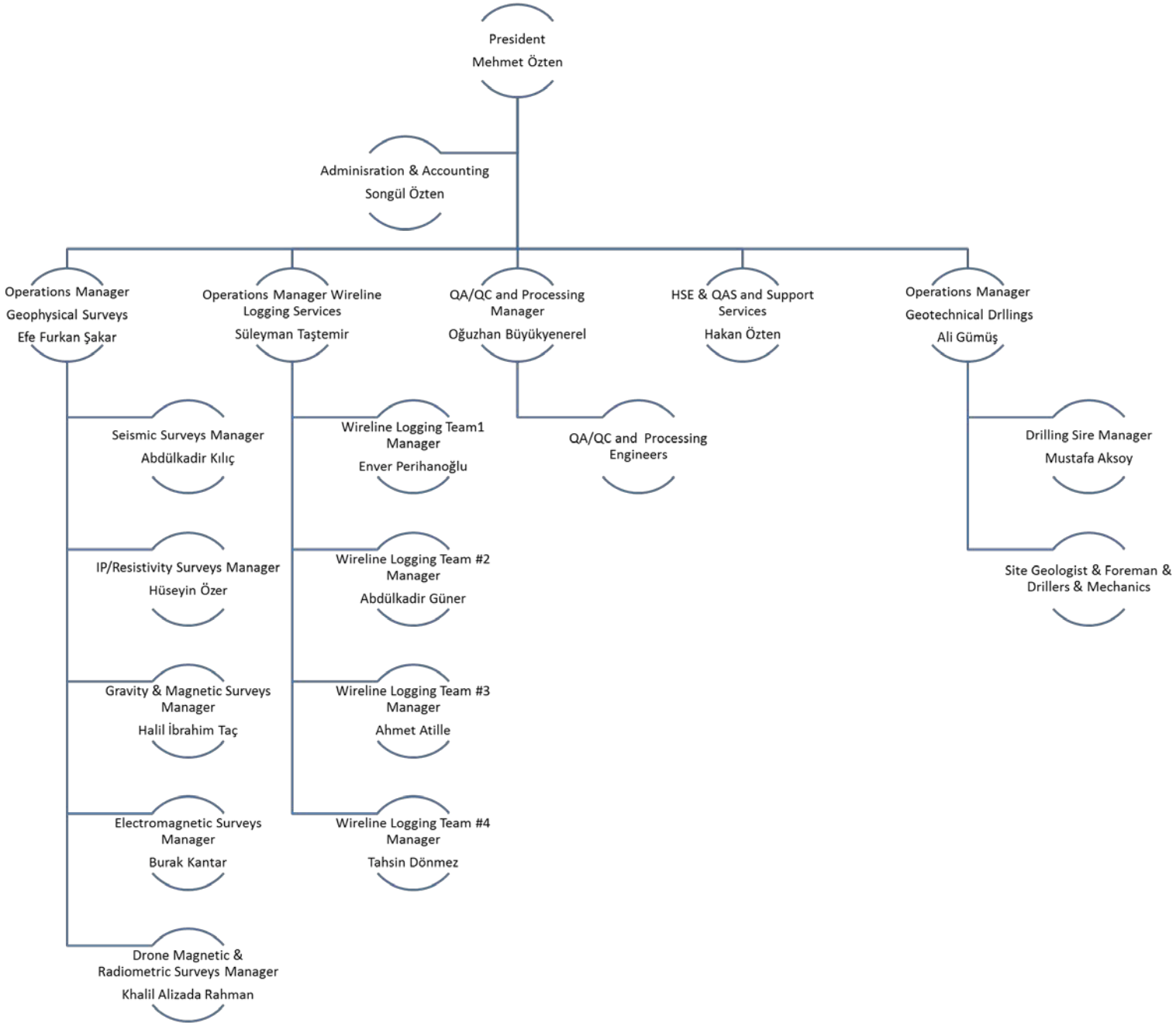
I trust that all of you will join me in a personal commitment to make safety a way of life.

Signed: Date: 01/01/2023

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

1.1 ORGANIZATION, ROLES & RESPONSIBILITIES

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



The President retains overall responsibility for the development and implementation of health, safety and environmental protection policies and procedures. His operational responsibilities are delegated to the Operations Managers.

Management:

- Provide a workplace free of recognized hazards – conduct hazard assessments of the workplace, ensure that any risk is eliminated or controlled to an acceptable level, and ensure that all workers are aware of hazards and the controls in place.
- Ensure that workers are aware of their responsibilities and duties.
- Provide information, instruction, training, and supervision to workers to ensure their health and safety.
- Ensure that regular inspections are made of workplaces, equipment, procedures, and behaviors, and that any deficiencies are corrected.
- Ensure that all workers are familiar with legislation, policies and procedures.
- Ensure that work is performed by competent workers, or under the direct supervision of a competent worker.
- Report serious incidents to the appropriate authorities.
- Ensure that all workers are trained in the company's emergency response plan.
- Provide proper, maintained equipment, including personal protective equipment, and ensure workers use the required equipment.
- Monitor workers and hold them accountable for their individual safety behavior.

Supervisor:

- Provide a workplace free of recognized hazards – ensure that a hazard assessment of the operations is conducted, and any risk is eliminated or controlled to an acceptable level, and ensure that all
- Workers are aware of hazards and the controls in place.
- Provide information, instruction, training, and supervision to workers to ensure their health and safety.
- Promptly investigate incidents, including near misses and hazard reports, to determine root causes and prevent the likelihood of similar incidents recurring.
- Ensure that regular inspections are made of workplaces, equipment, procedures, and behaviors, and that any deficiencies are corrected.
- Develop and communicate safe work procedures and rules.
- Monitor employees for compliance to company policies, procedures, and regulations.

Employee:

- Employees have the Right to Know, the Right to Participate and the Right to Refuse Unsafe Work.
- In the event that there is an imminent danger situation, it must be reported to management, who shall promptly investigate and implement control measures or stop work if it is deemed unsafe.
- Workers have the right to be informed of real and potential dangers in the workplace. Workers have the right to participate in hazard assessments and ensure everyone on site is aware of hazards and controls.
- Employees also have a responsibility to comply with federal and provincial legislation.
- Employees have a responsibility to work safely on the job and to cooperate with their

employer by following Enerson Geophysical Exploration's health and safety policies and procedures.

- Utilize safety equipment and personal protective equipment as required by the employer/management.
- Immediately report incidents to management.
- Participate in training required by legislation and the employer and apply that training.

Contractor Responsibilities:

- A contractor is someone who, through a contract, an agreement or ownership, directs the activities of one or more employers involved in work at a work site. Contractors are responsible to ensure, as far as it is reasonably practicable, that the employer complies with OHS legislation in respect of that work site. Our operations are conducted under the direction of the client. As subcontractors, it is Enerson's responsibility to adhere to the clients' policies and procedures, as well as our company specific policies and procedures and all relevant legislation.

Visitor and Subcontractor Responsibilities:

- Visitor and subcontractor safety is the responsibility of the person that brought/invited the person(s) onto the company property. All visitors and subcontractors should receive a brief orientation of the company's safety policies and procedures and be provided personal protective equipment, as needed, to be in compliance with the company's policies. The orientation will address emergency response, incident and hazard reporting policies, the location of hazardous materials, personal protective equipment, etc. Visitors and subcontractors should not be allowed on premises unescorted without prior approval. All subcontractors must provide certificates of insurance and WCB coverage prior to initiating any work. Subcontractors must have proof of required training as per industry best practices.

2.0 WORK SITE HAZARD ASSESSMENT

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

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

Hazard recognition and control involves;

- Determining what hazards are present in the workplace
- Assessing the level of risk for the hazards identified
- Implementing strategies to eliminate or reduce the risk involved
- Monitoring and following-up to ensure the control strategies chosen are implemented and effective

Every workplace consists of four major components. These are;

- The people (employees, visitors, clients, suppliers, subcontractors, etc.
- The environment in which they work
- The materials they work with
- The equipment and tools they use

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

Step #1	Work Site Hazard Assessment	
Client:	Crew Chief:	Date\Time:
Location:	Type of Operation:	Crew Size:

Assessment Team Names And Positions:

Hazard Priority (Status) #1 Imminent Danger #2 Serious #3 Minor
#4 O.K. #5 Not Applicable (N/A)

ITEM	IDENTIFIED HAZARDS ACTIVITIES AND LOCATIONS	STATUS (1-2-3-4-5)	SAFETY HAZARD AND LOCATION
1	Waste Disposal/Housekeeping		
2	Material Storage/Handling		
3	Protection to Public		
4	Water/Vibration/Erosion		
5	High Risk Positioning		
6	Working on Water/Boats		
7	Flammables (Fire/Explosion)		
8	Hazardous Chemicals (WHMIS)		
9	Off-Road Vehicles		
10	Cables/Ropes/Chains/Slings		
11	Night Lighting		
12	Power		
13	Tools/Pneumatic/Compressors Chainsaws/Line Cutting		
14	Vehicle/Machine Condition		
15	Electrical Wiring & Guards		
16	Exposed Electrical Conductors/IP		
17	High Traffic		
18	Ventilation		
19	Weather Conditions		
20	Hot Work		
21	Cold Work		
22	Working Alone/Communications		
23	Hoisting/Lifting		
24	Working on Ice		
25	Diamond Drilling		
26	PPE: Basic/Specialized		
27	Fatigue		
28	Wild Animals		
29	Firearms		
30			
31			
32			

Assessment Team Comments on Priority Items:

Item #	Priority

Note: For corrective action, transfer information by Hazard Priority Number to Step #2 "Work Place Hazard Assessment Corrective Action" form

Step #2 WORKPLACE HAZARD ASSESSMENT CORRECTIVE ACTION

Client Name:

Project Name(s): | Time/Date:

Survey Types Covered:

Assessment Team: Name Position

_____ _____

_____ _____

_____ _____

FOLLOW-UP

ITEM #	PRIORITY	RECOMMENDED ACTION	ACTION TAKEN DATE/TIME	BY WHOM

COPIES TO: (FOR ACTION) (FOR INFORMATION):

Manager's Signature: | Date:

2.1 HAZARD ASSESSMENT POLICY

2.1.1 PURPOSE

Enerson Wireline Services is committed to maintaining a safe and healthy workplace by ensuring that hazards are identified and corrected.

Hazard assessment is a combination of functions, steps and criteria for the design and plan of work that identify hazards, provide measures to reduce the probability and severity, and provide alternative methods for further control. Enerson Wireline Services will see that all tasks undertaken will be assessed to identify existing and potential hazards before work begins, and any time tasks or conditions change. Through completion of hazard assessments, every task will be brought to the point of least hazard/risk by eliminating or controlling the hazard.

2.1.2 DEFINITIONS

Hazard: a source of danger; a condition or practice with the potential for loss or injury.

Risk: the chance of a loss occurring; a measure of the probability and potential severity of harm or loss.

Field Level Risk Assessment (FLRA): a method of identifying hazards and correcting them to prevent loss. This is completed using the Pre-Job Safety Meeting and Hazard Assessment Form.

2.1.3 EXPECTATIONS

In an effort to reduce loss, hazard assessments must be performed on a daily basis at the field level, and when there is a change in tasks, location, or conditions. All field-level hazard assessments must be documented using the Pre-Job Safety Meeting and Hazard Assessment form, and shall be signed by all personnel in attendance.

2.1.4 RESPONSIBILITIES

Safety Management Audit hazard assessments through Pre-Job Safety Meeting and Hazard Assessment forms

Provide feedback to all workers on hazard assessments
Provide training and assistance to workers on hazard assessments
Monitor compliance to the Hazard Assessment Policy and procedures

Field Supervisors and Field Technicians

- Complete hazard assessments on a daily basis, or as tasks, conditions, or location change.
- All Enerson personnel on site shall be involved in the hazard assessment process.
- Use the field level risk assessment process (FLRA), below, to conduct hazard assessments.
- Ensure all risks identified are eliminated, or where not reasonably practicable to eliminate a hazard, take the appropriate measures to control it.
- Document hazard assessments using the Pre-Job Safety Meeting and Hazard Assessment form.
- Ensure all personnel on site are involved in the discussion and sign off.
- Consult with management on the hazard assessment process.

2.1.5 HAZARD ASSESSMENT PROCESS STOP AND THINK

IDENTIFY HAZARDS:

- Does everyone involved understand the task?
- Is everyone physically and mentally prepared and capable of doing the task?
- What could go wrong?
- Is there a risk to others or myself?
- What can change that could create a new risk?
- Could other personnel present a problem?

ASSESS RISKS:

- How bad could this be, and how likely is it to happen?

CONTROL RISKS:

- Who should be contacted for help? Are written procedures required?
- What can be done to control the work?
- Will the control affect another part of the task?
- Do the controls need to be communicated to anyone else on site?
- Have emergency response plans been discussed?

RESUME WORK

YOU HAVE THE RIGHT TO REFUSE UNSAFE WORK. IF ANY RISK CANNOT BE ELIMINATED OR CONTROLLED TO AN ACCEPTABLE LEVEL, IMMEDIATELY STOP WORK AND CONTACT MANAGEMENT.

2.1.6 HAZARD IDENTIFICATION & RISK CONTROL

Hazard controls may be generic or specific. Generic hazard controls may include safe work practices and job procedures, training, regulations and workplace rules. These types of controls are to be applied regardless whether an actual hazard is present. Specific controls are typically those safeguards, which are initiated based on the knowledge of a certain unavoidable hazard being present.

Having identified the hazards through the hazard assessment process, the next step is to decide if action is required to minimize the hazard or its effects. The hazards need to be prioritized according to the risk associated with them.

Hazards can be divided into four areas or degrees of potential impact:

- **Unacceptable** - likely to occur soon (imminent danger, with major or catastrophic effects.
- **Class A (High)** - likely to occur and with major irreversible loss potential or imminent danger.
- **Class B (Moderate)** - somewhat likely to occur resulting in serious (not likely permanent) injury or damage
- **Class C (Low or Acceptable**) - may never occur, or if it does, the loss potential would be minimal.

Unacceptable Risk — involves imminent danger situations, which are Immediately Dangerous to Life and Health (IDLH). Do NOT proceed with these tasks, unless the risk can be brought to the lowest achievable level. You have the DUTY to refuse unsafe work.

Class A: High-impact hazards should be addressed immediately even if ideal solutions are not available. Often this step will involve contingency plans or special procedures. It is important to reduce the degree of hazard to its lowest potential, but also to recognize that even the best countermeasures often fail to eliminate all the hazards. In any situation where situations are Immediately Dangerous to Life and Health (IDLH), every reasonable effort must be made to reduce the number of workers involved, and ensure that only qualified, competent workers are involved in controlling the hazard. Examples of this may be lock out operations, or use of respirators or other lifesaving PPE.

Class B: Moderate or Medium-impact hazards require appropriate action through the introduction of controls frequently in the form of written safe work practices and/or job procedures and the use of standard PPE.

Class C: Low-impact (or Acceptable) hazards may be accepted as is, with little or no action taken.

Developing a rule or safe work practice might be all the preventative action necessary.

Risk Control

The final stage in conducting the hazard identification review is to determine ways to eliminate or control the hazards identified. The measures to eliminate or control hazards are (in order of preference):

- Eliminate the hazard — choose a different process, modify an existing process, substitute with less hazardous substance, improve environment, modify or change equipment or tools.
- Revise work procedures — modify steps that are hazardous, change the sequence of steps, or add additional steps.
- Contain the hazard — if the hazard cannot be eliminated, using enclosures, machine guards, or similar devices might prevent contact.
- Reduce the exposure — these are the least effective measures and should only be used if no other solutions are possible. Reducing the number of times the hazard is encountered, increasing distance from a hazard, or the use of Personal Protective Equipment (PPE), may minimize exposure.

Implementing Controls:

1. Identify the measures necessary to prevent the known negative circumstances from arising. (How can things be prevented from going wrong?)
2. Identify the measures necessary to protect resources from harm or loss in the event of potentially uncontrollable hazards. (How do you protect people, equipment, material or the work environment if things go wrong or if the exposure to the hazard is unavoidable?)

Types of Controls:

1. **Engineering Controls** involve attempting to eliminate the presence of the hazard. This method of hazard control may be as simple as placing a guard around the source of the hazard, or as complicated as redesigning the process to eliminate the hazard. This process is usually the most effective form of hazard control because you attack the hazard at its source, often eliminating it altogether.
2. **Administrative Controls** involve the management of hazards, which cannot be eliminated. Quite often these controls are in the form of safe work practices and/or job procedures. Administrative controls may also include the scheduling of work in a manner, which will expose the fewest possible number of workers to the hazard.
3. **Personal Protective Equipment** is used as a last line of defense, in conjunction with other hazard controls. Both the hazard and the risk potential associated with the hazard must be acutely understood.

Forward the report to those who have the responsibility and authority to implement the corrections that are recommended. Inspection findings should be communicated during safety meetings.

2.1.7 RISK ANALYSIS MATRIX

Severity

Imminent Danger (4)	4	8	12	16	Catastrophic: causing death, widespread occupational illness, loss of facilities
Serious (3)	3	6	9	12	Serious, causing severe injury, serious illness, property and equipment damage — disabling or lifelong
Minor (2)	2	4	6	8	Minor, causing non-serious injury, illness or damage (i.e. medical aid)
Negligible/OK (1)	1	2	3	4	Causing minor injury requiring first aid or less
Probability:	Extremely Remote - unlikely to occur (1)	Remote - Could occur at some point (2)	Reasonably Probable — likely to occur eventually (3)	Probable — likely to occur soon or immediately (4)	* Multiply the severity factor by the probability factor to equal the priority factor.

Scores of 12-16 (red) — do not proceed unless the risk can be reduced to a lower level. Everyone has the duty to refuse unsafe work. Scores of 8-9 (orange) - High Risk Scores of 4-6 (yellow) - Moderate Risk Scores of 1-3 (green) - Acceptable Risk

Tasks ranked as High Risk, and some tasks ranked as Moderate Risk, are considered Critical Tasks. All critical tasks (which include new tasks or changing conditions) must have hazard assessments conducted. Hazards must be controlled or eliminated to bring risk down to a moderate or acceptable level.

3.0 Task-Related Risks and Precautions (TEM and Seismic)

3.1 **Slips, trips and falls:** Slips, trips and falls caused by rough terrain, slippery surfaces, balance problems from carrying heavy equipment. Footing: It is easy to lose your balance when carrying heavy equipment. To prevent slips, trips and falls, watch your footing at all times, especially late in the day when you are tired. Boots should have high grip soles for work on slippery surfaces (e.g., rounded or algae covered rocks). In some wet terrain it may be advisable to wear rubber boots or use caulks (replaceable steel spikes screwed into the soles of special boots). Carrying heavy equipment hinders good balance. Be vigilant when traversing cut lines and/or climbing over logs or debris. Because some surveys are carried out along straight lines, it may not be possible to avoid difficult and sometimes dangerous terrain (e.g., cliffs, swamps). While trees and brush are usually are not cut down to ground level. It is easy to trip over them and get cut or impaled, especially when carrying a heavy pack or surveying equipment.

3.2 **Weather:** Be fully prepared for the local weather and climate. Carry a suitable survival kit, extra water and food, etc. Wear appropriate clothing and carry rain gear and extra clothing in case you become stranded and must spend a night away from camp. Lightning can be a serious risk depending on the location and especially when carrying out electrical surveys. Be prepared and follow lightning safety precautions including the 30-30 rule. When there will be rain work will be stopped until rain stops. In the flooded rice area TEM survey cannot be performed until the fields are dry because TEM survey cannot be performed in water zone areas. Similarly during rain Seismic survey cannot be performed. Daily and weekly weather updates will be taken before starting any survey.

3.3 **Fire:** Be critically aware of fire risks carry appropriate fire extinguishing equipment, including: a fire extinguisher, water and/or a small shovel when using gasoline powered machinery (e.g., generators, power augers). Keep the exhaust area clear of vegetation and place hot machinery on bare rock so it will not start a fire.

3.4 **Wildlife, Insects and Animals:** On field fighter pet dogs are a hazard, be trained in dog's safety procedures and carry appropriate deterrents including pepper spray. Be aware of potential fauna at ground level. Watch out for cows, dogs, goats and sheep's on the ground. Watch out for signs of bees or wasps which often build nests in the ground. Do not place your hands where they might be bitten by a venomous snake or stung by scorpions or insects. When working in insect infested areas and using insect repellent, avoid applying it to your eyes and mouth. Use Insect repellent lotion or oil but do not overuse the insect repellent lotion or oil. Keep Insect repellent spray for mosquitoes and flies. Do not overuse repellent as it is absorbed through the skin. Follow medical advice regarding the use of anti-malarial medications and

avoid mosquito bites when working where malaria and other serious insect-borne diseases are present.

3.5 **Impact injuries and cuts:** Impact injuries and cuts caused by the misuse of tools such as mattocks, shovels, mechanical augers, post hole drills. Use mattocks, shovels, picks, etc., correctly. Use caution when traversing so you do not fall on them. Wear gloves to protect your hands from soil exposure. Electrical and EM surveys may expose your hands to soils with disease causing organisms and it is easy for cuts to become infected. Soil borne diseases include but are not limited to: hookworm, tetanus, histoplasmosis, and numerous fungal diseases. Make sure tetanus immunizations are up-to-date.

3.6 **Hyperthermia:** When working in very warm climates, try to work in shade, use sunscreen and keep hydrated. Create your own shade, if necessary. Take special care of your feet to prevent fungal diseases, which are common when feet are wet for long periods of time.

3.7 **Back strains and injuries:** Back strains and injuries caused by carrying heavy survey equipment, carrying heavy backpacks, improper lifting techniques. Use correct lifting procedures and properly constructed backpacks. Carry loads that are appropriate for your personal strength and physical size; do not overload your backpack or show off.

3.8 **Injuries or death caused by accidents when travelling by vehicles:** Obey the rules of the road of the country, province, territory or state. Vehicles must carry vehicle registration and insurance documents. Comply with the manufacturer's operating procedures located in the vehicle operator manual. Most manufacturers supply comprehensive operation and maintenance procedures. Only properly licensed and trained employees should drive company vehicles. It is advisable for drivers to obtain an international driver's license when it is necessary to drive in some countries. Wear a seat belt at all times. Vehicles must be fitted with seat belts for each seat. The only exception to this rule – do not wear a seat belt when driving on frozen lakes or ice bridges. Use vehicles that are appropriate for the job and conditions of the field area. Vehicles should be mechanically sound and carry sufficient equipment. Essential equipment should not be shared between vehicles. Develop an emergency response plan (ERP). Include procedures that address breakdowns and overdue vehicles etc. In the event of a breakdown, it is usually best to stay with the vehicle. If it is necessary to go for help, leave a visible explanatory note with the vehicle in addition to any communication you may have with the camp or project. This may avert a full scale search. Each project should establish a communication schedule with predetermined check-in times. Employees should adhere to the check-in schedule and inform their base camp of changes in plans. Inform the person in charge of the planned route and the estimated time of arrival or return; record the information on a map. The person in charge of the tracking system should be familiar with the ERP and know what to do if a vehicle does not arrive or return as planned, or if it does not check in on schedule. Respect the legal speed limit. Most crashes result from driving too fast for existing road conditions. Reduce speed if road conditions are unknown, if they deteriorate, or if

visibility is reduced – no matter what the legal speed limit. Obtain permission to cross private land. Leave gates as they are found. Drive to protect the environment. Use existing roads and tracks. Minimize off-road driving especially in wet conditions, on stream banks and in fragile environments. Avoid having passengers ride in the back of open vehicles unless they are properly restrained. Tray back trucks should be fitted with benches, seat belts and side bars if passengers are carried. Do not drive a vehicle if you have consumed alcohol or if you have taken medication or drugs that might affect your ability to drive.

3.9 **Electric shock:** The most hazardous geophysical surveys are those that employ electric current, which includes induced polarization (IP) surveys and electromagnetic (EM) surveys. The set up for both is similar, as long lengths of wire are laid down in a designated area and readings are taken when the wire is pulsed with electricity from a generator. IP surveys have potentially more serious risk of injury than other geophysical surveys due to the use of high voltage electric current. Surface electromagnetic (EM) surveys, also known as ground pulse electromagnetic or fixed loop EM surveys, use lower voltages and therefore do not usually present the same degree of risk of electrocution to the operators. Even so, all employees who participate in surveys using electricity should receive thorough training in the safe use of survey equipment. It is imperative that all employees who operate transmitters are fully aware of the hazards associated with the use of high voltage equipment.

3.9.1 Safety procedures for survey layouts

i. If working in a populated area, post the survey site, date and time at central locations to notify the public (e.g., post office, community center, grocery store). Hire “sentries”, as required, to supervise all electrical equipment, especially exposed wires and electrodes. Curious children and people are highly vulnerable to serious injury.

ii. Place “High Voltage” signs on any unsupervised geophysical electrode sites that carry high voltage or currents exceeding the milli-ampere range. Place signs in populated areas where electrodes are out of sight and use sentries, as needed.

iii. When pulling electrical wires and cables across terrain, it is advisable to pull it by hand or use a snowmobile or 4-wheel ATV (rather than a motor bike). Before pulling, carefully check the wire or cable to be sure it has no kinks or knots and very few splices, as these may catch on roots etc. Do not drag wire. If the cable breaks while being pulled, it will stretch first and then whip back at the driver when it breaks.

iv. Place wire where it will not harm people or animals. Place it on the ground with sufficient slack so it stays on the ground. Make sure wires are placed so domestic animals will not be harmed.

v. It is advisable to bury cables and wires where they cross trails or paths, especially if they are heavily travelled routes. Bury them out of sight and anchor them solidly on either side

of the route. When crossing a paved road, secure wire to the asphalt with fencing staples or other secure means in at least three places. If burying is not possible, it is imperative that wires or cables are solidly anchored on each side of the trail, path or road. In all situations, wire should be secured and flagged on both sides of a trail; path or road for 6 meters with flags placed every 0.5 meters. In addition, the wire should be marked with flagging where it crosses roads or paths to provide additional visibility in case it still rises up. If an animal, person or vehicle contacts and lifts or drags the cable or wire, it will tighten and rise up across a road or path unless it is solidly anchored. A raised wire can seriously injure or even decapitate someone passing on bicycle, snow machine, ATV etc.

vi. A record of the amount and location of the wire deployed and removed should be maintained. When a survey is completed, inspect the wire insulation for breaks and damage when picking up wire. Repair damage or replace the wire as necessary. Using damaged wires increases the likelihood of someone receiving an electric shock.

3.9.2 Safety procedures for handling wires that may carry electric current

i. Do not hold the ends of a transmission wire in each hand, as your body will complete a circuit if the current is turned on.

ii. Do not touch any exposed metal of any potentially energized transmission wire.

iii. Follow correct safe methods when making temporary field splices.

iv. Beware of wet wires. It is possible to receive an electric shock if there are breaks in the wire's plastic casing where the wire passes through a puddle of water.

3.9.3 Radio communication protocol

Develop a very clear radio protocol to indicate "power on" and "power off" to avoid shock and the potential electrocution of a worker handling the wires. The generator operator must never apply electrical current to grounded wires or ungrounded loops of wire unless he or she notifies the rest of the crew and receives confirmation that they know the system will be energized. "Confirmation" means a clear, positive verbal response usually sent over a radio. An arm wave and/or two clicks of the radio microphone do not qualify as confirmation, as they are both signals that can be easily misunderstood.

3.9.4 Lightning safety

Take extreme precautions whenever a lightning storm approaches. Survey crews need to be aware of the weather around them while working. When a storm approaches:

i. Immediately cease all operations. When thunder is first heard, shut off all power sources and disconnect all wires and cables from the instruments. Do not attempt to collect any wires or cables. Lightning can travel more than a kilometer along wires. Lengths of wire or large loops

may have very high voltages induced by a lightning strike a long distance away; this is not only dangerous, it can also destroy equipment.

ii. Move all personnel and easily portable instruments to a sheltered location, preferably a safe shelter or a field vehicle. If it is necessary to remain outdoors, do not seek shelter under a tall tree. If working on high ground, attempt to move to a lower elevation. Avoid areas of tall metallic objects (e.g., power lines, antennas, drill rigs).

iii. Follow the "30-30 Rule" when thunderstorms are moving into the area. If you see lightning, count the time until you hear thunder. If the time is 30 seconds or less, you should immediately go to a safer place. After the thunderstorm has moved away, wait 30 minutes before leaving the safe location and resuming work.

3.9.5 Additional safety tips for electrical survey methods

i. Be sure the transmitter power is off except when actual measurements are being made. Always verify that the power is off before you remove or connect electrodes, change personnel on a task, or attempt any field repairs. Do not move a generator while it is turned on.

ii. Inspect the transmitter and generator for damage and loose components each day before work. If IP or loop wire must remain in place beyond the time required for the survey, they should be monitored regularly to make sure they remain in a safe position on the ground. Where IP wires or loops are not safe, corrective action should be carried out immediately. Keep records of any inspections of the IP wires or loops noting their condition, the condition of posted signs and other safety concerns.

iii. Watch your footing and take care when lifting geophysical equipment because it is often very heavy.

iv. In addition to regular PPE, it may be advisable to wear nonconductive electric shock resistant boots. Avoid wearing steel toed boots, as they are more conductive than regular leather boots.

4) Task-Related Risks and Precautions (Wireline logging)

4.1 Transportation of the Well Logging Vehicle to drill site:

Risks:

a) Traffic accident

b) Property damage like fences, walls, etc.

c) Personal injury Sinking or rolling over of the vehicle due to the uneven or lose ground conditions

Precautions:

i. Local police or escort vehicle to provide guidance while the Logging Truck is traveling.

ii. Coordination between operator and responsible person during entrance of the Logging Vehicle to the site.

iii. Pre operation meeting with workers and the Well Logging operator,

iv. Pre assessment of the path and roads before the movement of vehicle,

v. Pre assessment and securement of the area where the logging vehicle will be positioned for the operation.

4.2 Well Logging Operation

Risks:

a) Being struck by wireline due to line failure

b) Personal injury due to contact with the wireline during operation

c) Being struck by wireline, lubricator, sheaves, or other equipment.

d) Getting caught in wireline.

e) Falling from a height

f) Being exposed to the radioactive source

g) Being exposed to radiation

h) Getting injured due to an unexpected release of pressure.

Precautions:

a) Barricading the whole area and instructions will be given to all people on site not to cross the barricaded area during wireline operation.

b) Specification of one responsible (competent) person for the whole operation and ensuring the crew follow his instructions.

c) Removing any obstacles form walking area.

d) Pre-operation talks (toolbox meetings).

e) Pre-inspection of Wireline, cable sockets, and cable heads for defects before use.

f) Pre-inspection of all slings, chains, pins or other attachment devices before lifting or suspending tools or equipment.

g) Ensuring the work is being executed by the SOPs especially in determination of the end of line location.

h) Using proper fall protection. Using proper hand placement and tag lines to avoid pinch points.

i) Protections from ionizing radiation are: time, distance and shielding. At the well site following procedures should be applied using these three principles to ensure a safe and healthy work environment.

I. All rig personnel should minimize their length of time spent near the radioactive source.

II. Unauthorized personnel should be kept out of the area when the source is being transferred from the shield to the tool.

III. During the process of transferring from the shield to the tool, the hole should be covered.

IV. The radioactive source should be kept on the truck; and when not on the truck, it should be under visual control of the logging company personnel. If rig personnel notice an unattended source, they should immediately inform the logging engineer.

V. If a radioactive source is found at site when there are no personnel from the logging company at site, the company should be notified immediately. The source should be isolated and access to the storage area should be restricted. Exposure time should be minimized.

VI. During fishing operations where a logging tool containing a radioactive source is retrieved, following steps must be taken to prevent unnecessary exposure:

VII. The logging engineer should consult with the rig crew on procedures.

VIII. The fishing operation should be stopped before the source comes out of the hole. While the source is still inside the hole, but close to surface, depending on the present environmental working conditions, the best practice for the fastest recovery of the source has to be decided with the drilling crew to be able to minimize the exposure during the recovery of the source.

IX. Unauthorized personnel should leave the rig floor.

X. During fishing operation drilling, rotating, pounding and milling should be avoided to prevent the damage to the source.

XI. In case of a suspected source rupture, the principles of time, distance, and shielding become more important:

XII. Restrict any area which might be contaminated.

XIII. If rescue operations are necessary, rescuers should be protected from prolonged exposure. Radiation exposure should be spread among a large crew for short periods rather than allowing one person to receive a large amount of exposure.

XIV. Protection from contamination can be provided through the means of protective layering (e.g., wearing several layers of clothing and gloves). A scarf over the mouth will help prevent inhalation or ingestion of radioactive material.

XV. People who may have been contaminated should be isolated.

XVI. Anyone who has been working around the rig should be checked for contamination.

XVII. Eating, drinking, and smoking are all prohibited.

XVIII. If it is discovered that someone has been contaminated, the person should shower immediately. Body folds and hairy areas should be scrubbed for at least 15 minutes. All clothing, everything from the hard hat right down to the boots, should be bagged and labeled.

XIX. Keep unauthorized away from the rig floor and marked-off areas where radiation hazards may be present.

XX. Wear appropriate personnel protective equipment (PPE).

XXI. Allow only authorized and qualified logging company personnel to handle the logging tools.

XXII. Report any damage to radioactive logging tools.

XXIII. Enerson uses a TLD for monitoring radioactivity dosage received by personnel. It is mandatory that all persons wear their TLD while assigned to duty that involves use of radioactive sources.

XXIV. During each logging operation the logging supervisor shall maintain direct surveillance of the operation to protect against unauthorized or unnecessary entry into a restricted area. Restricted areas are those areas in which the radiation level exceeds 2 mRem/hr (0.02 mSv/hr).

XXV. Each logging vehicle equipped with a radioactive source also will be equipped with a remote handling tool. This tool will allow the logger to maintain a distance of 1 m. from the source when installing the source on the probe.

XXVI. Radiation surveys shall be made and recorded on the radiation levels in occupied positions and on the exterior of each vehicle used to transport radioactive materials. These surveys shall be taken at intervals not to exceed every six months. Radiation surveys shall also be made and recorded each time the source is replaced in the transport vehicle.

XXVII. Dose Limits :Occupational Effective Dose: 20 mSv per year averaged over defined periods of 5 years

XXVIII. Pubic Effective Dose: 1 mSv in a year

XXIX. Annual equivalent dose in: Occupational: the lens of the eye 150 mSv, the skin 500 mSv ,the hands and feet 500 mSv

XXX. Public: he lens of the eye 15 mSv, the skin 50 mSv, the hands and feet, limit apply to the sum of relevant doses from external exposures and 50 year committed dose.

XXXI. Should not exceed 50 mSv (AERB limit 30 mSv) in any single year. In case of pregnant woman 2 mSv for the remainder of pregnancy. Higher value in any single year may be allowed provided average over 5 years does not exceed 1 mSv.

XXXII. A. Prior to engaging in a well logging procedure where licensed sealed sources are used, the logging supervisor will ascertain that the assigned logging vehicle has: Current company radioactive materials license, Current sealed source wipe test analysis for sources on board, Current survey meter calibration report, Vehicle "Radiation Inspection Form", Company "Operating and Emergency Procedures", A source handling tool in good and functional order, Source transport container(s) with proper labels, in safe, serviceable condition, properly bolted to the vehicle and secured by padlock, Proper radioactive placards displayed as required. Serviceable, visibly checked and labeled, down hole hardware including: Source holder, Cable head assembly, Logging cable, Logging tool, and Draw works, A functional and currently calibrated survey meter capable of measuring 0.1 mR/hr (0.001mSv/hr) through at least 50 mR/hr (5 mSv/hr).

XXXIII. Prior to entering a borehole for logging using a sealed source, the supervisor will: Have a signed agreement with the well owner stating: In the event a radioactive source becomes lodged in the well bore during well logging operations, recovery procedures and activities will comply with current regulations. Obtain from the drilling team or company, knowledge of the hole condition. If problem areas exist, run a tool in the hole without a sealed source to determine if the hole is clear and that it can be freely retrieved. If doubtful or "tight" areas exist, the borehole may have to be conditioned by the drill team, or in some situations, the placement of temporary casing may be required to assure safe entry and retrieval of the logging tool. Before removing a sealed source from its shield, perform a radiation survey on the pig and tool and record the "Before" information on the Job Report. Use a

calibrated survey meter and establish the 2 mR/hr operational boundary line of restriction around the area where a sealed source is to be used. Typically, the 2 mR/hr (0.02 mSv/hr) line for Cs137 source is:

Cs137 Gamma Ray Source
125 mCi (4.625 GBq) = 5.02 m.
200 mCi (7.4 GBq) = 5.54 m.
250 mCi (9.25 GBq) = 6.18 m..
300 mCi (11.1 GBq) = 6.78 m.
AmBe241 Neutron Source
1.0 Ci (37 GBq) = 1.12 m.
5.0 Ci (185 GBq) = 2.49 m.

A restricted area is that area surrounding the source where the radiation level exceeds 2 mR/hr (0.02 mSv/hr). The supervisor shall take necessary precautions to ensure that the restricted area is not occupied by unauthorized personnel throughout the time required to accomplish source handling activities of the well logging procedures.

XXXIV. Attach cable head to the logging tool and set up additional logging equipment as required. Preparation for logging the hole requires removal of the source from its shield and its installation on the logging tool. Follow these steps: Secure the probe in the vise that is mounted on the rear of the logging unit. Remove source handling tool from its storage location and check the actuating handle and the proper response of source holder jaws (collete). Unlock source shield and remove cover. Insert the source holder jaws into the source shield and over the source holder (nose). The source holder jaws must be seated properly over the hexagonal flat of the source holder to enable proper closure of the clasping handle. The source handling tool as far as practical from your body, unscrew the source from the shield and install it into the logging tool. Make sure the source holder (nose) is completely screwed in with no space showing between the end of the probe and the source holder. This procedure should be done as quickly as possible to minimize radiation exposure. Carefully install the logging tool into the borehole, maintaining a tight logging cable, i.e., do not permit the tool to drop because of slack cable. Zero tool head at the top of the hole and proceed with logging activities. If obstructions are encountered as the logging tool is lowered into the hole, the logging supervisor shall determine that excessive risk of lodging the tool exists and remove it from the bore hole. The well owner should be advised to take corrective action, such as reconditioning the hole or setting temporary casing through the problem area. On completion of the logging procedures, and before removal of the logging tool from the bore hole, the supervisor will ascertain that the designated restricted area as previously established is clear of unauthorized personnel. The logging tool will then be returned to the logging unit and secured in the vise. Proceed with removal and securing of the source into the Logging Tool as follows: Using the source handling tool, quickly remove the source holder from

the logging tool by turning the source holder counterclockwise. Reinstall the source holder into the source shield. Screw the assembly clockwise, being careful not to tighten excessively. Remove the source handling tool, reinstall source shield cover, and secure with the previously removed padlock. Secure the source handling tool for transport. Conduct a radiation survey on the pig and record the "After" survey meter reading on the Job Report. Survey the logging tool to confirm that it is free from contamination.

XXXV. Contamination Incident: If leakage of any radioactive isotope from a radioactive source occurs, the following precautions should be taken to prevent the spread of contamination. Limit the access to the contaminated area by constructing a fence or similar barrier. The radiation level outside this barrier should not exceed two mR/hr. Establish survey points within the parameter and maintain documented survey readings. The company owns and will immediately provide additional calibrated survey instruments capable of detecting low level radiation and contamination that could be encountered in a sealed source rupture. Post CAUTION RADIOACTIVE signs on all sides of the contaminated area. Limit the spread of contamination into drainage ditches, sewer systems, etc., by constructing dikes or taking other appropriate precautions all smoking and eating inside the restricted area. Take necessary action to minimize inhalation of possibly contaminated airborne dust by personnel. This may be accomplished by the use of filtered breathing masks and respirators. Notify nearest Health department and TAEK immediately by telephone. At the first opportunity, notify the Radiation Safety Officer, and/or an officer of the company. Arrange for a qualified decontamination team to begin decontamination procedures as quickly as possible. Do NOT allow equipment or personnel to be removed from restricted area until they have been thoroughly checked for contamination. Contamination is present when the radiation level is found to be higher than background radiation for the location where the survey is being conducted. When checking for contamination on personnel, special attention should be given to the hair, shoes and hands, since these are among the areas which most likely become contaminated. However, it will be necessary to very carefully check all areas of the body and all clothing. If contaminated personnel are found, it will likely be necessary to release them from the restricted area before the decontamination team arrives. This should only be done after all contamination has been removed from their bodies and after all contaminated clothes have been removed and left in the restricted area. All contamination has been removed when the radiation level at the suspect area returns to background level. Decontamination of the body should begin with a mild soap and water. If this does not remove all contamination, a detergent should then be tried.

5.0 SAFE WORK PRACTICES

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

Definition:

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

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

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

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

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

5.1 FIRE AND USE OF FIRE EXTINGUISHERS

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Maintenance & preparation

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

Operations

Types of Fires

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

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

Fighting the Fire
Soak the fire completely — even the smoking embers.

Class B: Flammable liquids, oil and grease.

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

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

Class C: Electrical equipment.

Recommended Extinguishers
Carbon dioxide and dry chemical (ABC units) extinguishers.

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

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

5.2 DEFECTIVE TOOLS

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

Be aware of problems such as:

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

Guidelines:

To ensure the safe use of tools:

- Never use a defective tool.
- Double check all tools prior to use.
- Ensure that defective tools are repaired or discarded and replaced.

5.3 TRUCK & TRAILER USE

Maintenance and preparation

Each spring and fall, the Supervisor in each office will ensure that vehicles are serviced including checking of brakes, emission equipment, lights, steering & alignment and tire condition. He will also ensure that the standard list of tools and equipment required for the vehicle is complete and in good working order.

Prior to leaving for a job, the Supervisor will check the tire pressure, working operation of lights and brakes, fire extinguisher condition, and general good working operation of the vehicle. Drivers must be over 23 years old, possess a valid driver's license, have no convictions for impaired driving and be familiar with the safe operation of the vehicle.

If a trailer is used, the safe operation of tail lights, brakes (if equipped) and hitches must be verified. No trailer will be used that does not also have a secured safety chain in addition to a properly sized ball hitch. All loads must be properly secured. If the load contains a number of small items, the load must be completely wrapped in a strong tarp and then secured to the trailer.

Operations

Drivers will limit their working day to 8 hours unless absolutely unavoidable. Drivers will take breaks as frequently as necessary to ensure that they are alert and in full control of the vehicle.

Drivers shall not consume drugs or alcohol immediately prior to or during any road trip until the destination is reached. Consumption of drugs or alcohol in any company truck at any time is prohibited.

Smoking in company trucks is prohibited. No driver shall be assigned a truck with trailer unless he has been trained by the Supervisor to properly attach the trailer, balance the load and back up the trailer.

All flat deck loads will be placed so that the heaviest objects are close to the front headache rack and ahead of the vehicular centre of gravity.

Lone drivers will be provided with a mobile phone for emergency use.

Records & reporting

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

5.4 CAMP OPERATIONS

Maintenance & preparation

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

Operations

A designated safety officer will be appointed for each camp. This person will be one of the Crew Chief (geophysical camp).

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

a. Communications: location and operation of phones & radios; phone lists and contact procedures in the event of an emergency.

b. First Aid: Designated first aid attendant, location of first aid station, procedures to be followed in the event of an accident.

c. Fire safety: Location of firefighting equipment, procedures to be followed in the event of fire.

d. Environment: Fuel storage and filling procedures, garbage handling, procedures in the event of large animal encounters.

e. Firearms in camp.

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

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

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

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

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

Human waste will be bagged and flown out in winter camps where this is mandated by local regulations. If an outhouse is used, the pit will be excavated at least 1.5 meters deep in well drained sediment. The outhouse will be kept clean and seats will be disinfected at least weekly. Abandoned waste pits will be closed by applying lime, by covering the waste with at least one foot of sediment, and by clearly marking the pit location with a labeled picket.

Garbage will be collected in receptacles provided in each tent. The garbage receptacles in the kitchen tent will be equipped with fitting lids. Kitchen garbage will be disposed of daily. Garbage will be completely burned with diesel and waste oil in a burn drum equipped with a screen. Metal and glass residue will be collected and either buried or back hauled to town and disposed of properly on a regular basis.

Fuel will be stored at a single location, at least 30 m from any water body and in a place with no immediate drainage to any body of water. A fuel spill liner and berm will be employed if bulk fuel storage is in effect. Empty drums will be back hauled regularly from camp and will not be allowed to accumulate. Firefighting equipment will be placed near any location where fueling occurs.

A fuel spill kit must be onsite in all camps where refueling of equipment will be done from drums or bulk fuel containers.

Camp decommissioning: Camps sites will be cleaned up to a standard meeting or exceeding local regulations for camp clean up. If not burned, tent frames will be laid down on the floors. All metallic debris including wiring will be removed from camp sites and garbage will be disposed of according to local regulations, whether that is by back haul out of the bush, or by proper burial to a depth and in such a manner as to prevent it from being exposed by animals, erosion or other natural agencies.

5.5 TRAVERSING ON FOOT

Date Prepared:_____
Revised:_____
Approved:_____

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

Preparation

Employees must inform some other person (s) (e.g. Crew chief, other member of your party, local police or natural resources personnel) of where you plan to go, what route you plan to follow, and when you plan to return.

A clear plan of search and rescue and communication protocols should be laid out in advance in the eventuality of an employee not returning back on time.

Employees must traverse in pairs. If this is not possible/feasible then separation distances must be short and/or two-way radio communications maintained.

Employees must be properly equipped with and use all personal protective equipment required for the task and/or activity at hand.

Training

No formal training is presently available. New employees routinely work with and gain experience from experienced field personnel.

First Aid training is a must. It is recommended that all employees working in the field obtain proper First Aid training.

5.6 ATV USE

Date Prepared:_____
Revised:_____
Approved:_____

Maintenance and preparation

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

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

Operations

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

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

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

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

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

Records&reporting

The Crew Chief shall maintain a record of all maintenance and repairs done to each ATV in a spreadsheet.

5.7 FIREARMS AND ANIMAL DEFENSE

Date Prepared:_____
Revised:_____
Approved:_____

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

Maintenance&preparation

No person will handle a firearm unless properly instructed and qualified to do so. The Operations Officer in each branch will ensure that firearms safety training is conducted for staff likely to need firearms before the season commences.

Firearms will be stored unloaded, in a clean and oiled condition, and in an authorized locked firearms storage locker. Keys will be in the custody of the Supervisor.

The Crew Chief will verify that any firearm deployed on a job is unloaded, equipped with the appropriate ammunition and is locked with an approved trigger lock. Firearms will be signed out on the equipment lists, specifying the serial number, type and caliber.

Flare projectors will be inspected before issue to ensure that they are in good working order and are not cracked.

Operations officers and crew chiefs will ensure that, prior to being sent to the field, new staff is fully briefed on the hazards posed by large animals and on the measures to be taken to avoid problems and deal with an encounter.

Personal firearms will not be taken in the field unless approved by the Crew Chief. Personal firearms taken to the field will be stored and used in accordance with the rules in this manual and the Crew Chief may order any personal firearm removed from camp at any time.

Operations

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

The Crew Chief will designate persons to use the company firearm in the event of an

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

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

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

No person will carry loaded flare projectors on their person. Pepper spray or insect repelling spray will be equipped.

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

5.8 DRILLS AND DRILL SITES

Date Prepared:_____
Revised:_____
Approved:_____

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

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

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

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

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

<u>StandardProcedures&Regulations</u>

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

Always make sure the drill crew is aware of your presence and what you are planning to do when you are on a drill site. Inform them when you have completed your work and are leaving the site.

While on a drill site, employees must have and use the proper personal protective equipment, which will include:

- an approved safety hard hat
- approved safety boots
- approved hearing protection (ear muffs or ear plugs)
- approved eye protection (safety glasses or goggles)
- sturdy work gloves

Employees conducting down hole surveys or tests that require the support of the drill contractors equipment shall:

- ensure that the procedure is approved by the drill contractor
- ensure that only the drill contractors employees operate the drill contractors equipment

No smoking is permitted in those areas where there are flammable liquids or gasses are stored.

Always stick to those areas of the drill site where your work requires you to be.

Never handle or operate any of the drill equipment or auxiliary equipment except by special arrangements between Enerson and the drill contractor and under the drill contractor's supervision.

While on a drill site no employee will act in a manner that could endanger the health and safety of others, or the efficiency of the operation.

Be sure that your clothing is adequate and suitable for the conditions of the work you need to carry out at the drill site. Examples are waterproof gear, rubber gloves, etc.

Stay well out of the drill crew's way during periods of critical activities such as hoisting rods, lowering rods, changing or adding a rod string, pulling the core tube and moving the drill or other equipment.

Advice the drill crew of any hazards you may observe and of which they may be unaware.

5.9 CHAIN SAW SAFETY-LINE CUTTING & PAD BUILDING

Date Prepared:_____
Revised:_____
Approved:_____

Maintenance&preparation

Chain saws will be checked before deployment to ensure that:

- Chains and bars are in good repair
- Engines are properly tuned
- The exhaust is fitted with proper spark arresters
- Chain brake works properly
- The ignition / kill switch works properly

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

Persons employed as cutters will have at least one year's experience as a brusher and will demonstrate safe proficiency in general chainsaw maintenance and safety, brushing operations, and falling including the use of wedges and jacks to the satisfaction of the Operations Officer for that branch.

Operations

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

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

5.10 GENERAL HOUSEKEEPING AND SITE MAINTENANCE

Date Prepared:_____
Revised:_____
Approved:_____

Many injuries can be directly related to poor housekeeping and site maintenance. Equally important to ensure safety are the attitudes of supervisors, who must issue clear directives, teach by example, and take action to ensure proper storage and upkeep.

Efficient site organization and materials handling require planning for storage, clean-up and disposal. A messy site not only creates hazards, but also fosters sloppy work attitudes that hurt productivity.

- Ensure work and traffic areas are clear.
- Too much material allowed on the site at any one time creates hazards to workers, increases the risk of damage and waste, leads to double and triple handling, and reduces productivity.
- Locate storage areas so that they do not interfere with work yet are accessible as materials are delivered in their sequence of use.
- Ensure that methods for stockpiling and storage prevent materials from falling, rolling, overturning, breaking apart, or otherwise endangering workers or the general public
- Consult site supervision regarding any doubts over the weight of materials or the load bearing capacity of floors, roofs and similar structures.
- Ensure that passageways, stairwells and other routes to and from work areas are clear at all times.
- Make sure that materials stored above ground level are no less than 1.8 meters back from the edges of slabs, floor openings and similar edges unless there is a wall reaching above the top of such materials
- Locate storage areas away from overhead power lines to protect fork lifts and other equipment from electrical contact.
- Consult with site supervision before storing materials

Site Upkeep

- The first step in site upkeep is to plan for cleanup and disposal as often as required to keep work areas unobstructed, accessible and efficient.
- Generally, it is good practice to have a designated crew to clean up as work proceeds and before the next day's operation.
- Arrange for regular removal and disposal of waste materials from the designated areas.
- On roofs and open floor, secure loose or light materials against the wind.
- Pick up tools, stockpile material and dispose of debris that may cause tripping or other hazards.

- Do not allow debris or waste material to fall freely from any level of the project. Lower rubbish by chutes or other approved devices.

- Dispose of bands, binders, and other packaging materials as soon as material is unwrapped.
- Ensure that unloading areas, work platforms and routes to and from work areas are clear of obstructions, well lit, and free of tripping hazards.

Fire Prevention

- Planning should also include fire prevention - a major part of site upkeep.
- Fire extinguishers must be readily accessible, properly maintained, regularly inspected and promptly refilled after use.
- Fire prevention is especially important in covered-in areas during winter.
- Never store fuels in any container not approved for fuel storage by the Turkish Standards Association (TSEK).

5.11 ELECTRICAL SAFETY

Date Prepared:_____
Revised:_____
Approved:_____

Electricity is commonly used, and often the potential hazards are not appreciated. If handled improperly, electricity can cause serious injury or death.

HAZARDS

There are four main types of injuries that can result from electrical currents: electrocution, electric shock, burns, and falls. These injuries can happen in various ways:

- Direct contact with electrical energy
- When the electricity arcs through a gas (i.e. air) to a person who is grounded
- Thermal burns including flash burns from heat generated by an electric arc, and flame burns from materials that catch on fire by electrical currents.
- Muscle contractions can cause a person to fall from heights and cause serious injuries.

PROTECTIVE MEASURES

- The key to working safely around electricity is to understand how it works and engage in safe work practices. Employers are required to train employees in safety-related work practices, as well as any other procedures necessary for safety from electrical hazards.
- Inspect tools, power cords, and electrical fittings for damage or wear before each use. Repair or replace damaged equipment immediately.
- Use cords or equipment that is rated for the level of amperage or wattage that you are using. Always use the correct fuse.
- Never nail or staple cords.
- Be aware that warm or hot outlets may be a sign that unsafe wiring conditions exist. Have these outlets inspected by a qualified electrician.
- Risk of electric shock is greater in areas that are wet or damp. Install Ground Fault Circuit Interrupters (GFCIs) as they will interrupt an electrical circuit before a current to cause injury occurs.
- Make sure that exposed receptacle boxes are made of non-conductive materials.

De-energizing electrical equipment prevents the accidental or unexpected starting of electrical equipment that can cause injury or death. Before any inspections or repairs are made, power should be turned off at the switch and padlocked in the off position.

Overhead lines are usually not insulated, so when a conductive object makes contact, the current immediately flows to ground through the object and anyone touching it receives an electric shock. Information on working near overhead power lines can be found in the procedure on Overhead Power Line Safety.

Ground Fault Circuit Interrupter (GFCI)

A Ground Fault Circuit Interrupter (GFCI) works by detecting any loss of electrical current in a circuit, and when a loss is detected, the GFCI turns the electricity off before severe injuries or electrocution can occur. A shock can occur during the time that it takes the GFCI to cut off electricity, so it is important to use a GFCI as a protective measure rather than as a replacement for safe work practices.

GFCIs should be tested on a monthly basis. A lamp can be plugged in and turned on; the 'test' button pressed, and if the GFCI is working properly, the lamp should turn off. If not, the GFCI should be repaired or replaced. Reset the GFCI to restore power.

5.12 ENVIRONMENTAL PROCEDURE FOR SPILL CONTAINMENT & RECOVERY

Date Prepared:_____
Revised:_____
Approved:_____

Protecting the environment is a major responsibility. Well fluids, petroleum products and many process chemicals are environmental hazards because they can poison people, plants, wildlife and livestock through direct exposure, vegetation growth in contaminated soil and through seepage into streams and wells.

To prevent environmental damage and the need for spill containment and recovery the following steps should be taken:

- Practice good housekeeping;
- Follow safe work procedures;
- Arrange to repair or replace leaking equipment;
- Clean up small spills immediately;
- Handle chemicals according to their Material Safety Data Sheets;
- Transport dangerous goods safely;
- Report emergencies immediately.

SMALL SPILLS

Note: DO NOT approach spill area until chemical has been identified.

Small Oil/Salt Water Spills

- Isolate/repair source of leak.
- Advise supervisor
- Dispose of contaminated soil as directed.

Small Chemical Spills

- Identify spilled chemical.
- Wear recommended protective equipment.
- Isolate/repair source of spill.
- Dispose of contaminated soil as directed by the Material Safety Data Sheet.

LARGE SPILLS

Large Oil/Salt Water Spill

- Leave the area immediately.
- Notify supervisor. The supervisor will determine if outside help is required.

- Check surrounding area for ignition sources such as fires, prime movers, vehicles or hot work.
- Secure the area if possible to do so safely.
- Advise others in the area.
- Shut off sources of spill only if safe to do so.

Note: DO NOT walk in crude oil.
- Contain spill ONLY IF SAFE TO DO SO.

Large Chemical Spills
- Leave the area immediately.
- Notify supervisor. The supervisor will determine if outside assistance is required.

Note: DO NOT approach the spill until it has been identified.
- Check surrounding area for ignition sources.
- Secure the area if possible to do so safely.

Advise others in the area:
Wear recommended protective equipment (refer to the Material Safety Data Sheets).

- Shut off source of spill ONLY IF SAFE TO DO SO.
- Contain spill ONLY IF SAFE TO DO SO.

Reporting Procedures
- Contact the office as soon as possible.
- Give as much information as possible in conjunction with incident report.
- Location
- Type of product
- Sources
- Present status of source
- Estimated flow
- Hazards and environmental threats
- Terrain or water surface
- Weather conditions.
- Management will determine if outside assistance is required and contact the Client.

Reminder: Contain spill ONLY IF SAFE TO DO SO.

5.13 ERGONOMICS

Date Prepared:_____
Revised:_____
Approved:_____

Ergonomics is the science of fitting work conditions and job demands to the capabilities of workers. It does this by analyzing job tasks and the work environment to develop better ways and tools to utilize human energy more comfortably, efficiently and safely.

Musculoskeletal Injuries (MSIs) are the leading cause of lost time injury claims in Turkey. The percentage of all lost time claims due to musculoskeletal injury ranges between 26 and 30 percent.

Musculoskeletal injury is defined as “an injury to a worker of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissues that are caused or aggravated by work, including overexertion injuries and overuse injuries”. MSIs are also known as repetitive strain injuries, repetitive motion injuries, and cumulative trauma disorders.

Enerson aims to eliminate the possibility of these injuries to its workers, by thoroughly educating on prevention, and the signs, symptoms, causes, and treatment. All workers shall be trained to identify factors contributing to musculoskeletal injuries, recognize the signs and symptoms, and controls used to minimize or eliminate the risks.

Responsibilities

Enerson shall ensure that the risk of musculoskeletal injuries is identified through hazard assessments of the job positions within the company. All reasonably practicable measures will be taken to eliminate or reduce the potential risk of musculoskeletal injury.

If anyone believes they are experiencing any of the signs or symptoms of MSI, they should report to the management, and seek medical attention. The employer will review activities of the worker, and other workers performing similar tasks, to identify possible contributors to the symptoms. Control measures will be implemented to prevent further injuries.

Prior to manually moving any load that has the potential to cause injury, a hazard assessment shall be conducted, considering the weight, size, shape, and the manner in which the load will be moved. The company will provide appropriate equipment to ensure that proper lifting, lowering, pushing, pulling, or carrying heavy or awkward loads. Employees are required to use the provided equipment.

Signs and Symptoms of Musculoskeletal Injury

Signs and symptoms of a musculoskeletal injury can be revealed suddenly, such as after a strain/sprain, or gradually over a long period of time.

Signs can be observed and could include swelling, redness, difficulty moving a particular body part, highly repetitive movements, frequent rubbing of arms/hands/wrists/shoulders, white knuckles, heavy perspiration, and heavy breathing.

Symptoms can be felt, but not observed. These may include numbness, tingling, burning sensations, tenderness, sharp pains, and dull aches.

Outline of three stages for most MSIs:

Stage 1

- Aching and weakness is experienced during work activities, but decreases while away from work
- Little effect on the performance of job duties
- Discomfort may be experienced for several weeks or months
- Possibility of correction

Stage 2

- Physical signs may be present
- Possible sleep disturbance
- Symptoms last for longer periods, up to months
- Difficulty in performing some work tasks

Stage 3

- Symptoms are present at all times, even at rest, and can persist for months or years
- Performing job tasks and other daily activities is difficult
- Poor likelihood of recovery

Some examples of MSIs are muscle strain, tendon/ligament sprain, herniated intervertebral disc ("slipped disc"), osteoarthritis, adaptive changes to muscle length, ligament disorders, circulatory disorders, tendinitis, and carpal tunnel syndrome.

Causes and Risk Factors:

The causes of musculoskeletal injuries are difficult to determine, but there are a number of risk factors have been shown to contribute to them. If there is a mismatch between the requirements of the job and the capacity of the worker, then injuries can occur. The main causes of musculoskeletal injuries (MSIs) include excessive repetition or force, incorrect posture and body mechanics, and environmental factors.

Some of the physical risk factors for MSI are the physical demands of a task – the force, repetition, work posture, and local contact stress – and the duration and magnitude of these demands.

- Awkward or sustained postures: i.e. slouching, bending forward at the waist, twisting, prolonged standing, workstation design (i.e. a workstation that is too high or low)
- Forceful exertions

- Repetitive motions or tasks: a worker who performs a task with the same motions is exposed to the risk factor for a longer time than someone who performs a variety of tasks during the day.
- Environmental conditions
- Vibration
- Mechanical Compression – external pressure on soft tissues: leaning, resting hands on a desk

while typing

- Rate at which work is performed and the variety of different movements
- Characteristics of objects: i.e. handling objects that do not have handles or are slippery can cause awkward postures or require greater force to handle.
- Environmental conditions: i.e. cold temperatures can reduce blood flow

Controls

Wherever reasonably practicable, engineering or administrative controls shall be used to eliminate the risk of musculoskeletal injuries.

Engineering controls for MSIs mean the physical arrangement, design or alteration of workstations, equipment, materials, or other physical aspects of the work environment for the purpose of controlling risk.

Administrative Controls are the provision, use and scheduling of work activities and resources in the workplace, including planning, organizing, staffing and coordinating, for the purpose of controlling risk.

Personal protective equipment (PPE) is the last line of defense and ideally is used only after all possible engineering and administrative controls have been utilized. Examples of PPE for reducing the risk of MSIs: gloves (anti-vibration gloves, friction gloves), footwear (cushioned), devices to protect against contact stress (knee pads, wrist rests).

Proper body mechanics, correct posture, and good physical condition are the primary preventative steps to reduce the risk of MSIs. Other preventative measures include using the correct tool for the job, following safe work practices when lifting and moving loads, taking breaks, and rotation of job tasks.

Proper Lifting and Moving Techniques

Lifting & Carrying must be done in such a way as to avoid all potential incidents related to this type of work. A major cause of back injuries is improper lifting. When you lift correctly, your risk of injury is greatly reduced.

Pre-plan the lift:

Before lifting and carrying anything, the following questions need to be answered and if the lift is too large or awkward, ask for assistance to make sure injury to worker does not happen.

1. Is the object of a size that can be handled comfortably?

2. Is the weight within the physical strength of the person?
3. Is there enough room in which to carry and move an object?
4. Will the lifter be able to see over the object they are moving?

Body positioning is very important to ensure that possible injury to worker is addressed and is as follows:

1. Feet are to be placed close to the object, eight to twelve inches apart for balance.
2. Knees are to be bent comfortably. Hands should have a good grip and head raised.

3. Load should be lifted straight up smoothly and evenly.
4. Objects are to be kept close to the body and lifted in a carrying position and to a clear travel path.
5. Turn whole body not just upper body when putting load down.

5.14 HAZARDOUS CHEMICALS AND WHMIS

Date Prepared:_____
Revised:_____
Approved:_____

PURPOSE

The Workplace Hazardous Materials Information System (WHMIS) is a system that was developed to ensure that anyone working with hazardous materials is provided with the information needed to work safely with those substances. You have a "right to know" about things that can hurt you in a workplace.

WHMIS protects your health and safety by giving you the information you need in order to identify or recognize the hazards or potential hazard of materials you use on the worksite, and take the proper precautions when you use, handle, store, label, or dispose of hazardous products.

DEFINITIONS

- Controlled Product: a product, material, or substance specified by the regulations and schedules under the Hazardous Products Act.
- Material Safety Data Sheet (MSDS): a document disclosing the information referred to in the Hazardous Products Act.
- Supplier Label: the label supplied by the supplier of a controlled product.
- Supplier's Material Safety Data Sheet: the material safety data sheet provided by the supplier of a controlled product.
- Work site label: a label that discloses a product identifier that is identical to the one on the material safety data sheet for that product; provides information for the safe handling of the product; and references the material safety data sheet.

RESPONSIBILITIES

Employer Responsibilities

- Ensure that all controlled products are stored, used, and handled in accordance with the Workplace Hazardous Materials Information System and the Occupational Health and Safety Code.
- Ensure that all controlled products have a current (within three years) Material Data Safety Sheet.
- Every controlled product must have a supplier or work site label on it.
- Ensure that employees are adequately trained in hazardous materials handling, including training on the content of labels and MSDS information sheets procedures for safe handling, storage and disposal of controlled products; and emergency procedures.
- If hazardous waste is generated at a work site from a controlled product, the employer must ensure that is it stored and handled safely using any means of identification and instruction of workers on the safe handling of hazardous waste.

Workers' Responsibilities

- The hazard warnings and handling instructions given on WHMIS labels are part of each employee's job instructions and must be followed.
- The above summary is only the start of your WHMIS training. All field employees are required to complete Petroleum Safety Training, including WHMIS, and Transportation of Dangerous Goods training. Each of these is to be completed every three years. On-going training also takes place in pre-job meetings, worksite meetings and monthly safety meetings.
- Job Supervisors are responsible for the on-going WHMIS training of their crews.
- Label any container that you fill with as a WHMIS controlled product. Confirm with MSDS or product identifier.

TRAINING

Enerson will ensure that any worker who works around, with, or manufactures a controlled product is trained in the content required to be on a supplier label and a work site label and the purpose and significance of the information on the label; the content required to be on a material safety data sheet and the purpose and significance of the information on the material safety data sheet; procedures for safely storing, using and handling the controlled product; and the procedures to be followed in case of an emergency involving the controlled product.

Enerson shall ensure that every employee who has to potential to work around or with any controlled product shall be adequately trained in Workplace Hazardous Materials Information System training.

CLASSIFICATION SUMMARY

There are six classes of controlled products and eight hazard symbols.

Class A – Compressed Gases

Any material that is normally a gas which is placed under pressure or chilled, and contained by a cylinder. These are dangerous because they are under pressure. Common examples: compressed air, propane, oxygen, and welding gases

Class B – Flammable and Combustible Material

Flammable means that the material will burn or catch on fire easily at normal temperatures (below 37.8 degrees Celsius or 100 degrees Fahrenheit). Combustible materials must normally be heated before they catch on fire.
Reactive flammable materials are those which may suddenly start burning when it contacts air or water, or react with air or water to make a flammable gas. Common Examples: propane, butane, acetylene, ethanol, turpentine, toluene, spray paints.

Class C – Oxidizing Materials

Oxidizers usually do not burn themselves but will help the fire by providing more oxygen or may cause materials that normally do not burn to spontaneously

combust. Oxidizers may be gases, such as oxygen or ozone; liquids, such as nitric acid or per chloric acid solutions; and solids, such as potassium permanganate and sodium chlorite.

Class D – Poisonous and Infectious Materials

Class D materials are those which can cause harm to your body. They are divided into three major divisions

Division 1: Materials Causing Immediate and Serious Toxic Effects – these are very poisonous and immediately dangerous to life and health, causing long-term effects. Examples: carbon monoxide, sulphuric acid, and sodium cyanide.

Division 2: Materials Causing Other Toxic Effects – these materials are poisonous, and more likely to show the effects months or years after exposure, or will be temporary immediate effects. Examples: asbestos fibers, mercury, acetone, quartz silica, lead and cadmium.

Division 3: Bio hazardous Infectious Materials – organisms or the toxins they produce that can cause diseases, such as bacteria, viruses, fungi, and parasites. Examples: HIV/AIDs Virus, Hepatitis B, and salmonella.

Class E – Corrosive Material

Materials that can cause severe burns to skin and other human tissues. The effects are permanent. Examples: ammonium hydroxide, sulphuric acid, caustic soda, ammonia gas, chlorine, nitrogen dioxide.

Class F – Dangerously Reactive Materials

A material that reacts vigorously with water to make it a toxic gas; if it reacts with itself when it is bumped/dropped or its temperature changes; and if it can vigorously join to itself, break down, or lose extra water to become denser. Most of these materials can be extremely hazardous because they react quickly and easily. Example: ethyl acrylate, vinyl chloride, ethylene oxide, picric acid, and anhydrous aluminum chloride.

LABELS

- Employers must ensure every controlled product and its container has a supplier label or work site label
- An employer must not remove, modify, or alter a supplier label if any amount of the product remains in the container
- If the supplier label on a controlled product is illegible or missing, the employer must immediately replace it with a supplier label or work site label.
- The employer may store an unlabeled controlled product for up to 120 days only if the employer is actively seeking the supplier label or information required to create a work site label, posts a placard, and ensures that any worker that is working with or near the controlled substance knows the meaning of the placard, is trained in procedures if there is an emission of the product, and is trained in the emergency response involving the controlled product.

MATERIAL SAFETY DATA SHEETS (MSDS)

- The employer must ensure that any controlled product that is for use at a work site must be accompanied by a supplier material safety data sheet.
- The employer must ensure that the most recent supplier material safety data sheet for a controlled product is within 3 years of its last revision.
- All Material Safety Data Sheets shall be made readily available to all workers. The master copy of all MSDS is held in the front reception area of the main office in Ankara, and every logging unit carrying controlled products shall also carry a copy of any MSDS that is for any controlled product possibly present in the vehicle.

PROCEDURES WHEN WORKING WITH, OR AROUND, HAZARDOUS CHEMICALS

Read and follow the safety instructions on the chemical container label and on the corresponding Material Safety Data Sheets (MSDS) before using, handling, or applying the chemicals in your workplace.

- Wear rubber gloves and protective eyewear, when using chemicals labeled "Flammable", "Corrosive", and “Caustic" or "Poisonous".
- Always use chemical goggles and a face shield before handling chemicals labeled "Corrosive" or "Caustic".
- Eye wash stations are located throughout the facility; if any chemical enters the eyes, ensure you aware of eye wash locations.
- Do not smoke while handling chemicals labeled "Flammable".
- Ensure a work site label is applied on all containers if there is a transfer of a controlled product from the original container.

- Flammable substances will not be stored in a quantity sufficient to produce an explosive reaction if released. Flammable substances shall not be stored near any underground shaft, within the vicinity of air intake of a ventilation supply system, an internal combustion engine, near any fired heater/furnace, or any potential source of heat or electrical spark. Flammable substances must be stored only in approved storage containers.
- If any worker's clothing is contaminated with a flammable or combustible liquid, any activity where a spark or flame may exist must be avoided. The contaminated clothing shall be removed as soon as possible and must be properly cleaned before it is used again.
- If flammable or combustible materials contact a worker's skin, ensure it is washed thoroughly. Refer to MSDS for the specific product for further details.
- If there is a release of any flammable or explosive substances at the worksite, ensure that no persons enter any area where more than 20% of the lower explosive limit is present. Ensure proper testing is conducted.
- Refer to Enerson's code of practice for working with the potential of Hydrogen Sulfide. All Well Logging field personnel working for oil and gas industry must be trained and certified every three years in H2S Alive.

5.15 HEARING CONSERVATION PROGRAM

Date Prepared:_____
Revised:_____
Approved:_____

The objective of the Enerson Hearing Conservation Program is to minimize occupational hearing loss by providing hearing protection, training, and annual hearing tests to all persons working in areas or with equipment that have noise levels equal to or exceeding an eight-hour time-weighted average (TWA) sound limit of 85 dBA (decibels measured on the A scale of a sound level meter). A copy of this program will be maintained by all affected departments

ASSIGNMENT OF RESPONSIBILITY

Management:

- Perform hazard assessments to determine where hearing protection is required.
- Use engineering and administrative controls to limit employee exposure.
- Provide adequate hearing protection for employees.
- Post signs and warnings in all high noise areas.
- Conduct noise surveys annually or when new equipment is needed.
- Conduct annual hearing test for all employees.
- Conduct hearing conservation training for all new employees.
- Conduct annual hearing conservation training for all employees.

Employees:

- Use company-issue approved hearing protection in designated high noise areas.
- Request new hearing protection when needed.
- Exercise proper care of issued hearing protection.
- Participate in training programs and any required hearing testing

PROCEDURES

Sound Level Monitoring:

- Monitoring will be performed with the use of sound level meters and personal dosimeters.
- Monitoring will also be conducted whenever there is a change in equipment, process or controls that affect the noise levels. This includes the addition or removal of machinery, alteration in building structure, or substitution of new equipment in place of that previously used.

EMPLOYEE TRAINING:

Affected employees will be required to attend training concerning the proper usage and wearing of hearing protection. The training will be conducted by management, or a designated representative, within 30 days of hire and annually thereafter.

Training shall consist of the following components:

- How noise affects hearing and hearing loss;
- The purpose and value of wearing hearing Protectors;
- The advantages and disadvantages of the hearing protectors to be offered;
- The various types of hearing protectors to be offered and the care, fitting, and use of each type;
- Legislation and applicable standards;
- The respective tasks in maintaining noise controls; and
- The purpose and value of audiometric testing and summary of procedures
- Training records will be maintained by management.

Hearing Protection:

Management, supervisors, and employees shall properly wear the prescribed hearing protection while working or traveling through any area that is designated as a high noise area.

Hearing protection will be provided at no cost to employees who perform tasks designated as having a high noise exposure and replaced as necessary. It is the supervisor's responsibility to require employees to wear hearing protection when noise levels reach or exceed 85 dBA.

- Employees will have the opportunity to choose from at least two different muff types and 2 different plug types of hearing protection, and in the event dual hearing protection.
- Personal stereo headsets, or "Walkman," are not approved for hearing protection and are not permitted in any operating area of company property.
- Signage is required in areas that necessitate hearing protection.
- Preformed earplugs and earmuffs should be washed regularly and stored in a clean area. Foam inserts should be discarded after each use. Hands should be washed before handling preformed earplugs and foam inserts to prevent contaminants from being placed in the ear.
- Refer to manufacturer's specifications for more information.
- Management will keep a log of the areas or job tasks designated as requiring hearing protection, as well as the personnel affected by this Hearing Conservation Program (see Attachment B).

Audiograms/Hearing Tests

- Employees subject to the Hearing Conservation Program who have time-weighted average (TWA) noise exposures of 85 dBA or greater for an eight (8) hour work shift will be required to have both a baseline and annual audiogram.
- The baseline audiogram will be given to an employee within one (6) month of employment with Enerson and before any exposure to high noise levels. Annual audiograms will be performed within one year from the date of the previous audiogram. It is the responsibility of the individual and management to schedule the annual audiogram.
- If an annual audiogram shows that an employee has suffered a standard threshold shift, the employee may provide one retest within thirty (30) days of the annual audiogram and may use the results of the retest. Employees who do experience a standard threshold shift will be refitted with hearing protection and provided more training on the effects of noise.

Occupational Exposure Limits for Noise

Schedule 3, Table 1 of the OHS Code Occupational exposure limits for noise Exposure level (dBA)	Exposure duration
82	16
83	12 hours and 41minutes
84	10 hours and 4 minutes
85	8
88	4
91	2
94	1
97	30
100	15
103	8
106	4
109	2
112	56 seconds
115 and greater	0

HEARING CONSERVATION TRAINING LOG Attachment A

Training Date: _____

Topic: _____

Training Conducted by: _____

Employee Name (Printed)	Employee Signature	Job Title

RECORD OF HEARING PROTECTION NEEDS Attachment B

Enerson Well Logging Services Personnel in Hearing Conservation Program				
Hearing protection is required for and has been issued to the following personnel:				
Employee Name	Department	Job Description/ Equipment Being Used	Type of Hearing Protection Issued	Date Issued

5.16 HYDROGEN SULPHIDE SAFETY

Date Prepared:_____
Revised:_____
Approved:_____

Hydrogen Sulphide is a deadly and naturally occurring gas. H_2S is composed of a mixture of hydrogen and sulphur, that is, two atoms of hydrogen to each one of sulphur and is found in a variety of geological formations. H_2S frequently appears in oil refineries, gas plants, oil and gas wells, in fact, throughout the entire petrochemical industry. H_2S can also be found in coalmines, heavy water plants, pulp mills, underground mines, sewers, swamps, or anywhere there is decomposition of organic material where oxygen is not present. H_2S is also known as "sour gas".

H_2S is extremely toxic. It is imperative that anyone working in an area where H_2S may be encountered is properly trained in H_2S. All Enerson Well Logging field personnel working for oil and gas industry will be trained in H_2S Alive by a certified instructor, and recertified every three years.

Properties of H_2S:

- Normally encountered as a gas
- Colorless – there is no physical sign to warn of the presence of H_2S
- At low concentrations, it smells like rotten eggs, but quickly impairs your sense of smell, so is not detectable by smell when it is more dangerous
- Is slightly heavier than air (vapor density of 1.19 vs. 1.0 for air). In its pure state, or as a high proportion of a gas mixture, it may flow or settle into low-lying areas.
- It is extremely flammable. It burns with a blue flame and gives off sulphur dioxide (SO_2), which is also hazardous and irritates the respiratory system and the eyes.
- It is explosive when mixed with air, depending on the proportions.
- Dissolves in fluids like water, oil, molten sulphur, or sludge. Heating, depressurizing, or mixing the fluids can release the H_2S.

Concentration of H_2S is measured in PPM, parts per million, or in percentages. 1 % of H_2S is equal to 10,000 PPM. The concentration of H_2S that is considered to be Immediately Dangerous to Life and Health (IDLH) is 100 ppm. This value is put into place to ensure that workers can escape from a given contaminated environment in the event of failure of the most effective respiratory protective equipment.

The limits for worker exposure to hazardous substances are set by regulations. These Occupational Exposure Limits are:

Exposure Limit		Description
8 - Hour	10 ppm	Time-weighted average for 8 hours
15-minute (STEL) Short term exposure limit)	N/A	Time-weighted average for up to 15 minutes, with 60 min breaks
Ceiling	15 ppm	NEVER exceed without respiratory protection

The following are possible health effects when exposed to H_2S:

- Less than 1 ppm - You can smell it (rotten egg smell)
- 10 ppm - No known adverse health effects for most people, respiratory protection is required beyond this level
- 20 – 200 ppm - eye and respiratory tract irritation and loss of smell, headache and nausea
- 200-500 ppm - eye and respiratory tract irritation, loss of smell, headache and nausea occur more quickly and are more severe, loss of breathing and death within hours
- 500-700 ppm - affects the central nervous system, loss of reasoning, loss of balance, unconsciousness and breathing to stop within minutes
- 700 ppm - immediate loss of consciousness, permanent brain damage and death if not rescued immediately

There are seven steps that should be taken if you encounter a release of H_2S.

1. EVACUATE – get to a safe area immediately. Move upwind if release is downwind of you. Move crosswind if release is upwind of you. Move to higher ground if possible.
2. ALARM – Call for help, sound bell, horn, whistle, or call by radio.
3. ASSESS – Do a head count. Consider other hazards – there could be other dangers (risk of fire/explosion, etc.)
4. PROTECT yourself before attempting a rescue. Put on breathing apparatus. 25% of deaths are rescuers. The use of breathing apparatus is an ABSOLUTE MUST.
5. RESCUE - remove the victim to safe area.
6. REVIVE the victim using CPR, if necessary.
7. MEDICAL AID - is a must for anyone who has been exposed to H_2S.

5.17 LADDER PROCEDURES

Date Prepared:_____
Revised:_____
Approved:_____

Workers are to be aware of potential dangers when working with ladders. Supervisors are responsible to properly train their workers on equipment use and PPE. Refer to Manufacturer/Owner's Manual for instruction, cautions, and warnings relevant to the specific tools, equipment or tasks.

Extension Ladders:
When setting up an extension ladder, use the following method to avoid straining muscles or losing control of ladder:

With ladders weighing more than 25 kg or where conditions complicate the task have two people set up ladder as follows.

1. Lay ladder on the ground close to intended location.
2. Brace ladders base using helpers' feet.
3. Raise ladder overhead and walk towards base maintaining ladders balance.
4. Move erect ladder to desired location and lead it forward to resting point.

One person can erect a short ladder step by step as follows:

1. Place bottom of ladder against a building or stationary object.
2. Lift top of ladder upwards to vertical position.
3. Transfer ladder to its required position when it is erect. Keep ladder upright and close to the body with a firm grip while moving. Look for overhead obstructions.

The method for lowering any ladder is the same procedure in reverse to erecting a ladder.

LEAVE all tie-off devices in place until they must be removed.

DO NOT RAISE or LOWER ladder when extended.

Step Ladders:
As with all ladders, make sure that the stepladder is in good condition, and is the right ladder for the job to be done.

Stepladders are to be used only on clean and even surfaces.

1. No work is to be done from the top two steps of a stepladder, top platform = a rung.
2. When in the open position ready for use, the incline of the front step section shall be one (1) horizontal to six (6) vertical

3. The stepladder is only to be used in the fully open position - the spreader bars locked.
4. Tops of the stepladders are not to be used as a support for scaffolds
5. Don't overreach while on ladder. Climb down and move the ladder to a new position.

6. When an employee is working on a step ladder over 3m high (except a platform ladder), another person shall hold the ladder.

5.18 LOCKOUT PROCEDURES

Date Prepared:_____
Revised:_____
Approved:_____

The purpose of lockout and tagging is to provide safety for workers and equipment while Repairs or changes are being made. Lockout is done by physically attaching a lock to valves, switches, starters, and hydraulics or control devices to render equipment inoperative, depressurized, and safe to work on.

Tagging is achieved by tagging the appropriate device with a DO NOT OPERATE tag, which is dated and signed by the person or persons involved in the work.

Always ensure that:

- All systems have been rendered safe from hazardous conditions.
- All involved devices have been properly tagged or locked out.
- Any stored energy has been bled off.
- Recording or logging of the tagged or locked out equipment has been completed.
- Tags are properly dated and signed with directions for startup or operating.
- A combination of locks and tags may be used.
- Any unauthorized altering or removal of locks or tags is cause for IMMEDIATE DISMISSAL could lead to fines by Ankara Labor & Occupational Health & Safety.
- Always maintain a clean and safe work area and
- Only persons involved with the work may remove locks or tags only AFTER ensuring the area and equipment is safe to operate.

Equipment Isolation

All harmful substances must be removed before any repair or modification work is begun on equipment, pipes or pipelines and a blind flange must be installed. The blind flange must be of sufficient rating to withstand the highest possible pressure that may result, according to engineering specifications. Any unit in which a blind flange has been installed must be clearly marked as containing the device.

Written procedures must be available that instruct the worker on the purging method and medium to be used, the use of a "blind list" to ensure placement and removal of the blinds (where suitable) and step-by- step instructions on performing the job.

5.19 OIL & GAS INDUSTRY HAZARDS

Date Prepared:_____
Revised:_____
Approved:_____

The following are some hazardous situations that are common in the oil and gas industry and some controls used to control potential incidents that may involve this equipment.

Hazards of rotating equipment:

- Equipment such as flywheels, drive shafts and water pumps can pose the hazards of catching ill-fitting clothing (including loose fitting gloves), jewelry and long hair.
- Most rotating equipment has guards - workers must ensure adequate guards are in place before using equipment.
- For rotating equipment that cannot be fitted with guards, safety procedures should be in place to identify the hazard and eliminate or control the risk. These procedures should be reassessed as equipment changes and revisited to ensure that the hazard is identified and the risk reduced.

Hazards of portable heaters:

- Only competent, trained workers can install, ignite, and service portable heaters (gas, electric, oil, etc.).
- All use and maintenance must strictly follow manufacturer's specifications.
- Ensure adequate ventilation to avoid buildup of exhaust gases.
- Use of portable heaters in potentially hazardous atmosphere may require hot work permit.

Hazards of pipe handling:

- Standing or walking on pipe should be avoided; wood platform or planking should be used.
- Tiers of pipe must be properly blocked and secured to control the hazard of rolling pipes.
- Do not use hands and feet to position pipe as this allows for great risk of crushing injuries.
- Never walk or work under a suspended pipe, unless load is fully secured or supported by blocking. All loads must be controlled by tag lines.

Hazards of winching/towing:

- Workers should never be between the winching vehicle and the load being winched.
- Always wear leather gloves when handling cable to avoid pieces of wire protruding from the cable.
- Use hand over hand action; the winch line should not be allowed to slip through the hands.
- If towing a vehicle; be aware of muddy conditions - tire chains may be required.
- Slack should be taken up until the line is taut, then steady power should be applied to control both vehicles.
- Workers must not use hands, feet or any hand-held object to guide rope/cable onto the drum.
- Braking must begin earlier than usual when towing a vehicle.
- When cornering, make sure the towed vehicle has room to negotiate the comer - be aware towed vehicles don't necessarily follow directly in the path of the towing vehicle.

Hazards of opening valves:

- Attempting to open a stubborn valve can cause strains and sprains through overexertion. If the valve suddenly gives, excessive force can cause a fall.
- Opening a valve can change the pressure in the pipe and the release of energy can produce enough force to blow a valve or gasket. Valves should never be operated by a worker who has not been properly trained to do so.

Hazards of ground disturbance:

- All underground energized lines must be marked before any ground disturbance is undertaken.
- Facility owners must be notified and have their facilities marked on service prior to starting work.
- A pre-job meeting must be held for all personnel and contractors involved in the ground disturbance.
- Workers must know and understand the safe working distances for heavy equipment from exposed underground facilities in their jurisdiction.
- All facilities situated within the excavation and within 5m of the work area must be hand exposed prior to mechanical excavation.
- Only the facility owner representative can direct or permit heavy equipment to operate within 60cm of an exposed facility

5.20 OVERHEAD POWER LINES

Date Prepared:_____
Revised:_____
Approved:_____

Persons working in the near vicinity of Overhead Power lines must be aware of the potential hazards and perform the task in a manner that will minimize and control these hazards.

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training.

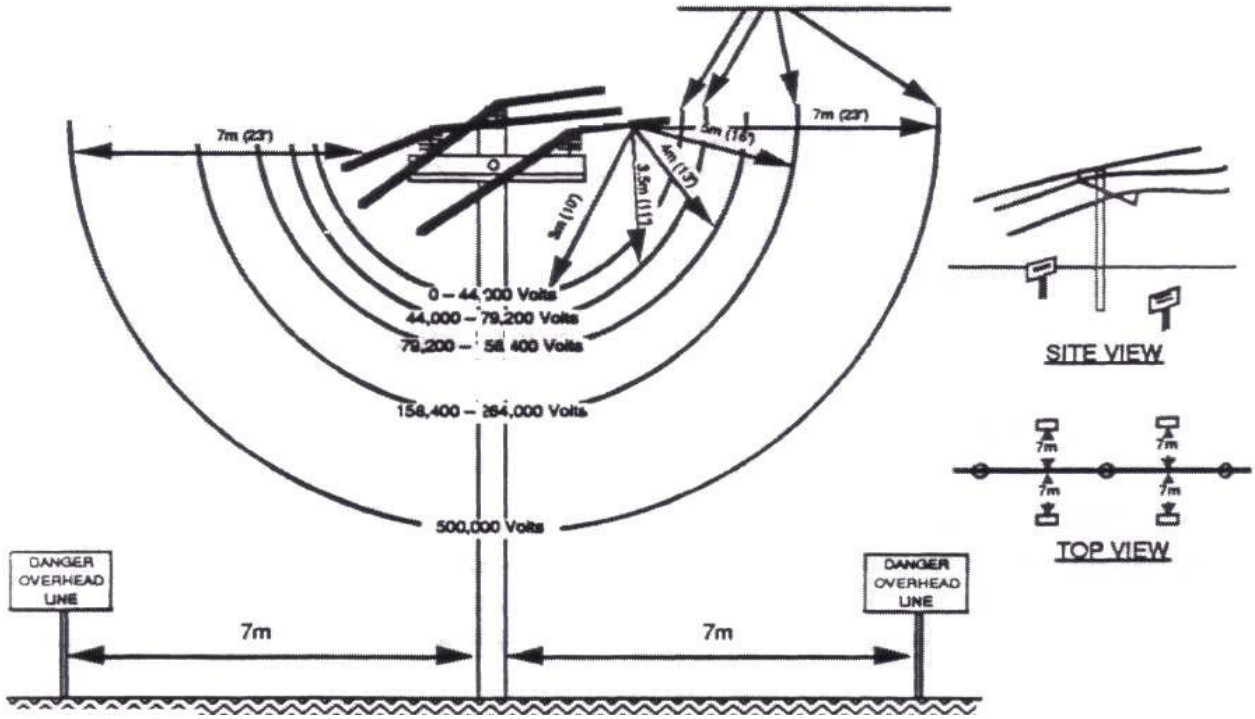
No equipment shall be operated closer to electrical power lines than the distances indicated by provincial power company guidelines and OH&S Code guidelines. If these distances cannot be reinforced, then special permission shall be obtained to have the power line de-activated for the duration of the work task.

Procedures

- Always be alert of overhead power lines and comply with clearance requirements
- Low level power lines should be marked by florescent paint or a high visibility tape (set up goal posts).
- Only authorized Power Company employees shall be permitted to lift overhead power lines to permit a load to pass below
- If your vehicle load comes in contact with an overhead line stay in the vehicle and attempt to move the truck away from the power line - if not hooked.
- If it is necessary to leave the truck (i.e. fire) jump as far from the vehicle as possible and land with both feet together.
- Hop away (with feet together) only if you are still in danger. Otherwise stay where you are until help arrives.
- The superintendent is responsible to know the over-all height of all loads.
- The Power Company must be contacted by the superintendent to disconnect the power or to move lines that are too low.
- No employee should attempt to tamper with the power lines, at any time.

OVERHEAD POWER LINES

Great care must be taken when working near electrical power lines. Equipment and personnel must not approach power lines from any direction closer than the limits below



Safe Limit of Approach Distances from Overhead Power Lines for Persons and Equipment

Operating Voltage of Overhead Power Line Between Conductors	Safe Limit of Approach Distance for Persons and Equipment
0 - 750 V - Insulated or polyethylene covered Conductors	300 mm
Above 750V –Insulated Conductors	1.0m
0-40Kv	3.0m
69kV,72kV	3.5m
138 kV, 144 kV	4.0m
230kV,240kV	5.0m
500 kV	7.0m

When crossing under power lines with low clearance, the direction man must stand in front of the truck until the truck and load have completely cleared the power line.

5.21 WELL SITE SAFETY

Date Prepared:_____
Revised:_____
Approved:_____

Introduction

The well site is a dangerous area. Not only do our own operations involve danger, there are numerous hazards around any rig; therefore, there are two overriding concepts in avoiding accidents:

- Awareness - keep alert at all times.
- Good communication - make sure that you and the crew are aware of what is happening.

Requirements

The following are some guidelines to potential dangers and their avoidance:

- Keep clear of the logging cable. If it is stretched tight in the hole, remember that cables can break suddenly. If it is loose, it could be that the tool is about to be picked up. DO NOT step over it - lift it up and walk underneath.
- As a winch operator, it is your responsibility to ensure that people are clear of cable and sheaves. This includes both on the rig floor and on the catwalk, before moving the cable.
- Check the cable frequently for loose and unraveling or missing armor strands, particularly during jobs involving pressure equipment.
- Do not stand underneath the upper sheave unnecessarily.
- Unless directly involved in operations, KEEP OFF the rig floor.
- Do not stand close to the lower sheave wheel. If the tie down chain breaks or moves under tension, the lower sheave wheel can move very rapidly.
- Do not let the cable run through your hand. Armor wires can be very sharp when worn. Keep your hands well away from moving cables and sheave wheels.
- NEVER PUT YOUR HANDS ON A MOVING CABLE, SHEAVE OR PULLEY.
- Do not let the cable run through your hand as worn or broken armor wires can cause serious cuts.
- Keep the hole covered at all times.
- DO NOT stand over the well if Blow-Out Prevention is used. Even a small build-up of pressure can cause significant jets of well fluid.
- Many areas around rig floors and catwalks can be wet and slippery and have loose footings - TAKE CARE.
- Much of our equipment is heavy and cumbersome, and pulled back muscles are a common injury. Ensure that you follow the guidelines to lifting heavy weights outlined in the relevant training video. If necessary, get help to assist in lifting.
- Always ground the Wireline unit to the rig.
- Take care when using steam; be aware of the following defects of steam hoses:
- Damaged or loose couplings;
- Sudden steam/hot water releases when turning steam on.

5.22 WILDLIFE

Date Prepared:_____
Revised:_____
Approved:_____

Field employees are at risk from exposure to all types of animals, their waste products and their carcasses. Rodents and other animals can harbor disease-causing agents that are very harmful to humans. Care should be taken to avoid all wild animals and domestic animals that have the potential to harm you.

Procedure

- Be aware of your surroundings and note any wild or suspicious-acting animals in your work area. If necessary, seek safe shelter from these animals.
- Avoid reaching or stepping into or over hidden areas that may contain such animals.
- Be aware of signs that indicate above or below ground animal nests and take appropriate action to prevent contamination by dust or injury from bites.
- Avoid contact with any animal carcasses. If necessary, wear rubber gloves to remove animal carcasses. Wash exposed skin with an antibacterial or disinfectant soap (i.e., Dial or Derma scrub) after removal and disposal of the animal.
- If an animal bite occurs, clean the wound with soap and water, and follow appropriate first aid procedures. Immediately report the incident to your supervisor.
- Transport any bite victim to a Physician in your area.
- If exposure to airborne particles and dust from a nest does occur, immediately report the incident to your supervisor. (If possible, and without exposing yourself, mark the site without disturbing it so trained personnel can collect samples to determine if any disease-causing agents are present.)
- Avoid direct contact with bird, bat and other animal droppings. Areas where birds and bats roost should be avoided or appropriate respiratory protection must be used.
- Avoid direct contact with animal blood. Wear rubber gloves if contact with animal blood cannot be prevented. Dispose of rubber gloves properly. Wash hands thoroughly with an antibacterial soap after disposal of rubber gloves and before eating, drinking or smoking.

Wild Dogs Safety and Awareness

Wild Dogs are cause for concern regarding employee health and safety while working in the fields of farmers who keep pet wild fighter dogs for their own safety and their farms safety as well. Recommendations concerning Wild Dogs encounters that are presented here are guidelines only.

Be alert and be aware of your surroundings. Never approach a Dog for any reason. In most instances, the Wild Dogs will want to get away from you as quickly as possible. Pepper Spray and Dogs repellent whistles may work in an attack situation or as a last defense and therefore should be easily assessable when carried in the field.

5.23 WORKING IN EXTREME WEATHER

Workers must be aware of the dangers associated with working in extreme weather conditions. Supervisors are responsible to provide proper training to their workers on protection requirements. Workers should be instructed in procedures appropriate to the tasks and the environment in which those tasks are performed.

The body is designed to function within a narrow core temperature range around 37 degrees Celsius. Hypothermia occurs when the core temperature falls below 35 degrees Celsius, and death is probable at 27 degrees or less. Hyperthermia occurs when the core temperature exceeds 40.6 degrees Celsius and there is no sweating. Death is imminent at around 42 degrees Celsius.

Cold Weather

Cold weather creates hazardous work environments for driving and working. This risk can be reduced by taking the following into consideration:

- Be aware of the current ambient temperature and the wind chill factor. The greater the wind chill factor, the less time that should be spent outside.
- When departing a vehicle, ensure that footing is stable and walk around to check for hazards.
- Wear clothing that is appropriate for the weather conditions. Rubber boots are not practical in extreme cold due to the decreased flexibility of the material.
- Have a survival kit in the vehicle: blanket or heavy coat, candles, flashlight, snacks, cell phone.
- Call the office when you reach your destination. Lone workers should be checking in with the office and/or the mine site periodically.
- All field employees are first aid trained, and should be aware of proper warming procedures, signs of hypothermia and frostbite, first aid treatment of hypothermia and frostbite.
- Know the emergency contact numbers for your work location.
- Exposure to vibration may increase a worker's susceptibility to cold injury because vibration can reduce circulation, particularly in the extremities.
- Work performed in snow or ice-covered terrain may require tinted safety eyewear. Alcohol must NOT be consumed at any time during work, and particularly while working in cold weather.
- Limit the consumption of caffeine-containing beverages because they act as diuretics, affecting hydration.

Heat Loss and Maintaining Body Heat:

Body heat may be lost in any of the following ways:

- Immersion of body parts in cool or cold liquids
- Direct contact with cold surfaces (i.e. ground, tools, machinery, products) o Conduction of heat through wet or damp clothing, including perspiration. o Exposure to cold air
- Consumption of cold liquids or foods.

The body maintains heat balance in two main ways:

- Restricting blood flow: the body automatically reduces the amount of blood circulating through the skin and cooled body parts by constricting blood vessels supplying blood to those regions. By doing so, warm blood is diverted to the body's core, maintaining the temperature of internal organs and the brain.
- Shivering: this can temporarily raise body temperature. Slight to moderate shivering is not uncomfortable and allows some warmth to be maintained. Severe, uncontrolled shivering occurs when body temperature falls to 35 C. Normal body temperature is 37 degrees Celsius. Severe shivering can cause body heat production to rise as high as four to five times normal. Severe shivering is dangerous – any severely shivering worker should be immediately removed from exposure to the cold.

Cold Stress

Cold stress threshold limit values (TLVs) have been developed by the American Conference of Governmental Industrial Hygienists (ACGIH) to protect workers from hypothermia and cold injury. The intent is to define cold working conditions under which most workers can be repeatedly exposed without adverse health effects.

Threshold Limit Values (TLVs) Work/Warm-up Schedule for a Four-Hour Shift

*The work-break schedule applies to any four-hour period with moderate or heavy activity. The warm-up break periods are of 10 minute duration in a warm location. The schedule assumes that "normal breaks" are taken once every two hours. At the end of a 4-hour period, an extended break is recommended.

Air Temp – Sunny	No noticeable wind	8 km/hr wind	16 km/hr wind	24 km/hr wind	32 km/hr Wind
-26 to -28	Normal	Normal	75 min work max, 2 breaks in 4 hours	55 min work, 3 breaks	40 min work, 4 breaks
-29 to -31	Normal	75 min work, 2 breaks	55 min work, 3 breaks	40 min work, 4 breaks	30 min work, 5 breaks
-32 to -34	75 min work, 2 breaks	55 min work, 3 breaks	40 min work, 4 breaks	30 min work, 5 breaks	Non-emergency work to cease
-35 to -37	55 min work, 3 breaks	40 min work, 4 breaks	30 min work, 5 breaks	Non-emergency	Non-emergency work to cease
-38 to -39	40 min work, 4 breaks	30 min work, 5 breaks	Non-emergency work to cease	Non-emergency work to cease	Non-emergency work to cease
-40 to -42	30 min work, 5 breaks	Non-emergency work to cease	Non-emergency work to cease	Non-emergency work to cease	Non-emergency work to cease
Below -43	Non-emergency work to cease	Non-emergency work to cease	Non-emergency work to cease	Non-emergency work to cease	Non-emergency work to cease

*2008 TLVs and BEIs – Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.

Cincinnati: American Conference of Governmental Industrial Hygienists (ACGIH), 2008.

Cold Weather Protective Gloves and Clothing

Hand Protection

Conditions and Tasks	Actio
Fine work with bare hands for more than 10-20 minutes at temp below -1C	Cover handles of tools and control bars with thermal insulating material
At temperatures below 16C for sedentary, 4C for light, or -7C for moderate and fine manual dexterity is not required	Workers should wear gloves
Prevent frostbite	Workers should wear anti-contact gloves
Cold surfaces below -7C within reach	Warn workers to prevent contact with bare skin
Air temperature at or below -17.5C	Protect hands with mittens, and design tools and controls for use with mittens

Total Body Protection

Conditions and Tasks	Action
At air temperatures below 4C	Cold protective clothing appropriate to the level of cold and physical activity
Increased air velocity by wind, draft, or artificial ventilation	Reduce cooling effect by shielding the work area or wearing easily removable windbreak garment
If work is light, and worker may become wet	Outer layer of clothing must be impermeable to water
Heavier work, and worker may become wet	Outer layer of clothing must be water repellent and changed as soon as it gets wet
Worker gets wet before entering cold area (i.e. from perspiration)	Always change into dry clothes before entering cold area
General	Change socks and felt insoles daily or use vapor barrier boots
Insufficient warmth from clothing	Provide auxiliary heated versions of the protective clothing
Protective clothing insufficient to prevent frostbite or hypothermia	Modify work or suspend work until adequate clothing is available or until weather conditions improve
Work with evaporate liquids (i.e. gasoline) attemperatures at or below 4C	Avoid soaking clothing or gloves

Working in the Heat

To maintain a safe internal temperature, the body must discharge excess heat quickly, by increasing blood circulation throughout the skin and producing and releasing sweat onto the skin. The body perspires to cool down; perspiration evaporates from the skin and cools the body down. It is crucial to stay hydrated to replace lost fluids. If the air temperature is the same temperature or warmer than the skin, blood brought to the surface for cooling cannot dispel its heat.

Working in the heat can create hazards in the workplace. Excess sweating can create problems gripping tools or machinery; exposure to heat can cause decreased alertness, dizziness, fatigue, fainting, vertigo, irritability, and inattention to safe work procedures.

The combination of high air temperatures, high humidity, and physical work can cause heat-induced illness, such as heat stroke, heat exhaustion, heat cramps, heat collapse, heat rash, and heat fatigue.

Heat stroke

- The most serious heat-related illness. It occurs when the temperature regulation in the body fails. If the body temperature is too high, it can be fatal.
- Symptoms: chills, restlessness, irritability, mental confusion
- Signs: euphoria, red face, disorientation, hot dry skin, sweating stops, erratic behavior, collapse, shivering, unconsciousness, convulsions
- Treatment: Immediate medical attentions, replace fluids, cool with ice packs in heat zones (under arms, behind knees), ensure air movement to cool. Do not leave unattended.

Heat Exhaustion

- Caused by the loss of large amounts of fluid from sweating, dehydration, lack of acclimatization, less physical fitness.
- Can advance to heat stroke if untreated
- Symptoms: fatigue, weakness, blurred vision, dizziness, vertigo, headache
- Signs: high pulse rate, excessive sweating, pale face, clammy skin, collapse, vomiting
- Treatment: lie flat on back in cool area, drink water, cool skin with spray mist or cloth, loosen clothing

Heat Cramps

- Usually caused by performing hard physical work in a hot environment
- Painful muscle spasms from drinking water but too much or too little sodium (electrolyte imbalance)
- Treatment: rest in cool area, massage muscles, drink carbohydrate-electrolyte replacement drinks

Heat Collapse

- The brain does not receive enough oxygen because blood pools in the extremities, often because of a lack of acclimatization
- It does not affect the body’s heat balance

- Laying down in a cool area generally allows for quick recovery

Heat Rash

- Most common problem in hot work environments
- "Prickly heat" – sweat ducts become plugged, skin rash appears
- Not likely to produce any health effects if skin is kept clean and dry

Heat Fatigue

- Temporary discomfort – can cause loss in coordination and awareness
- Generally due to a lack of acclimatization

Prevention of Heat-Induced Illness

- Acclimatization: gradually increase exposure – heat disorders are more likely to occur to those who are not acclimatized
- Breaks in cool areas
- Drinking water: 5-7 oz. every 15 to 20 minutes. Do not rely on thirst – thirst instincts are insufficient
- Perform heavier work earlier in the day
- Avoid eating large meals before working in the heat

Threshold Limit Values for Working in the Heat

ACGIH Screening Criteria for Heat Stress Exposure (Wet Bulb Globe Temperature values in Deg C for 8 hour work day five days per week with								
Allocation of work in Work / Rest	Acclimatize				Action Limit - Un-Acclimatized			
	Light	Mod	Heavy	Very Heavy	Light	Mod	Heavy	Very Heavy
75 - 100%	31.0	28.0	0.0	0.0	28.0	25.0	0.0	0.0
50 - 75%	31.0	29.0	27.5	0.0	28.5	26.0	24.0	0.0
25 - 50%	32.0	30.0	29.0	28.0	29.5	27.0	25.5	24.5
0 - 25%	32.5	31.5	30.5	30.0	30.0	29.0	28.0	27.0

Notes:
Assumes 8-hour workdays in a 5-day workweek with conventional breaks.
TLVs assume that workers exposed to these conditions are adequately hydrated, are not taking medication, are wearing lightweight clothing, and are in generally good health.

Examples of workloads:

Rest - sitting (quietly or with moderate arm movements)

Light work - sitting or standing to control machines; performing light hand or arm work (e.g. using a table saw); occasional walking; driving

Moderate work - walking about with moderate lifting and pushing or pulling; walking at moderate pace; e.g. scrubbing in a standing position

Heavy work - pick and shovel work, digging, carrying, pushing/pulling heavy loads; walking at fast pace; e.g. carpenter sawing by hand

Very Heavy - very intense activity at fast to maximum pace; e.g. shoveling wet sand

Adapted from: 2008 TLVs® and BEIs® - Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. Cincinnati: American Conference of Governmental Industrial Hygienists (ACGIH), 2008, p. 221

6.0 SAFE JOB PROCEDURES

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

6.1 INDUCED POLARIZATION /TEM

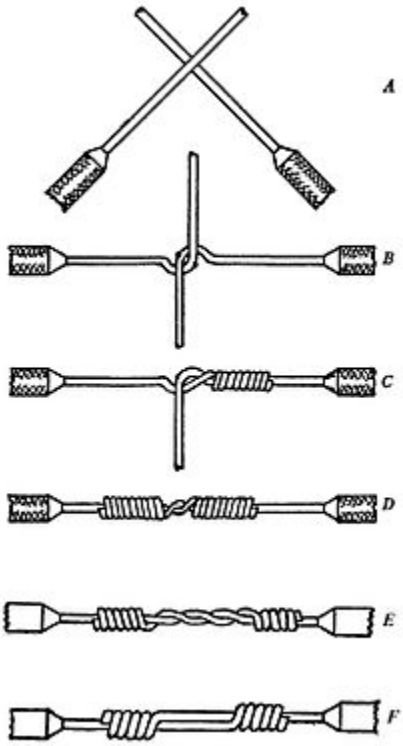
Date Prepared:_____
Revised:_____
Approved:_____

Maintenance & preparation

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

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

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



Figures A through D show how to make a "short tie" Western Union splice. Figures E and F show "long tie" variations.

Operations

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

a. Location of the transmitter, loop lines for TEM survey and current lines and the infinite for IP survey.

b. Voltages to be used and potential effects of contacting electrodes.

c. Procedures for marking and if necessary burying current lines to avoid public hazards and for briefing members of the public if a guard is posted on the current lines.

d. Demonstrating the correct method for splicing power lines and verifying that the crew can properly splice the power lines (western union).

e. Briefing the crew on survey procedure paying particular attention to standard radio commands for turning the power on, confirming it is on and turning the power off.

f. Emergency procedure to be followed if a crew member comes in contact with the current wires including equipment shutdown, applicable first aid and communication protocols.

g. Ensuring that every member of the crew knows how to safely shut down the transmitter and generator.

h. Verifying the proper operation of the hand held radios. i.

Fire hazards.

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

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

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

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

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

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

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

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

Crew members shall avoid walking down the power lines at any time the transmitter power is turned on. In the event that they do walk down the lines, they shall inform the crew chief and maintain radio contact with the crew.

Current wires which cross trails, paths or roads that may be used by the public will be buried.

Current wires crossing roads or trails which are commonly frequented by the public will be clearly marked with warning signs labeled “HIGH VOLTAGE” and sentries in radio communication with the transmitter operator will be posted at any crossing points.

IP/TEM surveys will be suspended in the event that electrical storms are present in the vicinity and the survey crew shall immediately evacuate the area due to the danger of electrical strike of the IP wire array.

Generators used as main power supplies for the transmitter will be properly grounded and the output voltage will be verified to be within specifications before the generator is attached to the transmitter.

The IP/TEM transmitter will be protected from rain and kept off damp ground during operation.

At the back of the transmitter, the current wires will be held apart, off the ground, and positioned so there is no chance they can come into contact with the transmitter chassis. The transmitter will be operated with a ground stake attached to chassis ground if the unit is equipped with an external ground plug.

If copper sulphate is used upon completion, solid copper sulphate shall be recovered and dried and any sludge or liquid shall be drained on the ground at least 10 m from any body of water and repeatedly flushed with water until dissolved.

Absorbent fuel spill pads shall be placed beneath IP generators and waste oil shall be stored in containers and removed from the field for proper disposal.

Reports

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

6.2 SEISMIC BLASTING

Date Prepared:_____
Revised:_____
Approved:_____

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

Maintenance &preparation

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

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

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

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

Operations

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

a. The type, location and quantity of explosives in the work area.

b. A description of the sensitivity of the explosives products to detonation or ignition.

c. Safe procedures for transporting explosives.

d. Safety signals to be employed to indicate that a blast is imminent and to indicate that blasting has terminated and an area is safe.

e. The location of first aid equipment and the procedure to be followed in the event of any accident (making the area safe, first aid, notification).

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

Blasting caps will be checked with an approved blasting galvanometer before being inserted into primer or other high explosives.

Cap leg wires will not be hooked to the blasting wires until the blaster has verified that the leg wires are shunted by measuring the resistance of the wire loop directly with a blasting galvanometer.

Hand held (< 5 W) radio transceivers will not be used within 5 m of the blasting wires.

Where possible, a broken wire loop will be used to trigger the seismograph and the charges will be initiated by the blaster from a location where he has a clear view of the blast area and its approaches.

Where the charge can only be initiated by the observer at the seismograph, the observer will:

a. Not hook up the blasting box to the blasting wires until instructed by the blaster.

b. Not fire the charge until the blaster has informed him that the area is clear.

Charges will not be buried unless absolutely necessary to achieve sufficient signal. If charges must be buried or stemmed, only sand, soil or snow will be used to cover the charges.

Hard hats equipped with ear defenders will be worn by all crew members working in the blasting area.

The crew will post warning signs on all access roads or trails leading into the blasting area and will post sentries equipped with radios to guard these entrances. The blaster will check with all sentries before detonating any charge and will sound an "All Clear" upon successful completionof the blast.

In the event of misfire, the crew will wait a minimum 30 minutes before approaching the blast site. Misfires shall be detonated by a charge placed on top of the misfired charge and the misfired charge and its cap leg wires shall not be touched.

All leg wires, shunts, explosives boxes and wrappings shall be picked up and all blast holes shall be filled in upon completion of blasting operations. Waste explosives shall be destroyed by incineration and excess caps either returned or taped together and detonated.

6.3 BLAST TRENCHING AND PAD BUILDING

Date Prepared:_____
Revised:_____
Approved:_____

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

Maintenance & preparation

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

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

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

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

Operations

All blasts will be detonated with electrical blasting caps using an approved high voltage blasting box. Tape fuse will not be used under any circumstances. All personnel working at the blasting site during drilling and blasting operations will wear hard hats, safety boots, ear protection and safety glasses. Blasts will be primed and fired in the same working day; no charges may be left overnight in the holes.

In the event of a misfire or bootleg, applicable local blasting regulations will be strictly complied with. No hand held radio transceiver (< 5 W) will be operated within 5 m of the blasting wires.

All leg wires, shunts, explosives boxes and wrappings shall be picked upon completion of blasting operations. Waste explosives shall be destroyed by incineration and excess caps either returned or taped together and detonated.

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

6.4 WIRELINE LOGGING

Date Prepared:_____

Revised:_____

Approved:_____

PURPOSE

- To provide guidelines to employees that is tasked with entering a lease or well site and logging off a drill rig.
- To define Safe Operating Procedures for all Enerson employees and clients.
- To ensure that employees know the risks involved with regards to logging operations.

SCOPE

- These operating procedures will apply to all Logging personnel performing logging operations.

RESPONSIBILITY

- It is the responsibility of the Supervisor and Technician, or qualified individual designated by management to ensure that all training, equipment and operations is executed in accordance with the client requirements and company policy and should be familiar with the contents. Managers are to review regularly to ensure it meets company standards.

PROCEDURES

Mobilization to Site

- Communicate with the client.
- Assess weather and road conditions.
- Confirm that Pre-trip inspection is completed.
- Ensure that all permits and access cards are valid.
- Ensure that you have all PPE and dosimeter badges.

Arrive on Site

- All vehicles are to stop at lease entrance and park in a safe area.
- Don all PPE including coveralls, hardhat, safety boots and glasses.
- Proceed to the clients or drill engineers shack to notify them of your arrival.
- Obtain the well license from the driller and all information including any abnormalities accounted or present in the borehole.
- Conduct the pre-job safety meeting (FLRA) and relevant JSA'S with entire rig crew involved, making sure the path to the "catwalk" is clear and free of obstructions and that no obstacles are impeding your worksite.
- Determine an escape plan and muster point in case of an emergency.
- Measure for Radiation

Position Logging Unit

- Park logger as level as possible ensuring that a spotter is used when backing up.
- Apply parking brake and chock blocks.
- Make sure winch control at neutral position. Take generator outside of car. Place it at a safe

place next to logging unit. Make grounding and run.

Rigging Up

- Take the logging sheave, safety lines and Cleves up to rig floor.
- Connect the upper sheave to the block or cat line and ensure safety strap is attached to sheave.
- Spool out wireline cable and run through the sheave attached to the rig.
- Supervisor to spool out cable while observing the Technicians hand signals as the driller raises the sheave to logging height and is safely secured.
- Remove logging tool from cribs and secure in vise on the rear of logging truck.
- Ensure System 6 box “Tool Power” is in OFF position.
- Attach tool to cable head.
- Ensure wireline is not looped and is in center of sheaves.
- Using the winch, lift tool into position above the hole.
- Lower tool down into hole and stop the tool at zero depth point. (Kelly Bushing)
- Ensure all pulleys, sheaves and depth wheels are free of dirt, ice and mud.
- Once the Supervisor has completed the run, wash the tool thoroughly with the wash gun by opening the valve just enough to create the pressure you require to clean the tool. Slowly raise tool and begin to wash the tool down. Be careful of small pieces of mud and dirt coming from the tool while you are washing it, especially around the eyes.
- Remove tool from hole and place in Crib on back of logger.

Logging & Radiation

- Tools that require a source attached must follow radiation procedures including ALARA, and time, distance and shielding.
- Ensure that Radiation Warning Signs are placed at entrance(s) of site and rig crew is aware of the proceedings.
- Place tool in the vice provided on rear of vehicle.
- Inspect the source handling stick.
- Inspect the source and tool to ensure threads are clean and dry.
- Check O-rings on source for lubrication, replace if necessary.
- Grasp the source firmly with the handling stick and unscrew source from shield.
- Ensure source is fully secured to the bottom of logging tool.
- Attach tool to cable head and place tool in borehole and zero at ground level.
- Check sheaves, depth wheel and pulleys for ice or mud build up. If build up is present, the winch must be stopped before cleaning.
- Once logging is complete, remove the tool from the borehole and the source removed from the tool. Check the threads for moisture and ice before storage. Spray the source with a small

amount of antifreeze to prevent freezing into the shield.

- Lock the source into the shield as per TAEK regulations and record Gieger readings on safety sheet.





Rigging Down

- After logging is complete the Driller must lower the upper sheave while the slack cable is spooled back onto the drum ensuring that nobody is directly underneath the block.
- Carefully remove the sheave from the blocks.
- Secure all rig up equipment in the logger.
- Ensure cable and cable head are protected and secure.
- Clean sheaves, pulleys and spray with antifreeze.

Power Down Sequence

- Ensure System 6 box Power is in OFF position.
- Ensure RPM is turned down to lowest setting.
- Ensure switch on draw works control is in neutral position depressed.
- Switch OFF all breakers on the electrical panel.
- Stop generator and put it inside of car.

Departure from Site

- Remove chock blocks.
- Complete a thorough "walk around" to ensure all tool, sources, straps, chains etc. are all packed away and cargo doors are all closed and secured.

- Visually inspect and measure with the Gieger counter to confirm the sources are Loaded, locked and secured.
- Complete a Pre-trip inspection on vehicles
- Communicate with client or driller that you have completed the well and will be leaving site.
- Ensure the Job Ticket is signed.
- Depart.

Reference Material

- Enerson Safety Manual
- Enerson Radiation Safety Manual

Definitions

SOP - Safe Operating Procedures

JSA - Job Safety Analysis

FLRA - Field Level Risk Assessment
TAEK – Turkish Atomic Agency

6.5 FATIGUE MANAGEMENT

Date Prepared:_____
Revised:_____
Approved:_____

Fatigue is a state of physical or mental weariness that results in reduced alertness. It is the result of a lack of adequate sleep. Fatigue affects performance, at work and at home. Fatigue can cause reduced reaction time, problems concentrating, difficulty with communication, and impaired judgment.

The nature of our work and contract demands generally require extended work hours and consecutive work hours, however, Enerson employees cannot exceed the maximum on-duty hours as prescribed by the Employment Standards Code and hours of service regulations. Therefore, each job task is evaluated by the worker individually to ensure compliance with fatigue management and all pertinent legislation.
All field personnel and company drivers shall be trained in fatigue management and hours of service, upon initial hire and every three years, or more often as deemed necessary.

Responsibilities
Management shall:

- Provide leadership and commitment through the allocation of resources and personnel for the establishment, evaluation, and review of a fatigue management program.
- Provide employees with the knowledge and skill to manage fatigue-related risk.
- Ensure employees are trained in:
    - Causes and consequences of fatigue
    - Fatigue risk management system
    - Fatigue management strategies
- Audit once a month, the driver log books ensuring compliance with Enerson's fatigue management program and all pertinent legislation.
- Ensure that workers must never operate motor vehicles and/or heavy equipment while excessively fatigued.
- Encourage all employees to ensure that they obtain adequate sleep, drink plenty of fluids, maintaining a healthy diet, exercising, limiting caffeine, nicotine and alcohol, avoiding drugs, big meals before bed, naps over 20 minutes, and changes in sleep routines.
- Monitor hours of work and arrange schedules to avoid fatigue and ensure compliance with Employment Standards and Hours of Service regulations:
    - Schedule appropriate days of rest
    - Minimize extended hours of work
    - Assign work teams

- Be supportive to employees experiencing fatigue. Offer rehabilitation or assistance.
- Ensure that if any employee's ability to work safely is reduced by fatigue, they must report it to their supervisor or management.

All Employees shall:

- Report any unsafe acts or conditions – notify a supervisor or management immediately where there is a potential risk
- Notify a supervisor or management if their work performance is likely to be affected by fatigue or there is any risk to themselves or others due to the effects of fatigue.
- Be fit for work while at work, on call, driving a company vehicle, and operating any company equipment.
- Not ignore signs of fatigue. If you are too tired to work safely, stop what you're doing and take a break by having a power nap, short walk, etc. to reduce fatigue. Plus to ALWAYS ensure that within every twenty four hour period there is 8 hours of continuous rest being taken.
- Participate in training

7.0 GENERAL RULES

Date Prepared:_____
Revised:_____
Approved:_____

1. All work shall be carried out in accordance with appropriate safe work practices and the supervisor's direction.

2. All unsafe acts and conditions, including "near miss" incidents, are to be reported to appropriate supervision promptly.

3. All incidents that result in damage or injury are to be reported to a supervisor immediately.

4. All appropriate personal protective equipment as described in the safe work practices and safe job procedures as well as those instructed by the supervisor are to be worn and used at all times on all job sites.

5. Fighting, horseplay, practical jokes or otherwise interfering with other workers is prohibited.

6. Theft, vandalism or any other abuse or misuse of company property is prohibited.

7. First aid treatment is to be obtained promptly for any injury.

8. Only those tools that are in good repair, with all guards and safety devices in place, shall be used.

9. Every worker shall keep his/her work area neat, clean and orderly.

10. Operate all vehicles and mobile equipment in accordance with site rules and highway regulations.

Grounds for Dismissal

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

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

7.1 DRUG & ALCOHOL POLICY

Date Prepared:_____
Revised:_____
Approved:_____

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

1. The use of illegal drugs by any employee during hours of employment and / or at any company office, work site or camp is grounds for immediate dismissal with cause.

2. Any person taking medication which may endanger any other person, endanger equipment or impair the safe performance of their duties may be dismissed with cause in the event that they fail to inform their supervisor of their requirement to take medication and / or comply with any measures put in place to ensure that they can work safely.

3. Most camps, crew accommodation provided in town and job sites are "dry". At such locations, the consumption of alcoholic beverages in any quantity is grounds for immediate dismissal and the possession of alcoholic beverages, if the person was aware of the camp restrictions, is also grounds for immediate dismissal.

4. At camps, crew accommodation or work sites where alcoholic beverages are permitted, company policy is that consumption is to be limited to 2 beer or equivalent drinks per day in the hours after work only. Consumption of alcohol in excess of these limits or outside of these hours is grounds for dismissal.

5. No person shall be required to submit to a drug or alcohol test as a condition of general employment with the company. Nonetheless, should any client require that our employees submit to drug or alcohol tests, the company will ensure that any person employed on projects for these clients requiring such tests have been tested impartially and that the results of these tests are made available to the employee.

6. Any employee who knowingly takes a substance or engages in practices whose effect is to defeat the effectiveness of a drug test is liable to dismissal with cause.

The terms and conditions of this policy are included in standard Terms of Employment forms, effective July 2017.

7.2 SAFETY ENFORCEMENT POLICY

Date Prepared:_____
Revised:_____
Approved:_____

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

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

- Verbal Warning
- Written Warning
- Suspension
- Dismissal

EMPLOYEE WARNING REPORT

Employee's Name: _____

Date of Warning: _____

Project: _____

Warning Issued by (print): _____

Type of Violation: ' Safety ' Other

Company Statement (Supervisor's Report):

_____

_____

_____

_____

Signature: _____

Employee Statement (check the appropriate statement)

' I agree with the company's statement.

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

_____

_____

_____

_____

I have entered my statement of the above matter.

Employee Signature:_____ Date: _____

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

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

Management Signature:_____ Date: _____

8.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

PPE generally falls into two categories.

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

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

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

8.1 POLICY FOR PERSONAL PROTECTIVE EQUIPMENT

Date Prepared:_____
Revised:_____
Approved:_____

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

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

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

8.2 INFORMATION SHEET FOR EYE & FACE PROTECTION

Date Prepared:_____
Revised:_____
Approved:_____

General Information

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

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

There are two types of PPE:

1. "basic eye protection" includes:
   - Eye cup goggles
   - Monoframe goggles and spectacles with or without side shields

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

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

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

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

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

Do

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

Do Not

- Modify eye/face protection; or
- Use eye/face protection that does not have a proper certification. (Various markings or the safety stamp for safety glasses are usually on the frame inside the temple near the hinges of the glasses.)
- For further Information refer to the appropriate current Occupational Health and Safety Legislation or Standards.

8.3 INFORMATION SHEET FOR HEAD PROTECTION

Date Prepared:_____
Revised:_____
Approved:_____

General Information

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

In industry, the recommended type of protective headwear is a hard hat that has the required "dielectric strength."

Most head protection is made up of two parts:

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

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

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

Inspection and Maintenance

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

Do

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

Do Not

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

8.4 INFORMATION SHEET FOR FOOT PROTECTION

Date Prepared:_____
Revised:_____
Approved:_____

General Information

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

- The tag color tells the amount of resistance the toe will supply to different weights dropped from different heights.

- The symbol indicates the strength of the sole. For example, a triangle means a puncture resistant sole able to withstand 135 kg of pressure without being punctured by a 5 cm nail.

Your choice of protective footwear should always overprotect, not under protect.

Do

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

Do Not

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

9.0 PREVENTATIVE MAINTENANCE PROGRAM POLICY

Date Prepared:_____
Revised:_____
Approved:_____

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

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

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

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

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

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

Qualifications should include:

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

Training in the following areas:

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

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

1. The OP will prepare and distribute standard lists of First Aid equipment and supplies required for each camp configuration. The first aid equipment required for each job will be clearly specified in the equipment list. Supervisor will check each kit for completeness and to ensure that it is fully stocked with fresh (non-expired) supplies.

2. Pre-deployment checks of equipment which may pose an HSE hazard will be prepared by the OP. These checks will be documented in the survey preparation checklist normally left with the supervisor prior to departure. The supervisor will perform all instrument and equipment checks and will ensure that completed checklist is left with the Supervisor prior to departure.

3. All communication equipment will be fully charged, will be checked before deployment. Cell phones will be sent out with standard emergency phone lists in the case including the contact information for police, hospital, search and rescue, environmental protection and company notification.

Equipment/Vehicle Checklist

Name of Project:_____ Inspected By:_____

Date/Time:_____ Vehicle Make & Model: _____

Unit #:_____ Mileage:_____km/miles

Rating Legend: NA - Not Applicable M - Passed but maintenance required
P - Passed in good working condition R - Rejected, repair necessary before returning to service

Fluid Levels						
	Motor Oil		Rear End		Oil Change Required?	
	Radiator		Brake Fluid		Oil Filter Changed?	
	Power Steering		Air Filter		Windshield Washer	
Driver's Compartment						
	Sun Visors		Horn & Switches		Steering Power Assist	
	Windshield Wipers		Windshield Defrost		Windshield	
	Side Windows		Beam Indicator		Instrument Lamps	
	Pedal Pads		Fire Extinguisher		Hazard Warning Kit/Flares	
	Seats & Seatbelts		First Aid Kit		Air Pressure Gauge	
	Speedometer		Survival Kit		Cellular Phone	
					Booster Cable	
Body Exterior						
	Head Lamp Operation/Aim		Clearance Lamps		Turn Signal Lamps	
	Tail Lamps		Brake Lights		Fenders/Mud Flaps	
	Marker Lamps		Hazard Lamps		Body & Doors	
	Trailer Hitch		TDG Placards		Bumpers	
	Trailer Wiring Harness		Paint		Tire Pressure	
Under The Hood						
	Hood		Fuel Pump and System		Battery & Wiring	
	Power Steering System		Fan & Belt		Carburetor	
	Cooling System		Windshield Washer Pump		Distributor	
	Exhaust System		Windshield Washer Container		Air Filter	
Undercarriage						
	Pin & Bushing Wear		Sprocket		Springs	
	Link Wear		Shock Absorbers		Muffler	
	Roller Wear		Oil Pan		Pittman Arm	
	Idler Wear		Drag Link		Differential	
	Track Wear		Tie Rod		Suspension	
	Roller Guards		Frame Rails		Axles	
Brake, Tires, and Wheels						
	Brake Components		Brake Failure Indicator		Road Clearance	
	Disc Brakes		Park Brake		Tire Pressure	
	Brake Drum Condition		Brake Operation		Tire Wear	
	Brake Lines & Hoses		Wheel Bearings		Jack	
	Tire Iron		Spare Tire		Chains	

' Equipment Passed ' Equipment Not Passed

Work Required Assigned To Completion (Date/Time)

1. _____ _____ _____

2. _____ _____ _____

3. _____ _____ _____

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

10 SAFETY TRAINING POLICY

Date Prepared:_____
Revised:_____
Approved:_____

Purpose

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

Policy

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

This training will include, but not be limited to:

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

Remember: "Learning continues for a Lifetime."

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

10.1 REQUIREMENT FOR HEALTH AND SAFETY TRAINING

To ensure that all employees receive the necessary HSE training:

1. The Supervisor will establish and maintain a register describing each employee's experience and documenting safety training they received. The latter will include the expiry date of any qualification.
2. In consultation with the Operations Officers for each branch, the Supervisor will schedule safety training for each branch to ensure that all employees receive necessary training.
3. The Operation Manager will ensure that the Supervisors receive necessary IATA and DGR training necessary to handle dangerous goods in accordance with the law. Where possible, this will be conducted with self-study or correspondence course packages.

4. Operations officers will ensure that crew chiefs brief their crews on operational safety as part of a briefing conducted before leaving for a job.
5. In a company camp where there are more than 4 persons, the Crew Chief will conduct a safety meeting as soon as feasible after arriving or setting up camp. This meeting will explicitly cover safety hazards associated with the particular job, with emergency procedures (first aid, communication protocol, evacuation procedures, etc.). The crew chief will document the meeting using the appropriate form.

10.2 NEW EMPLOYEE SAFETY ORIENTATION

Date Prepared:_____
Revised:_____
Approved:_____

Employee:	Orientation Date:
Hire Date:	Job Class:

Introduction

- Company History
- Company Safety Policy

Responsibility for Safety

- Worker
- Supervisor
- Manager

Emergency Procedures

- Fire
- Chain Saws and Line-Cutting
- Ambulance
- First Aid
- Security/Police
- Incident Reporting

General Rules

- Alcohol and Drugs
- Horseplay, Fighting
- Vehicle Operation
- Theft, Vandalism

Personal Protective Equipment

- Hard Hats
- Safety Glasses
- Winter Gear
- Hearing Protection
- Other _____

Trainer/Supervisor:_____

Safe Work Practices

- General Housekeeping
- Fires
- Defective Tools
- Trucks and Trailers
- Remote Camps
- Traversing on Foot
- Helicopters
- Boats
- Off-Road Vehicles
- Firearms
- Drill Sites

- Winter Work
- Other _____
- Other _____

Safe Job Procedures

- IP Surveying
- Seismic Blasting
- Blast Trenching
- Pad Building
- Wireline Operations
- Other: _____

Meetings

- Safety Committee
- Tool Box

Employee Signature: _____

SAFETY ORIENTATION QUESTIONNAIRE

Name of worker _____ Date/Time _____
(Please Print)

Branch Location _____

Note: Place ./ by correct response:

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

   No: ' Yes: '

2. Working safely is a condition of employment.

   No: ' Yes: '

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

   No: ' Yes: '

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

   No: ' Yes: '

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

   ' Wait for the weekly tailgate safety meeting and report it

   ' Report it immediately to your supervisor.

   ' Let someone else worry about it.

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

   No: ' Yes: '

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

   ' A radio

   ' Fire starter and matches

   ' Food and clothing sufficient to survive overnight in cold weather

   ' All of the above

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

No: ' Yes: '

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

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

10. Is smoking in company vehicles or buildings allowed?

No: ' Yes: '

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

No: ' Yes: '

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

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

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

No: ' Yes: '

Signature of worker: _____ Page 2 of 2

10.3 COMPANY SAFETY TRAINING COURSES

Date Prepared:_____
Revised:_____
Approved:_____

The following is a current list of safety courses and training modules recognized and administered by Enerson Geophysical Explorations Ltd.

-Orientation:
Company history, safety manual, PPE (pepper spray, hard hats, gloves, winter clothing, etc.), cold water videos, vehicle use and safety, safe work practices, safe job procedures
-Basic Firearm Safety:
Firearm types, ammunition, safety, practical training
-Basic Chainsaw Safety:
Parts, safety equipment, maintenance, starting, practical training
- Wild Dogs awareness and safety
-TDG (Transportation of Dangerous Goods)
-First Aid
-Food Safe
- Leadership for Safety Excellence
-Line-Cutting
-IP Surveying
-Mag Surveying
-Gravity Surveying
-Seismic Surveying
-Wireline Operations
-Firearm Possession and Acquisition License

10.4 TRAINING AND SAFETY MEETINGS

Safety Meeting Topics
(104 Idea Generators)

Aerosol Cans
' Danger in a Red Container
' Compressed Gas Bottles
' Fumes Can Be Dangerous
' Chemical Handling
' WHMIS
' Ventilation
' Explosions - Avoid Them
' Radiography (X-ray)
' Fire Extinguishers
' Welder Safety
' Clothing
' Fire Retardant Clothing
' Save Your Fingers '
Off the Job Safety '
Gun Handling
' Kitchen Fires
' Loved Ones Want You Safe
' Lawn Mower Safety
' Swimming Safely
' Access and Egress
' Lifting
' Fixtures and Fingers
' Damage Can Be Controlled
' Defective Equipment
' Eyes are Worth Protecting
' Grinding Wheels
' Fumes Can Be Dangerous
' Housekeeping at Work
' Climbing Safety
' Slips and Falls
' Instructing Equipment Operators
' Machines Can Maim ' Hazards Around You '
Care in Backing Up
' Company Rules

Crane Signals
' Ladder Climbing
' Electricity
' Equipment Guards '
Use of Hand tools'
Horseplay
' Noises
' Power Tools
' Tripping Hazards
' Radiography
' Unloading Trucks Safely
' Scaffolds Are Not Playthings
' Waste and Haste
' Leading in Safety
' Demonstrate Safety
' Explaining a Safety Rule
' Goals Worth Working For
' The Young Learn From You
' Knowledge Never Hurts
' Loss Control
' First Aid Hints
' Inspecting for Safety
' Mistakes Can Mean Trouble
' Investigating Thoroughly
' No Second Chance
' Attention Can Save A Life
' Insurance Against Accidents
' Analysis of an Accident
' Habits

' Boat Handling
' Your Seatbelt
' Driving Defensively
' Water Safety Skills
' Ladders in the Home
' Xmas Tree Safety
' Barricades

' Protective Clothing Pays Off
' Tools - Don't Abuse Them
' Vision and Eye Protection
' Tips for Truck Drivers
' Materials Handling
' Judgment May Keep You Alive
' Be a Safety Jury
' Insurance and Injuries
' Yellow Lines and Safety
' Organizing a Safety Committee
' Questions to Stimulate Safety
' Teaching Safety
' Treating an Open Wound
' The Law of Safety
' You Are the Key Worker
' Breathing Equipment

' Job Safety Analysis
' Benefits of Safety First
' Cooperation
' Betting Your Life
' Proper Job Instruction ' Safe Worker Awards ' Understanding
' Signs for Safety
' Tool Crib Accidents
' Visual Safety Example ' Watch the Main Issues ' Safe Working Positions ' Analyze the Unsafe Act ' Rewards For Safety
' On the Job Safety
' Prevention

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

' Review of Recent Accidents

' Review of Safe Work Practices

' Review Procedures of Tasks to be Done

TOOL BOX MEETING

TOOL BOX MEETING: DATE:_____ TIME: _____

PROJECT NUMBER: _____

PROJECT/FACILITY: _____

AGENDA

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

ATTENDANCE:(Haveeachattendee print &sign inink) (1)
_____(2)_____
(3)_____(4)_____
(5)_____(6)_____
(7)_____(8)_____
(9)_____(10)_____

TOPICOFREVIEW:

_____
_____
_____

EMPLOYEEINPUT:

_____
_____
_____

ACTION(S)TOBETAKEN:

_____
_____
_____
_____

NEXT MEETING: DATE:_____ TIME:_____
TOPIC NEXT MEETING _____
_____
_____

_____ _____
FOREMAN/SUPERVISOR SIGNATURE REVIEWED BY:

11.0 INSPECTIONS

Date Prepared:_____
Revised:_____
Approved:_____

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

11.1 INSPECTION POLICY

Purpose

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

Policy

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

Responsibilities

The Operations Managers are responsible for the overall operation of the program.

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

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

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

Work Site Safety Inspection

Location:	Project:
Conducted By:	

' Weekly ' Monthly ' Quarterly

Priority *	Unsafe Act/Condition	Corrective Action by	Date/Time Completed:

Priority Index: 1. Imminent Danger 2. Serious 3. Minor 4. Acceptable 5. Not Applicable (N\A)

Copies to: _____

Review Date: _____

Comments:

12.0 WORKPLACE ACCIDENT / INCIDENT INVESTIGATION POLICY

Purpose

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

Policy

In Enerson Geophysical Explorations Ltd., the following types of incidents shall be fully investigated:

1. Accidents that result in injuries requiring medical aid.

2. Accidents that cause property damage or interrupt operations with potential loss.

3. Incidents that have the potential to result in (1) or (2) above, such as close calls or near misses.

Responsibilities

1. All employees shall report all incidents as soon as possible to their immediate supervisor and assist in the investigation when requested.

2. Supervisors (Crew Chief) shall conduct initial investigations and submit their report(s) to their Project Managerpromptly.

3. The Project Manager shall determine the need for, and if necessary shall direct, detailed investigations. They shall also determine causes, recommend corrective action, and report to the manager.

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

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

Incident Investigation Report

Date Prepared:_____Revised:_
Approved:_____

1. Incident Type: ' Injury/Illness ' Property Damage ' Major Potential ' Fire ' Spill ' Other ' Vehicle Collision			
2. Incident Date (M/D/Y):_____/_____/_____		3. Time (24 Hour Clock):	
4. Area:		5.Specific Location:	
Injury/Illness			
6. ' First Aid ' Medical Aid ' Modified Work ' Lost Time ' Fatal			
7. Name of Employee:		8. Age: Sex:	
9. Occupation:		Experience:	
10. Nature of Injury:			
11. Object/Equipment/Substance Inflicting Injury/Damage:			
Property Damage			
12 Description of Property:			
13. Description of Damage:			
14. Estimated Loss/Damage Cost:			
Other Actual/Potential Loss			
15. Type:			
16. Description:			
17. Estimated Cost:			
18. Evaluation of Risk Potential if Not Corrected:			
A. Loss Severity Potential	' Major	' Serious	' Minor
B. Probable Recurrence Rate	' Frequent	' Occasional	' Rare

19. Description of Incident:	
Diagram of Scene:	
21. Witness(es):	
Witness(es) Statement(s) Attached: ' Yes ' No	
22. Immediate Cause(s)	
Description:	
23. Underlying Cause(s)	
Description:	
24. Corrective Action(s) (Immediate, Interim, Final):	
Recommendations Completed by Whom:	Date/Time:
25. Date Report Completed: (Y/M/D)_____/___ /__	
Signatures	
Supervisor:	Employee:

Accident / Incident / Loss Witness Statement

Name:_____ Date: _____

Location:_____ Time: _____

Tel:_____ Cell:_____ E-Mail: _____

Description of Accident/Incident/Loss: _____

_____

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

Description: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Signature: _____

Office Use Only

File #:_____Date Received:_____Job #: _____

Received By: _____

13.0 EMERGENCY PREPAREDNESS

Date Prepared:_____
Revised:_____
Approved:_____

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

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

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

13.1 EMERGENCY EVACUATION PROCEDURES

Date Prepared:_____
Revised:_____
Approved:_____

Tools/Equipment Required: Aerosol-PoweredHorn

Material Required: _____

Personal Protective Equip.: _____

STEPS

1. Evacuation procedures shall be initiated by the senior supervisor on site only, unless that person is unavailable or incapacitated.

2. The person instigating the site evacuation shall instruct that the aerosol-powered horn be sounded in three (3) sharp blasts, followed by a five (5) second delay, then three (3) more sharp blasts. This shall be repeated several times to ensure that all workers on site have heard this signal. This person, having the site evacuated, shall ensure that the emergency response procedure is activated.

3. ALL workers are to leave the site upon hearing the evacuation signal and assemble at the designated muster station.

4. Each supervisor will be responsible for taking a roll call following the evacuation, to ensure that all their workers are accounted for.

5. Each supervisor shall report the results of the roll call to the senior supervisor on site, as required in the Site Safety Plan.

6. The Superintendent shall determine if the site is safe to reoccupy following an evacuation. No one is to enter the site without authorization.

13.2 RADIOACTIVE EMERGENCIES

Radioactive emergencies vary greatly in their respective hazards. They may take the form of spills, fire, explosions, or vehicle wrecks. They may result in radioactive material contamination.

In the case of any radioactive source emergency, call the Radiation Safety Officer or Radiation Safety Officer Alternate immediately. Call the Company Safety Manager for any incident requiring medical aid or vehicle accidents.

Vehicle Accident

In the event of an accident while transporting radioactive materials, ALL EFFORTS SHOULD BE MADE TO MINIMIZE THE EXPOSURE TO ANY PERSONS.

This would include:

- Putting up cones or roping off the area, if there is a contamination problem (sources are out of their protective container),
- Posting the support vehicle with appropriate radioactive signage and supplying a full-time attendant.
- Immediately notify the investigating officer, other emergency personnel, and the Radiation Safety Officer. The Radiation Safety Officer is responsible to notify the proper government agency.
- CAUTION: Do NOT move ANYTHING from the accident scene. Do NOT move sources out of the truck - call the RSO and Safety Department, notify authorities, and wait for instructions. Disturbing a scene makes it difficult to investigate the causes of accidents, and is an offense.

Fire and Other Emergencies

- Notify all personnel in the area immediately and evacuate the area. Call the appropriate authorities (or designate someone to do so).
- Attempt to put out all fires if a radiation hazard is not immediately present, ONLY IF YOU ARE TRAINED TO PUT OUT A FIRE AND ARE AWARE OF ALL HAZARDS PRESENT. There could be flammable/explosive materials present.
- Notify the Fire Department.
- Notify the Radiation Safety Officer, AWAIT INSTRUCTIONS FROM THE RSO.
- IMPORTANT: Enerson personnel do not decontaminate and are NOT trained in decontamination procedures! Only the RSO can arrange for decontamination using specially trained decontamination personnel.
- The Radiation Safety Officer, emergency personnel, and if applicable, the TAEK (Turkish Atomic Agency) and Occupational Health and Safety officers will have to approve the area before work resumes
- Monitor all persons involved in combating the emergency.
- The Radiation Safety Officer will prepare a complete report of the accident. The Radiation Safety Officer is responsible for filing the report with the TAEK.

Leaking Source

- If a source is thought to be leaking or damaged, SHUT THE OPERATION DOWN.
- Notify the client and immediately call the RSO for instructions.
- Set up control procedures for keeping personnel out of the immediate area until instructions are received from the Radiation Safety Officer

Recovery of Source Pellet removed from holder

- No one is to recover sources, unless they have been trained.
- Notify and clear all personnel from suspected area.
- The closest trained Enerson employee to the last known location or suspected area, after receiving specific instructions from the RSO, will use a survey meter to determine the approximate location. This employee—using time, distance, shielding, and ALARA—will ensure that the area is kept clear of all personnel. This includes all Enerson Wireline Services employees.
- If the source cannot be located and recovered immediately, a recovery team consisting of the RSO and other properly trained personnel will be dispatched with remote handling equipment, and a certified sourceshield.
- All Enerson employees entering the area must wear a dosimeter badge and record their movements including times anddistances.
- The RSO will prepare a complete report of the incident. The incident must be reported to the TAEK.

Source Stuck Down Hole

In the event of becoming stuck in a borehole with a radioactive logging tool:

- Avoid breaking the cable
- Stop operations.
- Refer to the Emergency Contact List — contact the Radiation Safety Officer or alternate or Corporate Safety Manager for instructions. Enerson will contact the appropriate government agencies if necessary.
- If needed Enerson will contact a third-party source retrieval company, to advise on fishing operations.
- The fishing operation will be conducted to avoid damage to the source holder and the source will not be abandoned or cemented in without the express permission of the appropriate government authority(TAEK).
- The client must be reminded that they ultimately responsible for the condition of the well, and any equipment stuck in thewell.

13.3 FIELD CAMP SAFETY CHECKLIST AND EMERGENCY PROCEDURES

FIREPROCEDURES

In Arctic winter conditions, exposure to the cold can be just as deadly as the fire itself. Everyone must prepare for the possibility of having to evacuate their quarters in the middle of the night. You must always keep a warm coat in your tent and wear appropriate indoor/outdoor shoes for the conditions, around camp in case you have to leave the tent and go outside immediately.

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

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

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

SAFETYEQUIPMENT

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

WILDLIFE

- Keep camp and work site clean at all times.
- DO NOT FEED any wildlife.
- Familiarize yourself with available literature on Wild Dogs safety.
- Carry pepper spray and crack flares in the field.

HYGIENE

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

USEOFDRUGS

- Possession of illegal drugs is cause for immediate dismissal.

COLDWEATHER

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

SURVIVALGEAR

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

MEDICAL/MEDIVAC PROCEDURES

CAMP NAME:_____

MEDICAL ATTENDANT ON SITE:_____

IN THE EVENT OF ANY INJURY OR EMERGENCY:

1) OUR CAMP GPS COORDINATES ARE:

CAMP NAME: _____
LATITUDE:_____
LONGITUDE: _____
OUR CAMP SATELLITE PHONE NUMBER IS: _____

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

Accident location _____

How many people are involved _____

What has happened _____
_____
_____
_____
_____

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

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

- Call ENERSON office.

  Ankara: 00 90 312 473 3940

4. Advise the nearest nursing station or Hospital of the incident and that they will be receiving a patient and estimated time of arrival.

5. Report back to First Aid Attendant what happened during the calls and stand by in case further assistance is required.

13.4 List of Emergency ContactNumbers

1) Enerson Geophysical Explorations Ltd,
Ankara +90 (312) 473-3940
2) President, Mehmet Özten
Cell phone: +90(532) 654-2135
3) HSE Manager,
Hakan Özten: +90(541)921-0336

CAMP SAFETY MEETING REPORT FORM

CAMP SAFETY MEETING RECORD

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

PERSONS IN ATTENDANCE:

AGENDA

1. FIRST AID

_____

_____

_____

_____

2. FIRE SAFETY

_____

_____

_____

4. WORK SITE SAFETY

5. OTHER MATTERS

Crew chief

A copy of these minutes is to be posted in camp and returned to the office at the end of the project.

14.0 ENVIRONMENTAL POLICY

Date Prepared:_____
Revised:_____
Approved:_____

1. The proper safeguard of our environment is of vital importance to our organization.

2. While doing our work, we shall consider and to the best of our abilities, provide for the appropriate protection of humans, animals, plant life, air, water, and soil.

3. We expect all employees, contractors and sub-contractors to do their best to prevent harm to the environment.

4. Our goals on every job can be met without risking harm to the environment.

5. We shall use, store, and dispose of products in such a manner that will provide appropriate protection to the environment.

6. Management will develop and enforce good environmental standards in accordance with relevant legislation.

7. Workers will be kept informed on how to do their jobs in such a manner as to cause minimum environmental harm and waste of materials.

8. Where possible, we shall recycle and promote the use of recycled products.

14.1 WILDLIFE POLICY

1. Enerson is committed to ensuring a safe working environment for employees and the wildlife that they encounter in the field. All employees are required to undertake wildlife training specific to the environment in which the job is located including but not limited to endangered species identification, habitat awareness and safety.

2. While doing our work, we shall consider and to the best of our abilities, provide for the appropriate protection of humans, animals, plant life, air, water, and soil.

14.2 HERITAGE AND ARCHAEOLOGICAL SITE POLICY

1. Enerson is committed to preserving all heritage and archaeological sites during its operations.

2. We expect all employees, contractors and sub-contractors to do their best to record all archaeological sightings and potential heritage sites that are encountered in the field.

3. In all instances of contact with archaeological and heritage sites employees, contractors and sub-contractors are required to practice avoidance of the locations.

15.0 RECORDS AND STATISTICS

Date Prepared:_____
Revised:_____
Approved:_____

Safety Training Records and Summaries

ENERSON GEOPHYSICAL EXPLORATIONS LTD., CO. EMPLOYEE SAFETY			
Employee Name:			Hire Date:
Job Class:		Branch:	
Training Module	Date	Instructor	Notes

List of documents and forms attached to Enerson Geophysical Explorations Ltd. company safety manual.

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

16.0 HEALTH PLAN

- The survey site will be inspected by Occupational Safety Specialists in certain periods.
- The staff will start working only after obtaining the report to be issued by the Workplace Doctor, stating that the staffs is “Qualified for Heavy and Dangerous Works”.
- The staff will be subject to periodic examinations and their medical reports will be updated every year.