



TABLE 2: OROGO-NWT REGULATORY CONCORDANCE

SAFETY PLAN REQUIREMENTS FOR NORTHWEST TERRITORIES IN ACCORDANCE WITH PART 2, SECTION 8 OF THE OIL AND GAS DRILLING AND PRODUCTION REGULATIONS

Section 8 The safety plan must set out the procedures, practices, resources, sequence of key safety-related activities and monitoring measures necessary to ensure the safety of the proposed work or activity and must include:

Regulatory Requirement	Reference to Applicable Canadian Natural Section of Safety Plan for Compliance	Comment
<p>(a) a summary of and references to the management system that demonstrate how it will be applied to the proposed work or activity and how the duties set out in these regulations with regard to safety will be fulfilled;</p>	<ul style="list-style-type: none"> • The Safety Plan summarizes many Elements of the Canadian Natural Safety Management System (SMS) • Section 1 summary of SMS Element 1 • Section 2 summary of SMS Element 2 • Section 3 summary of SMS Element 3 • Section 4 summary of SMS Element 15 • Section 5 summary of SMS Element 5 • Section 6 summary of SMS Element 6 • Section 7 summary of SMS Element 8 • Section 8 summary of SMS Element 9 • Section 9 summary of SMS Element 11 • Section 12 list of SMS documents referenced 	<p>Canadian Natural expects all workers to take active involvement in managing safety. Project managers, coordinators and site supervisors will utilize the Safety Plan along with the Canadian Natural SMS and its tools and documents to achieve Safety Excellence.</p>
<p>(b) a summary of the studies undertaken to identify hazards and to evaluate safety risks related to the proposed work or activity;</p>	<ul style="list-style-type: none"> • Introduction of the Safety Plan and the four “Pillars” • Section 4 of the Safety Plan directs how hazards specific to each worksite and tasks will be identify and controlled using Hazard Assessment and Guideline- CNQ-OVR-FM-LM-000007 • Corporate Risk Matrix CNQ-OVR-MTRX-PSFP-000001 	<p>All site supervisors are trained to identify and control hazards at their specific worksites utilizing tools and documents from the SMS. Combined with the requirement for service providers to complete a JSA/Hazard Assessment and provide step-by-step procedures for all tasks all hazards are evaluated and controlled.</p>



<p>(c) a description of the hazards that were identified and the results of the risk evaluation;</p>	<ul style="list-style-type: none"> • Section 2 of the Safety Plan lists hazardous activities that have been identified as requiring specific direction. • Section 4 of the Safety Plan directs how hazards specific to each worksite and tasks will be identify and controlled using Hazard Assessment and Guideline- CNQ-OVR-FM-LM-000007 	<p>All site supervisors are trained to identify and control hazards at their specific worksites utilizing tools and documents from the SMS. Combined with the requirement for service providers to complete a JSA/Hazard Assessment and provide step-by-step procedures for all tasks all hazards are evaluated and controlled.</p>
<p>(d) a summary of the measures to avoid, prevent, reduce and manage safety risks;</p>	<ul style="list-style-type: none"> • The Safety Plan as a whole document addresses prevention, reduction and management of safety 	<p>Canadian Natural expects all workers to take active involvement in managing safety. Project managers, coordinators and site supervisors will utilize the Safety Plan along with the Canadian Natural SMS and its tools and documents to avoid, prevent, reduce and manage safety risks.</p>
<p>(e) a list of all structures, facilities, equipment and systems critical to safety and a summary of the system in place for their inspection, testing and maintenance;</p>	<ul style="list-style-type: none"> • Section 7 of the Safety Plan references the Inspection and Audits programs from Element 8 of the SMS • Camp Inspections Form CNQ-OVR-FM-LM-000001 • Rig Inspection Form CNQ-OVR-FM-LM-000019 • Worksite Safety Observation Form CNQ-OVR-FM-LM-000027 • See appendix # 3 	<p>Canadian Natural relies on 3rd party service providers to execute job tasks. The expectation is that they will provide equipment that is tested, inspected and maintained as per manufacturer guidelines. Canadian Natural utilizes inspections, the Hazard Assessment form and the WSO program to confirm compliance.</p>
<p>(f) a description of the organizational structure for the proposed work or activity and the command structure on the installation, which clearly explains (i) their relationship to each other, and (ii) the contact information and position of the person accountable for the safety plan and of the person responsible for implementing it;</p>	<ul style="list-style-type: none"> • See appendix # 4 	<p>All workers have a role on providing a safe work environment the organizational chart show distinct lines of reporting to hold all levels accountable for safety.</p>



<p>(g) if the possibility of pack sea ice, drifting icebergs or land-fast sea ice exists at the drill or production site, the measures to address the protection of the installation, including systems for ice detection, surveillance, data collection, reporting, forecasting and, if appropriate, ice avoidance or deflection; and</p>	<p>Not Applicable</p>	<p>Not Applicable</p>
<p>(h) a description of the arrangements for monitoring compliance with the plan and for measuring performance in relation to its objectives.</p>	<ul style="list-style-type: none"> • Section 7 of the Safety Plan references the Inspection and Audits programs from Element 8 of the SMS • Worksite Safety Observation Form CNQ-OVR-FM-LM-000027 	<p>Audits and inspections are an important part of ensuring compliance to safety standards. Canadian Natural has had success with the Worksite Safety Observation (WSO) program that works with frontline workers to identify positive observation and to identify gaps in safety performance. All groups have KPI's for participation in the program</p>

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Appendix # 3

Project Specific Facilities and Equipment List

Well Facilities

<u>UWI Locations</u>	<u>Well Names</u>	<u>License Number</u>	<u>Facilities on site</u>
00/C-55-60.40-122.45/00	ARROWHEAD RIVER C-55	1979	Wellhead only
00/I-75-60.40-122.45/00	ARROWHEAD RIVER I-75	1981	Wellhead only
00/J-74-60.40-122.45/00	ARROWHEAD RIVER J-74	1987	Wellhead only
00/P-16-60.30-123.30/00	LIARD P-16	1976	Wellhead only
00/F-56-60.40-122.45/02	ARROWHEAD RIVER F-56	1978	Wellhead only
00/O-38-60.40-122.45/00	ARROWHEAD RIVER O-38	1983	Wellhead only
00/K-35-60.40-122.45/01	ARROWHEAD RIVER K-35	1991	Wellhead only
00/A-77-60.50-122.30/00	EMILE LAKE A-77	1964	Wellhead only
00/M-35-60.30-123.00/00	SW ARROWHEAD M-35	1989	Wellhead only
00/A-68-60.50-122.30/00	NETLA A-68	1936	Wellhead only
00/C-07-60.50-122.45/00	NETLA C-07	191	Wellhead only
00/K-77-60.50-122.30/00	NETLA K-77	1862	Wellhead only
00/P-66-60.40-123.30/00		4050	Wellhead only

Equipment List

<u>Number</u>	<u>Type</u>	<u>Size</u>	<u>Proposed Use</u>
1	Helicopter	Light equipment	Crew transportation
1	Service Rig	Heavy equipment	Well abandonment
1	Wire Line Truck	Heavy equipment	Well abandonment
1	Welding Truck	Light equipment	Well abandonment
1	Truck with flatbed trailer	Heavy equipment	Transporting tubing and wellhead
1	Grader	Heavy equipment	Recontouring wellsite
1	Temporary Camp (possible)	15 persons	Crew accommodation
2	Tracked hoe	Heavy equipment	Phase II ESA and recontouring wellsite
2	Excavators – Caterpillar 335F or equivalent (38,200kg)	Heavy equipment	Access and wellsite clearing/repair
2	Crawler tractors – Caterpillar D6 (21,400kg) or equivalent	Heavy equipment	Access and wellsite clearing/repair
1	Truck and Trailer	Heavy equipment	Hauling heavy equipment
2	Crew Truck	Light equipment	Crew transportation
2	Storage tanks	TBD	Storage of fresh water
2	6 x 6 Polaris Ranger	Light equipment	Crew transportation
6	ATVs/Snowmobiles	Light equipment	Crew transportation
4	Trash Pumps	N/A	
1	Tracked compact excavator with bucket and blade	Light equipment	Recontouring wellsite
1	Fuel truck	Heavy equipment	Refueling vehicles

Organizational Roles for Project

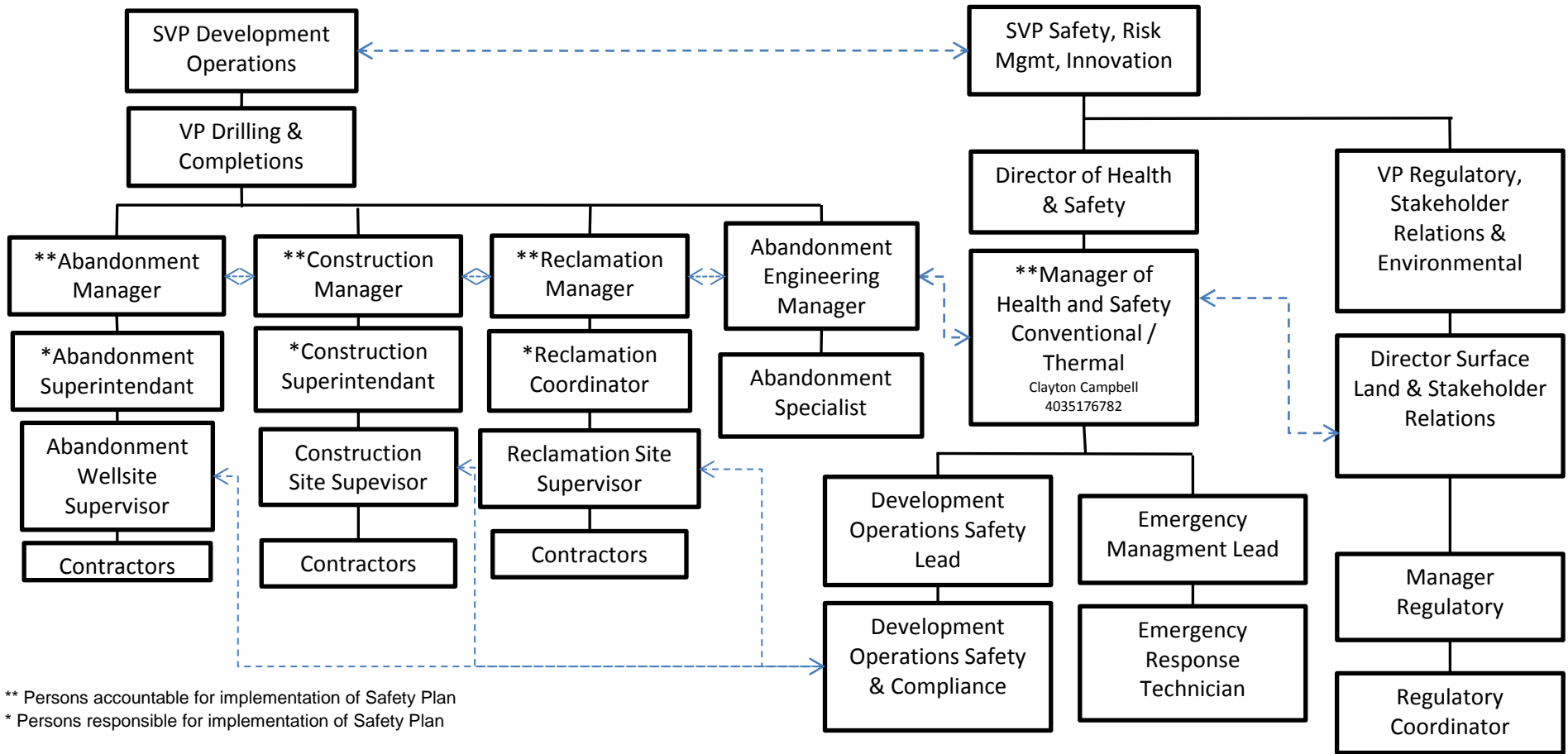




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PURPOSE

The purpose of this Project Site Safety Plan is to exhibit that Canadian Natural Resources understands the regulatory expectations and will conduct its operations with diligence to ensure that all reasonable steps are taken to maintain risk levels as low as reasonably practicable. As per Part 2, Section 8 of the Canada Oil and Gas Drilling and Production Regulations, the Project Site Safety Plan sets out the procedures, practices, resources, sequence of key safety-related activities and monitoring measures necessary to ensure the safety of the proposed work or activity.

It is expected that all project personnel will meet or exceed the requirements described in this plan. This is not an all-encompassing document; subcontractors are expected to comply with any additional regulatory requirements applicable to their work, and must adhere to their own company policies and procedures.

The intent of this Project Site Safety Plan is to be a living document that will grow with the project to address hazards and controls. Any questions regarding intent or interpretation of this document may be directed to the Canadian Natural Conventional / Thermal Health and Safety Manager for clarification. Requests for variances or suggested changes must be put in writing and sent to the Canadian Natural Conventional / Thermal Health and Safety Manager for review and approval.

SCOPE

This Safety plan is designed using the Canadian Natural Safety Management System (SMS) as the foundation for all work to be conducted by Canadian Natural employees, contractors and or service providers during the planned Abandonment project.

The Project Site Safety Plan addresses the items listed below.

- a) references to the safety management system that demonstrate how it will be applied to the proposed work or activity and how the duties set out in Regulations with regard to safety will be fulfilled;
- b) a summary of the how hazards will be identified and to evaluate safety risks related to the proposed work or activity;
- c) a description of the hazards that were identified and the results of the risk evaluation;
- d) a summary of the measures to avoid, prevent, reduce and manage safety risks;
- e) a list of all structures, facilities, equipment and systems critical to safety and a summary of the system in place for their inspection, testing and maintenance;
- f) a description of the organizational structure for the proposed work or activity and the command structure on the installation, which clearly explains
 - I. their relationship to each other, and
 - II. the contact information and position of the person accountable for the Project Site Safety Plan and of the person responsible for implementing it; and
- g) a description of the arrangements for monitoring compliance with the plan and for measuring performance in relation to its objectives



INTRODUCTION

Safety at Canadian Natural:

- Is a **Core Value**. Priorities change, Core Values do not
- We are committed to **Safety Excellence: “No Harm to People; No Safety Incidents”**
- Through **Continuous Improvement** we will do everything practical to protect the health, safety and welfare of all our employees, Service Providers, and the public
- We encourage a **Front Line Driven Safety Culture** in which safety is the responsibility of every worker and is highly valued by each and every employee

Safety shall be held at the same level as job productivity and business performance. To empower every worker with the knowledge and skills to prevent injuries, four “Pillars” must be in place for all work conducted at a Canadian Natural worksite:

1. **Orientation** – all workers on a Canadian Natural worksite must receive appropriate information as provided by the Quadfold “Safety Orientation” or by Computer Based Training. Canadian Natural also participates in General Safety Orientation for the Industry as administered by Enform. • More information is provided in Element 3 Employee Training
2. **Hazard Assessment** – all work conducted on a Canadian Natural worksite must be guided by a Hazard Assessment conducted before the work starts. Potential hazards must be identified, assessed and controlled. Workers and Service Providers should be part of conducting Hazard Assessments and must understand the Hazard Assessment and the Controls they are expected to use. Part of Safe Work Permits / Hazard Assessment is ensuring that Job Safety Analysis / Step-by-Step Procedures are in place for the work planned. • More information is provided in Element 15 Hazard Assessment / Task Analysis
3. **Service Provider Hazard Assessment** – although the Canadian Natural Hazard Assessment identifies hazards associated with the site, when Service Providers are hired to conduct work on behalf of Canadian Natural, they must conduct and document a Hazard Assessment for the specialized service they are providing. • More information is provided in Element 15 Hazard Assessment / Task Analysis
4. **Transportation of Injured Worker and Evacuation Plan** – although Canadian Natural expects that every precaution will be taken to ensure workers are not injured, every worksite must be prepared to evacuate a worker if required. • More information is provided in Element 5 Emergency Preparedness

This Safety Management System will be reviewed on an ongoing basis to ensure it is current with changing conditions of the company, worksites, and with any regulatory changes.



1 - LEADERSHIP COMMITMENT

1.1 – General

Canadian Natural maintains a Corporate Statement on Health, Safety and Welfare that clearly indicates management's commitment to Health, Safety and Welfare through reference to personal injury, occupational health, property damage, and regulatory compliance.

To help ensure that all workers are aware of Canadian Natural commitment to Health, Safety and Welfare this policy will be:

- Reviewed annually
- Signed by the President and Chief Operating Officers
- Included in manuals and appropriate booklets
- Used as part of employee or contractor orientation
- Displayed prominently in meeting rooms, area offices, or any place that workers may gather
- Displayed and referenced as part of any training
- Part of safety or operational meetings
- Displayed and referenced during meetings with contractors and service providers

1.2 - Program Coordinator

Canadian Natural employs Health and Safety Managers that report directly to Senior Management and direct teams whose primary responsibilities are coordinating the Health, Safety and Compliance of company employees and contract workers employed by Canadian Natural.

1.3 - Senior and Middle Management Participation

All levels of management are expected to show their support to Health, Safety and Welfare through their actions on a daily basis and at special events throughout the year:

- Senior management will support the Corporate Statement on Health and Safety by letters, memos, and personal visitations to employees at least once per year
- Senior management will participate in health and safety field tours or inspections at least once per year
- If a project will involve a workforce of 100 or more, appropriate management will participate in the project "kick-off" meetings for contractors
- All managers will attend safety meetings whenever possible to demonstrate support and commitment to issues relevant to workers
- Middle management, as part of their duties, will participate in health and safety inspections of facilities at least every three months
- Front line managers will conduct health and safety inspections in their respective BU / Group at least monthly using developed checklists appropriate to the work site. Any deficiencies identified must be marked for appropriate follow up action.



All levels of management are expected to participate in activities such as Safety Award functions, corporate safety meetings, contractor general and safety meetings.

1.4 - Refusal of Dangerous / Unsafe Work

Canadian Natural recognizes that from time to time circumstances may arise when a worker does not feel safe to conduct a task. The worker may not be adequately trained or experienced in the completion of the requested work or he / she may believe conditions exist that make it dangerous / unsafe to continue. Occupational Health and Safety regulation requires that workers refuse work that is dangerous / unsafe and Canadian Natural enforces the concept that this is an obligation not a choice or right.

Any worker on a Canadian Natural worksite is required to refuse work that is believed to be dangerous / unsafe and must immediately report the reason to the supervisor.

1.5 - Responsibilities

Responsibility and accountability for the health and safety of all workers lie with every manager, supervisor, employee, and contracted worker. Safety must be a united effort and a shared responsibility.

Senior management is responsible to:

- Be familiar with the Canadian Natural Safety Management System
- Provide safe work policies, standards and guidelines
- Provide direction and leadership for safety performance
- Establish responsibilities for all supervisors and workers
- Establish accountabilities at all levels
- Communicate safety programs or policies to workers directly and through supervisors
- Insist on safety performance throughout operations by ensuring contractors and employees are competent
- Provide adequate resources to maintain safe operations
- Ensure that the activities of employers, workers and other persons at the workplace relating to health and safety are coordinated
- Do everything that is reasonably practicable to establish and maintain a system or process that will ensure the health, safety and welfare of workers and compliance with regulations
- Maintain all workplaces in a manner that ensures the health, safety and welfare of persons at or near the workplace
- Provide contractors and employers information known that is necessary to identify and eliminate or control hazards
- Ensure the development of emergency response procedures
- Recognize employees and groups for safe work achievements



Supervisors are responsible to:

- Be familiar with the Canadian Natural Safety Management System
- Insist on performance and behavior that meet the standards of the company's health and safety management system
- Encourage employee involvement in health and safety by demonstrating management's commitment to health and safety
- Be knowledgeable of regulatory requirements and ensure all operations under their supervision comply
- Provide adequate supervision at every worksite
- Ensure workers know what is expected of them through orientation
- Ensure workers are qualified to perform their work
- Ensure workers know and are prepared to deal with potential hazards of their work and any specific hazards on the worksite
- Ensure workers are not subjected to or participate in harassment or violence
- Ensure training needs are identified and met
- Ensure safe work practices are used including the safe handling of hazardous substances
- Identify hazards through inspections, and remove them if possible
- Correct dangerous / unsafe conditions and behavior immediately
- Provide appropriate equipment required for each job
- Ensure incidents are reported, investigated and corrective actions are taken
- Ensure all devices and personal protective equipment is available, properly used, stored, maintained and replaced when necessary
- Ensure they are knowledgeable of the Emergency Response Plan and when to implement it
- Coordinate activities of contractors when there are two or more employers present at the worksite to ensure activities don't interfere or cause hazards for others
- Consult and cooperate with the Joint Work Site Health and Safety Committee or Health and Safety Representative

Workers are responsible to:

- Protect themselves and others at the worksite.
- Learn how to do their jobs properly - this includes:
 - Actively participate in training provided
 - Develop competence in safe operating practices and standard work procedures
 - Gain knowledge about standards and regulations that pertain to their workplace
- Become thoroughly familiar with the health and safety program



- Participate in health and safety program development and maintenance
- Comply with rules and regulations
- Follow company safety policies, procedures and requirements
- Refuse to perform work when dangerous / unsafe conditions exist or that they are not competent to perform
- Report potential hazards, incidents and injuries to supervisors as soon as practical
- Report contravention of the regulations of which the worker is aware to the supervisor
- Report the absence of or defect in any protective equipment
- Use required devices, personal protective and safety equipment
- Be clean shaven when required to use respiratory protection
- Check tools and equipment, including devices, personal protective and safety equipment for potential hazards before using them
- Know the location, type and operation of emergency equipment
- Know the location of SDS when working with hazardous products
- Know the roles and responsibilities as outlined in the Canadian Natural emergency response plan
- Refrain from causing or participating in harassment or violence
- Not engage in horseplay or similar conduct
- Be fit for work; not impaired by alcohol, drugs or other causes while on duty or designated on call
- Cooperate with the supervisor, Joint Work Site Health and Safety Committee or Health and Safety Representative

Contractors are responsible to:

- Cooperate with Canadian Natural and other contractors in providing a safe workplace
- Comply with regulatory and safety requirements
- Develop their own health and safety program and safe work procedures
- Report to the site supervisor or site entrance gate when arriving at a worksite
- Ensure their employees know and follow their safe work procedures
- Ensure work is conducted as outlined in the Canadian Natural Hazard Assessment
- Report all incidents or injuries to the Canadian Natural supervisor
- Assist Canadian Natural personnel in investigations
- Follow Canadian Natural procedures during an emergency
- Refuse dangerous / unsafe work



Visitors are responsible to:

- Report to the site supervisor or site entrance gate when arriving at a worksite
- Receive a site orientation involving worksite hazards
- Follow the instructions of the site supervisor or personal escort
- Wear personal protective equipment as required
- Never walk about a worksite unescorted

2 - Organizational Guidelines / Standards / Policies

2.1 - General Health and Safety Guidelines, Standards, Policies

Canadian Natural will maintain written Health and Safety Guidelines, Standards, and Policies that will be available and communicated to all employees. Every worker will be provided with ready access to these Guidelines, Standards, and Policies.

- At Safety Meetings / Toolbox Talks / Tailgate Meetings etc.
- Through Safety News
- Through Safety Bulletins
- At Orientation

Whenever possible, workers that will be affected will be included in the process of developing new Guidelines, Standards, and Policies or revising existing ones to update the information.

2.2- Specialized Work Guidelines, Standards, Policies

Where potential risk associated with certain tasks cannot be adequately addressed by general Guidelines, Standards, and Policies, Canadian Natural will ensure that specific procedures are in place or developed. Examples may include turn-around work, confined space entry, and site specific procedures.

2.3 Corrective Action and Disciplinary Process

Although potential hazards exist in all types of work, dangerous / unsafe conditions can be eliminated by following established rules and procedures. Canadian Natural will make every effort to ensure the health, safety and welfare of all workers; however workers are responsible to follow Canadian Natural guidelines and procedures.

The need for disciplinary measures is reserved for personnel who:

- Have little or no respect for the health, safety and welfare of themselves or others
- Ignore and defy health and safety rules or guidelines

Violations of rules and procedures by an employee will not be tolerated. Depending on the severity of the infraction, disciplinary action, up to and including termination may be taken as outlined in Human Resources (HR) policy guidelines. Actions taken may include:



- A verbal reprimand
- A written reprimand
- Counsel by manager or supervisor
- Suspension
- Termination of employment

The Canadian Natural discipline policy will take effect in the case of willful or repeated noncompliance to Guidelines, Standards, and Policies. When it has been determined that disciplinary action will be required, the following HR guideline will be used.

2.4 - Warning Signs / Identification / Flagging

Signs provide important communication and warning for any person who may access Canadian Natural worksites.

Signs that may be posted include:

- Facility entrance signs must have:
 - Canadian Natural logo
 - Facility name and surface location
 - Emergency contact phone number
 - Hazard symbol:
 - H₂S or Poisonous Gas for sour locations
 - Flammable gas for sweet locations
 - Site safety requirements
- First Aid Facilities location must be identified
- Emergency Eye Wash / Showers location must be identified
- Hearing Protection Required signs at worker entrance of high noise level locations
- Noise levels must be posted where required by Occupational Health and Safety regulation
- Danger High Voltage – Keep Out signs must be posted in areas or buildings with generators or high voltage electrical equipment
- Overhead power lines warning signs as required
- This machine may start automatically or by remote must be identified
- Confined Spaces must be identified where workers could enter
- Visitors Report to Office / Security as applicable
- Private property, no unauthorized personnel
- Personal Protective Equipment required as applicable
- Applicable hazard warnings and symbols
- Regularly used (more than once / month) truck loading / unloading facilities must be clearly identified and signs posted with the Canadian Natural truck loading / unloading procedure
- Other areas where grounding or bonding may be required must also be posted
- Pipeline crossings must have clear signs posted at road crossing and lease entrance
- Video surveillance as applicable
-

Flagging identifies to workers that there are potential hazards in the work area.

- **CAUTION** - identified by **YELLOW** flagging used for minor excavation, work on overhead scaffolding, or tripping hazards i.e. cords, hoses etc. Workers must proceed with caution and look for hazards.



- **DANGER** - identified by **RED** flagging used for cranes working overhead, process leaks; holes or trenches or potentially life threatening hazards. Workers must **STOP** - entry is strictly prohibited until you have authorization.

2.5 - Unauthorized Entry

Wherever practical, Canadian Natural will take steps to prevent unauthorized entry to our sites and facilities:

- To prevent damage to wellheads, equipment or buildings and theft
- To protect members of the public from inadvertent injury related to our processes, equipment or any associated potential risks

When unauthorized or unknown persons are identified, they should be asked to leave and the incident reported to supervisors. Workers may access a site on a regular basis through the working day, however when fences and gates are provided, they should be kept closed and locked when the facility will be left unattended for a period of time. Canadian Natural personnel must be aware and take appropriate precautions to avoid placing themselves at risk. For instance, in the event of an alarm, operators must not challenge intruders alone; call for back up from security or police.

2.6 – Theft

Theft must be reported using an Incident Report. Supervisors will report to authorities for investigation and follow up as required. Keys should be removed from mobile equipment and all valuable equipment should be stored out of sight and in a lockable and secure facility, if possible. Canadian Natural insurance does not cover personal items left in company vehicles and the company will not be responsible for these items.

2.7 - Workplace Hazardous Material Information System 2015 (WHMIS 2015)

WHMIS is the Canadian hazard communication standard. The key elements of the system are:

- Cautionary labeling of containers of WHMIS 2015 “hazardous products”
- Provision of Safety Data Sheets (SDSs)
- Worker education and training programs

WHMIS 2015 is implemented through coordinated federal, provincial and territorial legislation. Supplier labeling and SDS requirements are set out under the federal “Hazardous Products Act” and associated “Hazardous Products Regulations”. All of the provincial, territorial and federal agencies responsible for occupational safety and health have established WHMIS 2015 employer requirements within their respective jurisdictions.

Many of the products that Canadian Natural workers deal with regularly are hazardous products and fall under WHMIS 2015 legislation. Canadian Natural is committed to complying with all WHMIS 2015 legislation including consistent worker training, effective application of labels and markings, and availability of Safety Data Sheets.

Canadian Natural keeps SDSs current for all products produced at our facilities as well as all other hazardous products brought in for use. Each worker must have easy access to all applicable SDSs and



know where to find the information required. When electronic systems are used, workers must be properly trained in the use of the system. Canadian Natural relies on an online SDS Management System to ensure SDSs are available and current. SDSs for products no longer in use must be discarded.

When decanting products in to smaller containers for handling or use, workers will have access to workplace labels and must apply an appropriate label to every container used to transport or move any hazardous product. All containers, such as “Jerry Cans” must be appropriately labeled to ensure all workers are aware of the contents. A reoccurring problem with in our industry has been transferring small amounts of hazardous products, such as methanol, into bottles and when not completely used, left and mistaken for drinking water.

Canadian Natural will inspect WHMIS 2015 compliance in each BU / Group during inspections / audits and any deficiencies will be noted and corrected by the formal action plan.

Workers are expected to have current WHMIS 2015 training certification through the computer based training modules on the CNQ’U training portal

Canadian Natural facilities must utilize an effective system to identify hazardous products in piping and process systems, with arrows indicating the direction of the flow of the product.

Systems may:

- Use different colored piping etc. for various products
- Use labels attached to piping to identify what is in the pipe or vessel
- Use different colored labels to identify what is in the pipe or vessel

When color coded systems are used, either with painted pipes or various colored labels, a chart must be prominently displayed to identify the product that each color represents.

2.8 - Driving

At the time of hiring, or before employees are allowed to drive company vehicles, Canadian Natural reserves the right, as part of the employee certification process to:

- Ensure that the candidate holds a valid driver’s license
- Request a driver’s abstract from the candidate
- Request permission to review the candidate’s drivers abstract annually
- Review driver’s accumulated demerit points
- Conduct a fit for duty certification test

Management will consider each case and use its discretion to make a decision regarding a potential candidate’s eligibility for hire.

Driver Training

Workers whose duties include operating a motor vehicle will be trained as required by Orientation for the area they will be working in.

Workers in Conventional / Thermal Operations that are required to operate company vehicles will receive a Driver Attitude training course or equivalent within six months of employment.



When a driver has experienced a preventable vehicle incident, the applicable supervisor must refer to the Accountability Matrix to determine appropriate action. Additional Driver Education must be considered.

Loss of License

If an employee is required to drive a company vehicle as part of their job, and loses his license for any reason, he must immediately notify the supervisor of the loss of his driver's license and the reason.

Each case will be considered on its own merit by supervisors or management to determine if it is practical to modify duties for a short time or if the worker's employment will be continued.

Safe Driving Procedures

Canadian Natural expects vehicles to be driven in a safe manner in compliance with all applicable Highway and Traffic laws:

- Ensure every passenger is wearing a seat belt before proceeding
- Ensure vehicles are maintained in a safe condition, including tires, brakes and windshield
- Drivers are to walk around their vehicles prior to driving to check for obstacles, leaks, tire condition, or any defects
- Follow the Canadian Natural Policy to "Drive In, Drive Out"
- Drive defensively and courteously
- Slow down on unfamiliar roads or in poor weather conditions, drive to conditions.
- Never drive while under the influence of alcohol or drugs
- Don't drive tired – fatigue causes impairment
- Drive responsibly – control distractions like cellular phones, 2 way radios, radios or CD players, conversations, eating, drinking, etc.

Drive In, Drive Out Policy

Whenever possible, drivers must park their vehicles in a position that does not require backing up to park or to leave the parking spot. Drivers must leave their vehicle in a position with the front of the vehicle facing the direction they will take when they leave that parking spot.

In some situations, when drive in / drive out is not feasible; drivers must back their vehicle in to the parking spot so they can leave in a forward direction. Many vehicle incidents occur when drivers must back up when leaving a parking spot. When drivers are able to simply drive forward, potential hazards that may have changed while they were parked are in their line of sight and many incidents are avoided. Drivers, intending to back in to a parking spot, will check the intended parking spot before making the decision to park there.

Many of the incidents that have occurred involving Canadian Natural vehicles over the past years have happened because conditions changed after the driver parked the vehicle. Another vehicle pulled up beside or behind them and when the driver intended to leave the location he backed into another vehicle.



Another frequent cause of incidents that occur when backing up is a driver that parks his vehicle beside or too close to a post, building or other stationary object. Then, when leaving the location, they back up and while turning sharply to one side or the other striking the stationary object causing damage to their vehicle.

2.9 - Claims Management / Return to Work

Every employee working for Canadian Natural is covered by the Workers Compensation Board in the jurisdiction they are working. The Canadian Natural WCB accounts in the various jurisdictions are kept in good standing.

All incidents involving injuries must be reported using the Canadian Natural Incident Report. If the worker is unable to complete the report, his immediate supervisor will provide the information.

- Conventional / Thermal – the injured worker’s supervisor is responsible to submit forms to Horizon Health Centre.
- Horizon - all WCB cases are processed at the Horizon Health Centre. If a worker receives medical attention off site, he must also report to the Horizon Health Center as soon as possible.

Data Review / Statistical Analysis

A quarterly statistical incident report provides a breakdown of incidents by BU / Group supervisor / foreman, or support group for operations and management. Reports are evaluated to identify incident / injury trends or concerns so that the requirement for corrective action plans can be identified and initiated.

Return to Work Program

Employees and contractors are responsible to advise their immediate supervisor as soon as possible of any need to be absent from work due to injury or illness.

The Canadian Natural Return-To-Work Plan will be used to promote a proactive approach to assist injured or ill workers to return to safe, meaningful and productive employment when medically able. Individual plans will be designed to be flexible, short-term accommodations leading toward the primary goal of complete rehabilitation.

The duration of any modified work plan will depend on the injured worker’s medical recovery, but will normally not exceed six months. Revisions to the modified work may be made as the worker’s medical condition changes, until the worker is considered medically fit to return to preaccident level of employment or permanent work restrictions are identified.

2.10 Contractor / Service Provider Management

Service Providers with an effective, recognizable health and safety program and a low injury rate will be given preference when awarding work. It will be the responsibility of the Canadian Natural representative hiring Service Providers or Service Providers to access Canadian Natural’s Contractor Management System through Complyworks to ensure Service Providers are eligible for hire.

Service Providers are required to be familiar with and comply with all applicable regulation. Small Contractors who do not have their own health and safety program will follow the Canadian Natural health and safety program guidelines.



In some circumstances, as identified by business requirements or by Worksite Safety Observation, Canadian Natural personnel may conduct reviews or audits of Service Provider's Safety Programs to ensure compliance to Canadian Natural requirements and Occupational Health & Safety legislation.

Safety Orientation

Every person involved in work on a Canadian Natural worksite must receive appropriate orientation. Proof of Orientation does not expire.

Hazard Assessment

Canadian Natural will provide as much information as possible regarding all known or expected hazards at each job site. Service Providers must conduct an appropriate Hazard Assessment and provide written procedures for the service(s) they are providing.

Responsibilities

Service Providers are responsible to:

- Provide adequate on-site safety personnel and support for the number of workers on location.
- Ensure subcontractors and their employees are familiar with and follow applicable legislation for the work they are conducting.
- Ensure all workers are familiar and comply, as applicable, with Canadian Natural standards, practices, and expectations.
- Ensure all hazards are identified.
- Provide competent workers able to do the work. Service Providers are expected to perform the work they are hired for in a safe and competent manner. If the position requires certification, such as crane operators, a copy of the certification must be provided to the Site Supervisor and documented on the Canadian Natural Hazard Assessment.
- Include all health, safety and welfare provisions of the contract in any agreement with a subcontractor.
- Ensure that their workers have safe working conditions including reasonable hours of work. It is the Service Provider's responsibility to ensure workers have received adequate rest and are not impaired by fatigue or anything else. Workers must be fit for duty.
- Ensure their workers have received appropriate training.
- Ensure their workers have received appropriate job orientation.
- Ensure their workers have been provided with all required Personal Protective Equipment.
- Conduct regular and periodic inspections of the worksite to identify unsafe conditions or practices.
- Provide appropriate and safe equipment with appropriate safe guards that are required to do the job.
- Take all necessary precautions to protect all personnel including workers, visitors and the public from any injury or illness as a result of their work.



- Exercise the right to refuse dangerous / unsafe work by stopping all activities if it is considered dangerous / unsafe. The situation must be investigated and documented on a Canadian Natural Incident Report and resolved.
- The Canadian Natural Safety and Compliance Coordinator will conduct the investigation with the refusing worker of the dangerous / unsafe condition and a member of the Joint Work Site Health and Safety Committee or Health and Safety Representative.
- Report incidents using the Canadian Natural Incident Report form and conduct an appropriate investigation. Copies of the investigation report must be made available to Canadian Natural.
- Remove any worker or subcontractor who doesn't comply with health and safety requirements from the job site.

Designated Authority for Safety

Each Service Provider must designate, in writing, the person on each jobsite that has the responsibility and authority regarding the health, safety and welfare of that Service Provider's work activities on the site.

If the site supervisor leaves the site for any reason it is his responsibility to designate, in writing, an alternative person to have the ultimate authority for health, safety and welfare in his absence.

Safety Meetings

Service providers are expected to:

- Hold pre-job safety meetings with their workers to discuss health, safety and welfare issues pertinent to the job, such as site specific emergency plans and job specific hazards.
- Hold regular meetings to discuss general health, safety and welfare concerns, review incidents, and determine actions needed to improve job health, safety and welfare. Minutes of every meeting must be taken to document issues and concerns discussed as well as the attendance of each worker.
- Hold job specific tailgate meetings before beginning any potentially hazardous job to discuss hazards and the safe work procedures to be followed to control the hazards.

Alcohol and Drug Program

Service providers are encouraged to have a Alcohol and Drug program in place for their employees. If there is reasonable cause to suspect that a worker is unfit for duty, the worker will be removed from the Canadian Natural worksite. Canadian Natural may request that the worker's employer activate their Alcohol and Drug program.

Inspections

Service providers are expected to conduct regular and informal inspections of the worksite to ensure unsafe conditions or practices that may develop are dealt with and controlled.

Canadian Natural representatives will also conduct Worksite Safety Observations (WSO) to ensure that health, safety and welfare requirements are being followed. If unsafe conditions or equipment are identified, Canadian Natural may require the removal or repair of the faulty equipment or replacement at the Service Provider's expense.



2.11 - New Products

When new products are introduced to a work site, it must be discussed with appropriate management personnel to ensure that all Canadian Natural Standards are met.

Safety Data Sheets (SDS)

All chemicals or hazardous substances must be accompanied by the applicable SDS and all workers that may be exposed to the product must be:

- Trained in regards to the information
- Knowledgeable of the potential hazards and the appropriate protective measures to be taken, including Personal Protective Equipment
- Familiar with emergency procedures, such as emergency shower or eye wash requirements

Equipment

All equipment provided on Canadian Natural works sites must meet applicable standards. If the equipment is safety related it must be CSA or ANSI approved, or equivalent.

Supervisors must ensure that workers are familiar with new equipment and that the manufacturer's specifications and recommendations are available for reference and followed. When possible, a manufacturer's representative should be invited to provide initial training and demonstration of the equipment to all workers that may be required to work with it. Additional site specific procedures may be required.

2.12 - Hearing Conservation

Field workers may be exposed to high noise levels at some facilities. Although engineering controls will be used to reduce noise levels wherever possible, it is not always feasible to reduce noise to a safe level.

Signs must be used to identify where hearing protection is required and workers are responsible to use appropriate hearing protection. Some areas, that have noise levels above 105 decibels, will require the use of both ear plugs and ear muffs to provide adequate hearing protection.

Effects of worker exposure to high noise levels may not be immediately apparent but develop over time. Workers that may be exposed to noise levels above 85 decibels will have their hearing tested:

- Within 6 months of being hired
- At least every two years or as required by provincial regulation (BC – annually)

Canadian Natural will supply hearing protection as required to employees.



2.13 - Harassment and Violence Free Workplace

Introduction

Canadian Natural is committed to a healthy, productive work environment, where the dignity and safety of each individual employee is respected and protected. Our Mission Statement provides strong support for this concept through its focus on 'people working together' and 'integrity'.

This policy is intended to prevent harassment and/or workplace violence against Canadian Natural employees and to deal effectively with any incident.

Policy

Harassment or violence in the workplace will not be tolerated. Verified incidents of harassment or violence in the workplace are subject to corrective action, including disciplinary actions up to and including termination of employment for cause.

Definition of Violence in the Workplace:

Any inappropriate physical contact or action, or threat of inappropriate physical contact or action that would result in pain and/or suffering to individuals.

This includes:

- Behavior that would be interpreted by a reasonable person as a substantial threat to harm another person(s) or to endanger the health, safety or wellbeing of other persons.
- Any abnormal behavior that causes emotional or physical distress to other persons.
- Any behavior that causes or is likely to cause physical or psychological injury or harm and includes domestic or sexual violence

Definition of Harassment:

Harassment is any form of conduct, comment, bullying or action that:

- Creates an intimidating, hostile, or offensive work environment
- Adversely affects an individual's employment relationship or work performance
- Denies an individual dignity and respect
- Causes or is likely to cause, physical or psychological injury or harm and includes domestic or sexual violence

Examples of behavior that is considered harassment are: insulting comments; slurs; insulting or demeaning posters; insulting or demeaning invitations; unwanted or offensive actions, teasing, jokes, cartoons, graffiti, innuendoes, drawings; unwanted touch; unwanted gifts; lack of respect for personal space, etc. Harassment may have occurred if a behavior was known, or ought to have reasonably been known, will or would cause offence or humiliation to the worker, to be unwelcome or adversely affect an individual's health and safety.

The definition of harassment can be applied to the following categories:

- Prohibited Grounds: Harassment is prohibited on the grounds of Race, Color, Ethnic Origin, Sexual Orientation, Creed, Religion, Mental Disability, Physical Disability, Marital Status, Family



Status, Pregnancy, Age, and Gender, Source of Income, Gender Identity or expression, as well as any other ground defined in the legislative jurisdictions where Canadian Natural operates.

- Sexual Harassment: Any conduct, comment, gesture, or contact of a sexual nature that is likely to cause offense or that may be reasonably perceived as placing a condition on employment or opportunity for career development.
- Workplace Harassment: Any unwelcome conduct or comment that an employee finds offensive, which interferes with work performance, affects employment relationships, or denies dignity and respect. This includes, but is not limited to, offensive language, unwanted taunting/teasing, and the display of written material that is offensive or derogatory.

Application:

This policy applies to all permanent and temporary employees of Canadian Natural Resources Limited, and all Service Providers who work with Canadian Natural employees and/or represent Canadian Natural in any way.

Any incidents of harassment or violence in the workplace that involved customers, vendors, or visitors to Canadian Natural will be managed by Canadian Natural's leadership through a process based on the procedure outlined below, but may require alternate steps and/or the cooperation of other business entities.

Victims of harassment, violence, or of the threat of violence may wish to report the incident to the police. Nothing in this policy prevents them from exercising that right.

Responsibilities:

All employees are responsible for:

- Refrain from causing or participating in harassment or violence
- Fostering a workplace where harassment or violence is not tolerated
- When encountering objectionable behavior, for advising that individual (where possible) that the behavior is unwelcome

Managers and Supervisors are responsible for:

- Ensure workers are not subjected to or participate in harassment or violence
- Taking seriously any allegation or report of harassment or violence
- Addressing any abnormal or threatening behavior or statements which indicate the possibility for violence
- Consulting with Human Resources in order to facilitate the resolution of any complaint

Human Resources is responsible for:

- Supporting a workplace free from harassment, discrimination violence, or threat of violence
- Taking seriously any allegation or report of harassment or violence
- Ensuring the investigation of any complaint of harassment or violence is conducted in an expedient, confidential, and fair manner

Vindictive or frivolous complaints are a serious offence. Employees who have been found to have made such a complaint will be subject to disciplinary action.



Confidentiality:

Complaints of harassment or violence will be treated with the strictest of confidence. They will be investigated and resolved with as few people involved as possible. The names of individuals involved and the circumstances will only be divulged if clearly necessary for the purpose of investigating the complaint or if required by Law.

Procedure:

If you are being harassed or have been subjected to violence or threat of violence:

1. If possible, tell the individual - either verbally or in writing - that the behavior is unwelcome and ask him/her to stop.
2. Keep a record of the incident(s) (dates, times, locations, what happened, witnesses, etc.).
3. If you are not comfortable that Steps #1 and #2 (will) resolve the issue, then file a complaint with any of:
 - Your immediate supervisor or Department Manager
 - Any member of the Canadian Natural Management Committee
 - Your Human Resources Advisor, or the Manager, Human Resources

Employees also have the right to contact the Alberta Human Rights Commission and, if appropriate, the police to file a charge of assault.

Once reported, the complaint will be kept strictly confidential. An investigation will be undertaken immediately and all necessary steps will be taken to resolve the problem as expediently as possible.

If the investigation reveals evidence to support the complaint, the harasser's behavior will be corrected appropriately, and the incident will be documented in the harasser's personnel file.

If the investigation fails to find supportive evidence, there will be NO documentation concerning the complaint placed on the alleged harasser's personnel file. However, no matter what outcome is reached, Human Resources will maintain a separate file that documents the investigation process. The resolution/decision of the issue will be shared with the victims of the harassment.

Regardless of the outcome, the employee lodging the complaint as well as others providing information will be protected from any form of retaliation by co-workers or superiors, including demotion, or denial of opportunities within Canadian Natural.

If you observe an incident of harassment, violence, or threat of violence:

1. If possible, tell the alleged harasser or source of violent behavior that the behavior is inappropriate and ask him/her to stop.
2. Keep a record of the incident(s) (dates, times, locations, what happened, etc.).
3. Refer the victim of the incident to this Policy and/or his/her immediate supervisor, a member of the Management Committee, or Human Resources.
4. Report the incident yourself to your Department Manager, a member of the Management Committee, or Human Resources.



Avoid Confrontation:

In the event that a confrontational situation or a perceived threat is recognized, either between Canadian Natural workers or between a Canadian Natural worker and a member of the public, every effort should be made to control the situation. If there appears to be a potential for escalation, personnel are expected to stop, back down, and ensure they protect themselves.

The situation must be reported and, if necessary, another way determined to handle it with the aid of a supervisor.

The following chart outlines some situations where workers at Canadian Natural could potentially encounter violence or harassment at the workplace. Controls and Actions to be taken in the event of violence or harassment are suggested.



SITUATION	HAZARD	CONTROLS AND ACTION
1. Dismissal of personnel	Potential conflict including violence resulting in injury Potential for property damage	Control the workplace environment. Terminations to be done in a room set up for easy exit and in presence of more than one individual. Terminations to be performed by trained personnel . Follow Human Resources termination of employment guidelines.
2. Acts of terror or violence from others.	Equipment changed or tampered with Break-ins / vandalism	Protect yourself. Security (system or method) Report any vandalism, threat or violence to supervisor
3. Land owner altercations / confrontations.	Violence or threat of violence occurs between land owner and employee	Do not allow to escalate, back away and Report all or any altercations, threats or harassment by landowners to immediate supervisor. Document time and situation.
4. Construction Project (Service Provider conflict with employee)	Unsuccessful Service Providers may confront employees at Construction sites with threats or actual violence to on site personnel	Do not allow to escalate, back away and Report any and all altercations or threats to immediate supervisor and document the time, place and situation.
5. Open houses / public consultations	General public may become agitated at public consultation meetings and threaten or actually physically or psychologically abuse an employee	Communicate set agenda prior to meeting Arrange for appropriate security beforehand Do not allow to escalate, do not argue Report any harassment, threats or violent behavior to supervisor
6. Road rage.	Employees may be subject to road rage from other drivers. Field personnel drive public roads	Slow, Stop, get out of the situation and Report aggressive driving behaviors of others to supervisor
7. Hunting confrontations	Operations personnel may be subject to harassment, violence or threats of violence when confronting hunters trespassing on company property	Be courteous when asking hunters to vacate company property and if they do not leave immediately, contact immediate supervisor or local authorities for assistance. Report any harassment, violence or threat of violence to supervisor. Document occurrence including description of personnel, license plate numbers or any other identifiable means



8. Employee altercations	Disagreements that turn into violence or threat of violence	Report to supervisor Document any situations that lead to harassment, violence or threat of violence
9. Acquisitions / take overs	Disgruntled employees may confront other employees Threats or violence may occur	Report to supervisor any actions that consist of harassment, violence or threat of violence Communication of changes as soon as possible to effected personnel
10. Horseplay / Practical jokes	Horseplay or practical jokes can get carried too far resulting in conflict including violence to personnel	Horseplay and practical jokes should be kept out of the work place Report situations to supervisor
11. Scouting locations (drilling)	Threats of personal injury may occur if confrontation occurs	Follow working Alone procedure Report any confrontations to supervisor
12. E-mail advances or abuse	Unwanted harassment or inappropriate emails may offend others	Report any inappropriate or unwanted email to supervisor

It is difficult to identify every possible problem or hazard, which could be encountered at Canadian Natural locations; however workers must recognize the need to always put their safety first when dealing with any situation. Should situations develop that require additional personnel and or equipment - notify your supervisor. Canadian Natural facilities are designed with personal safety in mind. The controls and safety equipment are in place to aid and protect personnel however it is the employee's responsibility to communicate any unwanted contact or action to the applicable personnel. Review established Human Resource procedures for workplace violence, know what to do.

2.14 - Smoking

Canadian Natural is committed to comply with regulation in all jurisdictions.

Smoking:

- Is limited to clearly designated outdoor areas only, more than 6 meters from any doorway, window, or air intake. Workers must be provided with safe access to and in designated smoking areas.
- Is not permitted in a company owned or leased vehicle
- In a camp used for group living, may be permitted in a designated private room only if camp rules permit. Signs must be posted at the entrance to these rooms indicating that smoking is permitted
- Electronic cigarettes or similar devices must be treated in the same way as tobacco.
- Workers may choose to completely leave the worksite



2.15 - Working Alone

When workers are required to work alone or in isolation, an appropriate plan must be in place to protect workers and comply with applicable provincial regulation.

A plan must be implemented:

- Hazards must be assessed, documented and discussed with workers
- Hazards must be reduced or eliminated. Check-in intervals must be appropriate to potential hazards associated with the work. In most cases intervals should not exceed 2 hours.
- Effective communication (radio, telephone, scheduled check in points) must be provided for workers to summon assistance
- Check in times and locations must be documented
- An effective written plan must be in place and activated in the event of a missed check in

2.16 - Handling Hydrates

Hydrates are a mixture of water and gas molecules that crystallize to form a solid “ice plug” in piping under certain conditions of temperature and pressure. Although every effort is made to prevent hydrates, workers must be aware that, like any obstruction, they present a significant potential hazard due to pressure differential.

Differential pressures can quickly accelerate a hydrate plug to velocities that create excessive forces. Moving hydrates can cause serious mechanical damage at downstream locations where restrictions or a sharp change of direction exists. The failure can occur through impact or from the over pressure caused by the shockwave.

When a hydrate has been detected, operators must not allow the pressure differential to exceed 10%. Pressure must be bled off equally on both sides of the plug.

Please refer to Hydrate Removal procedures and the Canadian Association of Petroleum Producers (CAPP) publication entitled Prevention and Safe Handling of Hydrates.

2.17 - Lifting and Carrying

Many back injuries occur while lifting and carrying. Whenever possible use mechanical assistance such as hoists, bars, jacks, rollers or hand trucks when moving heavy material. Never place yourself under a heavy object when it is being lifted. Be sure that footing is secure. Place feet firmly with one foot slightly ahead for stability and be very cautious of slippery surfaces.

Before attempting to lift an object, estimate the weight and get help, if needed. When lifting a load, start from a squatting position and, keeping the load as close to your body as possible, lift with your legs. If the load is heavier than anticipated, stop and get help. When two or more workers are lifting and carrying, ensure everyone understands signals or directions to work together to move the load. Work deliberately - when moving light objects, use the same, correct lifting procedures as you would for heavy weight. Never pick up or put down an object while in a twisted position. Do not twist your torso while lifting.



2.18 - Repetitive Strains

Repetitive Strain

Repetitive strain injuries can occur in many different areas of the body. Common examples include tennis elbow; runners knee problems and carpal tunnel syndrome.

Repetitive movements do not cause injuries. They are the result of the strain we subject our bodies to while we are in the act of performing repetitive movement. They can also be related to previous injuries, poor posture or other traumas.

Work at your own pace and take breaks. Whenever possible, organize tasks to include a variety of postures and movement. Maintain good posture and set up workstations, keyboards and chairs to fit you.

To help Preventing Injury:

- Maintain a straight wrist position (up, down and sideways). Your forearm should be parallel to the floor
- Never rest your wrists while typing (rest your wrists only when you are not typing).
- Use your whole arm (from the shoulder) to move your hands. Don't stretch for far away keys. (Escape, End, Insert and Delete)
- Keep your fingers curved. Don't hold your pinkie (or thumb) in the air. Relax your thumb. By relaxing your thumb you relax your whole hand
- Use strong fingers instead of stressing your pinkie. (Shift, Control, Alt, Tab and Enter)
- Use both hands for two key strokes. Don't stretch one hand to hit both
- Use a light touch. Pounding on the keyboard is like dancing on a concrete floor
- Work at a comfortable pace and take frequent breaks. If it hurts, stop
- Keep your fingernails short so you can use your fingertips instead of the flat of your finger

2.19 - Working in the Cold

Much of the work performed by Canadian Natural operational personnel is done outside.

When the work requires workers to be outside in cold conditions (-7°C or colder) for an extended time, a place must be provided to warm up. A vehicle or similar equipment can be used.

Workers must use adequate clothing to prevent hypothermia. Cold workers can become disorientated, less alert, and less attentive to the job. Safety-toed footwear designed for cold conditions is also required in winter.

When workers are required to travel by snowmobile or ATV / UTV for an extended period, a good quality snowmobile suit with water resistant covering and lightweight high insulating lining is recommended.



Good thermal underwear will provide extra insulation. Remember that Fire Resistant Clothing is required when working within 25 meters of a potential hydro carbon source.

Wear a cold weather mask or wool scarf during severe wind chill conditions, and check frequently for frostbite. Ensure there are no dangling ends that could become entangled.

When travelling always carry an emergency kit and survival gear (including a parka and a winter sleeping bag, if possible) in case of emergency.

Hypothermia refers to a condition in which the core temperature of the body falls below the normal 37 degrees C (98.6° F). Hypothermia can develop rapidly, as a result of falling into cold water, or slowly, from working in wet, windy environments.

The effects of hypothermia occur in the following order: shivering, slowing of the heart and breathing, lack of co-ordination, lack of organ (e.g., kidney) function, disorientation, and stopping of the heart (death).

Individuals affected by hypothermia are often unaware of their problem and may resist help. Provide help even if the person resists.

To treat hypothermia:

- If necessary, administer artificial respiration but not heart massage, as this may cause heart failure
- Move the victim out of the cold and into a warm room or shelter. Move gently; rough handling may also cause the heart to fail
- Remove wet clothing and very gently towel the person dry
- Warm the person by applying hot-water bottles or towels soaked in hot water to the neck, armpits and inside the thighs. If these methods are not possible, one or two persons can lie in close contact with the person to warm him or her.
- Keep the person awake until he or she has received medical aid
- Give sweets to eat, as they are turned into energy quickly

Do Not:

- Give the victim alcohol or hot liquids. (Hot liquids should be given only after the person is totally re-warmed)
- Immerse the victim in a hot bath
- Massage the person to warm him or her
- Cover the victim, unless the victim is simultaneously being warmed underneath the wrap

Frostbite is characterized by white, waxy skin that feels numb and hard. It requires immediate emergency medical attention:

- Immerse frozen areas in warm water (around 100 degrees Fahrenheit) or apply warm compresses for 30 minutes. If warm water is not available, wrap gently in warm blankets.
- Do **not** use direct heat such as a fire or heating pad.



- Do **not** thaw the area if it is at risk for refreezing, which may cause severe tissue damage.
- Do **not** rub frostbitten skin or rub snow on it.
- Re-warming will be accompanied by a burning sensation. Skin may blister and swell and may turn red, blue, or purple. When skin is pink and no longer numb, the area is thawed.
- Apply sterile dressing to the area, placing it between fingers and toes if they are affected. Try not to disturb any blisters.
- Wrap re-warmed areas to prevent refreezing, and keep thawed areas as still as possible.

Wind Chill refers to the combined chilling effect of wind and temperature. A wind chill factor can result from even a relatively gentle 15 km/h wind. For example, a temperature of 4°C plus a 32 km/h wind lowers the temperature to freezing.

WIND CHILL CHART										
		Ambient Temperature (°C)								
		4	-1	-7	-12	-18	-23	-29	-34	-40
Wind km/h	Velocity mph	Equivalent Chill Temperature (°C)								
Calm										
0	0	4	-1	-7	-12	-18	-23	-29	-34	-40
8	5	3	-3	-9	-14	-21	-26	-32	-38	-44
16	10	-2	-9	-16	-23	-30	-35	-43	-50	-57
24	15	-6	-13	-20	-28	-36	-43	-50	-58	-65
32	20	-8	-16	-23	-32	-39	-47	-55	-63	-71
40	25	-9	-18	-26	-34	-42	-51	-59	-67	-76
48	30	-16	-19	-22	-36	-44	-53	-62	-70	-78
56	35	-11	-20	-29	-37	-46	-55	-63	-72	-81
64	40	-12	-21	-29	-38	-47	-56	-65	-73	-82

Adapted from: Threshold Limit Values (TLV™) and Biological Exposure Indices (BEI™) booklet; published by ACGIH, Cincinnati, Ohio

Little danger in less than one hour exposure of dry skin
Maximum danger of false sense of security

DANGER – Exposed flesh freezes within one minute

GREAT DANGER – Flesh may freeze within 30 seconds

2.20 - Heat Stress

Workers at Canadian Natural may also be exposed to hot conditions when working inside process buildings or working outside in hot weather.

Three common disorders associated with heat are:

Heat cramps - painful cramps in the stomach, arms and legs can result if heavy sweating drains a person of salt. Cramps may occur suddenly while at work or after hours. Cramps are a warning that more serious heat disorders may occur if the stress continues. When heat cramps occur, move the victims to a cool area, loosen their clothing and have them drink cool water. If cramps continue, provide first aid and take victims to a doctor.



Heat exhaustion - occurs when the body's cooling system cannot keep up with the heat stress. Sweat contains a balance of important fluids and salts. If lost water and salt are not replaced, the body becomes dehydrated. Signs of heat exhaustion include: heavy sweating, cool, moist skin, body temperature greater than 38°C, weak pulse, normal or low blood pressure. Victims may be tired, weak, clumsy, upset or confused. They are usually very thirsty, panting and may have blurred vision. Victims should be moved to a cool area, given cool water to drink and have their clothing loosened. Since heat exhaustion can lead to heat stroke, provide first aid and send victims to a doctor.

Heat stroke - develops when all the water and salt available for sweating has been used up. The body's temperature rises to above 40°C, the skin becomes hot, dry and red. Victims may act strangely, be weak, confused, have a fast pulse rate, headache or be dizzy. In later stages, victims may faint or have convulsions. Heat stroke can kill. Anyone in this condition must be taken to a hospital immediately. During transport remove excess clothing from the victims, fan and spray their bodies with cool water, offer sips of cool water.

When hot work conditions are anticipated or encountered, a work plan must be developed applicable to the job effort and working environment. Natural ventilation and fans should be used whenever possible to provide cooler working areas where air conditioning is not practical. If possible, schedule work for cooler times of the day and allow workers to set their own work pace.

Workers must take frequent rest and drink breaks, frequently drinking small amounts of water or other cool (but not cold) fluids. One cup of fluid every 15 - 20 minutes should replace water lost in sweat. If workers drink only when they are thirsty, they may not get enough fluid.

Workers, supervisors, and first aid attendants must recognize heat stress disorders and how to treat them.

2.21 - Hydrogen Sulfide (H₂S)

Hydrogen Sulfide (H₂S) is a naturally occurring gas found in a variety of geological formations and as a production byproduct in many of Canadian Natural's field areas. These areas and the products associated with production such as gas, produced water or condensate are commonly referred to as "sour".

Exposure occurs through inhalation of hydrogen sulfide in air and it is quickly absorbed by the lungs. Hydrogen sulfide is extremely toxic:

- Low concentrations cause irritation to the nose, throat, eyes and lungs.
- Higher concentrations can cause breathing to stop immediately - one inhalation can result in death.

Hydrogen Sulfide:

- Is colorless.
- Smells like rotten eggs in low concentrations.
- Deadens the sense of smell.
- Is heavier than air and generally settles in low lying areas.
- Is flammable / explosive through a wide range when mixed with air.



- Is soluble in water, oil, sludge, emulsions, well fluids and molten sulfur.
- Can be released if liquids are agitated, heated or system is depressurized.

Workers in sour areas must be adequately trained and use personal monitors at all times.

Although Occupational Exposure Limits (OEL) vary from province to province from 10 parts per million (ppm) to 20 ppm, there may be potential long term effects of exposure to low level concentrations of H₂S and Canadian Natural expects workers to target “0” exposure.

If workers encounter low concentration levels (below OEL) they are encouraged to use appropriate respiratory protection to identify and eliminate the source. If the concentration exceeds the OEL they must use Self Contained Breathing Apparatus (SCBA) or Supplied Air Breathing Apparatus (SABA). They must be fit tested for the face piece they intend to wear.

Concentrations greater than 100 ppm are an imminent danger or Immediately Dangerous to Life and Health (IDLH) and a backup person, also equipped with respiratory protection must be available and capable to effect a rescue for the worker intending to conduct work in that area.

Refer to the Hydrogen Sulfide and Respiratory Protection Codes of Practice.

Concentration Table and Effects:

10 ppm or less	No known short term effects from 8hr. exposures
20-50 ppm	Eye, nose, throat and lung irritation
50-100 ppm	Marked eye, nose, throat and lung irritation
100-150 ppm	Severe eye, nose, throat and lung irritation. Loss of smell. Exposure duration of 8 hours or more may be fatal
200-300 ppm	Headaches, drowsiness. Prolonged exposures of several hours may cause the lungs to fill with fluids.
300-500 ppm	May cause unconsciousness and death in 1-4 hours
500-700 ppm	Knockdown (may be fatal) with 1 hour exposure
Greater than 700 ppm	Immediate knockdown (may be fatal)

In an emergency:

1. Evacuate - Immediately to pre-determined muster point upwind of the release
2. Alarm - Call for help, sound bell or horn, call for outside assistance
3. Assess - Determine a plan of action to safely handle the situation
4. Protect - Use appropriate breathing apparatus to participate in a rescue exercise
5. Rescue - Complete rescue of casualty to a safe area
6. Revive - Initiate First Aid (artificial respiration and CPR if necessary)
7. Medical Aid - Ensure casualty receives medical aid promptly



2.22 - Confined / Restricted Spaces

A **restricted** space is:

- An enclosed or partially enclosed space.
- Large enough and so configured that a worker could enter.
- Not designed or intended for continuous human occupancy.
- Has restricted means of entry or exit.

A **confined** space has the above characteristics and, in addition:

- May become hazardous to a worker entering it due to:
 - Its design, construction, location, work activities or atmosphere
 - The materials or substances in it
 - The provision of first aid, evacuation, rescue or other emergency response service is compromised; or
 - Any other hazards relating to it.

When Canadian Natural is conducting Confined Space work, the appropriate Canadian Natural documentation (Hazard Assessment / Confined Space Permit) must be in place.

When a Service Provider has been hired to conduct Confined Space work as a specialized service to Canadian Natural, the Service Provider's documentation (Hazard Assessment / Permits etc.) must be used. The Canadian Natural representative is responsible to review and ensure it is adequate to keep workers safe and comply with regulation.

Potential hazards in confined spaces are numerous and varied, however the most obvious and lethal in the oil and gas industry is the presence of H₂S or other toxic gas, and the deficiency of oxygen. Work processes such as welding, or applying coatings may affect the atmosphere. Ventilation must be adequate to keep workers safe, or workers must use supplied air respiratory protection. If ventilation relies on mechanical means, a warning device must provide workers with sufficient time to evacuate.

A worker is considered to have entered the confined space when his breathing zone enters even if his lower body remains outside.

Isolation of the confined space must ensure that no form of energy can be released or product introduced while workers are required to be in it.

Personnel completing the confined space hazard assessment / entry permit, supervising, or entering must be appropriately trained and certified.

2.23 - Hot Work

Hot work is any activity which may cause an ignition source to be introduced into an area within 25 meters of a potential hydrocarbon source.

Examples of hot work include:

- Transporting infield condensate



- Welding
- Grinding
- Cutting with a torch
- Using electrical equipment that is not classified for use in a hazardous location

Whenever hot work is contemplated in an area with a potential hydro carbon source, appropriate documentation must be completed and followed to ensure controls are identified and implemented.

Controls may include isolation, depressurizing, and purging, along with appropriate gas detection and warnings to ensure an explosive atmosphere does not develop.

2.24 - Ground Disturbance

A ground disturbance is defined by the oil and gas industry as any work, operation or activity that results in a disturbance of the earth to a depth of 30cm or more, or in a reduction of the initial installation cover over a pipeline.

Anyone proposing to undertake a ground disturbance must make every effort to determine the existence of underground facilities in the vicinity. Canadian Natural defines the search area as an area extending 30m in all directions surrounding the work area. All underground facilities within the search area must be identified and marked prior to undertaking a ground disturbance.

Excavations and Trenches

No mechanical excavation may take place until:

- Canadian Natural Ground Disturbance documentation has been completed
- A 360° degree grid sweep has been done to identify all underground facilities within 30 meters of the proposed excavation
- All underground facilities have been exposed by hand or hydrovac

No worker may enter an excavation deeper than 1.5m (AB), 1.2 (BC/SK) unless it is adequately sloped or shored to prevent any possibility of cave in. Use a one to one ratio of slope, that is for every foot in depth, the side should be sloped back an equal amount, or use an engineered shoring system.

Safe access and egress must be provided when workers enter an excavation. A ladder may be used.

The spoil pile must be kept back at least a meter from the edge of the excavation.

All excavations must be clearly marked and barricaded.
See Canadian Natural Ground Disturbance Code of Practice.

2.25 - Fall Protection

Fall Protection is an integral part of Canadian Natural's commitment to a safe work environment. Falls from height can represent a high risk to workers if appropriate measures are not taken. Falls from the same elevation present a much lower risk but have a potential to occur more often.



All Canadian Natural field operators will receive formal fall protection training and all personnel required to use fall protection equipment must be trained in inspection and use of it by a competent person. As well, personnel expected to conduct a site rescue will be trained in the procedures and techniques to conduct such a rescue.

It must be recognized that falls and injuries can occur when working on the same elevation. Slips and trips account for approximately 60% of falls:

- Spills, smooth surfaces or other material that reduces traction
- Cords or hoses that could be tripped over
- Protruding objects, exposed corners
- Uneven surfaces
- Ruts
- Worker inattention

Although fall protection is required for any work above 3 meters, any work at an elevation above floor or grade level increases the hazard of a fall. Potential fall hazards include but are not limited to:

- Ladders – portable, temporary, or fixed
- Vessels
- Building roofs
- Rig Derricks
- Over water
- Over other obstacles where a fall could result in greater injury than a flat surface. E.g. – impalement
- Any work above 3 meters
- Working from a man basket

The goal of every worker at Canadian Natural should be to eliminate falls.

Fall Protection can be achieved through:

- Identification of hazards
- Elimination of hazards through engineering
- Administrative procedures to mitigate hazards through restraint systems
- Fall arrest

When equipment and facilities are designed and built, consideration should be given to worker access:

- The use of skid resistant materials and coatings should be used to reduce the risk of slips.
- Piping, cables etc. should be routed to avoid presenting a tripping hazard.
- Adequate lighting must be provided to ensure workers are aware of potential hazards.
- If work at height cannot be eliminated the following hierarchy should be used:



1. Stairs and **platforms with guardrails** should be provided if possible.
2. **Fall restraint** can be used to restrict worker movement to a safe area. An effective anchor capable of withstanding 3.5 kN (800#), appropriate length of lanyard, and a safety belt or harness must be used to prevent workers from accessing any point they could fall from.
3. As a last resort, **fall arrest systems** will be used. This equipment is designed to protect workers after they have fallen. Full body harnesses, lanyards that restrict free fall to 1.2 meters (4') without a shock absorber and 1.9 meters (6') with a shock absorber, must be attached to an anchor capable of withstanding 22 kN (5000 #) (Alberta - 16 kN / 3500#).

Provincial OHS regulation requires that a written fall protection plan is in place prior to using a personal fall protection system for work with a potential fall hazard:

- AB / SK / MB - 3 meters (10') or more
- BC - 7.5 meters (25') or more

The plan must identify:

- Potential fall hazard
- The fall protection system to be used
- Instructions on how to assemble, use, and disassemble the system
- Instructions on how to rescue a worker who has fallen and can't initiate a self-rescue

Every task undertaken by a worker can have inherent risks associated with it. It is the worker's responsibility to assess their current task, the risk associated with it and what precautions must be taken to reduce or eliminate that risk while climbing and working at heights. When workers are unsure of the methods, equipment or procedures to reduce the risk, they are to seek direction from their supervisor.

Ladders

Although workers climbing or descending a ladder are not required to be in continuous fall protection, ladders may be equipped with a climbing device that workers can attach their harness to and remain in continuous fall protection as they climb, work from, and descend the ladder. An alternative is for workers to use two lanyards that can be moved up individually so protection remains constant.

- Workers on ladders must retain three points of contact at all times.
- Tools and equipment must not be carried in the workers hands.
- Portable ladders must be secured from movement and extend at least 1 meter (3') above the access point.
- All work from ladders must be short duration – 15 minutes or less and allow the worker to maintain a three point contact. A work positioning system can be used to allow the use of both hands.
- Workers must not reach - the worker's center of gravity must remain between the side rails at all times.
- No work from the top 2 rungs of step ladders.
- Canadian Natural does not permit walking on tank roofs unless;
 - A manufactured or engineered walkway extends across the tank roof, or



- Engineering have confirmed the integrity of the tank roof.

Equipment Selection

All equipment selected for fall protection shall be:

- Canadian Standards Association (CSA) approved. Tags must remain legible
- Inspected prior to use by the worker using the equipment
- Inspected at least annually by a competent person as per manufacturers recommendations and legislated requirements

It is imperative that workers follow the manufacturer's guidelines in the inspection, use, care and maintenance of the specific equipment used

2.26 - Firearms

Except for individuals in Law Enforcement (Peace Officers, RCMP, SRD etc.) that carry weapons in their normal line of duty, firearms are prohibited on any Canadian Natural work site unless specifically authorized by Canadian Natural.

Some Canadian Natural worksites are in remote areas, and many are in wildlife habitat so worker safety must be considered:

- Supervisors must consider times and areas where predatory wildlife presents a potential hazard
- When carrying a firearm is considered the only effective option, it is to be used as a last resort for protection only
- When using aircraft to access remote sites, alternative arrangements must be made to ensure worker safety

When workers are authorized by a Canadian Natural supervisor to carry a firearm:

- The Canadian Natural supervisor must develop a site specific guideline / procedure to clearly identify expectations and limits
- Firearm users must provide a firearm appropriate for protection from aggressive wildlife that could be encountered. Canadian Natural will not provide firearms.
- No restricted firearms will be allowed
- Firearm users must provide proof of training appropriate to the firearm. (Canadian Firearms Safety Course)
- Firearm users must hold a Possession Acquisition License (PAL) or Possession Only License (POL)
- Firearm users are responsible to ensure firearms are transported and secured safely at all times
- If workers are not comfortable with firearms, another worker may be assigned to conduct the work, or accompany other workers for their protection

2.27 - Cranes and Hoists

A written operating and safety procedure is required at each facility with a crane. If the facility makes up their own operating procedures, reference should be made to the manufacturers operational and safety procedures.



The crane operator is responsible to be familiar with the safe operating procedure.

A log must be kept available for inspection for each crane or hoist operating at each work site.

The equipment must be visually inspected by the operator before using it.

The following information is required in the log for each crane or hoist (including date and time any related work was done):

- Inspections and tests including those listed in manufacturers specifications
- Any defects or deficiencies
- Any repairs and modifications
- Sizes and types of ropes or load chains in the hoist
- Any matter or incident that could affect the safe operation of the crane or hoist
- A record showing certification by a Professional Engineer

Inspections should include the following checks:

- Date of inspection
- All lifting equipment capacities should be compatible and be equal to or less than the super structure
- Load capacities must be clearly indicated on super structures, hoists and all lifting equipment
- Hooks and safety latches
- Ropes and chain for wear or damage
- All functions operate normally
- Upper and lower limit devices, if applicable
- Any unusual noises or rough operation
- Any obvious damage to components
- Emergency stop and the main line contactor

Preventive maintenance and safety inspections must be performed by qualified personnel and all repairs or modifications must be certified by a Professional Engineer:

- Overhead hoists must be inspected by a qualified Professional Engineer or manufacturer's representative every 2 years
- Mobile cranes must be inspected and certified by a qualified Professional Engineer or manufacturer's representative at least annually

Cranes and hoists are to be operated only by competent personnel:

- Before every lift, visually inspect all lifting equipment. Replace any damaged or worn parts. Be sure a preventive maintenance system is used on slings.



- Before attempting a lift, ensure the load does not exceed the capacity of the equipment by using a load scale indicator
- Properly hook up all loads by using good rigging techniques
- Instruct workers to watch for pinch points when holding on to hook or slings while the slack is being taken up
- Use non-conductive tag lines for controlling the load
- Ensure all hooks have properly working safety latches
- Do not lift unbalanced loads, lift loads over workers, or pull loads sideways

The following are safe practices for using slings:

- Inspect slings before use and remove any defective slings from service
- Store slings properly when not in use
- Do not use wire rope slings with kinks or knots in the wire rope
- Use non-conductive slings wherever possible
- Pad sharp corners of the load to avoid damaging the sling
- Lift loads slowly

2.28 - Electrical

Work on any electrical equipment at Canadian Natural must be conducted by qualified personnel in compliance with the Canadian Electrical Code.

Electrical panel / contents must be clearly identified.

A Hot Work Hazard Assessment must be completed before performing electrical work in any area where a hydrocarbon may be introduced. Test for combustible gas to ensure the area is gas free before any hot work is done on electrical equipment.

Power sources must be locked out and a bump test must be completed to ensure zero energy before work is started on electrical equipment.

Maintain a log of all electrical work done.

Static Electricity

Sparks resulting from the accumulation of static electricity can cause fires.

- Steam, a blast of sand, or hydrocarbons rushing through a hose or pipe or escaping from an open end of a pipe can generate a large static charge
- Ensure equipment is properly grounded to avoid the buildup of static electricity
- Do not open sample lines or drains any wider than necessary
- Use metal catch trays; plastic trays are not recommended



Cheater Cords

The use of a cheater cord is not considered routine work and all necessary precautions required for Hot Work must be followed. If fixed, continuous monitoring is not provided, LEL readings must be verified and documented before starting the job and at regular intervals (15 min) for the duration of the Hot Work.

The Hot Work Hazard Assessment must indicate that:

- When the job is completed, the connection at the explosion proof receptacle must be disconnected first and then at the standard connection to the cheater cord to prevent any chance of arcing.
- The cheater cord can only be used as laid out in the Hazard Assessment and that a change in work, area, etc. will need another assessment and permit.

Cheater cords must be stored in a manner to prevent unauthorized use.

Grounding and Bonding

All equipment, including portable electrical equipment, must be properly grounded to prevent static electricity build up.

All trucks loading or unloading hydrocarbon fluids must be properly grounded or bonded while pumping fluids.

When taking samples or transferring fluids, containers must be bonded before pouring.

Catch trays must be bonded, when possible use metal catch trays; plastic trays are not recommended.

All blowdown barrels must be properly grounded.

Limits of Approach to Power Lines

All equipment and personnel must be kept at least 7 meters (20') away from overhead power lines unless the owner of the line has been contacted to provide procedures and appropriate limits of approach. When work must be conducted within 7 meters (20') of any overhead power lines, the power Service Provider must be contacted to confirm a safe distance or disconnect the power.

2.29 - Lock Out

Whenever work is done on any equipment at Canadian Natural, it must be rendered inoperative; all residual energy must be released, and effectively prevented from any inadvertent movement or release and locked out to prevent worker injury.

Canadian Natural has a general lock out procedure and there must be specific written lock out procedures available for workers when equipment must be locked out. The specific procedures must identify every potential energy source and the most effective way to isolate and lock each point.

Energy sources to consider are not limited to but include:

- Pneumatic
- Hydraulic
- Electrical
- Mechanical



- Gravity
- Nuclear
- Gas
- Chemicals
- Any other form of energy

Each worker that performs work on the equipment must ensure that each potential energy source is isolated and install his lock at each point.

After lock out is completed according to Canadian Natural Lock Out or Job Specific procedures, and all energy is bled off, it must be tested by attempting to start the equipment to ensure all appropriate switches, valves, etc. have been shut off.

Locks can only be removed by the worker that installed them. If the equipment is shut down through a shift change or similar circumstances, the worker leaving must remove his lock and his replacement must install his lock. If a worker inadvertently leaves his lock installed and the equipment needs to be restarted, the supervisor will make every effort to contact the worker and request that he return to the job site to remove his lock. If this is not possible, the supervisor will inspect the equipment and, when satisfied that everything is safe, remove the workers lock. Disciplinary action may be taken at the discretion of the supervisor.

Group Lock Out

When there are a large number of isolation points or a large number of workers working on equipment, such as turn arounds etc. it may be more practical to consider a group lock out procedure.

In a group lock out procedure:

A qualified, designated worker (two workers in BC) isolates and locks out each potential energy source using group locks. (AB – a second qualified worker must verify). The designated worker verifies effective isolation by testing start switches etc. as applicable.

All the keys to the isolation locks are then placed in a lock box designed for this purpose.

The qualified worker(s) that installed the isolation locks on each energy source then install their personal locks on the lock box.

The designated worker must complete, sign and post a check sheet indicating which equipment is isolated and locked out.

Additional workers that are required to work on the equipment can then simply install their locks on the lock box.

Multi Lock hasps will have to be used to accommodate every worker's locks.

Vehicles / Mobile Equipment

When maintenance work must be performed on any vehicles or mobile equipment, at a minimum, the operator must remove the key from the ignition and keep it on his person at all times while he is working on the machine. A tag must be used to inform any other workers that the machine or vehicle is not to be started or moved.



Depending on the work required, other options are available and should be considered, such as disconnecting the battery cables and applying a box and lock to prevent any way for it to be reconnected before the lock is removed.

Wheel chocks must be used to prevent movement when workers are working on the machine or vehicle.

Hydraulic cylinders, gravity, and air operated equipment must be correctly blocked or all energy must be at a zero state before workers attempt to enter to work on the equipment.

2.30 - Blinding / Blanking

The most effective way to isolate a vessel or any equipment from a piping system is to disconnect a flange as close as possible to the equipment to be isolated and install a blind that is certified and correctly rated for the application.

When this method is used, a blind list may be used to identify each flange blinded or blank used.

2.31 - Double Block & Bleed

To isolate piping, or a pipeline, a double block and bleed system may be used. Each potential source of energy must be isolated by 2 valves, secured in the closed position, with a bleed valve secured in the open position between them.

2.32 - Bypassing Safety Shutdowns

Much of the equipment operating on Canadian Natural worksites is protected by safety shutdown systems that are designed to detect abnormal conditions and initiate a shut down or pressure relief before dangerous conditions develop.

Examples of safety shutdown systems include:

- Control panels with fault detection.
- High / Low pressure switch (Presco Dyne) on pumping wellheads.
- Pilot button on catalytic heater control valve.
- Drilling / Service rig crown savers.

Safety shutdowns, devices and engineering controls are in place to protect:

1. People
2. Environment
3. Equipment

Whenever a safety shut down or alarm must be bypassed for maintenance or any reason, the BU / Group Supervisor must be notified and his approval given. The Canadian Natural Bypass Shutdown Check sheet must be completed and prominently posted to inform any workers that may be affected.

Safety Shutdowns are not to be bypassed for convenience or production.



2.33 - Field Office Safety

Emergency Exits:

- Must be provided as required, marked with signs, to permit prompt escape in case of emergency
- Must be kept unobstructed and accessible at all times.

Passageways / Aisles

- Must be kept clear of obstructions or tripping hazards and not used for storage
- Doors must be installed to swing out of the passageway / aisle

Floors

- Must be kept clean, dry, and free from tripping / slipping hazards

Stairways

- Stairways must be anti-slip
- Equipped with handrails

File Cabinets and Shelves

- Must be adequate for the purpose
- May be attached to the wall, or other means to ensure stability
- Bottom shelves and drawers must be filled first
- Avoid overloading top drawers and shelves
- Interlocks must allow only one drawer to be opened at a time

Desks

- Must not block exits or passageways
- Must be appropriate and sturdy enough for intended purpose

Chairs

- Never allow anyone to climb on any office chair - use an approved ladder
- Rolling chairs must have at least 5 castors
- Repair or replace damaged chairs

Material Storage

- Do not store boxes, papers, or other materials on top of lockers or file cabinets
- Keep aisles and passageways free of obstruction
- Store all hazardous products safely - flammable products must be stored in separate, vented cabinets
- Never store combustible material near a heat source or other potential source of ignition
- Always maintain at least 18 inches of clearance from sprinkler heads

Fire Prevention

- Use only approved electrical appliances and turn off when not in use
- Remove combustible material from recycling and waste bins as per the Fire Code

Emergency Preparedness

- Floor plans or workplace maps as required, must clearly show emergency escape routes
- Conduct emergency drills on a regular basis to assess procedures and evacuation time



- Test emergency alarms regularly

Electrical Cords

- Extension cords should only be used when necessary and must not be located across walkways or aisles
- Use only industrial grade electrical cords in excellent condition
- Do not place cords on radiators, steam pipes, or other heat sources

Machine Incidents

- Always read the directions or get appropriate training before operating an unfamiliar machine
- Moving parts must be guarded - do not remove these guards
- If a machine malfunctions, unplug it and have it repaired
- Always close hand-operated paper cutters after each use and activate the guard
- Follow manufacturer's direction for maintenance, repair, or troubleshooting. Machines must be shut off or unplugged and allowed to cool.

Inspections

- Safety Inspections should be conducted monthly.

Field Office Footwear

- All personnel are encouraged to wear appropriate footwear at the discretion of the supervisor. Closed toe shoes with non-slip soles are recommended.

3 - TRAINING AND COMPETENCY

3.1 - Training

Canadian Natural recognizes the value of qualified workers and will make every effort to ensure worker competency through formal and on-the-job training. This section lists courses or training that workers may receive but this does not limit any additional training that supervisors or workers believe would benefit workers in the safe and efficient performance of their duties.

Safety Training courses are necessary to ensure workers are competent in the safety aspects of their jobs. Competent is defined as being adequately qualified, suitably trained and with sufficient experience to work safely without supervision or under the supervision of a competent worker. Operations managers and supervisors must ensure that each employee receives the required training for his job and tasks.

3.2 - Mandatory Courses for Field Positions (Canadian Natural Representative)

Conventional / Thermal:	Oil Sands:
Energy Safety Canada Common Safety Orientation (CSO)	Energy Safety Canada Common Safety Orientation (CSO)
Emergency Response Plan	Emergency Response Plan
WHMIS 2015	WHMIS 2015



TDG	H2S Alive
First Aid / CPR (with Transportation Endorsement in BC)	Elevated Work Platform (EWP)
Driver Attitude or equivalent (for workers driving company vehicles)	Fire Warden Training
Fire Fighting	Respiratory Protective Equipment (RPE)
Fall Protection	NORM Detection/Awareness
Site Supervisor Safety Training (SSST)	Gas Detection
H ₂ S Alive	Heavy Hauler / Haul Road Training
Bear / Wildlife Awareness	A & D Awareness
Confined Space Entry	Field Level Hazard Assessment (FLHA)
Ground Disturbance	Spark Watch
ATV / UTV (Quads, Side-by-sides, Snowmobiles, Argos etc.)	

3.3 - Optional Courses

Conventional / Thermal:	Oil Sands:
Other Mobile Equipment (e.g. forklift, loaders, skid steer, tractors etc.)	Rigging / Crane Training
Training for Joint Work Site Health and Safety Committee Members and Health and Safety Representatives	Training for Joint Work Site Health and Safety Committee Members and Health and Safety Representatives
Hazard Identification	Nitrogen Awareness / Training
Incident Investigation	First Aid / CPR
NORM Detection	Fall Protection
Cold Weather Survival	TDG
Food Safe	Basic Fire Extinguisher Use
Asbestos / RCF Abatement	Mine Orientation
Hydrates	



3.4 - Supervisors

Canadian Natural Site Supervisors must be trained in (minimum):

- Canadian Natural Site Supervisor Safety Training (SSST)
- Canadian Natural Successful Supervisor
- WHMIS 2015
- TDG (as applicable)
- Blow Out Prevention (as applicable)
- Detection and Control of Flammable Substances (as applicable)
- H₂S Alive (as applicable)
- Safety Management and Regulatory Awareness for Wellsite Supervision (as applicable)
- First Aid (as applicable)
- Alcohol and Drug Awareness
- Others as deemed necessary

3.5 - High Risk Critical Tasks

- Some of the work procedures may present a higher potential of risk and should be given extra care and consideration
- Workers must be trained in these high risk critical tasks through the review of written procedures.
- High risk critical tasks should be identified by supervisors who must review the task step-by-step using developed written procedures

This Canadian Natural Safety Management System and developed procedures should be used as tools to assist in training and evaluation of workers through:

- Review on a one to one basis
- At safety meetings / toolbox/ tailgate meetings
- If there is no written procedure for the task contemplated, a site specific procedure must be developed and used for training purposes

4 - HAZARD ASSESSMENTS / TASK ANALYSIS

4.1 - Management Directive

Canadian Natural, in a continued effort to provide an incident free work place, incorporates safety in to the planning and execution of every job. Every task should be well thought out in advance and broken down to basic steps. The task must be analyzed to determine what potential hazards may be involved and the appropriate precautions and practices to eliminate or mitigate the hazard.



Procedures must be developed, reviewed and followed in the performance of all tasks where there is a potential for personal injury or loss.

4.2 - Hazard Assessment / Permits

Work at Canadian Natural, as with most work and activities, presents potential hazards. With appropriate assessment and planning, all potential hazards can be eliminated or controlled so as not to present an undue risk to workers.

- Conventional / Thermal Operations use a Hazard Assessment See Appendix #1

Hazard Assessment is required for all work conducted by Service Providers.

The Hazard Assessment / Safe Work Permit is completed by a Canadian Natural representative, employee, or contract operator that is responsible to supervise the work.

If the Supervisor must leave the site, the Hazard Assessment / Safe Work Permit must be left at the worksite and the Onsite Designate will be responsible for safety at the site.

Workers conducting Hazard Assessments / Safe Work Permit will be appropriately trained including the Canadian Natural Site Supervisor Safety Training.

Hazard Assessments and Permits must be kept on file for a minimum of one year.

Hazard Assessments / Safe Work Permit:

- Identify the scope of the work to be completed
- Identify potential hazards of the work or task
- Ensure appropriate measures are taken to eliminate or control all identified hazards
- Are specific to the work to be done
- Identify the time period in which the work is to be completed
- Completed for each phase of an operation
- Are reviewed and / or redone if conditions of the work, or at the work site, change significantly
- Are reviewed with all workers who may be involved with the work to ensure they understand the hazards and the controls
- Are acknowledged by workers. (not used as a sign-in sheet)
- Identify what to do and where to go in an emergency
- Identify the On-Site Designate if Supervisor leaves

The Canadian Natural representative must include the workers involved to identify potential hazards before work commences. Each documented hazard must be considered and identified if applicable.

When a potential hazard is identified, appropriate control(s) must be documented and implemented. If additional potential hazards are identified, controls may be noted in the comments section, or on an additional page(s) which must be attached to the Hazard Assessment / Safe Work Permit.



Service Providers must also complete appropriate Hazard Assessment / Safe Work Permit and job specific procedures for specialized services being provided.

Additional Hazard Assessment / Safe Work Permit will be required for:

- Hot Work
- Confined Space Entry Hazard Assessment / Safe Work Permit
- Ground Disturbance / Backfill Report

Extended Hazard Assessments / Safe Work Permits may be issued to proven Service Providers who perform routine and repetitive work at similar work sites. If conditions at the worksite(s) change significantly or if the nature of the work performed changes, a new Hazard Assessment / Safe Work Permit must be conducted and issued. The Canadian Natural representative issuing the extended Hazard Assessment / Safe Work Permit must:

- Clearly identify all potential hazards and control measures to the Service Provider
- Clearly identify the need for the Hazard Assessment / Safe Work Permit to be in the possession of the Service Provider at the work site
- Verify that the Service Provider has their own Hazard Assessment / Safe Work Permit and job procedures at the worksite for the tasks to be done
- Ensure extended Hazard Assessments / Safe Work Permits are not used for any activity involving Hot Work, Confined Space Entry, Ground Disturbance, or pumping out any underground tanks at a battery or facility

When work procedures or peculiar circumstances require deviation from standards and guidelines outlined in this manual, appropriate written procedures must be developed in consultation with the BU / Group Safety and Compliance Coordinator, to ensure equivalent, or better, worker safety is provided.

Step-by-step written procedures are developed with consideration of the potential hazards that may be associated with the task. Controls of the hazards are identified and incorporated into all instructions, signs etc. at the worksite.

4.3 - High Risk Critical Procedure Inventory

Each BU / Group must maintain a list of tasks that have a high potential to cause personal injury or a significant loss if performed incorrectly.

A written Hazard Assessment / Procedure must be developed for each high risk / critical task on this list. Written procedures will be available for the workers conducting the tasks at their area of work. Workers that have received a high risk critical task procedure and demonstrated their understanding and competency to perform the task sign an acknowledgement with their Supervisor.

Written procedures should be reviewed as part of on the job training and at safety meetings etc. They should also be reviewed as part of any investigation that is required for high potential incidents to determine if they were used and followed and if they are adequate.



Supervisors in all areas are responsible to ensure workers under their direction review all applicable high risk critical procedures annually or, at minimum, prior to performing the task.

- In safety meetings
- During planned personal contacts
- When assigning tasks
- Employee orientation and training programs (Safety Orientation & Competency Training)
- Incident investigation
- Preparation for work observations (Worksite Safety Observation)
- Identification of health hazard
- Identification of needs for rules

4.4 - Task Analysis and Procedures for High Risk Critical Tasks

There are two basic steps to ensure a job is safe:

1. Hazard Assessments are to be conducted before tasks are performed to consider each aspect of the work with potential hazards and controls to eliminate or mitigate the hazard.
2. Job observations must be conducted by Supervisors to ensure procedures are followed. Supervisors must provide direction, take corrective action, and provide positive reinforcement as the situation warrants. Procedures can be developed or modified to improve work place practices.

When site specific procedures are developed, they must follow a hazard assessment format to identify hazards, risk ranking, and controls as well as step-by-step procedures.

4.5 - Procedures

Procedures are initially developed by workers in the field and are provided as reference for all workers to follow. When workers conduct a task procedure less frequently than once per month, they must review the procedure before conducting the work.

Canadian Natural does not conduct procedure review in a set frequency. Procedures are updated and / or enhanced if the following apply:

- New technology emerges
- Work procedures change
- Valid suggestions are received
- Regulations change
- Accepted Industry practice changes



5 - EMERGENCY PREPAREDNESS

5.1 - Emergency Response Plan

Canadian Natural maintains a Corporate Emergency Response Plan (ERP) and site-specific ERPs where applicable by regulatory requirements.

The Corporate ERP contains pertinent emergency response information such as forms, guidelines, procedures, roles and responsibilities and other general information. Site-specific ERPs contain site information (e.g. contact numbers, facility data, ERP map) for a specific facility.

ERPs may be available at applicable plant locations and BU / Group offices. An electronic version of the Corporate ERP is available on the company intranet (CiNQ).

An Emergency Response Guide, which is a condensed summary of the Corporate ERP, is provided to all field personnel for an easy and quick reference. This guide is printed in a smaller booklet format and consists of information such as field related guidelines and procedures, roles and responsibilities and the Media Statement. It may be used if the Corporate ERP manual is unavailable.

Emergency Response Sun Visor Kits are supplied to field personnel to help guide them in the initial stages of an emergency. The kits are to be kept in all vehicles and include:

- a copy of the Emergency Response Guide
- a Time / Action Log Post-It pad (yellow)
- a copy of the First Responders Guide (pamphlet)
- a copy of the Vehicle Incidents Reporting Procedure.

A corporate 24-Hour Emergency Phone List is updated and distributed regularly. These lists must be posted and kept current at locations as deemed necessary, such as at First Aid Stations, near phones and with designated personnel, such as first aid attendants.

Canadian Natural's 10 Steps for Emergency Response helps personnel manage an emergency situation from start to finish. It is a significant element of the company's Emergency Management system.

The 10 steps of an emergency:

1. Initial contact regarding problem
2. Assess situation
3. Classify emergency level
4. Activate emergency response plan
5. Define emergency planning zone
6. Decide on public protection method
7. Make external (government) notification
8. Activate personnel and equipment
9. Respond and control the emergency
10. Stand down



5.2 - Transportation of Injured Worker & Evacuation Plan

The Canadian Natural Transportation of Injured Worker & Evacuation Plan must be completed and posted before work commences at any development operation such as Pipeline or Facility Construction, Drilling and Completions, Lease or Road construction, and Seismic. It must also be posted at Plants, Camps, Batteries, and Compressor Stations that have an office. Each worker at the site must be aware of the contents of the plan and what his role may be in the event of an emergency. Appendix #2 is an example document of the TIWEP.

The plan provides an effective emergency response and meets the intent of regulatory requirements by providing the following information:

- The equipment, supplies, facilities, first aid attendants and services available
- The location of, and how to call for, first aid
- Identify the First Aid Attendant
- How the first aid attendant is to respond to a call for first aid
- The authority of the first aid attendant over the treatment of injured workers
- Who is to call for transportation for the injured worker
- The method of transportation
- Co-ordinates (Longitude, and Latitude) of location
- Driving direction to location

The plan must be posted conspicuously in suitable locations throughout the workplace and the information communicated to workers.

The first aid attendant and all other persons authorized to call for transportation for injured workers must be trained in the procedures.

6 - Incident Reporting and Investigation

6.1 - Incident Reporting

All Injuries, Equipment Damage, Spills, and Near Misses must be reported as soon as possible after the incident is controlled and the site is secured.

*To report an incident involving Harassment and Violence in the workplace contact Human Resources. Ref: CNRL-OVR-POL-HR-000018.

Canadian Natural North American Operations follow the Canadian Association of Petroleum Producers "*Health & Safety Performance Metrics Reporting Guide*" to classify and report injury statistics. The incident reporting protocol provides accurate up-to-date incident information and identifies appropriate investigation.



Incident reports ensure:

- Incidents are reported in a timely manner
- Consistent information
- Accurate reporting
- All levels of management are aware of incidents and involved in prevention
- Consistent investigation
- Accurate statistics
- Costs are captured

Examples of incidents to be reported:

- Fatality
- Lost Time (LTI) – an injury that requires the worker to miss his next scheduled shift
- Medical Aid – medical physician visit with treatment, but worker returns to work on his next shift
- First Aid – minor injury, no medical aid required, visit medical physician but no treatment
- Restricted work
- Occupational illness
- Any refusal of dangerous / unsafe work
- Fire or Explosion
- Motor Vehicle Incidents (MVI) – must be reported to police as well as the Administrative Assistant for Commercial Operations
- Damage to equipment or property (includes unexpected failure but not normal wear and tear)
- Near misses – an occurrence which, under slightly different circumstances, may have caused harm to people, the environment, property, or the public
- Spills or emissions
- Pipeline Leaks – Mandatory Reporting to applicable Provincial Oil & Gas Regulatory Authority (AER, OGC etc.)
- Theft
- Sabotage or vandalism – reported to police in jurisdiction, insurance carrier, and the Canadian Natural Coordinator for Legal Services
- Others – for example, Security violations, medical conditions, pipeline strikes.

Incidents may need to be reported to various regulatory bodies including, but not limited to:

- Alberta Boilers Safety Association or other provincial Safety Authorities
- Canadian Electrical Association
- Provincial Oil & Gas Regulators (AER, OGC, etc.)
- Provincial Occupational Health & Safety / Workers Compensation Boards
- Provincial Environment Regulators



- Canadian Nuclear Safety Commission
- Environment Canada
- Fisheries and Oceans Canada

The applicable Canadian Natural Supervisor, BU / Group Safety and Compliance Coordinator, and Safety Department Authority (i.e. Safety, Asset Integrity and Technical Safety) are responsible to ensure compliance with regulatory reporting requirements.

Incidents that must be reported to OH&S / WCB:

- Injury / incident resulting in death. (except MVI on public road)
 - Injury / incident as defined by provincial OH&S / WCB:
 - AB – results in a worker being admitted to hospital, excludes a worker being assessed in an emergency room or urgent care centre
 - BC – any serious injury (e.g. fractures, crushing, amputation, penetration, 3rd degree burns, respiratory compromise, loss of sight or hearing)
 - SK – results in being admitted to a hospital for 3 or more days
 - MB – any serious injury (e.g. fractures, concussion, amputation, 3rd degree burns, respiratory compromise, loss of sight)
 - Unplanned or uncontrolled explosion, fire, or flood that causes a serious injury or has the potential to cause a serious injury
 - Collapse, upset or failure of crane, derrick, or hoist
 - Collapse or failure of building, bridge, excavation or structure
 - Major hazardous substance release
 - Near Miss that has the potential to cause serious injury to a person
 - Any incidents required, by specific regulation, to be reported:
 - Dangerous incident involving explosive, with or without injury (BC)
 - Diving incident (BC)
 - Bursting of a grinding wheel (SK)
 - Accidental contact with a power source (SK)
- Failure of atmosphere supplying respirator (SK)

When an incident occurs:

1. As soon as practical, notify your Supervisor.
2. Notify the BU / Group Safety and Compliance Coordinator (Environmental Coordinator if applicable) immediately after notifying your Supervisor.
3. As soon as possible (within 24 hours of incident) complete an Incident Report, attach Hazard Assessment / Field Level Hazard Assessment and send to Safety Admin. Include any applicable attachments (i.e. Spill drawings, contractor reports, photos etc.).



6.2 - Incidents to be investigated:

Canadian Natural is committed to conducting thorough and timely investigations. Incidents are not investigated to place blame or define responsibility but to learn what can be changed to prevent similar instances.

The severity, or potential severity, of the incident will determine the extent of the investigation process in the following sequence. Depending on the incident, legal client privilege may be required.

1. All incidents are reported using the Incident Report:
 - Supervisors and BU / Group Safety and Compliance Coordinators provide comments and recommendations for prevention.
 - Supervisors must assist with reported incidents to recommend and initiate appropriate corrective or preventative measures. Comments regarding the incident and corrective measures must be provided within 7 days and reports returned.
 - To be communicated with other workers at Safety Meetings for prevention
 - The Supervisor of the worksite and the BU / Group Safety and Compliance Coordinator are responsible to ensure that the Canadian Natural 4 Pillars of safety were in place when the incident occurred:
 - Orientation for all workers on site
 - Canadian Natural Hazard Assessment / Field Level Hazard Assessment
 - Service Provider Hazard Assessment / Step-by-Step Procedure / JSA
 - Canadian Natural Transportation of Injured Worker and Evacuation Plan
2. Incidents classified as severity 3 and above on the Corporate Risk Matrix are typically investigated by BU / Group Safety and Compliance Coordinators using the Canadian Natural Investigation Report Form.
3. When an incident classified as a severity 3 or above on the Corporate Risk matrix is reported, additional Safety Department Authority group engagement will be determined through discussion between the Safety Manager and the relevant Safety Department Authority BU / Group managers and / or management.

In cases when it is decided that other Safety Department Authority BU / Groups (e.g. Safety, Asset Integrity and Technical Safety) are better suited to conduct the investigation, they will lead and complete the investigation using the Canadian Natural Investigation Report Form. Ref: CNQ-OVR-FM-LM-000011.

6.3 - Reason for Investigation

Investigation determines:

1. Who was involved
2. What happened
3. When it happened
4. Why it happened



5. Where it happened
6. How it will be prevented in the future

Investigations are carried out:

- To prevent reoccurrences by determining and documenting the cause of the incidents or violations
- To develop helpful information to pass on to other areas of the company
- To comply with provincial regulatory requirements
- To help settle insurance claims as quickly as possible
- To determine actual costs
- To provide accurate, detailed information and determine company liability in case of possible future legal action
- To help assess the efficiency of company operations
- To increase the focus on safety for Supervisors and workers

6.4 - Who Investigates

The BU / Group Canadian Natural Safety and Compliance Coordinator will initiate and steward investigations unless the incident is deemed to be the responsibility of another Safety Department Authority:

- The Calgary Supervisor or the BU / Group Supervisor / Foreman responsible for the site or work will attend the worksite as soon as possible to work with the BU / Group Safety and Compliance Coordinator.
- In serious cases, or as required, the BU / Group Safety Lead will assist on site.
- Members of the Joint Work Site Health and Safety Committee or Health and Safety Representative as applicable will be involved.
- Senior Management will be notified and may be involved when an incident causes a disabling injury or death, or has significant potential.
- Other Canadian Natural Safety Department Authority BU / Groups will be notified as applicable, and may assist, including:
 - Asset Integrity
 - Environment
 - Land
 - Technical Safety Engineering
 - Instrumentation / Electrical
 - Legal / Financial
 - Supply Management



- Process Safety
- Fire Prevention
- Other
- The BU / Group Safety and Compliance Coordinator will work with the appropriate Safety Department Authority BU / Group to determine and follow up when external resources are required for things like failure analysis, non-destructive testing etc.
- Some situations may require the assistance of external investigators to ensure impartiality and an objective approach. This will be determined by the Manager of Health and Safety in discussion with Senior Management.
- BU / Group Safety and Compliance Coordinators or Safety Department Authority will distribute final Investigation Reports to:
 - The appropriate Safety Department Authority Manager
 - BU / Group Supervisor / Foreman or Development Operations Superintendent
 - BU / Group Superintendent
 - Operations Manager or Development Operations Manager
 - Vice Presidents – Safety & Integrity, Production Operations, Drilling, Completions, etc. and Business Units as applicable.
 - Senior Vice President
 - BU / Group Safety Lead
 - Health and Safety Manager
 - Health and Safety Director
 - Joint Worksite Health and Safety Committee or Health and Safety Representative

For incidents involving “refusal of dangerous / unsafe work” provide a copy of the incident report to the Joint Work Site Health and Safety Committee or Health and Safety Representative. The report must not contain any personal information related to the worker who refused the dangerous / unsafe work.

6.5 - Responsibility for corrective action

Investigations will identify appropriate remedial actions and preventative measures. The supervisor most able to initiate and control recommendations will be assigned to ensure corrective measures are completed in an assigned time period.

BU / Group Safety and Compliance Coordinators and / or the Safety Department Authority representative who has completed the investigation are responsible to ensure corrective actions are completed in the time frame in the Investigation Report.



6.6 - Near Misses

A Near Miss is defined as an occurrence which, under slightly different circumstances, may have caused harm to people, the environment, property, or the public. Near misses will be given the same significance as an incident so that lessons can be learned and applied to prevent actual incidents or injuries.

Near Misses:

- Report using the Near Miss / Hazard Identification / Opportunity cards, or
- Report using the same Incident Reporting process as any other incident

Information regarding near misses must be distributed:

- As appropriate - through Newsletters, Safety Bulletins etc.
- To all BU / Groups that could have similar conditions
- Discussed at safety meetings / toolbox / tailgate meetings

6.7 - Securing the worksite

The worksite must be secured and undisturbed as much as possible in the event of an incident that may require reporting to any regulatory body (Occupational Health and Safety, Environment, Alberta Boilers Safety Association or other provincial Safety Authorities, Provincial Oil and Gas Regulators etc.):

- Stop work
- Secure the scene and leave it undisturbed except to ensure the safety of workers or others that could be affected
- Report the incident to Canadian Natural Supervisor and BU / Group Safety and Compliance Coordinator who will call regulators (WCB, OHS etc.) as required
- Take separate witness statements from workers that were involved or saw what happened
- Complete the Canadian Natural Incident Report
- Site will be released as determined by Canadian Natural BU / Group Safety and Compliance Coordinator in cooperation with regulators

6.8 - Contractors / Service Providers

Contractors and Service Providers working on Canadian Natural sites are required to follow the same reporting protocol:

1. Notify their Supervisor and the Canadian Natural Supervisor
2. Notify the BU / Group Safety & Compliance Coordinator
3. Consult with BU / Group Canadian Natural representative concerning any reporting requirements to appropriate regulatory bodies as applicable
4. Conduct their own investigation in co-operation with the Canadian Natural BU / Group Safety and Compliance Coordinator



Canadian Natural is responsible for:

- Obtaining a copy of their investigation report
- Releasing pictures or media statements
- Authorizing access to site
- Ensure external notifications are made properly

6.9 - Management Participation

In the event of an incident that requires a formal investigation as identified by the Corporate Risk Matrix of severity 3 and above. The Safety Vice President escalates the incident information to the appropriate level of Canadian Natural Senior Management who will be involved and assist in the investigation process. The applicable Vice President will review and approve the investigation report and prevention measures prior to final distribution.

Senior management demonstrates commitment to safety by contacting regulators, attending the incident scene, and getting involved to ensure appropriate preventative measures are put in place.

Investigation Reports will be discussed at Management Committee meetings. Concerns or questions will be forwarded to the applicable Health and Safety Manager for follow up.

7 – INSPECTIONS AND / OR AUDITS

7.1 - General Information

In the interest of maintaining the health, safety and welfare of workers in the workplace Canadian Natural has developed inspection programs to identify potential hazards and prevent incidents by verifying that hazard controls have been implemented and are working. There are many types of inspections, formal and informal, that can be used to meet this purpose. The key to successful inspections is a culture of continually looking for hazards.

Middle management, as part of their duties, will participate in safety inspections of various facilities at least every three months with the intention of identifying any safety concerns and demonstrating support of the health and safety program.

Formal Inspections are conducted by Supervisors, Operators, and Safety and Compliance Coordinators using applicable inspection forms to provide consistency and ensure items are not overlooked.

Informal Inspections are conducted by Supervisors, Operators, and Safety and Compliance Coordinators as part of their daily work routine. Checklists should be used as tools to remind the inspector of non-compliance or unsafe situations or conditions.

Workers have ongoing responsibilities to keep work areas safe that include:

- Watching for hazardous developing conditions in the work area
- Reporting real or potential hazards
- Continuous monitoring of equipment and parts



- Complete the appropriate forms
- Work Order Requests when maintenance or repair work is required

Planned safety inspections are to start before new jobs begin and continue throughout the job. Inspections must be documented and deficiencies noted for follow up. Safety meetings can be used to discuss inspection results.

Types of inspections include:

- Preventative maintenance
- Pre-start up
- Vehicle inspections
- Facility inspections
- Rig inspection
- Fire and safety inspections
- NORM testing

These inspections include compliance to Canadian Natural Safety Management System, Industry Standards, Federal and Provincial Regulatory Requirements.

Site Inspections should assess:

- Health and Safety hazards and potential impacts from materials handled or work carried out
- Physical layout and conditions of the site, including location, terrain, season and weather
- Condition of equipment and tools
- Work practices and behavior of people at the site (employees, contractors, service providers, and visitors)
- Level and quality of supervision given workers
- Compliance to Regulations and Legislation
- Compliance to Canadian Natural Standards, Policies and Procedures

Hazards include but are not limited to:

- Slipping and tripping hazards
- Faulty or missing emergency equipment
- Improper or missing signs
- Faulty machinery, cables, tie-downs etc.
- Equipment guarding
- Mobile equipment
- Hoisting devices



- Noise levels
- Poor housekeeping
- Atmospheric hazards present inside confined spaces
- Incorrect or missing Personal Protective Equipment
- Blocked exits
- Overhead hazards
- Electrical hazards
- Difficult terrain for vehicular or personal movement
- Improperly stored hazardous chemicals
- Lack of access to chemical safety information from SDSs
- Thermal Stress (heat stress or cold stress)
- Pathogens from animal droppings, handling sewage or untreated water etc.

Inspections of work practices and procedures should also be conducted by BU / Group supervisors to ensure workers:

- Know and follow standard work practices or procedures
- Use tools and equipment properly
- Use all devices, Personal Protective Equipment and other safety equipment properly
- Are adequately trained to perform their work properly
- Know emergency response procedures

7.2 - Drilling / Service Rig Inspections

The Site Supervisor and Rig Manager are expected to jointly complete a rig inspection using, as a minimum, a Canadian Association of Oil Well Drilling Contractors (CAODC) rig inspection form, at least once each hole or weekly, whichever occurs first. The contractor may choose to develop their own form that meets or exceeds the CAODC standard. Both the Site Supervisor and Rig Manager must sign the inspection form and ensure it is filed for future reference, if needed.

The Site Supervisor and Rig Manager are also to conduct daily walk around inspections and record their findings in the tour report.

Safety and Compliance Coordinators will conduct inspections on rigs working for Canadian Natural once a year.



7.3 - Reports

All inspection reports must be distributed to assigned personnel for review, and maintained on file in the BU / Group offices.

7.4 - Worksite Safety Observation (WSO)

The WSO is intended to provide positive reinforcement and identify opportunities for improvement of Health, Safety and Welfare through observation of people, equipment, processes and procedures while engaged in activities at Canadian Natural worksites.

Worksite Safety Observations are to be completed by Canadian Natural Representatives including:

- Canadian Natural (Employee, Contract Operator, or Consultant)

Worksite Safety Observations can be conducted on:

- Canadian Natural field operations
- Service Providers
- Consultants

Every Worksite Safety Observation, at a minimum, must identify that Canadian Natural's "Four Pillars" are in place for every worksite.

8 – PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Should engineering, administrative, and work practice controls fail, the last line of defense is Personal Protective Equipment.
- Ensure Personal Protective Equipment is adequately supplied, maintained, and properly used in all operations.
- Ensure Personal Protective Equipment requirements (standards) are in place and evaluated periodically.

To avoid or reduce personal injuries, Canadian Natural requires that all employees, contract workers and visitors use all devices and wear Personal Protective Equipment when required on a Canadian Natural work site.

Some potential hazards include:

- Fire
- Explosion
- Hazardous chemicals
- Toxic gas
- Falling or moving objects
- Loud noise
- Working at heights

Canadian Natural supplies all required Personal Protective Equipment for employees. Service Providers are to provide and maintain appropriate Personal Protective Equipment for their employees when working on a Canadian Natural work site.



Related Documents:

- Safety Footwear Policy

8.1 - Minimum Personal Protective Equipment

As a minimum, all workers on Canadian Natural field worksites are required to wear:

- Approved head protection.
- CSA approved footwear.
- Fire Resistant Clothing (FRC) (within 25 meters of a potential hydro carbon source).
- Safety Glasses with Side Shields.
- High Visibility outerwear when working around mobile equipment.
- Appropriate gloves for the task.
- Other Personal Protective Equipment for specific tasks and conditions as identified by Hazard Assessments.
- Outerwear must be appropriate for the work and should fit reasonably close to the body. All dangling objects must be removed.
- Field workers must ensure their legs are covered to the ankle and arms to the wrist.

9 – SAFETY MEETINGS

Safety meetings are an integral part of the Canadian Natural safety program.

Meetings may be used as education and communication opportunities of a general nature or of very specific issues as required. All workers on Canadian Natural sites are encouraged to remain alert and observe worksite conditions at all times. Unsafe conditions must be reported to their supervisor immediately and should be discussed at Safety Meetings.

All safety meetings should provide:

- A cooperative communication climate
- Appropriate information to workers
- An opportunity for everyone to contribute ideas or suggestions
- Continuing education and motivation

Section 1 of

9.1- PRE-JOB MEETINGS

- Pre-job meetings are typically held for contract work or service providers before a crew of any size starts work. The Canadian Natural Hazard Assessment / Safe Work Permit should be discussed to ensure every worker understands the associated potential risks and the controls that have been put in place to eliminate or mitigate them. Every worker must understand the scope of the job, any other specific procedures (JSA's), the emergency response procedures, and his role for the duration of the work.
- Minutes are typically recorded by the service provider holding the meeting and must be kept on file.



9.2- TAILGATE SAFETY MEETINGS

- Tailgate meetings are held at least daily during an ongoing job to address issues workers are likely to encounter during their duties that day. The supervisor, considering the job site circumstances, may require additional meetings as required:
- If unexpected situations arise during the course of the regular work
- When conditions of the work or site change significantly
- When new tasks are started
- Prior to beginning high risk activities or specific work
- When other services come on site
- These are short meetings usually from five to fifteen minutes long.
- Minutes must be recorded and kept on file with the service provider for recall, if required.

10- LEGISLATION AND INDUSTRY GUIDELINES & STANDARDS

The following legislative references were used in development of this Safety Plan. However, except where noted, this plan has adopted a “best practice” approach that will take the most restrictive reference in the development of specific requirements.

Field work associated with the project will take place primarily in the Northwest Territories but may also require travel through British Columbia, and/or Alberta. Canadian Natural and all contractors must comply with the applicable provincial and territorial legislation. The Occupational Health and Safety Regulation sets the minimum requirement for regulating the health and safety component of the Project. (NWT Government 2015). The well abandonment program will comply with NWT Oil and Gas act regulations. Copies of the required legislation should be made readily available to all personnel at the work site.

Legislation	Remarks
National Energy Board	<ul style="list-style-type: none"> • Regulates operational aspects of oil and gas activities in the Northwest Territories, Nunavut and offshore northern Canada
Indian and Northern Affairs	<ul style="list-style-type: none"> • Works in partnership with Northern and Aboriginal governments and people to govern the allocation of Crown lands to the private sector for oil and gas exploration and develop the regulatory environment.
NWT Government	<ul style="list-style-type: none"> • The following legislation governs workplace health and safety in the Northwest Territories and Nunavut. <ul style="list-style-type: none"> ○ The Petroleum Resources Act ○ The Oil and Gas Operations Act ○ Safety Act and Regulations ○ Mine Health and Safety Act and Regulations ○ Explosive Use Acts and Regulations ○ Summary Convictions Procedures • The Petroleum Resources Act sets the rules around how a company can get permits to explore for and produce oil on N.W.T. lands. • The Oil and Gas Operations Act regulates what happens once a company starts exploring for or producing oil and gas
OROGO	<ul style="list-style-type: none"> • OROGO is an arm’s length unit within the Department of Industry, Tourism



	<p>and Investment (ITI), operating outside of ITI's regular policy structure and separate from the Mineral and Petroleum Resources unit.</p> <ul style="list-style-type: none">• OROGO receives technical support and expertise through service agreements with the Alberta Energy Regulator and the National Energy Board.<ul style="list-style-type: none">o Oil and Gas Certificate of Fitness Regulationso Oil and Gas Drilling and Production Regulationso Oil and Gas Geophysical Operations Regulationso Oil and Gas Operations Regulationso Oil and Gas Spills and Debris Liability Regulationso Oil and Gas Diving Regulationso Oil and Gas Installations Regulations
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11- DEFINITIONS

Audit:	A comprehensive and formal examination/verification process of a system utilizing an established and recognized protocol.
Basic Causes:	The job and personal factors, such as inadequate engineering, lack of knowledge or skill, etc., from which the substandard acts and/or substandard conditions originate. Basic causes may also be referred to as underlying, root or real causes, systems defects or contributing factors. Basic causes are most frequently the result of an inadequate program, inadequate program standards, and/or inadequate compliance with standards.
BU:	Business Unit.
Codes:	Rules and standards which have been adopted, by a governmental agency or professional regulatory body, as mandatory regulations having the force and effect of law.
Controls:	(1) Physical devices to regulate a machine, apparatus or system within prescribed limits or physical standards of safety and operating effectiveness. (2) Policies/procedures and other measures to regulate systems, environments or actions.
Critical Parts:	An item or component part of machinery, equipment, material, structure or area that is likely to result in a major loss to people, property, process and/or environment when worn, damaged, abused, misused or improperly applies etc. Those critical few items part which, when worn, damaged, abused, misused or improperly applied, are more likely to result in a major loss.
Critical Task:	A specific element of work which historically has procedure and/or which possesses the potential to produce major loss (people, property or process) when not properly performed.
Disability:	Any injury or illness, temporary or permanent, which prevents a person from carrying on with his/her usual activity.
Emergency Response Plan:	(ERP) A comprehensive document to provide guidance to personnel on actions to be taken under various possible emergency conditions. Includes responsibilities of individuals and departments, organization resources available for the use, sources of aid outside the organization, general methods or procedures to follow, authority to make decisions, requirements for implementing procedures within departments, training practice of emergency procedures, communications and reports required.



Competency Training:	Training which includes classroom instruction, student testing and reference material. Certification to be issued upon passing of final examination. Those who directly supervise the bulk of the hourly and/or non-supervisory salaried employees. Typical titles are Foreman, Supervisor, Project engineers, and safety representatives.
Front Line Management:	Those who directly supervise the bulk of the hourly and / or non-supervisory salaried employees. Typical titles are Foreman, Assistant Foreman, Supervisor, Lead Hand, Shift Team Lead, Lead and Project Engineers.
Guideline:	Provide information and direction to the correct way of performing actions or duties.
Hazard:	A condition / practice with the potential danger to cause harm.
Health and Safety Representative:	Health and safety representatives promote awareness and interest in health and safety, and take on many of the roles of the joint work site health and safety committee.
Immediate Causes:	The substandard acts or conditions which directly contribute to the occurrence of an accident/incident. (also-unsafe acts or conditions)
Incident:	An event / occurrence causing harm to people, equipment, property, the environment and / or the public.
Incident Analysis:	Study of statistical information of accidents and incidents to identify trends, problems and potential problems. Analyses usually include frequency of occurrence, severity, nature of injury/damage, part of body injured, part of equipment or material damaged, agency of the accident, substandard practices and conditions, job factors and personal factors.
Inspection:	Checking or testing a component in the system to an established standard.
Injury Frequency Rate:	<p>An injury experience measurement. An injury frequency rate may also be referred to as a lost-time frequency rate, as defined by the American National Institute Z16.4 code.</p> $\frac{\text{Incidence rate of lost workdays plus lost workday cases}}{\text{Number of recordable cases X 200,000}} = \frac{\text{Exposure or employee-hours}}{\text{Exposure or employee-hours}}$
Job Orientation:	An orientation that is specific in nature and designed to orientate the employee to specific information necessary to prepare him/her for the specific job. The employee's immediate supervisor usually does these orientations.



Joint Work Site Health & Safety Committee:	(JWSHSC) A joint work site health and safety committee is a group of worker and employer representatives working together to identify and solve health and safety problems at the work site.
Middle Management:	Those between the senior managers and the front lines - titles, typically Managers or Superintendents.
Occupational Illness:	An occupational illness is any abnormal condition or disorder caused by repeated exposure to environmental factors associated with employment.
Occupational Injury:	Any injury that results from a work accident or from an exposure involving a single incident in the work environment.
Policy:	A high level overall plan embracing the general goals and acceptable procedures.
Recordable Incidents:	Recordable as regulatory requirements for reporting injuries to governmental agencies.
Procedure:	An established and defined step by step method of performing specified work.
Risk:	The degree of probability of loss. (possibility of loss or injury)
Safety Orientation:	A pre-assignment presentation to employees on the major points of the organization's policy, benefits, services, facilities, general rules and practices, and the work environment.
Senior Management:	Typical titles are Presidents, Vice President, Director or anyone reporting directly to a Vice President.
Standard:	A structured method serving as a base that has been well established and widely recognized.
Substandard Acts:	Those acts or conditions that do not meet established standards. They are frequently referred to as unsafe acts or conditions in a safety and health program.
Task:	A specific work assignment within an occupation.
Task Analysis:	The systematic review of a task to identify all loss exposures present while the task is being done.
Work Practice:	The industry expected way of performing work.



12- REFERENCES

Canadian Natural Documents:

FORMS	
CNQ-OVR-FM-LM-000107	BC RESOURCE ROAD QUADFOLD
CNRL-OVR-FM-LM-000001	BENZENE / VOC SURVEY FORM
CNQ-OVR-FM-LM-000001	CAMP INSPECTION FORM
CNQ-OVR-MTRX-PSFP-000001	CORPORATE RISK MATRIX
CNQ-OVR-FM-LM-000021	CNRL SUSPENDED WELL INSPECTION FORM
CNQ-OVR-FM-LM-000002	CONFINED AND OR RESTRICTED SPACE GUIDELINE
CNQ-OVR-FM-LM-000003	EMERGENCY SHUT DOWN (ESD) FUNCTION TEST LOG
CNQ-OVR-FM-LM-000010	FACILITY INSPECTION FORM
HZN-00-FM-LM-000190	FIELD LEVEL HAZARD ASSESSMENT
CNQ-OVR-FM-LM-000004	FIRE EXTINGUISHER INSPECTION FORM
CNQ-OVR-FM-LM-000035	FIREARM AUTHORIZATION FORM
CNQ-OVR-FM-LM-000005	FIRST AID TREATMENT RECORD SHEET
CNQ-OVR-FM-LM-000017	GROUND DISTURBANCE / PIPELINE CONSTRUCTION INSPECTION FORM
CNQ-OVR-FM-LM-000006	GROUND DISTURBANCE GUIDELINE AND PERMIT PIPELINE EXPOSURE AND BACKFILL REPORT
CNQ-OVR-FM-LM-000007	HAZARD ASSESSMENT AND GUIDELINE
CNQ-OVR-FM-LM-000125	INCIDENT REPORT FORM
CNQ-OVR-FM-LM-000011	INVESTIGATION REPORT
CNQ-OVR-FM-LM-000024	MOBILE WELDER INSPECTION FORM
CNQ-OVR-FM-LM-000037	NEAR MISS/HAZARD ID/OPPORTUNITY
CNRL-OVR-FM-LM-000005	NOISE SURVEY FORM
CNRL-OVR-FM-LM-000002	NORM SURVEY FORM
CNQ-OVR-FM-LM-000018	PROJECT KICK OFF SAFETY AND COMPLIANCE CHECKLIST
CNQ-OVR-FM-LM-000122	PUBLIC COMPLAINT FORM
CNQ-OVR-FM-LM-000121	REPORTING AND INVESTIGATING POTENTIALLY SERIOUS INCIDENTS (PSI) GUIDE FOR SAFETY LEADS
CNQ-OVR-FM-LM-000019	RIG INSPECTION FORM
CNQ-OVR-FM-LM-000020	SAFETY MEETING MINUTES
CNQ-OVR-FM-LM-000016	SAFETY ORIENTATION
CNQ-OVR-FM-LM-000119	STORAGE TANK INSPECTION MONTHLY SUMMARY
CNQ-OVR-FM-LM-000108	TRAFFIC CONTROL PLAN
CNQ-OVR-FM-LM-000117	TRANSPORTATION OF DANGEROUS GOODS - SHIPPING DOCUMENT INFORMATION
CNQ-OVR-FM-LM-000022	TRANSPORTATION OF INJURED WORKER AND EVACUATION PLAN
CNQ-OVR-FM-LM-000113	VEHICLE INCIDENT GUIDELINE
CNQ-OVR-FM-LM-000023	VEHICLE INSPECTION FORM
CNQ-OVR-FM-LM-000118	VISITOR AUTHORIZATION
CNQ-OVR-FM-LM-000027	WORKSITE SAFETY OBSERVATION



CODES OF PRACTICE	
CNQ-OVR-PRG-LM-000001	CODE OF PRACTICE ASBESTOS
CNRL-OVR-PRG-LM-000002	CODE OF PRACTICE BENZENE
CNQ-OVR-PRG-LM-000008	CODE OF PRACTICE CHEMICAL MANAGEMENT AND WHMIS 2015
TC-OVR-PRG-LM-000018	CODE OF PRACTICE CONFINED SPACE CONVENTIONAL / THERMAL
CNQ-OVR-PRG-LM-000004	CODE OF PRACTICE ENERGIZED ELECTRICAL WORK
CNQ-OVR-PRG-LM-000017	CODE OF PRACTICE ERGONOMICS & MUSCULOSKELETAL INJURY PREVENTION
CNQ-OVR-PRG-LM-000005	CODE OF PRACTICE FALL PROTECTION
CNQ-OVR-PRG-LM-000006	CODE OF PRACTICE GROUND DISTURBANCE
CNQ-OVR-PRG-LM-000007	CODE OF PRACTICE HARASSMENT AND VIOLENCE IN THE WORKPLACE
CNQ-OVR-PRG-LM-000009	CODE OF PRACTICE HYDROGEN SULFIDE (H ₂ S)
CNQ-OVR-PRG-LM-000010	CODE OF PRACTICE MERCURY
CNQ-OVR-PRG-LM-000011	CODE OF PRACTICE NATURALLY OCCURRING RADIOACTIVE MATERIAL (N.O.R.M)
CNQ-OVR-PRG-LM-000012	CODE OF PRACTICE PIPELINE PIGGING
CNQ-OVR-PRG-LM-000013	CODE OF PRACTICE REFRACTORY CERAMIC FIBERS (RCF)
CNQ-OVR-PRG-LM-000014	CODE OF PRACTICE RESPIRATORY PROTECTION
CNQ-OVR-PRG-LM-000015	CODE OF PRACTICE SILICA DUST
CNQ-OVR-PRG-LM-000016	CODE OF PRACTICE TRANSPORTING INFIELD CONDENSATE

PROCEDURES	
01	ARTIFICIAL LIFT
02	CHEMICAL INJECTION
03	COMPRESSORS AND ENGINES
05	GAS DETECTORS
06	GENERAL SAFETY
12	PIPELINES
13	CODE OF PRACTICE PIPELINE PIGGING
15	SURFACE WATER RELEASE
16	SYSTEMS
17	TANKS
19	TRUCKING
21	WELLS AND FACILITIES
22	EMERGENCY RESPONSE



APPENDIX #1 (pages 65-65):

HAZARD ASSESSMENT GUIDELINE (DIRECTIVE)

This Hazard Assessment is Canadian Natural's requirement to ensure the safety of workers on our sites and comply with WCB / OH&S regulations.

INSTRUCTION TO COMPLETE:

1. This Hazard Assessment is required for all work performed by contractors / service providers.
2. The purpose of Canadian Natural's Hazard Assessment is to:
 - Identify the work to be done,
 - Identify the hazards involved with that work, and
 - Identify the control measures to be taken to mitigate hazards and communicate to all workers involved.

NOTE:

- If a hazard is identified (i.e. checked in the "Y" column) an appropriate control must be identified.
 - This is not a checklist - write in the control to be implemented or, when several controls are identified, circle the appropriate control(s).
 - All sections must be completed.
 - If additional potential hazards are identified that are not listed on the Hazard Assessment, use the "comments" section to identify the hazard(s) and appropriate control(s).
3. The Canadian Natural Hazard Assessment must be completed by an employee, contract operator, or consultant (company representative) who has received formal Site Supervisor Safety Training.
 4. The Hazard Assessment must identify, in writing, an Alternate Onsite Designate to be in charge of safety when the supervisor is not on site. ("Alternate Onsite Designate" at bottom of Hazard Assessment)
 5. If the scope of the job, conditions or personnel change, the hazard assessment must be revised or a new Hazard Assessment completed and reviewed with all workers involved.
 6. An additional Hazard Assessment will be required for all Hot Work.
 7. The Hazard Assessment must be completed / reviewed in the presence of the contractor(s) / service provider(s).
 8. It is the responsibility of the Canadian Natural representative to verbally review the completed Hazard Assessment with all workers before they begin work at the location. Workers must sign the Hazard Assessment Acknowledgement. On a work site where a Prime Contractor is required, the Prime Contractor is advised of the names of all of the Supervisors of the workers therefore all "Designated Supervisor(s)" must insert a check in the check box beside their name in the "Service Provider Company Name" column.
 9. The Prime Contractor for the site is typically "Canadian Natural" unless Prime Contractor has been designated in writing to other person(s) at the work site).
 10. If you have any questions and / or require clarification to complete the Hazard Assessment, consult your BU / Group Safety & Compliance Coordinator.
 - Contractor(s) / Service Provider(s) must produce their Hazard Assessment / JSA's / Procedures for each task and review with all workers that will be involved prior to performing the work.



HAZARD ASSESSMENT
Emergency Phone 1 (888) 878 – 3700

Please do not modify this form or the existing wording



MISSION STATEMENT

“To develop people to work together to create value for the Company’s shareholders by doing it right with fun and integrity”

Location: _____ **Service Provider:** _____ **Date:** _____
Type of Work: Cold Work ___ Hot Work ___ Drilling ___ Pipelines ___ Seismic ___ Well Servicing ___ Construction ___
Description of Work: _____

Mark With <input checked="" type="checkbox"/> In Appropriate Column (if checked “Y” - the control must be noted)	Y	N	Mark With <input checked="" type="checkbox"/> In Appropriate Column (if checked “Y” - the control must be noted)	Y	N
Service provider(s) must have a Hazard Assessment and step-by-step Procedure / JSA for task(s) to be performed. Control: Canadian Natural Representative is responsible to ensure that Hazard Assessment will be in place and verify that step-by-step procedure(s) /JSA(s) are reviewed with applicable workers.			Will Powered Mobile Equipment be used? (i.e. loader / skidsteer / forklift / dozer / grader / backhoe / ATV / snowmobile etc.) Control: Operators must demonstrate competency / provide certification / possess a valid Provincial Driver’s License when on public roadways. Equipment over 700 kgs. must have seat belts & rollover protection.		
All workers must receive Canadian Natural Safety Orientation (Quadfold) Control: Canadian Natural Representative is responsible to verify and conduct orientation for new workers and to retain signed acknowledgements.			Will there be potential exposure to radiation? (Use of X-ray Equipment, Naturally Occurring Radioactive Material (NORM) in well or surface equipment) Control: Check area history, use appropriate detection, PPE. Ref. Code of Practice Service Provider’s JSA / Procedures, Establish safe distance with signage.		
Are you aware of any workers with allergies to foods and/or insects, or taking prescribed medication? Control: Notify supervisor / first aid attendant what or where control measures are: (i.e. epi-pen):			Will there be any Rigging required, involving the use of Slings, Cables, Ropes or Chains? Control: Confirm load rating and certification, inspect condition, safety latches on hooks etc. Rigging work must be conducted by trained workers.		
Have wind and weather conditions been considered? Control: Monitor direction of wind (dust, exhaust, trees, windsock etc.) Consider lightning / thunderstorms or other extreme conditions			Are any additional Safeguards required? (Circle all that apply) Control: Equipment guards installed / handrails & toe boards where required / barriers & fences as required / covers secured etc. Others:		
Are Equipment Certifications and/or Specifications required? Control: Service provider must confirm equipment is of sufficient size, strength & design for the proposed work.			Will Scaffolds and / or Temporary Platforms be required? Control: Equipment must be installed & tagged by a competent worker (before use & intervals not more than 21 days)		
Are there any Chemical Hazards or Harmful Substances present? Reference Provincial Regulations for exposure limits Control: Review and follow SDS. An Exposure Control Plan may be required e.g. silica (frac sand), invert mud etc. Identify chemical or substance: _____			Are appropriate Drinking Fluids, Toilet & Washing Facilities available for the # of workers? Control: Identify where: _____		
Will there be any Confined Space entry? Control: Review and follow provincial regulatory requirements and ensure confined space hazard assessment, entry permits, and procedures are completed prior to entry.			Are Power Tools, Equipment and Machinery required to perform the work at this location? Control: Ensure they are used as designed, by competent workers and operated within Manufacturer Specifications.		
Will Cranes, Hoists or Lifting Devices be used? Control: Cranes / Pickers must display an engineering certification label that is less than a year old. Operator must provide applicable certification. Note Certification or Apprentice # _____			Will Ventilation Systems be required to remove airborne contaminants (dust, smoke, fumes, gas) and maintain oxygen >19.5%? Control: Must be sufficient to ensure contaminants are kept below Occupational Exposure Limits and Oxygen above 19.5 %		
Is Emergency Preparedness & Response established and reviewed for the location? Control: Canadian Natural corporate or site specific Emergency Response Plan must be available.			Will an individual be Working Alone? Control: Ensure contractor / service provider has an appropriate working alone program in place.		
Are Entrances, Walkways, Stairways & Ladders used? Control: Inspect to ensure they are installed, adequate, secured, and free of obstruction; Use safe accesses provided and maintain 3 point contact.			Have all WHMIS & TDG requirements been met? Control: SDS’s applicable to the product used must be reviewed by the workers prior to use. Loads secure & appropriate placards displayed.		
Is Fall Protection required? Control: Individuals working above 3 meters must be trained, fall arrest equipment must be CSA approved, Fall Protection Hazard Assessment /Plan in place as required.			Will any Demolition be required? Control: Services must be disconnected & the affected areas controlled.		
Are there any potential Fire or Explosion hazards?			Will there be any diving operations?		



Control: Identify ignition sources, use continuous gas monitoring, Fire & Explosion Prevention Plan, Fire suppression provided as per Wildfire Act.		Control: Safety procedures must be prepared and reviewed at the dive site.			
Provincial First Aid requirements must be in place. Canadian Natural Transportation of Injured Worker Plan posted, Consider number of workers / distance to medical aid / First Aiders / Medic / equipment / ETV as required.		Will there be any Excavating, or Ground Disturbance? Control: Adhere to Canadian Natural Ground Disturbance Guidelines, at minimum Consider provincial 1 st . call. # _____ AB 1.800.242.3447 BC 1.800.474.6886 SK 1.866.828.4888 MB 1.800.940.3447			
General Safety Precautions identified? (Circle all that apply) Daily housekeeping / additional lighting /slips & trips / pinch points / location of eye wash stations & showers/ traffic / Drive in – Drive out/ use of signalers & spotters / BC: Drivers - Resource Road Quadfold Others / Control:		Will Explosives be required? Control: Confirm safe work procedures are in place and undertaken by a certified blaster. Blasters certification # _____			
Will there be any lifting and handling of loads? Control: When practicable, utilize equipment, tag ropes and appropriate lifting techniques for manual lifts.		Will there be any Forestry activity such as felling or bucking? Control: Workers must be competent in the use of equipment / Fallers must be certified / all workers maintain 2 tree lengths distance from fallers / chainsaw operators must have training.			
Will Lock Out and / or Isolation be required? Control: Review applicable Lockout Procedure. Equipment must be rendered inoperative & all energy sources must be isolated/locked/tagged.		Are there any Violence / Harassment/ Psychological / Biological Hazards? Control: Policies/Procedures, RPE and PPE for storage, handling and disposal of contaminated materials			
Will workers be exposed to Noise above Provincial Occupational Exposure Levels? (AB / BC / MB - 85dBA SK - 80dBA) Control: Appropriate hearing protection must be used.		Have pre-cautions been taken to ensure no other work will be done in the vicinity that could create a hazard while the job is in progress? Control: Review your hazard assessment with personnel & service providers that may be affected. Consider appropriate barriers / fences, and warning signs.			
Will any work be conducted near Overhead Power Lines? Control: Contact power service provider if within 7 meters of power lines to determine voltage / safe distances / procedures required.		Identify Canadian Natural Health & Safety Representative: Name: _____ Phone: _____			
Is additional Personal Protective Equipment required for the proposed work? (Circle all that apply) Control: Respirator / SCBA or SABA / Face Shield / Goggles / Gloves / Flotation Device / Limb & Body Protection Identify other(s): _____		Has a Maximum Operating Pressure (MOP) been identified for this job? (Note: For Hydrate Removal – Maximum 10% Pressure Differential) Control: Ensure program / instructions are followed and workers are aware of MOP Identify MOP: _____ kPa.			
Will workers be required to use respiratory protection? Control: Ensure workers are fit tested for face piece.		Designated Smoking Area? (includes Electronic Smoking devices) Control: Identify where: _____			
Prior to performing Hot Work, Atmospheric Testing must be conducted and the results recorded:					
Tester name:	Time of reading:	LEL %	H ₂ S PPM	CO %	O ₂ %
Tester name:	Time of reading:	LEL %	H ₂ S PPM	CO %	O ₂ %
Comments:					
Note: Service provider(s) agree to comply with applicable Government Regulations, Industry Recommended Practices and Canadian Natural Guidelines / Policies. Service provider(s) will identify any other hazards that may be present at the worksite and ensure that their workers understand the hazards, conditions and control measures in their Hazard Assessment.					
Assessment Issued to: (or see acknowledgement)		Signature:		Contact #:	
Issued By:		Signature:		Contact #:	
Assessment Valid From:		To:			
Alternate Onsite Designate:		Identify Muster Area:			
Prime Contractor:					



HAZARD ASSESSMENT ACKNOWLEDGEMENT

By signing this document I acknowledge that I have reviewed and understand the Canadian Natural Hazard Assessment. In addition, I will review my company's Hazard Assessment and step-by-step Procedure / JSA prior to performing the intended work.

LOCATION: _____ **DATE:** _____

SITE SUPERVISOR: _____ **CONTACT #** _____

Service Provider Company Name <i>Designated Supervisor must check the box <input type="checkbox"/></i>	Worker Name (Print)	Worker Signature	Experience in Current Position	Contact #
<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	
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<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	
<input type="checkbox"/>			Yrs.	



APPENDIX #2:



TRANSPORTATION of INJURED WORKER & EVACUATION PLAN

Please do not modify this form or the existing wording

Mission Statement: To develop people to work together to create value for the Company's shareholders by doing it right with fun and integrity

Location		Date of Plan	
Muster Area / Emergency Assembly Area		Prime Contractor	
Site Supervisor		Phone	
First Aid Attendant(s) / Contact Number(s):			
<small>NOTE: Unless care is refused - the First Aid Attendant is responsible and has full authority for all first aid treatment of the injured worker until the responsibility for treatment is accepted by a place of medical treatment or an accepted ambulance service or by a person with equal or higher first aid certification. If the first aid attendant leaves the site with the injured worker - all critical work shall cease until they return or a replacement arrives.</small>			

Service to be used at Work Location: The First Aid Attendant is responsible to determine the most appropriate method of transportation depending on severity of injury, etc. If a helicopter is the primary, or only, method of evacuation, prior arrangements must ensure an aircraft will be available during working hours. In extreme situations, STARS will be dispatched by 911 personnel.

Local Ambulance	Helicopter	On-Site ETV	Other:
Local Ambulance Phone		Response Time to Location	min.
Nearest Helicopter Phone		Response Time to Location	min.
Alternate Helicopter Phone		Response Time to Location	min.
Nearest Medical Center Phone		Response Time to Center	min.

Communication Method to Contact Emergency Services: The Site Supervisor is responsible to summon emergency services when required, however if he / she is not able to, any other person on site may do so.

Cell Phone (Number)	Two Way Radio (Freq. / Ch.)
Other:	

Information to be given to Emergency Responding Personnel:

Total Number of Workers	Weather Conditions
Legal Land Description	Site Contact Number
Latitude	Nature of Injury
Longitude	Closest Airstrip

Direction to Location:

Transport by Ground: Provide clear directions to site using specific road instructions. If possible have someone meet the ambulance at a main road to guide to location: (route in / out of the workplace and to medical treatment if required in B.C.)

Transport by Air: Provide Coordinates (Lat / Long) or Legal Land Description (LSD). Request **Stretcher Equipped Helicopter**. Ensure a landing site is cleared and identified.

Workers Covered by This Plan if additional room is required, use the back of this page, or reference the Canadian Natural Hazard Assessment / Acknowledgement.

Health & Safety Representative:	Phone:

- Ten Steps for Emergency Response:**
- | | |
|---|---|
| 1. Initial Contact Regarding Problem | 6. Decide on Public Protection Method |
| 2. Assess the Situation | 7. Make External Notifications (Government) |
| 3. Classify the Emergency Level | 8. Activate Personnel and Equipment |
| 4. Activate the Emergency Response Plan | 9. Respond and Control the Emergency |
| 5. Define the Emergency Planning Zone | 10. Stand Down |
- 24 Hour Emergency Phone**
(Conventional - 1.888.878.3700) (Horizon - 1.780.828.3000) (Albian - 1.780.713.3700)



APPENDIX#3: PROJECT SPECIFIC FACILITIES AND EQUIPMENT LIST

Project Specific Facilities and Equipment List

Well Facilities

<u>UWI Locations</u>	<u>Well Names</u>	<u>License Number</u>	<u>Facilities on site</u>
00/C-55-60.40-122.45/00	ARROWHEAD RIVER C-55	1979	Wellhead only
00/I-75-60.40-122.45/00	ARROWHEAD RIVER I-75	1981	Wellhead only
00/J-74-60.40-122.45/00	ARROWHEAD RIVER J-74	1987	Wellhead only
00/P-16-60.30-123.30/00	LIARD P-16	1976	Wellhead only
00/F-56-60.40-122.45/02	ARROWHEAD RIVER F-56	1978	Wellhead only
00/O-38-60.40-122.45/00	ARROWHEAD RIVER O-38	1983	Wellhead only
00/K-35-60.40-122.45/01	ARROWHEAD RIVER K-35	1991	Wellhead only
00/A-77-60.50-122.30/00	EMILE LAKE A-77	1964	Wellhead only
00/M-35-60.30-123.00/00	SW ARROWHEAD M-35	1989	Wellhead only
00/A-68-60.50-122.30/00	NETLA A-68	1936	Wellhead only
00/C-07-60.50-122.45/00	NETLA C-07	191	Wellhead only
00/K-77-60.50-122.30/00	NETLA K-77	1862	Wellhead only
00/P-66-60.40-123.30/00		4050	Wellhead only

Equipment List

<u>Number</u>	<u>Type</u>	<u>Size</u>	<u>Proposed Use</u>
1	Helicopter	Light equipment	Crew transportation
1	Service Rig	Heavy equipment	Well abandonment
1	Wire Line Truck	Heavy equipment	Well abandonment
1	Welding Truck	Light equipment	Well abandonment
1	Truck with flatbed trailer	Heavy equipment	Transporting tubing and wellhead
1	Grader	Heavy equipment	Recontouring wellsite
1	Temporary Camp (possible)	15 persons	Crew accommodation
2	Tracked hoe	Heavy equipment	Phase II ESA and recontouring wellsite
2	Excavators – Caterpillar 335F or equivalent (38,200kg)	Heavy equipment	Access and wellsite clearing/repair
2	Crawler tractors – Caterpillar D6 (21,400kg) or equivalent	Heavy equipment	Access and wellsite clearing/repair
1	Truck and Trailer	Heavy equipment	Hauling heavy equipment
2	Crew Truck	Light equipment	Crew transportation
2	Storage tanks	TBD	Storage of fresh water
2	6 x 6 Polaris Ranger	Light equipment	Crew transportation
6	ATVs/Snowmobiles	Light equipment	Crew transportation
4	Trash Pumps	N/A	
1	Tracked compact excavator with bucket and blade	Light equipment	Recontouring wellsite
1	Fuel truck	Heavy equipment	Refueling vehicles



APPENDIX#4: ORGANIZATIONAL ROLES

Organizational Roles for Project

