Northern Inc.

2024

Safety Manual

Revision #24

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Revision History

This section is intended to record any changes made and to implement document version control.

Revision Date	Revised By	Summary of Changes
2021-02-19	JOHSC / HR / Safety	Harassment & Workplace Violence Policy • Update to definitions, procedures, & investigations • Addition of Domestic Violence and PEI Provincial Human Rights Commission
2021-03-03	Patrick Jean	Return to Work Policy • Renamed Policy to Early Return to Work Policy
2021-03-03	Patrick Jean	Emergency Preparedness Policy First Aid Section • Update to First Aid Kits to CSA Standard
2022-03-01	Patrick Jean	Harassment & Workplace Violence Policy & Procedures • 1.3 Risk Assessments • 10.1 Training for harassment & workplace violence
2022-03-03	Patrick Jean	Emergency Preparedness Policy First Aid Section • Updated reporting and document first aid reports • Updated the First Aider is to be certified and readily available
2022-03-03	Patrick Jean	Multiple Sections • Replaced MSDS with SDS • Replaced Material Safety Data Sheet with Safety Data Sheet
2022-03-29	Patrick Jean	Fleet Safety • Replaced Employee with Driver • Added: Comply with the Nation Safety Code Hours of Service Rules. No driver shall exceed 13 hours of driving time and/or 14 hours of on-duty time in a day. Record of duty is kept to ensure hours of service limits are not exceeded. Vehicle must be repaired before allowed to be operated on a public road. **Impairment –** No driver is permitted to operate a motor vehicle when their ability and/or alertness is impaired by fatigue, illness, drugs, alcohol, or any other cause that makes it unsafe to begin or continue to drive the vehicle. **Load Securement -** cargo must be firmly secured and immobilized on or within a vehicle by structures of adequate strength, tie-downs, dunnage and dunnage bags, and shoring bars.
2022-03-29	Patrick Jean	Changed Company Logo in Header
2022-12-14	Lucette Michaud	Changed Northern Group of Companies Inc. TO Northern Inc.
2022-12-14	Lucette Michaud	Removed from the Acknowledgement – Northern Construction Inc., Northern Construction & Suppliers Ltd., Madawaska Paving Inc., Falls Construction Ltd., Maritime Road Recycling Inc., Maritime Asphalt Emulsion and Gagnon Crushing and Aggregates Ltd.
2022-12-14	Lucette Michaud	Removed Patrick Jean as HSE Lead and added Serina Mazerolle as HSE Lead in the Emergency phone numbers.

2022-12-14	Lucette Michaud	Changed the amount of kN as defined in the OH&S regulations from 17.8 kN to 22kN in Section 5.2.1 Anchors p.91
2024-01-29	Lucette Michaud	Added the Hand-Arm Vibration Code of Practice Including Appendix A, B & C
2024-01-29	Lucette Michaud	Yanic Albert, our legal advisor, updated our Harassment & Workplace Violence Policy and Procedures
2024-01-29	Lucette Michaud	Made the necessary changes to our Confined Space code of practice as per the new legislation
2024-01-29	Lucette Michaud	Our legal dept., Yanic Albert, updated our Subcontractors & trucking company policy agreement
2024-01-29	Lucette Michaud	Made the necessary updates as per legislation to our Early Return to Work Policy Statement

Acknowledgement

We the undersigned approve and adopt the Northern Construction Inc. Health and Safety Manual and all of its contents including Safe Work Practices, Job Procedures, Programs, Codes of Practice, Safety Rules, Regulations contained in this manual and the policies listed below. On behalf of Maritime Fence a division of Northern Construction Inc. and Scotian Materials Ltd.

Health and Safety Policy
Harassment and Workplace Violence Policy
Drug and Alcohol Policy
Personal Protective Equipment Policy
Training and Safety Meeting Policy
Investigation Policy
Physical Plant Policy
Safe Work Practice Policy
Sub-contractors Policy
Hazard Assessment Policy
Environmental Policy
Smoking Policy
Maintenance Program Policy
Inspections Policy
Emergency Preparedness Policy
Early Return to work Policy
Safe Job Procedure Policy

We hereby recognize this manual as our Company Health and Safety Manual by our signature below.

Executive Vice-President Date HSE Manager Date

Due Diligence Checklist

1. Do you know and understand your safety and health responsibilities?
2. Do you have definite procedures in place to identify and control hazards?
3. Have you integrated safety into all aspects of your work?
4. Do you set objectives for safety and health just as you do for quality, production, and sales?
5. Have you committed appropriate resources to safety and health?
6. Have you explained health and safety responsibilities to all employees and made sure they understand it?
7. Have employees been trained to work safely and use proper protective equipment
8. Is there a hazard reporting procedure in place that encourage employees to report all unsafe conditions and unsafe practices to their supervisors?
9. Are managers, supervisors and workers held accountable for safety and health just as they are for quality?
10. Is safety a factor when acquiring new equipment of changing process?
11. Do you keep records of your program activities and improvements?
12. Do you keep records of training each employee has received?
13. Do your records show that you take disciplinary action when an employee violates safety procedures?
14. Do you review your OHS program at least once a year and make improvements as needed?

Assignment of Responsibilities and Accountability for Safety

Manager

Establish a safety policy	Correct unsafe conditions
Provide a safe workplace	Ensure first aid is provided
Maintain a safety program	Investigate incidents
Ensure the proper training of workers	Report injuries to WCB
Ensure proper PPE is available	Ensure compliance with regulations
Ensure regular inspections are completed	Set a good example

Supervisor/Foreman

Promote safety awareness	Enforce safety rules
Establish safe work practices	Inspect for hazards
Instruct workers	Investigate all incidents
Correct unsafe practices	Ensure proper maintenance
Detect troubled employees	Comply with regulations
Correct unsafe conditions	Set a good example

Worker

Use safe work practices	Report any injury
Identify unsafe conditions	Comply with rules and regulations
Correct unsafe conditions	Make safety suggestions
Report unsafe acts	Set a good example

Employees Rights
No matter what job responsibilities you may have, all employees have the following three fundamental rights:

1. Right to know
All employees have a right to receive the training needed to do the job safely. All employees, new, transferred, or experienced, should be made aware of:

- Workplace hazards
- Safe work procedures
- Emergency procedures

If at any time you are unsure about a task on the job or are concerned about your personal safety or the safety of others, you should talk to your supervisor about receiving additional on-the-job training.

2. Right to participate
All employees have a right to participate in solving health and safety problems and in the identification and control of workplace hazards. Joint health and safety committees (JHSCs) are formed to address health and safety concerns. It is a good idea for employees to know who the workplace JHSC representatives are in case you have a question or concern related to workplace health or safety.

3. Right to refuse dangerous work
All employees have the right to refuse work they believe is dangerous to their health or safety, or to that of others. If you are unsure about your safety at work, you should take the following steps:
STEP 1
Report the safety concern to your supervisor. Fill out the Right to Refuse form. If the problem is resolved, return to work. If not, then:
STEP 2
Report the matter to the joint health and safety committee or to the safety representative. If it is still not resolved, then:
STEP 3
Call your regulating authority and explain the situation. Return to work only when the situation is no longer dangerous.

Company Health and Safety Policy

Northern Inc. is committed to ensuring that all reasonable precautions are taken to protect employees, the public, property, and the environment from any risks occurring in the execution of our business activities.

Management considers the prevention of accidents and occupational illness a moral responsibility that can best be achieved by providing safe and healthy working conditions, combined with properly maintained equipment

All Employees on company sites must ensure the safety of themselves, co-workers, the public and the environment; by working within the applicable Provincial and Federal legislation, safe work practices, job procedures and rules contained in this manual.

It is the responsibility of Management to establish, implement and maintain Health and Safety standards that meet or exceed all legislative requirements.

It is the responsibility of Supervisors and Safety Representatives to ensure that all policies, safe work practices and job procedures required performing the assigned tasks are followed.

It is the responsibility of every worker to know and follow appropriate safe workplace standards, and to apply those standards, as well as the procedures in this manual to their daily work.

Northern Inc. will ensure proper training and proper equipment will be provided to all employees.

Management commits to work in a spirit of consultation and cooperation with the workers. In that spirit, Northern Inc. will ensure that a Safety Representatives and a Joint Occupational Health and Safety Committee are selected and supported in their endeavors.

To ensure this policy continues to meet the needs of Northern Inc., Management and Employees shall review annually.

1.0 Definitions

Discrimination: an action or a decision that treats a person or a group badly for the following reasons – race, color, religion, national origin, ancestry, place of origin, age, physical disability, mental disability, marital status, family status, sexual orientation, sex, gender identity or expression, social condition or political belief or activity (hereinafter "grounds of discrimination").

Abuse of Authority: It is the exercise of authority in a manner which serves no legitimate work purpose and ought reasonably to be known to be inappropriate, may endanger an employee's job, undermine an employee`s ability to perform his duties or threatens the economic livelihood of such employee. The following are non-exhaustive examples of Abuse of authority:

- Misuse of power;
- Intimidation;
- Threats;
- Blackmail or coercion; and
- Inappropriate use of power for sexual purposes.

Harassment: in the context of employment, Harassment means any objectional or offensive behavior that is known or ought reasonably to be known to be unwelcome, including bullying or any other conduct, comment or display made on either a one-time pr repeated basis that threatens the well-being, health or safety of an employee, but does not include reasonable conduct of an employer in respect of the management and direction of employees at the place of employment. Types of harassment includes:

Personal Harassment: any objectionable or offensive behavior that is known or ought reasonably to be known to be unwelcome. This includes objectionable conduct, comment or display made on either a one-time or continuous basis that demeans, belittles, or causes personal humiliation or embarrassment. The following are non-exhaustive examples of Personal Harassment:

- Any behavior that insults;
- Threatening or intimidating someone;
- Making unwelcomed jokes or comments regarding the 16 grounds of discrimination;
- This type of Harassment may be in a form of posters, pictures, messages, graffiti, etc. It may involve touching, striking, pinching, shoving, or any unwelcomed physical and/or verbal contact.

Sexual Harassment: engage in vexatious/displeasing **comments** or **conducts** of a sexual nature that is known or ought reasonably to be known to be unwelcomed. The following are non-exhaustive examples of Sexual Harassment:

- Offensive or humiliating behavior that is related to a person`s sex;
- Behavior of a sexual nature that creates an intimidating, unwelcome, hostile, or offensive work environment; and
- Behavior of a sexual nature that could reasonably be thought to put sexual conditions on a person`s job or employment opportunities.

Mediation: is a voluntary and confidential process which is intended to assist the parties to arrive at a mutually acceptable resolution to the harassment and/or violence complaint when the internal procedures are not satisfactory.

Objective Standard: is the independent measures of legitimacy that helps the Manager, Supervisor, Human Resources or the Mediator to evaluate what is fair, reasonable or acceptable in an agreement.

Poisonous Work Environment: characterized by an activity or behavior, not necessarily directed at anyone, that creates a hostile or offensive workplace. Examples of poisoned work environment includes, but not limited to:

- Bullying;
- Graffiti;
- Sexual, racial or religious insults, jokes or comments;
- Abusive treatment of an employee; and
- Display of offensive material.

Violence in Place of Employment: the attempted or actual use of physical force against an employee, or any threatening statement or behavior that gives an employee reasonable cause to believe that physical force will be used against the employee, and includes sexual violence, intimate partner violence and domestic violence. Workplace violence includes:

- **Threatening Behavior** – such as shaking fists, destroying property, or throwing objects;
- **Verbal or written threats** – any expression of intent to inflict harm;
- **Verbal Abuse** – swearing, insults or condescending language;
- **Physical Attacks** – hitting, shoving, pushing, or kicking; and
- **Harassment**

Unwelcomed pranks, sabotaging, theft, psychological trauma, anger-related incidents, sexual assault, arson and murder are further examples of workplace violence.

Workplace violence can not only occur in traditional workplace, it can also occur at off-site business-related functions, at social events related to work, in clients homes or away from work but resulting from work functions.

Workplace: any building, structure, premise, water, or land where work is carried on by one or more employees, and includes a project site, mines, ferries, quarries, train, and any vehicle used or ought to be used by an employee.

2.0 Policy Statement

2.1 NCI is committed to developing a harassment and violence free workplace where all employees are treated with respect and dignity.

- The New Brunswick *Human Rights Act,* RSNB 2011, c.171 protects employees from harassment and the 16 grounds of discrimination that is defined under the definition of Discrimination.
- Workplace violence is any act in which a person is abused, threatened, intimidated, or assaulted in his or her employment. For examples, see the definition of Violence in Place of Employment.

2.2 Harassment and violence at NCI is 100% not tolerated. Employees who are found to have harassed or actively/indirectly participated in violence towards another individual in the context of their employment may be subject to disciplinary action. This includes any employee who: interferes with the resolution of a harassment or violence complaint; retaliates against an individual for filing a harassment or violence complaint to the employer or the *Commission of Human Rights*; or files an unfounded harassment or violence complaint intended to inflict harm.

2.3 Risk assessments of Harassment and Violence in the Workplace shall be performed by NCI on an annual basis in order to give its employees a better and safer work environment.

3.0 Application

3.1 This policy applies to all current employees of NCI, including full and part-time, casual, contracted, permanent, temporary employees, along with its sub-contractors. This policy also applies to job applicants.

3.2 This policy applies to all behavior that is in some way connected to work, including during off-site meetings, training and on business trips.

4.0 Procedures for Addressing a Harassment or Violence Complaint

4.1 The first step when being harassed is addressing the harasser and advising him that his behavior and/or actions are offending and unacceptable. If the employee does not feel comfortable in addressing the harasser, move to step 2 / or the below paragraph 4.2

4.2 Filing an Internal Complaint

- An employee may file a harassment or violence complaint by contacting their immediate Supervisor. Should the situation be grotesque or justified, the employee may file his complaint directly to its Manager and/or Human Resources;
- The Complaint may be verbal, or in writing using the HS36 Harassment & Violence Incident Report Form which is available through the employee's Manager, Supervisor or on the Shared Drive or Site Docs. If the complaint is made verbally, the details provided by the employee will be recorder onto the HS36 Harassment & Violence incident Report Form.
- The employee should be prepared to provide details (objective and subjective) in order to describe the alleged incident, such as
    - When the incident occurred, where it occurred, how often it occurred and, if applicable, who else was present.
- Complaints should be made as soon as possible. Rule of thumb would be that the employee has 1 year to report the last perceived harassment or violence incident. This time limit may be extended should the circumstances prevent the employee to file a complaint, but this is an exception to the Rule of Thumb.

4.3 Your complaint will remain confidential, and actions will be taken immediately. The alleged harasser/violator will be advised in private that a harassment and/or violence complaint has been filed and documented against him.

4.4 Every effort will be made to resolve harassment and violence complaints within 30 days. All involved individuals will be advised of the reasons why the complaint is valid or unfounded.

4.5 If either party to the harassment and/or violence complaint believes that the complaint is being mishandled accordingly to these policies, it should contact their respective Manager and Human Resources.

5.0 Investigation

5.1 The process of Investigation will begin immediately after the complaint has been filed by an employee.

5.2 During the process illustrated at paragraph 4.0, a harassment and/or violence investigation will be conducted by the Administration in order to fully understand the circumstances of the situation. In some cases, an external consultant may be engaged to fully understand the situation.

5.3 To the extent that is possible, all information will be kept confidential. The outcome of the investigation will be communicated to the complainant and the accused. The investigator(s) will document the outcome of the investigation and submit to the Manager and Human Resources.

5.4 The investigator will undertake:

- A documented interview with the complainant(s)/victim(s);
- A documented interview with the alleged offender(s);
- A documented interview with any witnesses with relevant information to provide; and
- Any other steps the investigator deems relevant to the investigation.

5.5 At the conclusion of the investigation, the Manager and/or Human Resources department will prepare a written report of the findings and provide any recommendations to prevent a recurrence. Following the investigation, the appropriate corrective measures will be determined by the Manager of the employee(s) involved or the Human Resources department.

6.0 Mediation

6.1 Wherever appropriate and possible, the parties to the harassment and or violence complaint will be offered a resolution method that is mediation prior to proceeding with a harassment and/or violence investigation.

6.2 The mediator will be a neutral person, agreed upon by all involved parties. The mediator will not be involved in investigating the complaint. Instead, the mediator will take an objective stance and will attempt to help all involved parties to come to a satisfactory resolution.

6.3 At not time will the mediator make a decision. The mediator is simply present in order to help the relevant parties achieve a resolution.

6.4 Each involved party to the mediation has the right to be accompanied and assisted during the process, by a person of his choosing.

7.0 Legitimate Complaint

7.1 If a harassment and/or violence complaint is legitimate, the Upper Management will decide what action is appropriate after considering all of the relevant evidence, sworn statements, investigations, etc.

7.2 Remedies for the complainant may include: an oral or written apology; compensation for lost wages directly related to the incident; compensation for any lost employment benefits such as sick leave and vacation, or any remedies that the Upper Management deems as justifiable.

8.0 Domestic Violence

8.1 Any employee, or knowledge of another employee experiencing violence outside of the workplace that may create risk of danger to themselves or others in the workplace is encouraged to report such violence to their Manager/Supervisor so that the necessary preventative precautions may be taken to protect all employees. In case of domestic violence, please follow paragraph 4.2 of this policy.

9.0 Other Recourses

9.1 An employee who is not satisfied with the outcome and/or process of the internal harassment or violence complaint may file a complaint with following respective *Provincial Human Rights Commissions*.

New Brunswick		Newfoundland and Labrador		Nova Scotia		Prince Edward Island	
751 Brunswick St. Fredericton NB E3B 1H8	(T): 506-453-2301 (F): 506-453-2653 (E): hrc.cdp@gnb.ca	P.O. Box 9700 St. John's, NL A1B 4J6	(T): 709-729-2709 (F): 709-729-0790 (E): humanrights@gov.nl.ca	5657 Spring Garden Road Park Lane Terrace 3rd Fl., Suite 305	(T) : 902-424-4111 (F) : 902-424-0596 (E) : hrcinquieiwa@novascotia.ca	53 Water St. PO Box 2000 Charlottetown PE C1A 7N8	(T) : 902-368-4180 (F) : 902-368-4236 (E) : contact@peihumanrights.ca

10.0 Responsibilities and Expectations

10.1 Northern Construction Inc. Is responsible for :

- Providing all employees a harassment and violence-free workplace;
- Provide training to employees on harassment and workplace violence.

10.2 Company Manager is responsible for:

- Ensuring that this policy is applied in a timely, consistent, and confidential manner;
- Determining whether allegations of harassment or violence are legitimate; and
- Determining what corrective action is appropriate where a harassment or violence complaint has been found to be legitimate.

10.3 Human Resources is responsible for:

- The administration of this policy;
- Reviewing this policy annually, or as required by legislations;
- Making the necessary adjustments to ensure that this policy meets the needs of the organization;
- Attempting to resolve the complaint internally without the implication of a mediator.

10.4 Supervisors are responsible for:

- Fostering a harassment and violence-free work environment and setting an example about appropriate workplace behavior;
- Communicating the process for filing complaint and investigating and help resolving harassment or violence complaints made by employees;
- Dealing with harassment or violence situations immediately upon becoming aware of them, whether a harassment or violence complaint has been made – being proactive;
- Taking appropriate actions during a harassment or violence investigation, including separating the parties to the harassment or violence complaint, when appropriate; and
- Ensuring harassment or violence situations are delt with in a sensitive and confidential manner.

10.5 Employees are responsible for:

- Treating others with respect in the workplace;
- Reporting harassment and/or violence to their Supervisor, Manager and/or Human Resources;
- Cooperating with a harassment and/or violence investigation and respecting the confidentiality related to the investigation process;
- Knowing and understanding NCI's harassment and violence policy and procedures.

10.6 Employees can expect:

- To be treated with respect in the workplace;
- That reported harassment and violence complaints will be dealt within a timely, confidential, and effective manner;
- To have rights to a fair process and that the confidentiality will be respected during a harassment and/or violence investigation; and to be protected against retaliation/bullying for reporting/filing a harassment and/or violence incident or cooperating with a harassment and/or violence investigation;
- To have the appropriate training on harassment and workplace violence; and
- To work in a harassment and violence-free workplace.

11.0 Privacy and Confidentiality

11.1 All parties to a harassment and/or violence complaint are expected to respect the privacy and confidentiality of all other parties involved and to limit the discussion of a harassment and/or violence complaint exclusively to those that need to know.

11.2 NCI and all individuals involved in the harassment and/or violence complaint process will comply with all requirements of the *Right to Information and Protection of Privacy Act*, SNB 2009, c. R-10.6.

12.0 Review

12.1 NCI will review this policy and procedures on an annual basis, or as required, and will make the necessary adjustments to ensure that it meets the needs of all employees.

13.0 Enquiries

13.1 Enquiries about this policy and related procedures can be made to Human Resources.

13.2 For more information, refer to:

- *Human Rights Act*, RSNB 2011, c.171 for New Brunswick;
- *Human Rights Act*, SNL 2010, c. H-13.1 for Newfoundland and Labrador;
- *Human Rights Act,* RS., c. 214 for Nova Scotia
- *Human Rights Act*, PEI., c. H-12 for Prince Edward-Island.

Sub-contractor / Truckers Policy Agreement

Please check the appropriate box if you are a Subcontractor or a Trucking Company.

☐ Subcontractor ☐ Trucking Company

Northern Construction Inc (referred as "NCI") strives to provide a safe and healthy workplace for all its employees, subcontractors, and visitors. Safety is a shared responsibility and as Subcontractors, you also have a share in that responsibility.

Subcontractors/Trucking Companies (referred as "Subcontractors") shall understand and comply with all municipal, provincial and federal laws standards and safety regulations. While on NCI's jobsites, Subcontractors shall respect NCI's policies, procedures, codes, and safety programs which are available at www.northernconstruction.ca.

NCI is to conduct their affairs with the highest legal, moral and ethical standards and embrace integrity, professionalism, respect and confidentiality. The business affairs of NCI are confidential and must not be divulged.

1) Training & Certifications

As a Subcontractor to NCI, you are responsible to ensure that your employees have the proper training, certificates and licenses for the tasks assigned. Subcontractors shall be responsible to provide First Aid supplies and designated First Aid providers to meet their workforce requirements as required by the Occupational Health and Safety Regulations.

2) Personal Protective Equipment (PPE)

PPE required for the task at hand must be worn by all workers. This includes CSA approved safety boots, hard hats, high-visibility clothing/vest, and eye protection. Subcontractors' employees will be advised to follow this policy should they not use the PPE. Should they not follow the policy and NCI's advice, then the employees will be removed from the worksite.

3) Safety Documentation

Subcontractors shall perform a site hazard assessment prior to their site start-up which shall include safe work practices and job procedures applicable to their work. Subcontractors are required to either participate and sign off on NCI's daily Field Level Risk Assessment and Weekly Toolbox meetings or conduct their own similar meetings. Should the subcontractor choose to perform his own meetings, it shall provide NCI with a copy if it's a government job. If not a government job, provide a copy right after an incident occurred.

4) Incident

All incidents (including motor vehicle collisions, injuries, property damage & near misses) must be reported to the appropriate NCI representative which would be the on-site supervisor or coordinator.

5) Environmental

Any spill **must** be reported to NCI immediately. The subcontractors will be responsible for any damages resulting from a spill or loss of any hazardous materials.

6) Drug and Alcohol Policy

Subcontractors must adhere to the requirements of our Clients' and NCI's Drug and Alcohol Policy, and any non-compliance will be met with immediate termination of all work.

7) Pre-Qualifying Certifications for Subcontractors

In order to pre-qualify, sub-contractors are required to have the following certifications (as a minimum) for each worker who will be representing NCI (you may be requested to submit proof of training):

- Valid Safety Orientation;
- Valid Workplace Hazardous Materials Information Systems (WHMIS) certificates;
- Valid WATCM Awareness if applicable (New Brunswick road operations);
- First Aid/CPR training;

Depending on the scope of work, NCI may require further documents such as:

- Fall Protection, Lockout/Tag-Out, Confined Space Entry, etc. These certifications shall be submitted to NCI for review prior to commencing work.

8) PLEASE SUBMIT TO NCI AS SOON AS THIS POLICY AGREEMENT IS SIGNED

- Your company's Safety Policy;
- Updated Clearance Letter from WorkSafe. Sub-contractors shall maintain a "good standing" with WorkSafe;
- Good Standing Certificate of Recognition (COR) or Small Employer Certificate of Recognition clearance from NBCSA);
- Certificate of Insurance inclusive of Comprehensive General Liability and Automobile Insurance of not less than $2,000,000.00. Upon demand from NCI, sub-contractors shall provide NCI with a Certificate of Insurance **naming Northern Construction Inc. & Scotian Materials Ltd. as "additional Insured"**;
- Comprehensive Hazard Assessment;
- **Please provide a copy of your safety statistics from the past 3 years** (Your industry Premium Rate, Employer's Premium Rate, Number of Fatalities, Number of Lost Time Accidents (LTA), Numbers of Days Lost, Number of Medical Aid Injuries (MA), Number of First Aid Injuries, Number of Near Miss Reported, Total Hours Worked, Total number of employees); and
- If a Trucking Company, please provide the details of the trucks (Tandem, Twin, etc) to be used and their respective plate number.

****** The Sub-Contractor / Trucking Company must provide all the above documentation to NCI before they are to start working for NCI.***

9) Subcontractors Health, Safety & Environmental Questionnaire – TO BE FILLED BY SUBCONTRACTOR

Questions	Yes	No
Does your company have a written safety program?		
Do you have a recognized safety program that has received a COR?		
Is your senior management, supervisory staff and employees aware of the contents of your safety program along with NCI's safety program?		
Does your company develop safe work procedures, standards practice for performed work?		
Does your company provide supporting processes for ensuring employee competencies?		
Does your company, including all employees, comply with the provincial OH&S and WCB regulations applicable to your company's work activities?		
Does your company ensure that management, supervisors, and employees understand their specific responsibilities for safety?		
Do your management personnel conduct routine site inspections? How often? Circle the best answer: **Daily – Weekly – Monthly – Quarterly – Annually**		
Does your company have a policy outlining the responsibilities and frequency for conducting regular inspections of equipment, work sites and employee action?		
Has a preventative maintenance program been developed and implemented for all your equipment?		
Does your company have standards for purchasing material, renting equipment, and follow appropriate engineering standards?		
Does your safety program identify work hazards for your company's work activities and are procedures to control those hazards developed? (risk/hazard assessments)		
Does your company have a process in place that allows employees to promptly submit reports of hazards, incidents, and near-misses at the worksite?		
Is a review and follow-up on all incidents conducted and are senior management involved in the process?		
Does your company have an effective incident reporting structure in place that ensures hazards are identified and either controlled or eliminated?		
Does your company conduct periodic audits to ensure effectiveness of its safety program?		
Does your company conduct routine safety meetings?		
Are minutes from these meetings kept on file and circulated to all employees? Are follow-up items addressed and captured at the next meeting?		
Are all workers involved in pre-job safety meetings and are the meeting topics & attendance documented?		
Does your company use appropriate communication methods to stress the importance of good health and safety practices?		
Does your company have an effective modified work program in place for injured workers?		
Does your employees receive a minimum training of Company Orientation, WHMIS and WATCM where applicable?		
Is your company ISO Certified?		
Is your company ISN Certified?		

10) Sub-Contract Company Acknowledgement

The preceding information is correct and accurate to the best of my knowledge. As an authorized representative of my company, I acknowledge that my company and representatives within will comply with all policies, rules and regulations applicable to our operations with NCI.

_____ _____

(Subcontractor / Trucking Company Name) *(Date)*

_____

(Signature of Authorized Signing Officer)

Early Return to Work Policy Statement

1. Purpose

The Early Return to Work (ERTW) program has been developed for an is available to all of NCI's employees. The ERTW process does not in any way jeopardize the health and safety of employees. On the contrary, the process is to return the employee to his pre-injury position inside the company, or in the alternative, find a suitable position inside the company, should his pre-injury position not be recommended by WorkSafe and health care professionals.

Safe and timely ERTW is NCI's priority and together we will all participate to make the program successful and sustainable.

2. Return to Work Policy

NCI's goal is to complete working tasks safely without injuries. Safety is of utmost priority and the responsibility of everyone in NCI's workplace(s). NCI is committed to injury prevention and will take steps to continually improve safety in its workplace(s), which means increasing its ability to identify hazards and working to control them to prevent injuries. If at any time one sees a potential hazard, report it immediately to your supervisor and they will review the hazard and follow-up with you to inform what will be done. It is also necessary to report any symptoms or pains associated with certain work tasks to your supervisor so that action can be taken to prevent possible injuries.

This Statement reflects the views of both NCI's Management and Employees and has been developed in full consultation with the Joint Occupational Health & Safety Committee. Any issues arising from the objectives contained herein will be monitored annually by management in coalition with the Joint Occupational Health & Safety Committee..

3. Return to Work Program

In the event of a workplace injury, NCI will take steps to ensure appropriate medical treatment is provided, investigate the cause of the incident, and put a plan in motion to facilitate a safe and timely return to work. It's NCI's policy to take all reasonable steps to return employees to their pre-injury position as quickly as possible.

NCI will meet its obligation to an injured employee by having the HSE Manager/HR Manager contact the employee as soon as possible following the injury in order to jointly develop an Early Return to Work (ERTW) plan. Such plan will be specific and individualised to each injured employee as it will be based on the individual needs of each. Any options identified will be assessed in accordance with the regulatory compensation authority (WorkSafe).

If an employee is clearly unable to return to their pre-injury position resulting from a work-related injury, NCI will consider inserting the employee in an alternate position inside its company in accordance with recommendations from health care professionals and WorkSafe, as well as the Human Rights legislations.

NCI state that all employees will be treated fairly during the work-injury period, but it specifically states that all work-injured employee **must** participate and cooperate in the ERTW program, as the end goal is always to place the injured employee in the same position it was, but for the work-injury.

4. Roles and Responsibilities

All Managers and Supervisors acknowledge, understands and values the importance of an injured worker returning to work via a ERTW program. Managers and Supervisors are expected to provide assistance to such employee where appropriate.

4.1. The **Employees** will be required to:

- Contact and maintain communication with the employer as soon as possible after the injury occurs;
- Assist the employer, as may be required or requested, to identify suitable and available positions inside the company;
- Accept suitable employment when identified;
- Give the employer and the Workplace Health Safety and Compensation Commission any appropriate information requested concerning the ERTW process; and
- Understand what occurs when a ERTW program is activated following a work-injury.

4.2. The **Employer** will be required to:

- Contact and maintain communication with the worker as soon as possible after the injury occurs or reported;
- Provide suitable and available employment following the injury;
- Provide employees and the Workplace Health Safety and Compensation Commission any relevant information requested regarding the employee's ERTW; and
- Provide training to Management, Supervisors and Employees about the applicability of a ERTW program, it's benefits and how to improve ERTW programs.

Roles and Responsibilities

Employee Role

- Get First Aid, if necessary
- Report the injury/incident immediately following the incident to your supervisor (before leaving the work place)
- Seek timely medical treatment and advise the doctor your were hurt on the job
- Provide a copy of the Doctor's report to your employer
- Work with employer to identify potential accommodation and develop ERTW plan
- Notify employer of any concerns with the ERTW plan
- Comply with recommendations of the treatment provider
- Provide feedback to your employer regarding your experience with ERTW

Supervisor Role

- Ensure employee gets First Aid or medical treatment if necessary
- Immediately complete and forward the proper Form to the regulatory compensation authority
- Complete an incident/accident report
- Work with employee to identify potential accommodation and develop a ERTW plan
- Inform co-workers of job modifications, restrictions and accommodations for returning employees, as appropriate
- Monitor recovery, attendance and progress of injured employees
- Report any payroll adjustments to the payroll administrator
- Notify employer of any concerns regarding ERTW plan
- Provide feedback regarding your experience with ERTW

5. Training

NCI's Health and Safety Department will provide annual training to all employee regarding the ERTW process. This training will provide the Trainee with awareness of the existence of the ERTW process while also providing them with understanding on the reason why such a program is beneficial for NCI. ERTW training will also be given to employees during their orientation when they return to work.

6. Privacy of Information

Any personal information gathered that can lead to the identification of an injured employee will be held in confidence in accordance with *privacy legislations*. Personal information will only be release if required by law or with the consent of the injured employee.

7. Review / Evaluation

This Statement is reviewed annually and may be updated or changed as required by legislation or following specific circumstances that would require changes to the Statement.

Company HSE Rules

All levels of employees, management and supervisors are subject to the Company's rules.

*Employer is not responsible for employees Motor Vehicle offence while on duty.

Cardinal Rules- Cardinal Rules are No Tolerance rules. This means that anyone who violates these rules will be suspended immediately without pay.

Cardinal Offence: Immediate suspension without pay

Cardinal Rules

- Entering a red tagged or hard barricaded area.
- Unauthorized removal of lockout tags.
- Failing to use proper fall protection when working at heights.
- Entering a confined space without authorization and training.
- Unauthorized removal or tampering with critical emergency response equipment.

Minor Offence – Minor offences use a progressive three-offence enforcement model.

*Depending upon the severity of the offence, the company may go directly to disciplinary offence 2 or 3

- First Offence: Verbal warning with witness
- Second Offence: Written warning with up to 3 days suspension without pay
- Third Offence: Termination

Minor Offences

- Fighting, horseplay, practical jokes or otherwise interfering with any other worker is prohibited.
- All unsafe acts and conditions, including near miss incidents are to be reported as soon as possible.
- All incidents that result in injury or damage are to be reported immediately.
- First-Aid treatments to be obtained promptly for all injuries.
- All work to be carried out in accordance with procedures and the supervisor's instruction.
- Only the tools & equipment that are in good repair shall be used.
- Every worker shall help keep the job-site neat, clean, and orderly.

Major Offence – Major Offences use a severe offence enforcement model due to the harm or potential harm to themselves or others.

- Major Offence: Immediate removal from site, someone will be responsible to pick up the employee. Grounds for dismissal

Major Offences

- Consuming, or possession of alcohol, or illegal drugs, or misuse of prescription drugs on company premises, or on any company job site, or in any company vehicles during or after working hours are all prohibited or any violation of the Drug and Alcohol Policy.
- Theft, vandalism or any abuse or misuse of company property is prohibited.

Non-acceptable Practices - These will result in disciplinary action being taken.

- Beginning roadwork before signing is in place according to provincially acceptable standards.
- Starting work without Job hazard assessment.
- Starting employees without proper orientation and WHMIS training.
- Not holding proper weekly tool box meeting.
- Employees not wearing proper PPE on worksites.
- Failing to have unsafe equipment repaired immediately.
- Failure to conduct Accident/Incident investigations for injury or damage to property within 1 week of incident.
- Proper floating ties and trailers are clear of any rocks or debris that may be a hazard on the road.
- Failure to use proper lockout/tag out procedures.
- All drivers and subcontractors must report to plant for orientation before starting onsite.
- Locates need to be completed before ground disturbance.
- Commencing work around water or waterways without the proper fall protection and or PPE used for water safety.
- Not maintaining a safe working distance from power lines, if required to work close to power lines contact the utility for a consultation proper to commencing work.

Employee Non-Compliance

Name of Employee / Nom de l'employé :	**Date :**
Supervisor's Name / Nom de Superviseur:	**Job # / Contract # :**

Offence to : (Check One Box / Cochez une boîte)

Company Rules ☐ Règlement de l'entreprise

Safety Rules ☐ Règlement de sécurité

This is the employee's / Ceci est la:

First Offence ☐ Première infraction **Second Offence** ☐ Deuxième infraction **Third Offence** ☐ Troisième infraction **Major Offence** ☐ majeure

(Check One Box/ Cochez une boîte)

Which is grounds for a / Qui est un motif de:

Verbal Warning ☐ Avertissement verbal **Written Warning** ☐ Avertissement écrit **Suspension** ☐ Suspension **Dismissal** ☐ Congédiement de l'employé

(Check One Box / Cochez une boîte)

Description of offence / Description de l'infraction:

Employee / Employé:	
Print	Sign
Supervisor / Superviseur:	
Print	Sign
Management / Direction	
Print	Sign

Safe Job Procedure Policy

Safe job procedures are step by step operational guides for the performance of a task or procedure. SJPs are used with the objective of minimizing the risk presented by hazards involved in specific tasks.

Northern Inc. will ensure that Safe Job Procedures (SJPs) are developed for tasks.

Northern Inc. will ensure employees are trained on applicable SJPs and follow SJPs while performing tasks and procedures.

It is the responsibility of employees to follow SJPs when performing work. Employees are to consult with their supervisor if they need further assistance understanding the task and/or SJP.

SJPs will be available on all work sites.

In the absence of an SJP *Northern Inc.* will ensure a SJP is developed immediately and reviewed prior to beginning the task.

Safe Job Procedures are to be reviewed annually by management and employees to ensure they reflect the present scope of work and are up to date with applicable legislation, regulations, standards, and industry best practices.

Safe Work Practices Policy

Safe work practices (SWPs) are general guidelines for the performance of a task, the dos and don'ts. SWPs are used with the objective of minimizing the risk presented by hazards involved in specific tasks.

Northern Inc. will ensure that SWPs are developed for tasks.

Northern Inc. employees will be trained on applicable SWPs and refer to SWPs before performing any task.

It is the responsibility of employees to review SWPs before the performance of a task. Employees are to consult with their supervisor if they need further assistance understanding the task and/or SWP.

SWPs will be available on all work sites.

In the absence of an SWP *Northern Inc.* will ensure a SWP is developed immediately and reviewed prior to beginning the task.

Safe work practices are to be reviewed annually by management and employees to ensure they reflect the present scope of work and are up to date with applicable legislation, regulations, standards, and industry best practices.

Policy

The purpose of the Incident Reporting and Investigation Policy is to make certain that incidents are investigated according to the injury, or injury potential of an event, in accordance with company policy and OH&S legislation. This will help to control further losses of human and material resources by identifying and correcting unsafe acts and conditions that lead to an incident.

This policy applies to any and all work-related incidents and near misses that affect company employees and others who are performing work for the company.

All staff and others working with the company are required to report all incidents and near misses, including ergonomic issues, soft tissue damage and any signs or symptoms of musculoskeletal (MSI) injury to their supervisor or company contact. All incidents will be reported and investigated following company and regulatory requirements.

Some incidents are immediately reportable to the regulatory authority. Incident sites should not be disturbed unless the safety of workers is at risk.

The company uses the word “incident” rather than “accident” because there is an inherent belief by many people that accidents just happen and cannot be prevented. We use the word incident because we believe that all incidents can be prevented. Belief that all incidents can be prevented will drive the level of investigation to determine causes that could otherwise be missed.

Incident reports will be reviewed by a supervisor and other management as appropriate to the severity or potential severity of the incident.

Action items from incidents will be documented and tracked for completion and follow-up using our Corrective Action Log. Implementation of action items will be monitored and reviewed by the JHSC. Safe work procedures will be reviewed by the HSE Department after an incident to ensure that changes required by the investigation findings are implemented and that they meet or exceed jurisdictional requirements.

Injuries or incidents resulting from ergonomic hazards must be investigated.

Procedure

Incident Reporting and Investigations

Northern Inc. has an obligation to make certain that all our employees, staff, contractors, sub-contractors, volunteers, and visitors are aware of the importance of and requirements for reporting and investigating near misses and other incidents. Investigations of near misses provide a learning and improvement opportunity to help prevent someone from being injured.

An investigation is held to prevent recurrence, not to place blame.

Definitions

Incident: An incident is any event that has resulted in or has the potential to result in an injury. Incidents may include property damage, personal injury, death or near misses.

The following regarding immediate notification of incidents:

An employer must immediately notify the regulatory authority of the occurrence of any accident that:

- Any accidental explosion or exposure to a biological, chemical, or physical agent, whether a person is injured
- Any catastrophic event or equipment failure that results, or could have resulted in an injury (Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation)
- Admission to a hospital facility as an in-patient
- Burns requiring medical attention beyond first aid treatment
- Fracture other than a fracture to fingers or toes
- Deep lacerations requiring medical attention beyond first aid treatment
- A loss of consciousness
- Amputation
- Loss of vision in one or both eyes
- Serious injury to or the death of a worker

An employer must immediately undertake an investigation into the cause of any incident that:

- is required to be reported to the regulatory authority.
- resulted in injury to a worker requiring medical treatment
- did not involve injury to a worker, or involved only minor injury not requiring medical treatment, but had a potential for causing serious injury to a worker
- was an incident required by regulation to be investigated.

Responsibilities

Management

A manager will investigate an incident reported by a direct report. A manager will participate in an investigation of an incident if the severity or potential severity requires action appropriate to the manager's authority. All investigations requiring immediate notification to the regulatory authority will be attended by the appropriate management personnel. Copies of investigations required by the regulatory authority will be provided by the appropriate management personnel.

Supervisor

A supervisor must advise new and returning workers of the requirement to report all incidents including near misses. An annual reminder to all employees to report incidents is recommended. A supervisor must investigate incidents in a manner that is timely and appropriate to the circumstances and severity of the incident. A supervisor's incident review and signoff are a requirement.

Worker

A worker will report to the supervisor all incidents including near misses immediately no later than the end of the shift same day. A worker will attend the incident investigation unless unable to do so as a result of injury. A worker may be required to complete a worker/witness statement. The supervisor will be responsible for completing investigation report.

Incident Reporting and Investigation Procedure:

- The incident is reported by a person to the company. The incident may be reported verbally or in writing.
- The incident site must be visited if possible and the site preserved until the investigation is complete, if safe to do so. Photographs, sketches, and other evidence collection should be undertaken promptly. Note: Incidents requiring immediate notification to the regulatory authority will require communication with the regulatory authority personnel regarding site access and preservation of evidence.
- The direct supervisor of the employee involved or the person who reported the incident will organize and lead the investigation. The investigation must be carried out by those knowledgeable about the type of work involved and, if reasonably available, with the participation of a JHSC member.
- The investigation team will include those appropriate to the severity or potential severity and type of incident. The team may include people not under the scope of this policy (for example a prime contractor representative if the incident occurred on a worksite).
- The investigation will follow the Incident Investigation format, which includes root cause analysis.
- The investigation must be held in a timely manner. A preliminary investigation may be necessary if required attendees are not able to attend due to injury or other reasons.
- Action required as the result of an investigation will be recorded using a Corrective Action Log (CAL).
- Investigation summary will be forwarded to the JHSC.

All investigations that require notification to the regulatory authority will be forwarded after review and approved by company management or as directed by the regulatory authority. An industry safety alert will be issued through the company if findings from the investigation could help others prevent injury.

Training

Managers, supervisors and JHSC members must be familiar with this policy and associated forms. Training in the investigation process and the company's specific policy and forms will be determined by company management and communicated to the JHSC.

The requirement to report and investigate near misses and other incidents will be covered during new employee orientation.

Records

Copies of incident investigations will be electronically filed and kept in a secure filing area.

Review

This policy should be reviewed at least annually, or when revision is required.

Incident investigation historical records should be reviewed annually in order to:

- confirm that action required was implemented
- determine if the action was effective in prevention of recurrence
- identify trends
- determine areas for improvement.

NORTHERN

Incident Investigation Report

Unsafe Act Unsafe Condition ☐	Near Miss ☐	Damage ☐	Injury ☐	First Aid ☐	Doctor Visit ☐	Loss Time ☐

Company Name:	Supervisor's Name:
Job # / Contract #:	Location:
Weather:	Site Conditions:
Person(s) involved:	
Was the employee new to the jobsite: ☐ Yes ☐ No	Was the employee new to the task: ☐ Yes ☐ No

Date of Occurrence: (yyyy-mm-dd)	Time of Occurrence: am / pm	Date Reported: (yyyy-mm-dd)	Time Reported: am / pm

Nature of Injury:	Body Part Injured:
Name of First Aider:	Description of Property Damaged:
Object / Equipment / Substance Causing Injury:	Asset #:
	Make:
	Model:
Source of Damage:	

Type of Incident:

☐ Struck By	☐ Contacted By	☐ Caught Between	☐ Different Level Fall	☐ Struck Against
☐ Contact With	☐ Same Level Fall	☐ Exposure to	☐ Strain / Overexertion	☐ Other (specify):

Description of Incident:

Witness(es):

Worker / Witness Statement(s) attached: ☐ Yes ☐ No

Immediate Causes:

☐ Lack of warning/Failure to warn	☐ Congestion or restricted access
☐ Operating at improper speed	☐ Poor housekeeping/disorder
☐ Using defective/improper equipment	☐ Hazardous environment: gases, dust, Smoke
☐ Using equipment improperly	☐ Mental stress
☐ Failure to use PPE Properly	☐ Poor design
☐ Improper loading	☐ Extreme temperatures
☐ Improper lifting	☐ Inadequate purchase program
☐ Improper position for task	☐ Environmental factors slippery, sun, mud, uneven terrain…
☐ Influence of alcohol/drugs suspected	☐ Excessive Wear and Tear
☐ Failure to do pre-use inspection	☐ No pre-trip walkaround
☐ Failure to follow safe work procedure	☐ Misjudged distance
☐ New employee	☐ Negligence
☐ Lack of knowledge	☐ Worker not focused
☐ Soft Terrain	☐ Failure to plan task
☐ Distraction	☐ Rushing
☐ Complacency	☐ Slips Trips and falls
☐ Other:	☐ Other:

Root Causes:	
☐ Inexperience	☐ Substandard Work Practices
☐ fatigue	☐ No Fault
☐ Unforeseen Hazard	☐ Lack of Spotter/Operator inattentive
☐ Faulty Equipment	☐ Inadequate maintenance
☐ Operator inattentive/misjudgement	☐ Driving too fast for conditions
☐ Hurrying	☐ Not using proper equipment
☐ Lack of training	☐ Lack of communication
☐ Other:	☐ Other:

Causes of incident:

Corrective Actions	By Whom	Completion Date	Completed Date

If seen by a doctor	
Name of first doctor seen:	Facility:
Date doctor seen:	

Has the Incident been communicated to the proper departments and individuals?	☐ Yes	☐ No

Incident Investigated by: Name:	Investigator's Signature:
Position:	Employee's Signature:
This Report Reviewed & Approved By: Name:	
Position:	
Date:	Signature:
HSE Review: Name:	
Position:	
Date (yyyy-mm-dd):	Signature

Worker / Witness statement

COMPANY NAME:	
NAME:	
SUPERVISOR'S NAME:	
DATE OF INCIDENT: MM DD YYYY	TIME OF INCIDENT: ☐ AM ☐ PM
DATE REPORTED:	TIME REPORTED:
WITNESSES (if any):	

Have you answered: ☐ Who? ☐ What? ☐ Where? ☐ When? ☐ Why? ☐ How?

SIGNATURE: _____ DATE: _____

SUBMITTED TO: _____ Page___ of ___

Environmental Policy

We are committed to providing a quality service in a manner that ensures a safe and healthy workplace for our employees and minimises our potential impact on the environment. We will operate in compliance with all relevant environmental legislation and we will strive to use pollution prevention and environmental best practices in all we do.

We will:

- Integrate the consideration of environmental concerns and impacts into all our decision making and activities,
- Promote environmental awareness among our employees and encourage them to work in an environmentally responsible manner,
- Train, educate and inform our employees about environmental issues that may affect their work,
- Reduce waste through re-use and recycling and by purchasing recycled, recyclable, or re-furbished products and materials where these alternatives are available, economical, and suitable,
- Promote efficient use of materials and resources throughout our facility including water, electricity, raw materials, and other resources, particularly those that are non-renewable,
- Avoid unnecessary use of hazardous materials and products, seek substitutions when feasible, and take all reasonable steps to protect human health and the environment when such materials must be used, stored, and disposed of,
- Purchase and use environmentally responsible products accordingly,
- Where required by legislation or where significant health, safety or environmental hazards exist, develop, and maintain appropriate emergency and spill response programmes,
- Communicate our environmental commitment to clients, customers and the public and encourage them to support it,
- Strive to continually improve our environmental performance and minimise the social impact and damage of activities by periodically reviewing our environmental policy in light of our current and planned future activities.
- Review this policy annually

Inspection Policy

It is the policy of Northern Inc. to maintain a program of safety inspections. The objective of this program is to control hazards at the worksite before they become a problem, and to ensure compliance with Legislation, and Company Rules.

Informal inspections shall be conducted by supervisors, on an ongoing basis in their areas of responsibility.

Workers are responsible for participating in and contributing to the inspection program.

Management or a designate, at each major project will conduct formal inspections, at least once a month.

- All crews shall conduct a workplace inspection once a month.
- Garage, Fabrication and Shop facilities shall conduct a workplace inspection once a month.
- Office facilities shall conduct a workplace inspection once every three months.

Management will review all inspections.

To ensure this policy continues to meet the needs of Northern Inc. Management shall review annually.

NORTHERN

MONTHLY JOBSITE INSPECTION CHECKLIST

Job # / Contract #: Supervisor: Date:

Client Name: Location: # of Employees

✓ Satisfactory X Requires Action NA Non-Applicable

1. Site Access
- Clean, level ground
- Adequate ramps
- Adequate stairs
- Adequate ladders

2. Protective Equipment
- Hard hats worn
- Safety vest worn
- Foot protection worn
- Fall protection worn
- Skin protection: Worn / Available
- Eye & face protection: Worn / Available
- Hearing protection: Worn / Available
- Respiratory protection: Worn / Available

3. Guardrails, Barricades
- Located where required
- Properly constructed
- Adequately secured

4. Ladders
- Secured
- Proper angle (extension ladders)
- Proper size and type
- Safe, usable condition
- Properly used
- Proper handrail and landings
- Non-slip bases

5. Fire protection
- Extinguishers where required
- Fully charged
- Adequately identified
- Master emergency plan
- Extinguisher's yearly inspection

6. Housekeeping
- Clear walkways
- Clear work areas
- Clear access and landing

7. Scaffolds
- Properly erected (all parts used)
- Properly secured
- Properly planked
- Proper guardrails, toe boards
- Proper access to platform
- Acceptable loading

8. Hygiene
- Cleanliness of facilities

9. Other Items

10. Fall protection
- CSA approved
- Properly worn
- Safe, usable condition
- Unprotected openings & edges
- Working from: Ladders
- Scaffolds
- Swing stages

11. Stairwells & Ramps
- Proper filler blocks in metal stairs
- Proper cleats on ramps
- Adequate lighting in stairwells
- Proper handrails or guardrails

12. Power tools, equipment
- General condition
- Proper guards, cords, PPE
- Lockout Tag Out Tags
- Tagging as DEFECTIVE

13. Extension cords
- General condition of casing, ends and connections

14. Gas cylinders
- Properly located
- Properly secured
- Properly moved or lifted
- Properly hooked up

15. Worker education
- WHMIS training
- New Employee Orientation
- Mentorship Program

16. First aid requirements
- Adequate number of qualified first aiders on jobsite
- First aid kits: Adequate number
- Adequate contents

17. Cranes, Hoists, ETC
- Safe setup of equipment
- Maintenance log available
- Competent operator
- Condition of slings, hardware
- Safety catches on all hooks
- Proper use of tag lines
- Proper lifting containers
- Competent signaller

18. Formwork
- Guardrails and fall-arrest system
- Design drawings kept on project
- Inspection statement by engineer or competent worker

19. Welding
- Rods & cylinders properly labelled
- SDSs readily available
- Properly secured ground cables
- Proper eye protection worn
- Proper screens and exhaust
- Gas cylinders upright and secured
- Fire extinguisher readily available

20. Elevating work platform
- Worker training
- Properly used
- Safe, usable condition
- Acceptable loading
- Manufacturer's operating manual

21. Traffic control
- Trained traffic controllers
- Properly located
- Clean, regulation sign
- Properly dressed (including vest)

22. Temporary power supply
- Properly identified
- Overhead lines flagged & secured
- Surface cables buried or protected

23. Signs & print material
- OH&S Act and regulations
- SDSs
- Warning signs
- Emergency phone list
- Report Forms (including WCB Forms)

24. Materials storage
- Properly located
- Safely piled, stacked, bundled
- Properly moved or lifted
- Properly labelled (WHMIS)

25. Trenches & excavations
- Properly sloped, where required
- Appropriate shoring used
- Excavated soil properly placed
- Proper access to trench/excavation
- Proper storage of materials in and above trench/excavation
- Rescue plan

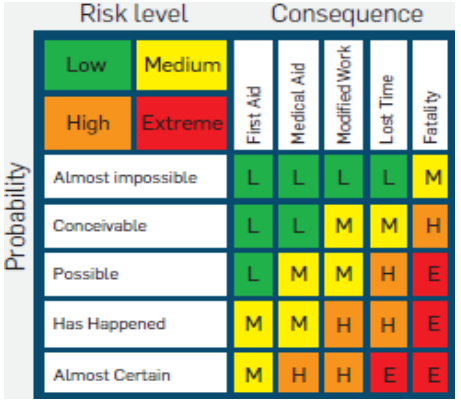
26. Confined spaces
- Proper access
- Air testing before entry
- Entry permit
- Rescue plan
- Rescue equipment readily available
- Safety harness, lifeline properly anchored, etc.
- Second person for rescue

Item #	Non-Compliance	Hazard Severity L,M,H,E	Repeat Item Yes / No	Recommended Action	Action Taken by Whom	Completion Date	Date Completed

Inspected by	Position	Signature

Manager's Review Name	Signature

Hazard Severity Ranking - Use the table to determine the severity of the non-compliance by looking at the probability and the consequence where the two lines intersect that is the hazard's severity. Example: Probability of **Possible** and the Consequence of **Medical Aid** the severity is Medium.



Safety Training Policy

Purpose

The purpose of this policy is to ensure that all employees receive adequate safety training.

Policy

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

This training will include, but not be limited to:

- New hire safety orientation;
- Job-specific training;
- Safety training for supervisors and management
- Task and trade-specific training and certification
- Specialized safety and related training.

To ensure this policy continues to meet the needs of Northern Inc., Management and Employees shall review annually.

Once a week, the employer shall have a toolbox meeting with employees.

Once a month, the employer shall schedule a health and safety meeting with management and employees.

There will be an agenda followed and minutes and attendance of the meetings kept on file.

New Employee Orientation/Orientation pour nouveau employé

Employee:		**Position:** **Poste:**	
Company:		**Trainer:** **Instructeur:**	
Topics Covered / Sujet couvert ****Please initial each completed topics**** ****Veuillez mettre vos initial pour chaque sujet complété. ****			
Company Safety Policy Politique de sécurité de l'entreprise		Company Rules Règlements de l'entreprise	
Environmental Policy Politique environnemental		Reporting Unsafe Acts/Conditions Déclaration des actes/conditions dangeureuses	
Harassment Policy Politique d'harcèlement		Reporting Incidents Déclaration d'incident	
Drug & Alcohol Policy Politique sur les drogues et l'alcool		First Aid Premiers soins	
PPE Policy Politique de EPI		JHSC & Contact Info CMHS & Informations de contact	
Fire Extinguishers Extincteurs		Emergency Numbers Numéro d'urgence	
Employee's Responsibilities Responsabilité de l'employé		WATCM Awareness Notion du GSTR	
Safe Work Practices / Job Procedures Pratiques de travail sécuritaire		Working around Mobile Equipment Travailler autour de l'équipement mobile	
Hazard Assessment Policy Politique d'évaluation des risques			

Employee Declaration/Déclaration de l'employé

I have received orientation from Northern Inc., I have read, understand and will comply with all the Company Safety Program while in the employment of or on site, shop or vehicle that is controlled by the Company. I also will comply with the Occupational Health and Safety Act, Regulations, standards and codes of practices.

J'ai reçu l'orientation de Northern Inc., j'ai lû, comprend, et respectera tous les programmes de sécurité de l'entreprise lors de mon emploi, sur un chantier, au garage ou avec un véhicule contrôlé par l'entreprise. Je respecterai aussi la santé la sécurité et la loi sur la sécurité au travail, règlements, normes et les codes de pratique.

Employee Signature: X_____ **Date:** _____

Trainer Signature: X_____ **Date:** _____

New Employee Orientation Quiz/Questionnaire d'orientation pour nouveaux employés

1. Where is the Company Health and Safety Manual Located / Où est situé le manuel de santé et sécurité de l'entreprise?

   a. Supervisor/Foreman Vehicle / Superiseur /Véhicule contremaitres
   b. Physical Locations / Emplacements Physiques
   c. All of the above / Tout ce qui précède
   d. None of the above / Aucune de ces réponses

2. Who does it apply to? / À qui s'applique-t-il?

   a. Managers / Gestionnaires
   b. Employees / Employés
   c. Supervisors/Foremen / Superviseurs / Contremaitres
   d. All of the above / Tout ce qui précède

3. What are your three legislated rights / Quels sont vos trois droits légiférés?

   a. Right to Know, Right to Work, Right to Refuse
      Droit de Savoir, Droit au Travail, Droit de Refuser
   b. Right to Eat, Right to Work, Right to Operate
      Droit de Manger, Droit au Travail, Droit d'exploiter
   c. Right to Renew, Right to Reuse, Right to Recycle
      Droit de renouveler, Droit de réutilisé, Droit de recycler
   d. Right to Know, Right to Participate, Right to Refuse
      Droit de Savoir, Droit de Participer, Droit de Refuser

4. What are Safe Work Practices / Quelles sont les pratiques sécuritaires au travail?

   a. Are a set of guidelines on how to perform a specific task that **may not** always be done in the same way and should be developed to mitigate hazards./Est un ensemble de directrives sur la façon d'effectuer une tâche spécifique qui peut ne pas toujours être fait de la même manière et devrait être développé pour réduire les dangers.
   b. Are ways to make shortcuts to do the task as fast as possible without concerns to safety./Sont des moyens de faire des raccourcis pour faire la tâche aussi vite que possible sans soucis de sécurité
   c. Is a written, specific step-by-step description of how to complete a job safely and efficiently from start to finish. It is a wayof mitigating hazards./Est une description écrite, spécifique étape par étape sur comment compléter une tâche sécuritairement et efficacement du début à la fin. C'est un moyen de diminuer les dangers.
   d. None of the above./Aucune de ces réponses.

5. What are Job Procedures / Quelles sont les procédures de travail?

   a. Are a set of guidelines on how to perform a specific task that **may not** always be done in the same way and should be developed to mitigate hazards./Est un ensemble de directrives sur la façon d'effectuer une tâche spécifique qui peut ne pas toujours être fait de la même manière et devrait être développé pour réduire les dangers.
   b. Are ways to make shortcuts to do the task as fast as possible without concerns to safety./Sont des moyens de faire des raccourcis pour faire la tâche aussi vite que possible sans soucis de sécurité.
   c. Is a written, specific step-by-step description of how to complete a job safely and efficiently from start to finish. It is a means of mitigating hazards./Est une description écrite, spécifique étape par étape sur comment compléter une tâche sécuritairement et efficacement du début à la fin. C'est un moyen de diminuer les dangers.
   d. None of the above./Aucune de ces réponses.

6. What system do you use to identify broken or defective tools / Quel système utilisez-vous pour identifier les outils cassés ou défectueux?
    a. Lock it Bag It/Verrouillez et Ensachez
    b. Lockout Tag Out/Verrouillage et Étiquetage
    c. Tag Out Blank Out /Étiquetez et Videz
    d. Blank it Test it /Videz et Testez

7. Does the company have a Joint Health and Safety Committee / Est-ce que les entreprises ont un comité de santé et sécurité commune?
☐True / Vrai ☐ False / Faux

8. Does the Employer hold monthly Health and Safety Meetings / Est-ce que l'employeur tient des réunions mensuelles de santé et sécurité?
☐ True / Vrai ☐False / Faux

9. Are the results communicated to employees / Est-ce que les résultats sont communiqués aux employés?
☐ True / Vrai ☐ False / Faux

10. Is there a process to assess hazards to ensure your safety? / Existe-t-il un processus d'évaluation des dangers pour assurer votre sécurité?
☐ True / Vrai ☐ False / Faux

11. How does Hazard Assessments apply to you? / Comment est-ce qu'identifier les dangers sur le site s'applique à vous?

12. Name 3 Company Rules that you have learned. / Nommez 3 règles d'entreprise que vous avez apprises.

13. What Happens when somebody commits an offense to the Company rules (policies)? / Que se passe-t-il lorsque quelqu'un enfreint les règles (politiques) de l'entreprise?

14. How are you made aware of the PPE requirements / Comment êtes-vous mis au courant des exigences du EPP?

15. What happens to broken or defective tools / Qu'est-ce qui arrive à les outils cassés ou défectueux?

16. What is the process for reporting an incident / Quelles sont les procédures pour signaler un incident?

Supervisors training New Brunswick

Hired after the training season.

Compulsory Courses

- Company Orientation
- NBCSA WHMIS Online
- NBCSA Safety Orientation
- Leadership (Short)
- Safety Documentation

Year one

Compulsory Courses

- Company Orientation
- NBCSA WHMIS Online
- NBCSA Safety Orientation
- Safety Documentation
- Return to Work Orientation

Supervisory Courses

- NBCSA Hazard Identification and Control
- NBCSA Accident/Incident Investigation
- NBCSA Leadership for Safety Excellence
- Leadership (Full)
- Workplace Standard First Aid + Level C with AED

Task Oriented Courses

- Task related
- Task related
- Task related

Year two

Supervisory Courses

Principles of Loss Control

- NBCSA Principles of Loss Control Audit
- Safety Culture
- NBCSA WHMIS Supervisor
- First Aid Refresher

Task Oriented Courses

- Task Related
- Task related
- Task related

Year three

Supervisory Courses

- Construction Safety Administrator
- Time Management
- Behavioral Safety
- Reasonable Suspicion
- First Aid Refresher

Task Oriented Courses

- Task Related
- Task Related
- Task Related

Supervisor training Nova Scotia

Completed	Hired after the training season.	Duration	Cost	Completed	Year two	Duration	Cost
	Compulsory Courses				Supervisory Courses		
	• Company Orientation				Principles of Loss Control		
	• CSNS WHMIS Online				• CSNS Principles of Loss Control Audit		
	• CSNS Safety Orientation				• Safety Culture		
	• Leadership (Short)				• CSNS WHMIS Supervisor		
	• Safety Documentation				• First Aid Refresher		
					Task Oriented Courses		
	Year one				• Task related:		
	Compulsory Courses				• Task related:		
	• Company Orientation				• Task related:		
	• CSNS WHMIS Online						
	• CSNS Safety Orientation				**Year three**		
	• Safety Documentation				Supervisory Courses		
	• Return to Work Orientation				• Construction Safety Administrator		
	Supervisory Courses				• Time Management		
	• CSNS Hazard Identification and Control				• Behavioral Safety		
	• CSNS Accident/Incident Investigation				• Reasonable Suspicion		
	• CSNS Leadership for Safety Excellence				• First Aid Refresher		
	• Leadership (Full)				Task Oriented Courses		
	• Workplace Standard First Aid + Level C with AED				• Task related:		
	Task Oriented Courses				• Task related:		
	• Task related:				• Task related:		
	• Task related:						
	• Task related:						

MENTORSHIP/EVALUATION-FORM

Mentorat / Formulaire d'évaluation

Name / Nom:	Position / Poste:	Date of Evaluation/Date d'Évaluation :

- Introduce new employee to your team and what is expected from everyone/Présentez le nouvel employé à votre équipe et ce qu'on attend de chacun
- Overall jobsite Review/Examen global du chantier
- Make sure to go over the following with new employee when he first gets to jobsite/Assurez-vous d'examiner les points suivants avec le nouvel employé dès son arrive sur le lieu de travail.
- Training observation should be completed no later than the first month at current position/L'observation de la formation doit être terminée au plus tard le premier mois à la position actuelle

☐	Safe Work Practices Pratiques de travail sécuritaire	☐	Injury reporting Déclaration des blessures	☐	OH&S Regs/Safety & SDS Manuals Loi sur l'hygiène et la sécurité au travail/Manuels de Sécurité et FDS
☐	Safe Job Procedures Procédures de Travail Sécuritaire	☐	Emergency Plan Plan d'urgence	☐	Job Hazards Danger sur le chantier sécuritaire
☐	First Aid Kit Locations Trousse de Premiers Soins	☐	Fire Extinguishers Extincteurs	☐	JHA/FLRA/Tool Box
☐	Tool & Equipment Training Formation en outillage et équipement	☐	First Aider Onsite Secouriste sur Site	☐	Code of Practices Code de Pratiques

Safe Work Procedures/Job Procedures covered/Pratiques de Travail Sécuritaires et Procédures de Travail Sécuritaires couvertes:

Training Information / Information sur la formation:

(Attach any additional notes, documentation or literature / Attaché toute autre notes, documentation, ou littératures)	
☐	Worker Shown by Trainer above topic / Instructeur a démontré au travailleur le sujet ci-haut
☐	Trainer observed Worker perform duty / Instructeur à observé le travailleur effectuer la tâche
☐	Positive Feedback and Constructive Criticism Provided below/ Rétroaction positive et critique constructive fourni
☐	Trainer observed worker perform duty independently and competently / Instructeur observe que le travailleur effectue la tâche indépendamment et avec compétence
☐	Employee needs to improve on/L'employé doit améliorer:
☐	Employee is competent at/Employé est compétent à:
Worker / Employé:	
Trainer / Instructeur:	
Supervisor/Superviseur:	
Next employee's review/Prochaine observation de l'employé:	

Tool Box Meeting
Réunion boîte d'outils

Job Number / Contract Number :	Site Location / Chantier:	Date:	Time / Heure:
Meeting Conducted by / Menée par:	Supervisor / Superviseur:	Client Name / Nom du client:	

Safety Share / Dialogue de sécurité:

Topic –SWP-JP-OH&S / Sujet – (SWP) – Loi sur l'hygiène et la sécurité au travail:

Job Hazard Review / Revisions des dangers sur le chantier:

New Business / Nouvelles affaires:

Unfinished Business / Anciennes affaires:

Suggestions:

Attendees(Print and Sign) / Participant (Imprimer et signer)

Management Review / Révision de la direction: **Date :**

Maintenance Program Policy

All tools, equipment, vehicles, and facilities shall be properly maintained so as to reduce risk of injuries to employees or damage to property. Employees are required to inspect all tools and equipment every day prior to use for any defects or excessive wear. Attention is to be paid to electrical components and cords for short circuits, cuts, and abrasions.

Tools and equipment will be inventoried, inspected, and approved or rejected on a regular basis depending upon the type of tool or equipment, and under what conditions they are used.

Any tool found not passing inspection is to be tagged out immediately and taken out of service.

- Ladders shall have an annually inspection conducted and documented. Ladders shall be tagged for identification.

Northern Inc. shall ensure that qualified personnel according to established schedules carry out all maintenance and those records of this maintenance are maintained.

To ensure this policy continues to meet the needs of Northern Inc., Management and Employees shall review annually.

Personal Protective Equipment Policy

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

- All employees, guests and visitors must wear CSA Grade 1 safety boots, long trousers, approved hard hats, and any other specialty PPE required for the job site.
- The company will supply necessary PPEs (safety vest, hard hat, safety glasses, rain suit, fall protection) to do the job, except for safety boots which are not paid by the company.
- All PPE used by this company will be maintained in accordance with manufacturer's instructions and requirements.
- All PPE that is of questionable reliability, damaged, or in need of service or repair will be removed from service immediately.
- All PPE that has been removed from service will be DESTROYED IMMEDIATELY.
- The company will maintain appropriate inspection and service logs for specialty PPE.
- No piece of PPE will be modified or changed contrary to manufacturer's instructions, specifications or the New Brunswick Occupational Health and Safety Act.
- To ensure this policy continues to meet the needs of Northern Inc., Management and Employees shall review annually

Personal Protective Equipment (PPE) "Info" Sheets
Foot Protection
General Information

Safety footwear is designed to protect against foot hazards in the workplace. Safety footwear protects compression, puncture injuries, and impact.

Safety footwear is divided into three grades which are indicated by coloured tags and symbols.

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

The symbol indicates the strength of the sole. For example, a triangle means puncture-resistant sole able to withstand 135kg (300ft.lbs.) of pressure without being punctured by a 5cm (2 inch) nail.

In construction, only the green triangle grade of footwear, which also gives ankle support, be used.

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

Do

- Choose footwear according to job hazard and CSA Standards
- Lace up boot and tie laces securely, boots do not protect if they are a tripping hazard or fall off
- Use a protective boot dressing to help the boot last longer and to provide greater water resistance. (Wet boots conduct current)
- Choose a high cut boot to provide ankle support (less injuries.)

Do not

- Wear defective safety footwear (i.e. exposed steel toe caps)
- Under protect your feet or modify safety footwear.

Personal Protective Equipment (PPE) "Info" Sheets

Limb and Body Protection

General Information

Due to the nature of the construction workplace and the number of different hazards, it is not possible to cover specialized limb and body protection in detail. These types of hazards are known as "job exposures" (exposure to fire, temperature extremes, body impacts, corrosives, molten metals, cuts from sharp or abrasive materials). PPE in the category would be items such as:

- Leg, arm, chin, and belly guards
- Specialty hand pads and grips
- Leather aprons and leggings
- Full body suits
- Flame and chemical resistant clothing
- Various types of plastic boot covers, and overshoes

For more information on the type of speciality PPE you require, check your local department of labour office. With all PPE, following the manufacturer's instructions on its use, care and cleaning is critical and will help you get the full-service life from your specialty PPE.

Hand PPE (Gloves and Mitts)

PPE for the hands include finger guards, thimbles and cots, hand pads, mitts, gloves, and barrier creams. Choose hand PPE that will protect against chemicals, scrape, abrasions, heat and cold, punctures and electrical shocks.

Types

PPE for the hands come in many forms, each designed to protect against certain hazards. Gloves most commonly used in the construction industry are made from leather, cotton, rubber, synthetic rubbers and other man-made materials, or combinations of materials.

Vinyl coated or leather gloves are good for providing protection while handling wood or metal objects. When you select hand PPE, keep the following in mind:

look for anything at the job-site that may be a hazard to the hands. If gloves are to be used, select the proper type for the job to be done. Inspect and maintain hand PPE regularly. If in doubt about the selection or need for glove or hand PPE, consult your safety supplier or Safety Data Sheet (SDS)

Do

- Inspect hand PPE for defects before use
- Wash all chemicals and fluids off gloves before removing them
- Ensure that gloves fit properly
- Use the proper hand PPE for the job
- Follow manufacturer's instructions on the care and use of the hand PPE you are using
- Ensure exposed skin is covered (no gap between the sleeve and the hand PPE)

Do not

- Wear gloves when working with moving machinery (gloves can get tangled or caught)
- Wear hand PPE with metal parts near electrical equipment
- Use gloves or hand protection that is worn out or defective

Personal Protective Equipment (PPE) "Info" Sheets

Respiratory Protection

General Information

Respiratory protection falls into two major categories. The first is Air Purifying Respirators (APRs) which are particle (dust) chemical cartridge but no visor plate. The second category is Atmosphere Supply Respirators, including self-contained breathing apparatus (SCBA), air line systems and protective suits that completely enclose the worker and incorporate a life support system.

Only APRs will be dealt with here. The second category of respirators requires much more specific information and training. If you need to use Atmosphere Supplying Respirators, you should get expert advice.

APRs

There are two basic types of APRs:

- Disposable fibre type with or without charcoal or chemical filter "buttons"
- The reusable rubber face mask type with disposable or rechargeable cartridges

The choice depends on your job, labour, cost, and your maintenance facility.

It is important to remember that APRs are limited to areas where there is enough oxygen to support life. APRs do not supply or make oxygen.

The service life is affected by the type of APR, wearer breathing demand, and the concentration of airborne contaminants. When an APR is required, consult the Safety Data Sheet (SDS) or supplier for the exact specifications for the APR.

Facial hair can prevent a good seal and fit of an APR: One to three days growth is the worst. Follow the manufacturer's instructions to the letter regarding the mask, filters, cartridges, and other components. Workers who must use respiratory protection should be clean shaven.

An APR is only as good as its seal and its ability to filter out the contaminants it was designed to filter.

Combination Respirators

This type of APR combines separate chemical and mechanical filters. This allows for the change of the different filters when one of them becomes plugged or exhausted before the other filter (usually the dust filter plugs up before the chemical filter). This type of respirator is suitable for most spray painting and welding. For more information check the:

- Safety Data Sheet (SDS)
- The local Department of Labour office
- The safety equipment supplier

Do

- Train workers very carefully in the APRs use, care and limitations
- Ensure that respirators are properly cleaned and disinfected after each shift, according to the manufacturer's instructions
- Dispose of exhausted cartridges and masks in sealed bags or containers
- Keep new, unused filters separate from old, used filters
- Monitor APR use; they are useless just hung around the neck
- Replace filters when breathing becomes difficult

Do not

- Use for protection against materials which are toxic in small amounts
- Use materials that are highly irritating to the eyes
- Use with gases that cannot be detected by odour or throat irritation
- Use with gases not effectively halted by chemical cartridges regardless of concentration (read the cartridge label)
- Use respirators or masks if the serviceability is in doubt
- Use APRs where oxygen content in the air is less than 18% or 18 kilopascals (partial pressure or greater)

Personal Protective Equipment (PPE) "Info" Sheets
Eye and Face Protection
General Information

This PPE is designed to protect the worker from such hazards as:
- Flying objects and particles
- Molten metals
- Splashing liquids
- Ultraviolet, infrared, and visible radiation (welding)

This PPE has two types. The first type, basic eye protection, includes:
- Eyecup goggles
- Monoframe goggles and spectacles with or without side shields

The second type, face protection, include:
- Metal mesh face shields for radiant heat of hot and humid conditions
- Chemical and impact resistant (plastic) face shields
- Welders shields or helmets with specified cover
- Filter plates and lens

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

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

Contact lens should NOT be worn at the worksite. Contact lenses may trap or absorb particles or gases causing eye irritation or blindness. Hard contact lens may break into the eye when hit.

Basic eye protection should be work with face shields. Face shields alone often are not enough to fully protect the eye from work hazards. When eye and face protection are required, advice from the OH&S Office, Safety Data Sheet (SDS) or your supplier will help in your selection.

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

Do not
- Modify eye/face protection
- Use eye/face protection which does not have a CSA certification (CSA stamp for safety glasses is usually on the frame inside the temple near the hinges of the glasses)

Eye Protection for Welders
Welders and welders' helpers should also wear the prescribed equipment. Anyone else working in the area should also wear eye protection where there is a change they could be exposed to a flash.

Personal Protective Equipment (PPE) “Info” Sheets

Hearing Protection

General Information

Hearing protection is designed to reduce the level of sound energy reaching the inner ear.

The rule of thumb for hearing protection is: Use hearing protection when you cannot carry on a conversation at a normal volume of voice when you are three feet apart.

Remember, this is only a rule of thumb. Any sustained sounds over 80 dba requires hearing protection. Hearing loss can be very gradual, usually happening over a number of years.

The most common types of hearing protection in the construction industry are earplugs and earmuffs. If you choose to use the other types of hearing protection, ask your safety supplier or Department of Labour office for further information.

It is important to have different styles of hearing protection available. Different styles allow a better chance of a good fit. Each person’s head, ear shape and size are different. One style may not fit every person on your crew. If hearing PPE does not fit properly or is painful to use, the other person will likely not use it. If the hearing protection is not properly fitted, it will not supply the level of protection it was designed to deliver.

Most earplugs, if properly fitted, generally reduce noise to the point where it is comfortable (takes the sharp edge off the noise).

If your hearing protection does not take the sharp edge off the noise, or if workers have ringing, pain, headaches or discomfort in the ears, your operation requires the advice of an expert.

Workers should have their hearing tested at least every year, twice a year if they work in a high noise area.

Personal Protective Equipment (PPE) "Info" Sheets

Head Protection

General Information

Safety headwear is designed to protect the head from impact from falling objects, bumps, splashes from chemicals or harmful substances, and contact with energized objects and equipment.
Most head protection is made up of two parts:

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

Both parts of the headwear must be compatible and maintained according to manufacturer's instructions. If attachments are used with headgear, they must be designed specifically for use with the specific headwear used. Bump caps are not considered a helmet.

Inspection and Maintenance

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

Do

- Replace headgear that is pitted, holed, cracked or brittle
- Replace headgear that has been subjected to a blow even though damage cannot be seen
- Remove from service any headgear if its serviceability is in doubt.
- Replace headgear and components according to manufacturer's instructions
- Consult the Department of Labour or your supplier for information on headgear
- Use liners that are only specified for brand of hard hat

Do not

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

Drug & Alcohol Policy

1.0. Purpose

1.1. Northern Inc. is committed to providing a safe work environment for all employees.

1.2. Safety risks associated with the misuse of alcohol and other drugs affect the ability of employees to properly perform their employment responsibilities. These risks can lead to incidents causing serious injury to employees, other persons or damage to the environment and property. The safety of our employees is a core value for Northern Inc. This policy has its purpose, to create a working environment free of the effects of drugs and alcohol impairment and requires that all employees report and remain fit for work.

1.3. This policy includes several work rules for all employees concerning the possession, use and effects of alcohol and drugs while on the job, as well as a requirement for alcohol and drug testing under certain conditions.

1.4. NGC recognizes the need to give appropriate importance to the prevention of alcohol or drug abuse. Northern Inc. is committed to:

- Protect the health and well being of our employees;
- Protect the communities in which we operate;
- Protect the interests of the company's shareholders;
- Meet regulatory requirements for providing a safe workplace;
- Treat employees fairly and with respect;
- Protect the environment;
- Clearly communicate the expectations regarding the misuse of substances by employees;
- Support the employees' efforts to maintain a safe workplace;
- Define clear, specific drug and alcohol work rules against which performance can be tested;
- Provide understandable and predictable responses to breaches of this policy; and
- Answer questions and concerns about this policy as needed.

Thank you for complying with this policy and sharing NGC's commitment to ensure a safe, healthy, and productive environment.

2.0. Scope

2.1. This policy on alcohol and drug use applies to all Northern Inc. employees, contractors, sub-contractors, and persons working or conducting activities on Northern Inc. premises.

3.0. Definitions

3.1. For the purpose of this policy, the following definitions apply:

3.1.1. **Alcohol** is any substance that may be consumed and that has an alcoholic content in excess of 0.5% by volume.

3.1.2. **Drugs** includes any substance, chemical or agent;
3.1.2.1. The use or possession of which is unlawful in Canada;
3.1.2.2. Requires a personal prescription or authorization from a licensed treating physician;
3.1.2.3. Any non-prescription drug or medication lawfully sold in Canada; or
3.1.2.4. Any controlled substance including alcohol and cannabis.

3.1.3. **Drug paraphernalia** includes any equipment, product or material that is used or intended for use in concealing a drug or for use in injecting, inhaling, or otherwise introducing a drug into the human body.

3.1.4. **Employee** includes any person categorized as permanent, term, part-time, casual, contract, seasonal and temporary or student employed by Northern Inc.

3.1.5. **Employer** is Northern Inc., including persons employed or retained who control and direct the work activities of employees. This also includes independent contractors retained by Northern Inc. to control and direct work activities of the Northern Inc. employees.

3.1.6. **Fitness for Work/ Fit for Work** in the context of this Policy means being able to safely perform assigned duties and responsibilities without any impairment due to the use or after-effects of alcohol, drugs, or medications. Anyone who is not able to do so would be deemed unfit for work.

3.1.7. **Incident** is an occurrence, circumstance or condition that caused or had the potential to cause damage to person, property, reputation, security, or the environment.

3.1.8. **Misuse of prescribed medications, over-the-counter medications** misuse of medication includes, but is not limited to:

- Excess consumption of a prescribed or recommended amount of a medication,
- Taking medication prescribed for someone else,
- Taking medication other than for its intended purpose,
- Taking medication improperly (for example, in combination with alcohol).

3.1.9. **Northern Inc. business** refers to all business activities undertaken in the course of operations, whether conducted on or off NGC property.

3.1.10. **Northern Inc. property** includes all land, property, facilities, structures, installations, offices, job sites, vehicles, and equipment owned, leased, operated, or otherwise directly controlled by NGC.

3.1.11. **Possession** the care, custody, control, or ability to immediately access a substance.

3.1.12. **Reasonable Suspicion** an understanding based on objective and articulated facts sufficient to lead a supervisor to form a reasonable suspicion that drugs or alcohol might be influencing an individual's work performance.

3.1.13. **Safety sensitive position** is one in which an employee's performance, if impacted by alcohol or drug use, could result in a significant incident, near miss or failure to adequately respond to a significant incident and detrimentally affects the health, safety or security of the employee, general public, others, property, or the environment. Any employee who directly supervises an employee in a safety sensitive position will also be considered to work in a safety sensitive position.

3.1.14. **Substance Abuse Expert** is a person with knowledge and clinical experience in the diagnosis and treatment of alcohol and drug related disorders. These experts are qualified to evaluate employees under this Policy and make recommendations concerning education, treatment, follow-up testing and aftercare.

3.1.15. **Substance misuse** is the use of illicit drugs, misuse of prescription and over-the-counter medications, use of other substances for intoxication, or the non-therapeutic use of other substances. It is the misuse of alcohol or drugs, where impairment by way of ingesting alcohol or drugs could adversely affect job performance, the health, safety or security of the employees, other persons, property, or the environment.

3.1.16. **Supervisor** means an individual who is accountable for a particular area or shift, including but not limited to team leaders, managers, directors, supervisors, superintendents, and others acting in supervisory positions.

3.1.17. **Tamper** to alter, meddle, interfere, substitute or change.

3.1.18. **Work Environment** includes any location at which an Northern Inc. employee is conducting work or is using Northern Inc. property.

4.0. **Workplace Rules**

4.1. In order to ensure the safety of employees, clients and the public, along with the protection of property and the efficient operation of Northern Inc., the following rules apply:

4.1.1. Employees shall not use, possess, or offer for sale alcohol and drugs, except as outlined in 4.2 below or any product or device that could tamper with any sample for an alcohol or drug test, while on Northern Inc. property or at Northern Inc. work environment. Employees must not use alcohol and drugs during break and meal times, whether or not they are paid or unpaid, by Northern Inc.

4.1.2. Employees must report fit for work free of any effects or after effects of drugs or alcohol. Employees who become unfit for work must report this to their supervisor immediately.

4.1.3. Employees required to operate a motor vehicle on Northern Inc. business must maintain a valid driver's licence. Any suspensions, loss of licence, impaired driving charge or conviction, or any other restrictions to their licence, must be reported immediately to their supervisor, regardless of the effective date.

4.1.4. Employees must cooperate with the implementation of this Policy including the submission to testing as required under this Policy.

4.2. An Employee complies with the workplace rules of this Policy if they are in possession, while on Northern Inc. property, of a prescription drug prescribed to that Employee, volunteer, contractor or subcontractor or a non-prescription drug and;

4.2.1. They are using the prescription or non-prescription drug for its intended purpose and in the manner directed by their treating physician or pharmacist or the drug manufacturer and;

4.2.2. In the case that the prescribed drug is cannabis, the use is with the approval of the employer and consistent with the terms of an approved accommodation with human resources and;

4.2.3. The use of the prescription or non-prescription drug does not adversely affect their ability to safely do their job, or

4.2.4. They have consulted with their treating physician or pharmacist to determine if the prescription or non-prescription drug will have any potential negative impact on job performance and before starting work, has advised, and submitted a copy of the prescription and side affects to their supervisor of any potential risk, limitation, or restriction for which they may need a referral to Human Resources.

4.3. Employees who fail to meet any of the above work rules may be subject to discipline, including the termination of their employment. The imposition and degree of discipline will be determined on an individual case by case basis, taking into account all relevant factors and circumstances.

5.0. Education and Prevention

5.1. Northern Inc. is committed to educating its employees with respect to the existence of this Policy and the workplace rules found within. NGC will also take reasonable steps to inform employees of the safety risks associated with alcohol and drug use.

6.0. Voluntary Disclosure

6.1. Northern Inc. encourages employees who believe they may require support to voluntarily request that support through Human Resources. The intent of this policy is to provide a safe work environment for all employees. An employee will not be disciplined for voluntarily requesting support unless they have failed to comply with the workplace rules section 4 of this Policy.

6.2. Any employee who is advised by a co-worker (another employee) of that co-worker's need for support related to alcohol or drug use, must take appropriate action to ensure their safety and the safety of others and to encourage their co-worker to seek support by speaking to a person in authority (supervisor) who will ensure the co-worker has access to support.

6.3. In responding to an employee's request for support, a supervisor or person in authority to whom the request was made known must:

6.3.1. take steps to determine the employee is fit for work and does not present a safety risk to themselves or others.

6.3.2. remind the employee of how to contact community-based resources and encourage them to use them.

6.4. Employees in a safety sensitive position who voluntarily disclose a need for support must be assessed by a Substance Abuse Expert.

6.5. Employees with an alcohol or drug dependency in safety sensitive positions are required to participate in pre-treatment, treatment and follow-up/aftercare activities as determined by a Substance Abuse Expert. This does not eliminate the requirement for maintenance of satisfactory job performance levels.

6.6. Where, in the opinion of a qualified Substance Abuse Expert, there is a risk that an employee cannot do their job safely, a medical work modification may be recommended, and Northern Inc. may assign the employee to alternative duties, if available and appropriate.

6.7. Employees holding safety sensitive positions may be removed from their safety sensitive positions until they are able to safely resume their regular duties as determined by a Substance Abuse Expert.

6.8. An employee in a safety sensitive position who receives support from any Substance Abuse Expert must comply with terms and conditions of any program established to support the employee.

7.0 Roles and Responsibilities

7.1. There is a shared responsibility for the successful implementation of this Policy. Any employee with an alcohol or drug dependency is expected to take responsibility to deal with the dependency. All employees are responsible for their own compliance of this Policy and are expected to place a priority on workplace safety in their attitude, performance, and practices.

7.1.1. Employees must:

7.1.1.1. know and understand this Policy;

7.1.1.2. comply with this Policy;

7.1.1.3. use medications responsibly, be aware of potential side effects and notify and submit a copy to their supervisor of any potential unsafe side effects where applicable;

7.1.1.4. follow the appropriate treatment recommendations if deemed necessary by a Substance Abuse Expert;

7.1.1.5. take every reasonable precaution in all circumstances to protect their own health and safety and that of other persons in the workplace.

7.1.2. Supervisors and managers must:

7.1.2.1. communicate and give leadership in the implementation of this Policy and its rationale to provide a healthy, safe, and productive work environment free of the effects or after effects of alcohol and drugs;

7.1.2.2. be knowledgeable about and communicate the alcohol and drug workplace rules to employees;

7.1.2.3. be knowledgeable about and follow the procedures associated with this Policy;

7.1.2.4. be knowledgeable about and recognize the symptoms of the use of alcohol and drugs;

7.1.2.6. act on reported or suspected alcohol or drug use by employees;

7.1.2.7. provide a copy of the Policy to current employees and to new employees immediately upon commencement of their employment and;

7.1.2.8. safely remove any employee unfit for work from the work place or Northern Inc. property and ensure the employee is transported home or to assessment and/or testing in a safe manner.

7.1.3. Human Resources must:

7.1.3.1. May provide training in drug and alcohol detection;

7.1.3.2. provide support to supervisors dealing with employees involved in a violation of this Policy;

7.1.3.3. provide information on resources available to employees who have voluntarily disclosed a need for support; and

7.1.3.4. work with supervisors to determine appropriate accommodations when necessary to support employees.

7.1.4. Contractors must:

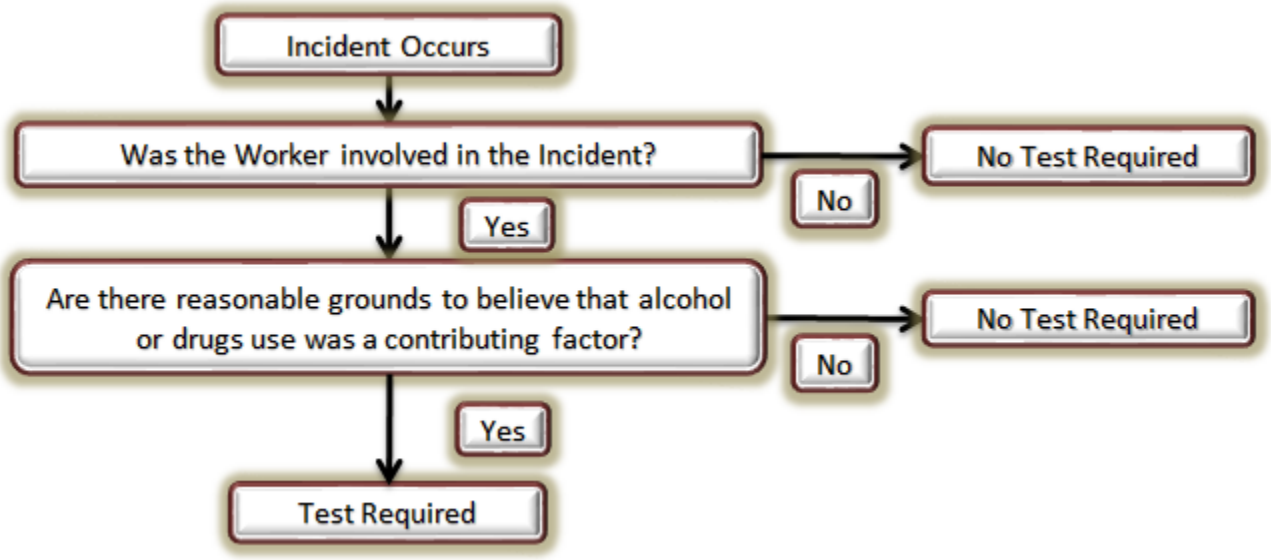
7.1.4.1. All contractors working for Northern Inc. will relate the requirements of this policy to their employees, agents, and subcontractors.

8.0. Alcohol and Drug Testing

8.1. Employees are subject to testing for alcohol and drugs under the following situations:

8.1.1. Post-Incident or Potentially Dangerous Incident:

8.1.1.1. A supervisor of an employee must request an employee to submit to an alcohol and drug test if, after consult with the following chart:



The supervisor will request the employee to submit to an alcohol and drug test immediately following the incident and will explain to the employee why the request is being made.

8.1.1.2. A supervisor of an employee need not request the employee to submit to an alcohol and drug test if the supervisor, after consulting the above chart, concludes there are reasonable grounds to believe that the use of alcohol and drugs did not contribute to the incident.

8.1.1.3. A supervisor of an employee is not required to request an employee to submit to an alcohol and drug test immediately after the employee was involved in an incident or other potentially dangerous incident if it is not practical or reasonable to do so until a later time due to medical emergencies.

8.1.2. Reasonable Grounds:

8.1.2.1. A supervisor of an employee must request an employee to submit to an alcohol and drug test if, they determine there are reasonable grounds to suspect an employee of alcohol or drug use or possession in violation of this Policy. The decision to test shall be made by the supervisor and must be based on the supervisor's specific observations. Documented observations will be completed on HS:32 Reasonable Suspicion Observation Checklist may include, but are not limited to:

- possession of drugs or alcohol prohibited in the workplace under the Workplace Rules section of this Policy;
- observed use or evidence of use of a substance (e.g. smell of alcohol; possession of substances or paraphernalia);
- erratic or atypical behaviour of the employee;
- changes in the physical appearance of the employee;
- uncoordinated walking, staggering, weaving; or
- changes in the speech patterns of the employee.

8.1.3. Return to work after Primary Treatment

8.1.3.1. Where employees have returned to work or have been reinstated after completing primary treatment (e.g. residential or outpatient treatment) for alcohol and/or drug addiction, testing may be performed on an unannounced basis.

8.1.4. Return to work while in Aftercare Program

8.1.4.1. As part of the aftercare program developed by the Substance Abuse Expert, employees in safety sensitive positions may be tested prior to returning to work after primary treatment, and on an unannounced basis for the duration of the aftercare program.

8.1.5. Return to work

8.1.5.1. When an employee who has violated this policy is authorized to return to work, the following procedure must be followed:

- The employee will submit his drug and Alcohol report showing negative results.
- Before resuming his duties, the employee will have to read the professional expectations written by human resources.

8.2. In any of the above situations, refusal to submit to a test when requested, attempts to delay reporting for a test, refusal to agree to the disclosure of test results to management, a confirmed attempt to tamper with a test or a positive result on a test, may result in disciplinary action up to and including the termination of employment.

9.0. Searches upon Reasonable Grounds

9.1. Supervisors are directed to notify their manager or designate where there are reasonable grounds to suspect that alcohol or drugs may be present in the workplace or in any Northern Inc. property in violation of this policy. A Supervisor may conduct a search of Northern Inc. property with the approval of senior management. Employees should be aware of a diminished expectation of privacy with respect to use of Northern Inc. owned or leased vehicles and/or Northern Inc. buildings and property, including lockers, desks, cabinets, etc.

10.0. Concentration Levels

Concentration Levels as pre the COAA Canadian Model alcohol and drug guidelines and work rule.

Table 1: Urine drug concentration limits

Drugs or classes of drugs	Screening concentration equal to or in excess of ng/mL	Confirmation concentration equal to or in excess of ng/mL
Marijuana metabolite	50	15
Cocaine metabolite	150	100
Opioids - Codeine - Morphine - Hydrocodone - Hydromorphone - Oxycodone - Oxymorphone	2000 2000 300 300 100 100	2000 2000 100 100 100 100
6-Acetylmorphine	10	10
Phencyclidine	25	25
Amphetamines - Amphetamine - Methamphetamine - MDMA1 - MDA2	500 — — 500 —	— 250 250 250 250

Table 2: Oral fluid drug concentration limits

Drugs or classes of drugs	Screening concentration equal to or in excess of ng/mL	Confirmation concentration equal to or in excess of ng/mL
Marijuana (THC)	4	2
Cocaine metabolite – Cocaine or Benzoylecgonine	20 —	— 8
Opioids - Codeine - Morphine - Hydrocodone - Hydromorphone - Oxycodone - Oxymorphone	40 — — — — — —	— 40 40 40 40 40 40
6-Acetylmorphine	—	4
Phencyclidine	10	10
Amphetamines - Amphetamine - Methamphetamine - MDMA1 - MDA2	50 — — — —	— 50 50 50 50

Table 3: Blood Alcohol Concentration (Breath Method)

Substance	Screening concentration equal to or in excess of BAC	Confirmation concentration equal to or in excess of BAC
Alcohol	0.04%	0.04%

11.0. Confidentiality

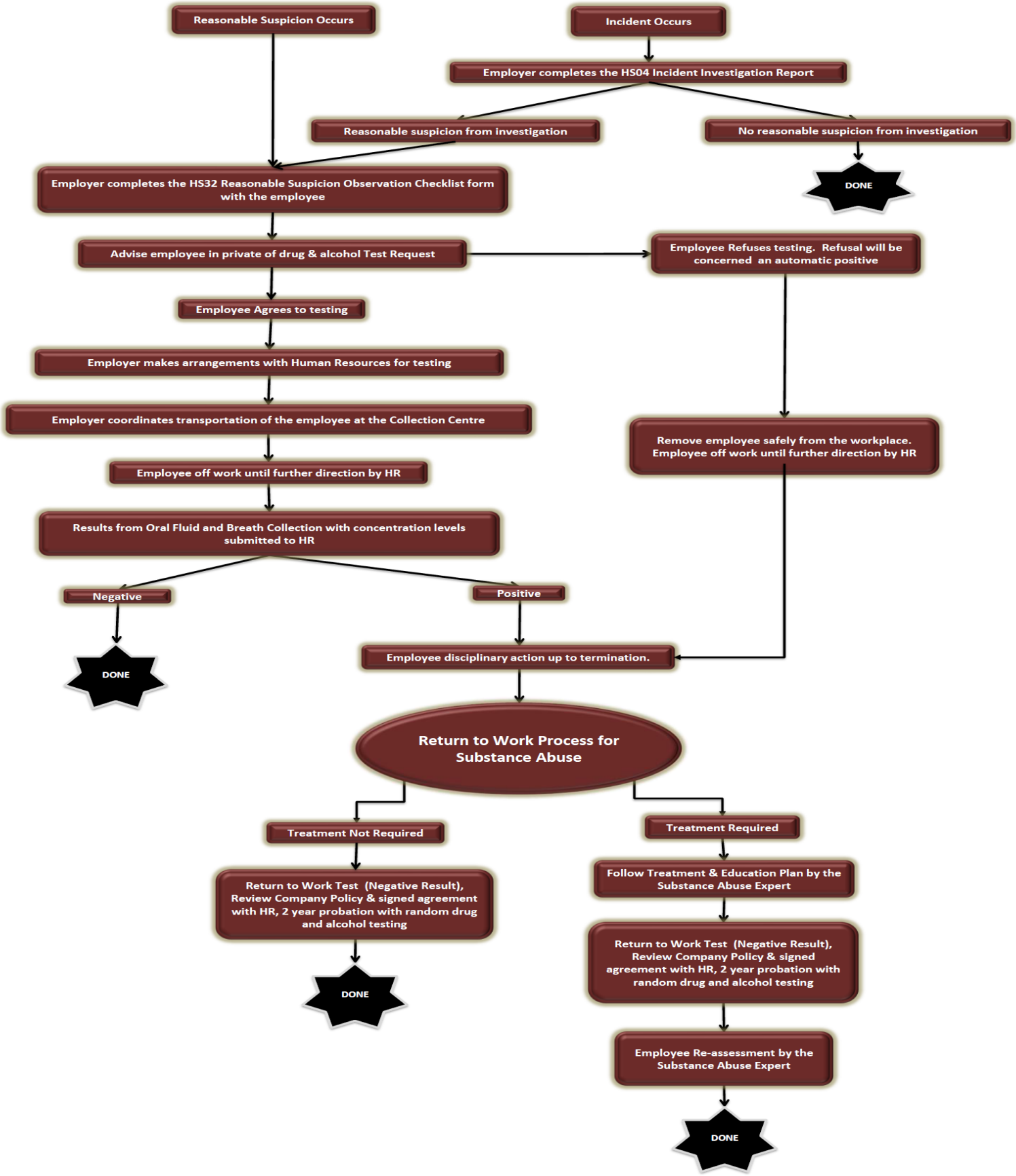
11.1. An employer who collects, maintains, or uses personal health information is required to protect the confidentiality of that information, unless where such disclosure is necessary for related health and safety concerns or for legal proceedings by or against Northern Inc.

12.0 Consequences of failure to comply with this policy

12.1. Employer responses to violations

Northern Inc. may discipline an employee who fails to comply with section 4.0. work rules. Discipline may include a variety of reasonable measures, up to and including termination for cause. Determination of the appropriate disciplinary measure will depend on the facts of each case, including the nature of the violation, the existence of prior violations, the response to prior corrective programs, the seriousness of the violation, and the objective of deterring any future violations by the employee or others in the company workplace.

Appendix 1 Drug & Alcohol Testing and Return to Work Process



Observed Behavior – Reasonable Suspicion Record

Employee's Name:	Date Observed:
Observer's Name:	Position:
Address of Incident: (street, city)	Time Observed From: am/pm To: am/pm

Record employee's observed behavior for reasonable suspicion for the use of alcohol, controlled or illicit substances. According to 49 CFR Section 382.307 Reasonable Suspicion Testing, the employer shall require the employee to submit to a controlled substance or alcohol test if a supervisor or company official who is trained in accordance with Section 382.603 determines that reasonable suspicion exists.

✓ **Checkmark items that apply and describe specifics**

Walking/Balance:

☐ Stumbling	☐ Staggering	☐ Falling	☐ Unable to stand
☐ Swaying	☐ Unsteady	☐ Holding on	☐ Rigid
☐ Sagging at knees	☐ Feet wide apart	☐ Normal	

Speech:

☐ Shouting	☐ Whispering	☐ Slow	☐ Rambling
☐ Slurred	☐ Slobbering	☐ Incoherent	☐ Normal

Actions:

☐ Resisting communications	☐ Insulting	☐ Hostile	☐ Drowsy
☐ Fighting/insubordinate	☐ Profanity	☐ Belligerent	☐ Erratic
☐ Hyperactive	☐ Crying	☐ Indifferent	☐ Normal

Eyes:

☐ Bloodshot	☐ Watery	☐ Dilated	☐ Glassy
☐ Droopy	☐ Crossed	☐ Wearing sunglasses	☐ Normal

Face:

☐ Flushed	☐ Pale	☐ Sweaty	☐ Normal

Appearance/Clothing:

☐ Dishelved	☐ Messy	☐ Dirty	☐ Partially Dressed
☐ Having odor	☐ Stains on clothing	☐ Normal	

Breath:

☐ Alcoholic odor	☐ Faint alcohol odor	☐ No alcohol odor	☐ Marijuana odor
☐ No odor			

Movements:

☐ Fumbling	☐ Jerky	☐ Slow	☐ Nervous
☐ Hyperactive	☐ Normal		

Eating/Chewing:

☐ Gum	☐ Candy	☐ Mints	☐ Tobacco
☐ Food	☐ None		

Observable signs directly related to substance use

☐	Observer witnesses use before entering or in the workplace
☐	Smell of alcohol
☐	Smell of cannabis (burnt hay)
☐	Worker reports using or addicted to one or more psychoactive substances
☐	One or more colleagues report recent use or use in the workplace
☐	Alcohol or other drugs seen: ☐ On their person ☐ In their locker or lunch box ☐ In their office ☐ On the machinery they drive or operate ☐ In the company vehicle
☐	Object(s) related to the consumption of drugs or alcohol seen: ☐ On their person ☐ In their locker or lunch box ☐ In their office ☐ On the machinery they drive or operate ☐ In the company vehicle
☐	Report of activities related to the sale or purchase of the substance in the workplace
☐	Comments by colleagues indicating consumption endangering the workplace
☐	Other observations directly related to psychotropic substances

Other Observations:

Did the employee admit to using drugs or alcohol?	☐ Yes ☐ No
If yes, when?	What substance?
How much?	taken where?

Witnessed by:

_____

Name Title Date Time

Note: The alcohol test must be administered within 8 hours following a reasonable suspicion determination.
Employer retains in employee's confidential file.

Do you have a substance abuse problem?	☐ Yes ☐ No
Send employee for testing?	☐ Yes ☐ No
If no explain:	
Employee's Signature:	Date:
Supervisor's Signature:	Date:
Manager's Signature:	Date:

Smoking/Vaping Policy

The Company maintains a smoke, vape and tobacco free office. No smoking/vaping or other use of tobacco products (including, but not limited to, cigarettes, pipes, cigars, snuff, or chewing tobacco) is permitted in any part of the building or in vehicles owned, leased, or rented by the Company. Employees may smoke/vape outside in designated areas during breaks. When smoking/vaping or otherwise using tobacco or similar products outside, do not leave cigarette butts or other traces of litter or tobacco use on the ground or anywhere else. No additional breaks beyond those allowed under the Company's break policy may be taken for the purpose of using tobacco or similar products. Dispose of any litter properly in the receptacles provided for that purpose.

Please remember to conform to the smoking/vaping or tobacco use policies of our clients when working at a client's site.

All employees are expected to abide by this policy in all respects while at work, and follow all federal, provincial, and municipal codes whether on company premises, at a client's site, or while in transit between work locations or assignments, as well as while the employee is off duty, if the employee is on company premises or in vehicles owned, leased, or rented by the company. Being permitted to use tobacco products during breaks is a privilege, as long as such use does not interfere with the employee's work, fitness for duty, or professional appearance. If that privilege is abused, it may be withdrawn altogether.

Physical Plant Policy

It is the policy of Physical Plant Services to strive to provide and maintain safe and healthful working conditions and to follow operating practices that will safeguard our employees, staff, and visitors.

Good Housekeeping is an essential part of every job. Work areas, aisles, walkways, and equipment shall be kept clear of loose materials, tools, and scraps. Spills such as grease, water, or oil shall be cleaned up as soon as possible; a delay could result in an accident to you or a fellow worker.

A safe access shall be maintained to work areas. Short cuts should be avoided. Never block aisles, traffic lanes, or fire exits with equipment or materials.

Accident prevention and efficient production go hand-in-hand. The Physical Plant Services management considers no phase of operation or administration as being of greater importance than accident prevention. All levels of management and all employees have a primary responsibility for the safety and well-being of all employees, staff, and visitors.

An accident is any unforeseen or unexpected event that may or may not result in injury or damage to property or equipment.

The ultimate goal in accident prevention is "zero" disabling injuries and no lost work-time. However, there are many barriers to achieving this goal, the most important of which is the human attitude. Most people feel that "it won't happen to me" or "it couldn't happen here." You can do more to protect yourself and your fellow worker by constantly thinking and practicing accident prevention than you can by memorizing all of the rules, regulations, and safeguards ever written or invented. You must *THINK* before you act.

Hazard Assessment Policy

We are committed to eliminating Incidents and protecting the health and safety of all workers. The goal therefore of this policy, is to implement a systematic process for the identification and elimination or control of Hazards. All types of Hazard Assessment will typically consider the steps in the task to be performed, Hazards associated with the work, equipment or location, control measures to be employed, a probability and severity factor as well as any required specialized PPE in addition to standard PPE.

The purpose of hazard assessments is to determine the probability of Incident due to situations that could occur on the job, and to have remedial action taken to remove or lessen the hazard.

It will be the policy of Northern Inc. to have the hazards found during assessments controlled, and/or corrected.

Types of Hazard Assessments conducted by the company

- Comprehensive Hazard Assessment – Completed on an annually basis on the activities the company does in whole by management and workers.
- Job Hazard Assessment – Completed per Project on the work-related activities on that site. Assessment is to be communicated with workers before work can commence.
- Field Level Risk Assessment (FLRA) – Required to be complete daily on the tasks that are to be started that day. The FLRA is communicated daily and must be signed.
- Major Job Hazard Assessments will be done on an individual job assessment basis. The criteria for assessment will be based on conditions such as:
    - Complexity, size, risk, unfamiliar tasks, physical elements, and situational changes.

NORTHERN

Field Level Risk Assessment – STOP AND THINK			MUST BE COMPLETED IN FIELD PRIOR TO STARTING WORK
Name:	Date:	Time: a.m. p.m.	Weather:
Job Number / Contract Number:	Job Location:		Area:
Job Description:	General Contractor Name:	Have you completed and reviewed the Job Hazard Assessment (JHA)?	☐ YES ☐ NO

Consider the following and check items which apply to the job and then review with the work crew

General Considerations	**Emergency Plans / Locations / Equip.**	**Identify Potential Hazards**
☐ Area Orientation	☐ Evacuation route	☐ Weather
☐ Job Instructions / Scope	☐ Emergency numbers / Plans / Responses	☐ Lighting
☐ Tools / Equipment for daily tasks	☐ Communication in work area	☐ Ventilation
☐ Road / Driving Conditions	☐ Accident / Injury plan	☐ Noise
☐ Permits	☐ Confined space rescue plan	☐ Hot or cold surfaces
☐ SDS	☐ Fire extinguishers	☐ Slippery / uneven walking surface
☐ Vehicle / Equipment Inspections	☐ Environmental spill kits	☐ Condensation
☐ Quarterly Inspection Color Codes	☐ Eye wash station	☐ Floor/wall openings
☐ Emergency Exits	☐ Man overboard rescue plan	☐ Access/egress
☐ Stairs / Handrails	**Personal Protective Equipment**	☐ Pinch Points
☐ Ladders	☐ Fall Protection	☐ Rock Crushing / Busting / Breaking
☐ Barricades / Tags	☐ Respiratory Protection	☐ Combustible materials
☐ Electrical Cords	☐ Safety Glasses	☐ Flammable liquids / gasses / vapors
☐ Other:	☐ Hard Hat	☐ Brush cutting
Critical Risk Control Protocol	☐ Hi-Visibility Vest / Clothing	☐ Concrete forms / cutting / pouring
☐ Chemical exposure (WHMIS)	☐ Steel Toe Boots	☐ Energized equipment / grounding / LOTO
☐ Heavy Lift Plan	☐ Protective Suits	☐ Housekeeping
☐ Pre-Trip Checklist of equipment	☐ Hearing Protection	☐ Sharp objects
☐ Equipment operators qualified/certified	☐ Cloth / Leather / Rubber Gloves	☐ Overhead work
☐ Trained confined space personnel	☐ Goggles / Face Shields	☐ Trenching / Excavation
☐ Rigging / Chocker / Sling Inspected	☐ Welding Hood / Lens	☐ Other crews working in area
☐ AWP / Personnel basket inspected	☐ Welding Screens / Leads / Tanks / Flash	☐ Blasting operations
☐ All energy isolations confirmed	☐ Safety Handrails / Stairs	☐ Vehicles traffic control
☐ Test Start / Stop switches	☐ Personal Flotation Device	☐ Moving / In-service equipment
☐ Excavation / Trench – Shoring Adequate	**Quick Environmental Assessment**	☐ Equipment proximity hazards
☐ Sloping on excavations adequate	☐ Risk of fuel / hazardous material spill	☐ Working alone
☐ Working at heights	☐ Working near a body of water (Spills)	☐ Spotters
☐ Motor Vehicle / Equipment safety	☐ Erosion and/or sedimentation issues	☐ Others:
☐ Working near a body of water	☐ Wildfire in area	☐ Others:
☐ Other:	☐ Silica / dust / airborne particles	☐ Others:
☐ Other:	☐ Other:	☐ Others:

Comments:	**Emergency Number:**	**Emergency Meeting Point:**

Incident Investigation Review: ☐ YES ☐ NO		
Date Incident Occurred:	Type of Incident:	Comments:
Date Incident Occurred:	Type of Incident:	Comments:

Tasks	Potential Hazards	Hazard Control Measures

Near Miss Report:		
Time:	Location:	Description:
Recommendations / Corrective Actions:		
Time:	Location:	Description:
Recommendations / Corrective Actions:		

All affected personnel must sign to verify they understand and agree to abide by all stated conditions

	Name	Signature		Name	Signature
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		

Foreman's Signature	Date	Superintendent's Signature	Date

Was there an injury / incident today?	Was it reported?	To Whom?
☐ YES ☐ NO	☐ YES ☐ NO	

Site Specific Orientation /Job Hazard Assessment	Date:	JHA #:
PROJECT:		
JOB DESCRIPTION:		

RISK ASSESSMENT DEVELOPED BY:				RISK ASSESSMENT REVIEWED BY:			
No.	Name	Position	Date	No.	Name	Position	Date
1.				*1.*			
2.				*2.*			
3.				*3.*			

Topic	**Checklist Code: ✔ = Yes × = No N/A = None Aplicable**			
Emergency Response	Muster Point(s)		Fire Extinguishers location	
	Emergency Contact information and location		Fire Procedures	
	First Aid Equipment location		Incident Reporting Procedures	
	Eye Wash Station location		First Aider's Name:	
Programs & Procedures	Safe Work Practices		Safe Job Procedures	
	Drug & Alcohol Policy		Company Rules	
	Lockout / Tag out		Excavation Safety	
	Fall Protection Plan		Confined Space Entry	
	Hot Work Program		Working Around Water Plan	
	Harassment / Workplace Violence		Other:	
Training	Safety Orientation		WHMIS	
	First Aid / CPR		WATCM Awareness (New Brunswick Only)	
	Equipment Training		Excavation / Trenching	
	Elevated Work Platform / Manlift		Respiratory Fit Testing	
	Confined Space Entry		Fall Protection	
	TCP / Traffic Control Person		Lockout / Tag out	
	Supervisory Training / OH&S Act		WATCM / Temporary Workplace Signing	
Meetings	Tool Box		Safety	
	Joint Occupational Health & Safety (JHSC)		Progress	
Logistics	Parking		Weather	
	Lunch Area(s)		Working Time	
	Restroom Facilities		Housekeeping	

The above orientation items have been reviewed with all personnel who have signed and dated the following page. You are aware of your responsibilities to follow policies, procedures and regulations and maintain a safe work environment. All Sub-trade Supervisors are responsible to ensure all employee they bring onsite are aware and follow Northern Inc.rules and policies. http://northerngroupco.com/pdf/safety_manual.pdf

P.P.E REQUIREMENTS "Check ☒"				Long sleeve clothing	☐	Steel-Toed Boots	☐	High Visibility Jacket/Vest	☐	Flame-Retardant Clothing	☐	Cold Weather Outerwear	☐
Hard Hat	☐	Gloves – Hyflex (Nitrile)	☐	Gloves	☐	Gloves – Leather	☐	Gloves – Lined Rubber	☐	Gloves – Welding	☐	Air Purifying Respirator	☐
Safety Glasses	☐	Safety Goggles	☐	Face Shield	☐	Hearing Protection	☐	Fall Protection Harness	☐	Lanyard	☐	SCBA	☐
NIOSH Approved Dust Mask	☐	Other	☐	Other	☐	Other	☐	Other	☐	Other	☐	Other	☐
EQUIPMENT & TOOLS FOR JOB "Check ☒"				Fire Extinguisher	☐	Fire Blanket	☐	Personal Locks	☐	Power Source	☐	Extension Leads	☐
Ladder	☐	Shovel	☐	Hand Tools	☐	Self-retracting Knives	☐	Backhoe/Skid Steer	☐	Forklift	☐	Pavement Roller	☐
Excavator	☐	Crane	☐	Slings	☐	Welding Machine	☐	Oxy/Acetylene cutting torch	☐	Articulating Boom Platform	☐	Impact Wrench	☐
Scissor Lift	☐	Grinder	☐	Auger Truck	☐	UTV	☐	Other	☐	Other	☐	Other	☐
TAGGING & SIGNS "Check ☒"				Men Working Above	☐	Barrier Mesh	☐	Lifting Limits	☐	Flagging	☐	Hard Barricades	☐
Heavy Lifting Signs	☐	Personnel Danger Tags	☐	Out of Service Tags	☐	Information Tags	☐	Confined Space Entry Signs	☐	Warning Signs	☐	Traffic Control	☐
ENERGY "Check ☒"				Electrical	☐	Mechanical	☐	Pneumatic	☐	Hydraulic	☐	Thermal	☐
Radiation	☐	Potential	☐	Chemical	☐	Residual	☐	Other	☐	Other	☐	Other	☐
PERMITS & INSTRUCTION "Check ☒"				SDS's	☐	Instruction Manuals	☐	Procedures	☐	Work Plans	☐	Confined Space Permit	☐
Hot Work Permit	☐	Working from heights permit	☐	Electrical	☐	Working Around Water	☐	Night Work	☐	Locates	☐	Other	☐

HAZARD PROMPT – *Identify the job hazards and assess the RISK personnel may be exposed to before safe guards are implemented. Mark as "H" (high), "M" (medium), "L" (low) or "N/A" (or –).* **DO NOT LEAVE ANY BLANKS**

Electrical		*Vehicles*		*Pressure*		*Weather*		UV Radiation (Hot Work / Sun)		Heat		*Engulfment*	
Chemical		Height		Access		*Bacteria*		Rotating Equipment		*Dehydration*		Lighting	
Tools		Depth		Vibration		Dust		Moving Equipment		Hot / Cold Objects		Manual Handling	
Gasses		Weight		Noise		SMF or Asbestos		Lifting Equipment		Overhead hazards		Heavy Equip.	
Communication		Working Alone		Remote locations		Traffic		Storms		Other workers			

RISK SCORE CALCULATOR

Use The Risk Score Calculator To Determine The Level Of Risk Of Each Hazard

What would the CONSEQUENCE of an occurrence, be?	What is the LIKELIHOOD of an occurrence?					Hierarchy of Controls
	Very Likely (occurs several times per year at similar project or location)	Likely (Occurs several times per year)	Possible (Incident has occurred)	Rare (Incident has been known to occur in EPC industry)	Unlikely (Incident not heard of or not know to have occurred in similar project/location)	**Can the hazard be** Eliminated **or removed during the design stage of engineering?**
Disaster (Unacceptable level of Risk) **Multiple Hospitalizations with Fatalities**	*Very High 25*	*Very High 24*	*Very High 22*	*High 19*	*High 15*	**Can the product or process be** Substituted **for a less hazardous alternative?**
Very Serious (Unacceptable level of risk) **Hospitalization, Permanent disability or ill health, Fatality**	*Very High 23*	*Very High 21*	*High 18*	*High 14*	*Medium 10*	**Can Engineering Controls be instituted to** isolate **and lower the risk associated with the hazard (E.g.; guards, barriers, shielding)?**
Serious **Lost time injury or illness without permanent disability hospitalization required.**	*Very High 20*	*High 17*	*High 13*	*Medium 9*	*Low 6*	**Will** Administration Controls **be adopted? I.e. training, procedures, job rotation etc.**
Substantial **Minor injury or acute illness requiring medical treatment no restrictions**	*High 16*	*Medium 12*	*Medium 8*	*Low 5*	*Low 3*	Will the last level in the hierarchy of Control, use of Personal Protective Equipment & Clothing be applied in conjunction with engineering controls and administrative controls? IE; no reliance on PPE as the sole safeguard against a hazard.
Minor **First aid case/Property Damage**	*Medium 11*	*Medium 7*	*Low 4*	*Low 2*	*Low 1*	

JSA Hazard Analysis				DATE:		JHA #
No.	Work Method Step *Describe the task step by step*	Hazard / Risk *What are the hazards of each step?*	Risk Score	Control Methods & Monitoring *What hazard safe guards will be used?*	New Risk Score	Person Responsible
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						

SSO / JHA REVIEWED BY THE FOLLOWING PERSONNEL				
	Name	Signature	Position	Date
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				

Emergency Preparedness Policy

The risk of an incident cannot be totally eliminated; therefore, Northern Inc. will take the following steps to help insure the proper reaction:

1. Provide First Aid Kits and ensure records are kept.
2. Provide Emergency First Aid Training and refresher training.
3. Ensure First Aid Personnel are known or their names are posted.
4. Provide transportation to a Medical Facility for injured persons.
5. Provide Fire Extinguishers.
6. Provide communications (cell phone).
7. Ensure a Rescue Plan is in place where necessary (confined space, scaffolding).
8. Safety Data Sheets – SDS are available on site.

Hazard Assessments could show the need for additional measures, appropriate for certain situations.

To ensure this policy continues to meet the needs of Northern Inc., Management and Employees shall review annually.

EMERGENCY NUMBERS

AMBULANCE	**911**
POLICE	**911**
FIRE DEPARTMENT	**911**
POISON CONTROL	**911**
N.B. Power	**1.800.663.6272**
Bell Aliant	**1.844.224.8344**
Liberty Utilities	**1.800 994.2762**
Rogers	**1.800.738.7893**
WorkSafe NB	**1.800.999.9775**
Environmental Emergency	**1.800.565.1633**
Emergency Measures Organization	**1.506.453.2133**
Department of Natural Resources	**1.506.273.4797**
Main Office	**1.506.473.1822**
Lucette Michaud – Safety Advisor	**1.506.473.0836**
Serina Mazerolle – HSE Lead	**1.506.477.8448**
Alain Parent - Human Resources	**1.506.473.0603**

First Aid

Activities on the Site meet OH&S definition of high-risk activities. Hence, the first aid requirements for the Site are as follows:

# of employees per shift	Place of employment with high hazard work*	
	Schedule A	CSA First Aid kit
1	Personal (Type P) first aid kit	1 CSA Type 1: Personal kit
2 – 19	• 1 first aid kit • 1 first aid provider	1 CSA Type 3: Small Intermediate kit
20 – 49	• 2 first aid kits • 2 first aid providers	2 CSA Type 3: Small Intermediate kits
50 – 99	• 2 first aid kits • 2 first aid providers	2 CSA Type 3: Medium Intermediate kits

In Days where twenty or more employees are onsite another first aid provider will be named as second designate.

First Aid supplies are located at the site trailer or in all vehicles marked with a green cross sign located on the door of the vehicle

All injuries and work-related illnesses will be reported and documented to the Northern Inc. Site Supervisors immediately and assessed or give first aid as required by the readily available certified first aider on site. The first aider will depend upon the mechanism of injury to contact Emergency Medical Services (EMS) immediately or promptly after the steps of Emergency Scene Management. Further assessment at the local medical facility must be done when the cause or effects of the injury and/or illness are questionable or obviously beyond a first aider's ability. The casually will be transported to a medical facility by EMS or by the company vehicle.

The governing regulatory authority's forms for the employer and employee injury reports will be completed by the worker and employer at the Site or local medical facility as appropriate and sent to the regulatory authority within 24 hours of work-related injury or illness.

A copy of the regulatory authority's report must be provided to the Northern Inc. Safety Representative and project manager for the project records.

Site Supervisors are responsible for ensuring all near-misses and incidents are properly reported, analyzed, and followed up on.

Emergency Communication

In the event of emergency Northern Inc. will communicate the extent of emergency to all employees, subcontractors and all personnel within the area.

Northern Inc. will have fire extinguisher, emergency eyewash station, First Aid Kit located in trailer.

Additional fire extinguishers will be located in working vehicles. Additional first aid kit and eye wash bottle will be located in supervisor's truck.

Spill kits will be located in all working vehicles onsite.

Northern Inc. is responsible for the verification of equipment and supplies that they are certified and fit for use.

Communications to emergency services

In the event that Emergency Services are required to be contacted follow the procedures below:

1. Use a cellular phone dial the number and press send. Stay calm. 911's dispatcher will not receive location or phone number information on a cellular call, and what you tell them is the only information we will have to determine how to respond. Know where you are. Dispatcher needs location information from you, and they have to determine if you are within their jurisdiction. If you are not, dispatch will have to transfer the call. Know your mobile number. They will ask for it, in case the call is disconnected, and they have to call you back for more information. (And leave your phone "on" so we can call you back.) Or;

2. When cellular phone service is unavailable still dial 911 and press send. If your provider does not have coverage in that area, your phone will show that it has no service. But another provider may offer coverage there and will transmit your 911 call for you. If your call is connected with 911 follow the information above in 1. Or;

3. By using a CB Radio CB Frequency: 27.06500 CB Channel: 09 for Emergencies. Press in and hold the button on the mic to talk and depress the button and listen for a response. Once you have made contact relay information to emergency services. Or;

4. Prior to the commencement of the project establish an area where cellular phone service is present send an employee with all the pertinent information that needs to be relayed to emergency services. Once employee is done communicating with emergency services go back to the site to inform the necessary personnel that emergency services are on the way.

Fire Emergency Situations

The best way to fight a fire is to ensure it never starts. Northern Inc. employees and Subcontractors should act with this idea in mind.

Blocking access to fire-fighting devices and emergency exits is strictly forbidden.

Before starting a job, employees must familiarize themselves with the Northern Inc. Safety Plan and the locations of fire extinguishers.

In Case of Fire

1. If the fire alarm is not available, notify the site personnel about the fire emergency and location by the following means:

   (i) Voice Communication – Yell **FIRE FIRE FIRE (Make sure someone hears you)**
   (ii) 2 Way Radio
   (iii) Cellular Phone

2. Notify the local Fire Department by dial **911** You will need to provide the following information:
   (i) Caller's Name and telephone number.
   (ii) State current location
   (iii) A place where you will meet the emergency service workers – meet at the Muster Point which is located at a predetermined location and located on map in Construction Trailer.
   (iv) State your type or cause of fire if possible.

3. *Upon being notified about the fire emergency, personnel must:*
   - Leave the building or area by using the designated escape routes.
   - Assemble in the Muster Area:
   - Remain at the Muster Area until the competent authority (Designated Official or designee) announces that it is safe to re-enter.

4. *Fight the fire ONLY if:*
   - • The Fire Department has been notified.
   - • The fire is small and is not spreading to other areas.
   - • Escaping the area is possible by backing up to the nearest exit.
   - • The fire extinguisher is in working condition and personnel are trained to use it.

Remain Calm

- Combustible refuse in sufficient quantities to constitute a fire hazard shall be moved to a safe location.
- Access to the site shall be kept free of all obstructions.
- Fire extinguishers shall be kept at key areas (Construction Trailer and all work vehicles) and be clearly marked, inspected, and maintained by Northern Inc.
- The Fire Safety Plan and most recent edition Map to Hospital to be available in Supervisors vehicle.

Designated Official, Emergency Coordinator or supervisors:

• Disconnect utilities and equipment unless doing so jeopardizes his/her safety.
• Coordinate an orderly evacuation of personnel.
• Perform an accurate head count of personnel reported to the designated area.
• Determine a rescue method to locate missing personnel.
• Provide the Fire Department personnel with the necessary information about the facility / site.
• Perform assessment and coordinate weather forecast office emergency closing procedures

Area/Floor Monitors must:
• Ensure that all employees have evacuated the area/floor.
• Report any problems to the Emergency Coordinator at the Muster Area.
Assistants to Physically Challenged should:
• Assist all physically challenged employees in emergency evacuation.

Vehicle Emergency Procedures

When it is absolutely necessary to stop on a highway or street in case of an emergency, use extreme caution and use one of the following methods to alert oncoming traffic:

1. Activate emergency flashers,
2. Warning signals and lights may be turned on.
3. Rotating beacon(s) may be used – if vehicle is so equipped.
4. Deploy warning flags, reflector triangles/Flares or other emergency equipment.

If the vehicle needs to be towed, contact your supervisor. The Supervisor will communicate with the service manager or shop manager to dispatch a mechanic or tow truck to the scene.

Accident Procedures

In the event of an accident on streets or highways:

1. Notify the local police department by dialing 911 and provide pertinent information concerning the accident. If no phone is available, immediately contact supervisor who is responsible for contacting 911. **DO NOT** leave the accident scene until the local police have responded. Drivers should speak freely and accurately to law enforcement personnel.
2. Notify Supervisor/department head within first hour.
3. Obtain the name, address, and phone number of injured person and all witnesses if possible.
4. Exchange vehicle identification, insurance company name and policy numbers with other driver.
5. Take a photograph of the scene of accident if possible.
6. Complete appropriate accident reports.
7. Do not admit negligence or liability. Do not attempt settlement, regardless of how minor.

Code of Practices & Programs

Code of Practice – Confined Space

1. Definitions

1.1 Confined Space: an enclosed or partially enclosed space not designed or intended for continuous human occupancy with restricted access or egress, and which is or may become hazardous to a person entering it because of its design, construction, location, atmosphere or the materials or substances in it or other conditions but does not include a development heading in an underground mine.

1.2 Site Specific Confined Space Code of Practice (Checklist): document used to identify and document hazards and hierarchy control measures relative to the Confined Space Entry and the work to be conducted in the confined space. Before entering a confined space, the potential hazards and risks will be identified, wrote down on the Checklist.

1.3 Identification of Confined Space Caution: Confined Spaces must have a sign to identify the confined space and advise workers of the need to have and follow safe entry procedures. The confined space must be clearly identified by:

- Name, identification, and location
- Diagram of internals
- Blind / blank list
- Products or materials normally associated with equipment (SDS)
- Lock-out/Tag-out
- Site Specific Confined Space Code of Practice - Hazard Assessment. **Caution:** Entry and work in any confined space will not be done by workers working alone. A specific hazard assessment will be developed / updated at the beginning of every shift. All affected workers should be included in the meeting. This meeting will include:
  - The review of the Site Specific – Confined Space Code of Practice/Safety Meeting and the Confined Space Entry Permit;
  - Hazards and hierarchy of controls required for the work to be conducted in the confined space.
  - Personal Protective Equipment;
  - Emergency Response and Rescue Plan;
- Field Level Risk Assessments (FLRA) must be completed immediately prior to and during the course of each task. Each worker will evaluate, document the hazards, and implement controls where there are any changes to a task.
- Safe Atmospheric Conditions.

1.4 Atmosphere within acceptable limits is within acceptable limits if (**Oxygen Warnings**):

- The percentage of oxygen is not less than 19.5% by volume and not more than 23% by volume. If outside these quantities, no entry is permitted;
- ***Safe Atmospheric Conditions – Contaminants;*** The concentration of an air contaminant does not exceed 50% of the lower explosive limit or lower flammability limit of the air contaminant when the confined space work is cleaning or inspecting and does not create a source of ignition;
  - When the source of air contaminants or oxygen cannot be determined from outside the confined space, NCI shall ensure that appropriate Hierarchy of Controls (Checklist) are implemented prior to entry and the source of air contaminants or oxygen is identified from inside the confined space before other work proceeds.
- ***Safe Atmospheric Condition – Flammability;*** The concentration of an air contaminant does not exceed 10% of the lower explosive limit or lower flammability limit of the air contaminant when the confined space work is cold work using non-sparking equipment;
- The concentration of an air contaminant does not exceed 5% of the lower explosive limit or lower flammability limit of the air contaminant when the confined space work is riveting, welding, flame cutting or other fire or spark-producing work;
- The concentration of air contaminants and physical agents meet the requirements of this Regulation;
- The concentration or percentage referred to in paragraphs five above paragraphs can be maintained during the period of proposed occupancy in the confined space;
- Any liquid in which an employee may drown or any free flowing solid in which an employee may become entrapped has been removed from the confined space;
- The entry of any liquid, free flowing solid or hazardous substance into the confined space in a quantity that could endanger the health or safety of the employee has been prevented by a secure means of disconnecting the pipes

adjacent to the confined space or fitting blank flanges or blind flanges to the pipes adjacent to the confined space; and
- All electrical or other equipment and machines that present a hazard to an entrant while entering, exiting or occupying the confined space have been put in a zero-energy state and locked out in accordance with this Regulation.

In order to bring the atmosphere of a confined space within acceptable limits, an employer shall:

- Ventilate the confined space,
- Remove air contaminants from the confined space by the displacement of air, or
- Intentionally flood the atmosphere inside the confined space with an inert gas such as nitrogen in order to eliminate the hazard of ignition of flammable vapours inside the confined space and create an oxygen deficient atmosphere.

Neither an employer or NCI shall permit an employee to enter or remain in a confined space in which the atmosphere is not within acceptable limits. **Exception:** an employer or NCI **may** if the Hierarchy of Hazard Controls identified in the Site Specific Confined Space Code of Practice are in place, permit an employee to enter or remain in a confined space in which the percentage of oxygen is less than 19.5% by volume.

1.5 Isolation: Before any entry by workers:
- All pipes and lines that may be a source of hazardous material must be disconnected, capped, or blinded. Double lock and bleed may be considered as an alternate
- All potentially hazardous energy sources will be isolated, de-energized and secured using acceptable Code of Practice for Lock-out.

1.6 Lighting: All lighting used in a confined space must be limited to a 12V power source and or an 110V power source with GFCI (ground fault circuit interrupter or breaker) protection outside the confined space.

1.7 Atmospheric / Gas Testing: Prior to an entrant entering a confined space, NCI shall ensure that a competent person tests the atmosphere of the confined space, taking into consideration the stratification of air contaminants and oxygen to ensure that the atmosphere is within the acceptable limits. The date, time and results of such tests shall be documented and visibly posted at the entrance to the confined space.

Only approved air testing equipment may be used. All gas testing equipment must be checked and calibrated according to manufacturer ‘s instructions. Maintenance and calibration records must be readily available. Air test requirements are subject to the hazard assessment and must be clearly identified on the Confined Space Entry Permit. All tests must be documented with the time of testing.

1.8 Continuous Air Testing: Continuous Air Testing or monitoring will be required if atmospheric conditions are likely to change in the confined space as they may be inherent to the space or work to be conducted in the space. At a minimum testing must be documented every 10 minutes.

1.9 Test Ventilation Systems: If ventilation systems are used to limit the concentration of air contaminants or to maintain safe levels of oxygen in the atmosphere of the confined space, NCI shall ensure that a competent person test the concentration of air contaminants and oxygen when the ventilation systems are shut own and when the ventilation systems are turned on.

1.10 Equipment Calibration: When performing the tests referred at paragraphs 1.7 and 1.9 of this Code, a competent person shall:

- Use appropriate equipment that has been calibrated in accordance with the manufacturer`s specifications;
- Bump test the equipment once each day unless the manufacturer requires bump tests to be done more often; and
- Maintain an equipment calibration and maintenance log containing the following information:
  - Date of purchase of the equipment;
  - The serial number of the equipment;

- The Sensor change schedule for the equipment; and
- The maintenance, repair and calibration history of the equipment

1.11 Emergency Response Plan: A written emergency response plan will be in place for all confined space entries. The plan will be customized to meet the potential hazards inherent to the space and the work conducted in the space. Rescue plan will provide for the designation of rescuers, alarm systems, communication procedures, rescuer skills, route and means of entry, personal protective and rescue equipment that may be required.

1.12 Emergency Response Team: NCI and the Owner will ensure that an emergency response team is present to respond immediately if the confined space contains or could develop an atmospheric or other hazards; or has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.

Should the confined space contain a IDLH atmosphere, the Owner and NCI shall each ensure that an emergency response team is able to reach the entrant within three minutes after the attendant initiates the emergency response plan.

2 Purpose

The Confined Space Code of Practice are steps taken by NCI to protect the health and safety of employees, contractors and public when work involves entry into a confined space or hazardous space. The Code applies to all Employees, Contractors, and public at any NCI work site when required to enter and work in a Confined and/or Hazardous Space. NCI acknowledges that each Owner will have their own Code for Confined Space. NCI will follow the site-specific Code provided by the Owner, providing that it meets or exceeds the minimum Standards prescribed in this Code of Practice.

3 Administration and Program Evaluation

The Entry Supervisor on the jobsite will be responsible to administer/explain the Code of Practice to all relevant employees (Attendant, Emergency Response Team Leader, Entrant, all other relevant person). When a jobsite is subject to confined space, the Entry Supervisor, Entrant, Attendant and Emergency Response Team Leader shall fill out the Site Specific – Confined Space Code of Practice Checklist. This will ensure that all Employees, Contractors and public are working in a healthy and safely way. Annual evaluations and/or changes of this Code shall be conducted by NCI's Safety Department in collaboration with the Health and Safety Department in order to satisfy the legislative changes.

4 Responsibilities

Prior to entering a confined work jobsite, the Entry Supervisor will ensure that all employees subject to confined space have the necessary confined space training, including among other things an Entry Level Rescue Training.

Pursuant to the OH&S NB, all Entry Supervisors, Entrants, Emergency Response Team Leader and the Attendant shall perform a Site-Specific Confined Space Code of Practice (Checklist) along with a Confined Space Entry Permit and any other relevant permits before entering the confined space. Should they discover some potential hazards (Checklist), it will be their responsibility, to ensure that safe working conditions are planned all along the entire confined space entry. In other words, should there be any potential hazards, there shall be various methods used by the Supervisor and Employees in order to minimize the potential risk, which should be written down on the Hierarchy of Controls section of the Site-Specific Confined Space Code of Practice Checklist.

Supervisors and Employees will ensure that they identify, in the Checklist, who is the Entry Supervisor, the Attendant and the Emergency Response Team Leader, all of which cannot be the same individual. Additionally, the Entry Supervisor and the Entrant shall identify which PPEs are required in order to perform the work in a safely manner.

In the event of an Emergency, all relevant employees shall identify in the Checklist, the equipment to be used in case of an Emergency and shall indicate if a lifeline is going to be used by employees.

Should NCI not have a designated competent person to perform the initial Hazard Assessment and/or the executed the permit, NCI's Supervisor for the job must be notified. Should the Supervisor be competent, he shall perform the

Assessment. Should he also be incompetent, NCI's upper Management must be notified, and they will appoint a competent person.

All employees shall report any infraction of the confined space code of practice immediately to their Supervisors in order to rectify for future potential hazardous confined space issues.

5 Duties of different assigned employees and personnel:

5.1 Entry Supervisor shall:

- Implement the code of practice;
- Prior to entry, ensure all employees involved in the confined space work are instructed and trained in the code of practice and the procedures identified in the code of practice;
- Ensure that all actions required to be taken before allowing entry to begin have been taken;
- Sign and date the code of practice;
- Ensure that acceptable conditions are maintained for the duration of the entry;
- Ensure that an emergency response team is available for the duration of the entry and that the means for summoning the team are operable;
- Terminate the entry and ensure removal of entrants and equipment at the appropriate time; and
- Communicate the status of the entry and the requirements relating to the entry to the next entry supervisor when the entry supervisor is replaced.

If the percentage or concentration referred to in the definition of **"**Atmosphere within acceptable limits**"** is unable to be maintained or there is a possibility that any liquid, free flowing solid or hazardous substance may enter into the confined space in a quantity that could endanger the health or safety of the entrant while inside the confined space, the Entry Supervisor shall ensure that

- The confined space is continuously monitored while the entrant is in the confined space, and
- Procedures are in place and equipment is provided to allow the entrant to safely enter and exit the confined space.

5.2 Emergency Response Team Leader shall ensure that:

- A written emergency response plan is established;
- The emergency response plan is adequate to protect the health and safety of employees and indicates the number of employees required in case of an emergency;
- The members of the emergency response team perform a simulated rescue at least once a year; and
- The procedures to be followed and the equipment to be used in the event of an emergency are followed and used correctly.

In an emergency, the Emergency Response Team Leader shall:

- Assume control of all activities during the emergency response and direct the emergency response team;
- Ensure that the members of the emergency response team properly perform their duties throughout the emergency response;
- Assess the ability of the attendant and air supply system attendant to continue performing their duties; and
- Maintain two-way communication with all affected parties.

5.3 Attendant (Safety Watch) shall:

- Be stationed at all times outside the point of entry to or exit from the confined space and continuously monitor work in and near the confined space;
- Be knowledgeable about the actual and potential hazards associated with entering a confined space;
- Maintain a two-way communication with the entrant;
- Review the entry procedures prior to entry;
- During the entry:
  - Monitor conditions and changes that could adversely affect the health or safety of the entrant;

- Ensure that the procedures to be followed and the equipment to be used in the event of an emergency are followed and used correctly;
- Recognize the signs and symptoms of illnesses, injuries and hazard exposures that can compromise the health and safety of the entrant;
- Have a means for two-way communication with the entry supervisor and the emergency response team leader; and
- Keep track of entrants entering and exiting the confined space.

In an emergency, the attendant shall:

- Initiate the emergency response plan;
- Order an evacuation of the confined space, if necessary, and
- Assist with or perform the non-entry rescue as set out in the code of practice.

5.4 Entrant shall exit a confined space and notify the attendant if the entrant:

- Observes a hazard that is not identified in the code of practice, and for which hazard control measures are not in place; or
- Believes the atmosphere of the confined space is unsafe due to the limitations of the equipment or the hazard control measures that are in place.

The Entrant shall:

- Follow all conditions specified on the confined space entry permit and the Emergency Response Plan;
- Be aware of hazards that could possibly be encountered during the entry; and
- Follow the directions provided by the Entry Supervisor, the Attendant and the Emergency Response Team Leader.

5.5 Air Supply System Attendant: When an air supply system attendant is identified in a code of practice, the air supply system attendant shall ensure both in normal and emergency situations that:

- The air-line supply system is in proper working order and the air supply is uninterrupted; and
- The air lines do not become entangled or otherwise compromised.

5.6 Operating Authority (Owner of Prime Contractor) shall ensure:

- The hazards that may be encountered while entering and working in the confined space have been identified and evaluated;
- The Hierarchy of controls required to safely enter and work in confined space are identified on the confined space permit and associated Emergency Response Plan.
- The confined space has been properly prepared for entry.
- The confined space entry permit is suspended immediately if any of the conditions on which the permit was issued cannot be maintained. Once, suspended, the confined space is immediately evacuated.
- All workers are made aware of the layout of the confined space.
- An effective Emergency Response Plan is in place and all personnel involved are informed of the plan and their responsibilities.

5.7 Fire Watch shall:

- Be familiar with the work being performed and the configuration of the confined space;
- Be trained to use the fire suppression equipment that is available;
- Be familiar with and be competent to enact the emergency response plan;
- Recognize the hazards associated with working in a confined space;
- Perform the required work safely.

6 In case of emergency rescue and medical response (Emergency Response Plan)

There are 3 types of Emergency Response Plans: Non-Entry Rescue – Conscious Person; Non-Entry Rescue – Unconscious Person and; Entry Rescue.

- Non-Entry Rescue – Conscious Person:
  Start by Sounding the alarm and call the Emergency Response Team Leader. Instruct the entry person to come out. Assist the entry person to exit the confined space. The person with appropriate First Aid skills will check the entry person and call 911 should it be necessary. The rescue person will then report the rescue to his supervisor.
- Non-Entry Rescue – Unconscious Person:
  Start by sounding the alarm and call for the Emergency Response Team Leader. Ensure the entry person is attached to the lifeline. The rescue person will then use the lifeline to pull the entry person out of the space. Once the entry person is through the opening, help him sit down. The person with appropriate First Aid skills will check the entry person and call 911 should it be necessary. The rescue person will then report the rescue to his supervisor.
- Entry-Rescue:
  Start by sounding the alarm and call for the Emergency Response Team Leader. The rescue person shall call 911 and then test the atmosphere to ensure it's safe. If the atmosphere test is safe and no emergency hazards exists, the Emergency Response Team Leader goes into the confined space to attach entry person to rescue system. The rescue person will then report the rescue to his supervisor.

7 Confined Space Entry Documentation Requirement

- Confined Space Entry Permit.
- Site Specific Confined Space Code of Practice Checklist/Safety Meeting
- Entry/Atmosphere Log Testing;
- Field Level Risk Assessment (FLRA) for task specific work.
- Bump Test Record, Vessel Configuration
- SDS for previous products or products produces into the space, isolation records and rescue plan.

8 Special Equipment for Confined Space

Full Body Harness: When required by the Code of Practice, NCI shall ensure that an Entrant, exiting or occupying a confined space wears a full body harness that is referred to in the code and attached to a lifeline that is attached to a secure anchor located outside the confined space, which lifeline and anchor are operated by a competent employee. Employees shall ensure that the full body harness conforms with the requirements for Class E harnesses in CSA standard Z259.10-18, "Full body harnesses" or a standard offering equivalent or better protection.

Lifelines: When more than one Entrant occupies a confined space, NCI shall ensure that measures are taken to prevent the lifelines attached to the full body harnesses worn by the Entrants from becoming entangled. The use of lifelines is not required if the code of practice identifies conditions that make its use impractical or unsafe.

Self-contained breathing apparatus (SCBA): IF a confined space in which entry is required contains an IDLH atmosphere, NCI shall ensure that a pressure-demand SCBA or a multifunctional SCBA/airline respirator with auxiliary self-contained air supply has a minimum rated service time of 15 minutes, or additional capacity if required by the code of practice.

Tripod: When applicable, a tripod must be accessible for employees subject to confined space work. This will provide stability and safe access for the entrants.

Gaz Monitor: When an entrant is in the confined space, a gas monitor must be used in order to test the quality of air. This will be used at all times during the time the entrant is in the space. Should their be low ventilation readings, then the entrant shall come out of the confined space.

9 Training for Employees & Records:

NCI shall establish and implement a training program for employees involved in confined space. NCI shall use Table A.1 “Overview of Training Requirements” of CSA Standard Z1006-10, (R2015), “Management of work in confined space” as a guide to establish the content of the training program. NCI shall ensure that a competent person provides the training program and that the training results in an employee being able to apply the information as needed to protect the employee`s health and safety.

NCI shall maintain a training record for each employee who has completed the training program, which record should have the following information:

- The name of the employee;
- The name of the competent person who provided the training; and
- The date on which the training took place.

NCI shall ensure the training records for each employee is made available to an officer on request.

CONFINED SPACE ENTRY PERMIT

This permit must be signed by the Authorized Competent Person before the work proceeds. ***Only the work listed may be done.***	
Workplace:	Location:
PERMIT Issued Date: YY YYYY/MM/DD	**PERMIT Expires** Date: YY YYYY/MM/DD
Name of Competent Person:	
Emergency contact; Name:	Phone#:
Description of Confined Space:	
DESCRIPTION OF WORK:	
Name of the employees involved with the Confined Space:	
Entry, Standby, and Back up Persons Training	
Successfully completed required training? Yes ☐ No ☐	Is this training current? Yes ☐ No ☐
First Aid, CPR? Yes ☐ No ☐	Confined Space Entry? Yes ☐ No ☐
Hot Work Permit required: Yes ☐ No ☐	(If yes fill out Hot Work Permit)
ISOLATION OF THE CONFINED SPACE (The **items ticked** below **have been** isolated or made safe)	
Pipelines (water, steam, gas, etc.) ☐	Electrical Services ☐
Mechanical or Electrical Drives ☐	Warning Notices, Portable Signs, Locks or Tags (danger) installed to the means of isolation ☐
Sludge, Deposits, Waste ☐	Radiation Services ☐
Harmful Materials ☐	
2. ATMOSPHERIC TEST REQUIREMENTS (Fill in details of test) If the confined space must be cleared of contaminants then use a suitable purging agent and if this is a gas mixture it shall have less than 21% by volume of oxygen, otherwise respiratory equipment shall be provided.	
Gas Detector Unit #:	
Has the Gas Detector been bump tested prior to use? Yes ☐ No ☐ (If No have unit Bump tested)	
Has the Gas Detector been calibrated in the last 6 months? Yes ☐ No ☐ (If No have unit calibrated)	
Is Continuous Atmospheric Testing required? Yes ☐ No ☐ (Hot Work requires C.A.T.)	

Atmospheric Test for Confined Space

Type of Confined Space:		
Date:	**Time:**	**Tested By:**

When doing Atmospheric Testing it takes 3 seconds per foot of hose for the air sample to reach the multi-gas detector. (Example: A 20-foot hose will take 60 seconds for the sample air to reach the detector)(Air samples are to be done every 2 feet down into the confined space.)

Depth of Test in Feet	Methane Comb/EX (0 – 10%) LEL	Oxygen O2 (19.5% – 23%)	Carbon Monoxide CO (0-30PPM)	Hydrogen Sulphide H2S (0-10PPM)

Continuous Atmospheric Testing

Time Every ___ Minutes	Methane Comb/EX (0 – 10%) LEL	Oxygen O2 (19.5% – 23%)	Carbon Monoxide CO (0-30PPM)	Hydrogen Sulphide H2S (0-10PPM)

The concentration of any flammable contaminant in the atmosphere of the confined space is:		
0% LEL ☐	Between 1 to 5% LEL ☐	Between 5 to 10% LEL ☐
between 1 and 5% LEL – enter confined space only with continuous monitoring and the use of suitably calibrated flammable gas detector and non sparking tools. **No Hot Work Allowed.**		
CONDITIONS SAFE TO ENTER?		
with supplied air respiratory device (no combustible gas)	Yes ☐	No ☐
with an air purifying (non air supplied) respiratory protection device	Yes ☐	No ☐
without supplied air respiratory device	Yes ☐	No ☐
3. PERSONAL PROTECTIVE EQUIPMENT The following personal protective equipment (ticked) **shall be worn** as required		
Supplied air respirators	Yes ☐	No ☐
Air purifying respiratory protection devices	Yes ☐	No ☐
Safety harness and/or safety line or lifeline/rescue	Yes ☐	No ☐
Eye protection e.g. safety glasses	Yes ☐	No ☐
Hand protection e.g. gloves	Yes ☐	No ☐
Foot protection e.g. safety shoes or boots	Yes ☐	No ☐
Protective clothing e.g. overalls	Yes ☐	No ☐
Hearing protection	Yes ☐	No ☐
Safety helmets	Yes ☐	No ☐
4. STAND-BY AND RESCUE PERSONNEL		
Stand-by personnel are:		
Rescue & emergency procedures have been issued and understood?	Yes ☐	No ☐
Openings for entry and exit to permit rescue of any person who may enter the confined space, or provision of suitable alternative means of rescue	Yes ☐	No ☐
Procedures to prevent obstruction of the openings by fittings or equipment which could impede rescue	Yes ☐	No ☐
5. HAZARDS IDENTIFIED WITH THIS CONFINED SPACE ARE:		
6. PRECAUTIONS: **The following precautions have been identified:**		
Appropriate warning signs and barriers **have** been placed correctly.		
Smoking has been **banned** from the confined space site.		
Ignition sources have been removed from within 6 metres of the entry/exit point.		
Equipment for fire protection		
First –aid equipment		
No chemical agents **other** than those listed below **shall** be permitted in the confined space:		
Any special precautions required :		

7. AUTHORISATION FOR ENTRY

The confined space described above, is in my opinion, safe for the work detailed in the Description of Work above to be carried out, provided that the precautions listed are adhered to.

NOTE: No work shall be carried out within a confined space, or on the outside surface of a confined space, if the work likely to cause or create a risk:

- To the health and safety of a person in the confined space, or fire or explosion.

Name: Authorized Competent Person	**Date:** YYYY/MM/DD	**Time:** **am/pm**
Signature: Authorized Competent Person		

8. ENTRY PERSONNEL

I/We understand the safety procedures required for entry and exit for working in a confined space and the safety protective equipment to be used and have a working knowledge of the equipment to be used.

EMPLOYEES NAME Please Print	EMPLOYEES SIGNATURE	Date of Entry	IN (TIME)	OUT (TIME)

9. TASK COMPLETED:

All persons, equipment, machinery & materials **have been withdrawn.**	Yes ☐	No ☐
Work has been **completed**	Yes ☐	No ☐
Access to the confined space has been **secured**	Yes ☐	No ☐

Name: Authorized Competent Person	**Date:** YYYY/MM/DD	**Time:** **am/pm**
Signature: Authorized Competent Person		

Return the completed form to the Site Supervisor

Code of Practice - Fall Protection

1. Definition/Explanation

The purpose of this Code of Practice (COP) is to ensure that all Northern Inc. employees, contractors, and subcontractors engaged in working at and may fall at vertical distances of:

a) above 3 metres (10 ft),
b) less than 3 metres if there is an unusual possibility of injury
c) into or onto a hazardous substance or object, or through an opening in a work surface,

thoroughly understand how to protect themselves and others present at the worksite where working at heights is required. The focus of this COP is on training and equipping employees with the tools necessary to eliminate or control the hazards associated with working at heights.

2. Identified Hazards

Sites may vary in what hazards they have but the complied hazards of Northern Inc. sites are:

a) Work on bridges
b) Flat roofs, edge and control zones and roof access doors
c) Sloped roofs
d) Pits and tanks
e) Construction sites, openings in floors, hazardous objects, or surfaces
f) Work over step embankments or cliffs.
g) Mezzanine openings
h) Working over water
i) Work over hazardous areas
j) Arial lifting devices

2.1 Risks of injury

a) Minor injury b) Severe injury c) Death

3. Training Required

3.1 Only Northern Inc. employees adequately trained by course recognized by Worksafe NB in fall protection will conduct work when fall protection system use is required. Fall protection training must include general information about the hazards associated with working at heights and specific information regarding control methods available to control these known hazards

4. Fall Protection Inspection, Maintenance and Storage

4.1 Prior to the use of any component, a pre-use inspection must be conducted on each work shift by the worker using them as required by the manufacturer. Training required prior to being given this responsibility must ensure that this inspection requirement is effectively communicated to all workers having to perform inspections and that workers are adequately trained on proper inspection methods. Items to check for during inspections include:

a) Mildew, wear, or damage;
b) Cuts, tears, or abrasions;
c) Stretching and loose or damaged stitching;
d) Loose or damaged mountings;
e) Cracked, broken and deformed D rings or snap-hooks;
f) Contact with fire, acids, or other corrosives;
g) Distorted hooks or faulty hook springs
h) Tongues ill-fitted to the shoulder of buckles;
i) Ropes that show wear or internal deterioration;
j) Damaged mechanical operating components; and
k) Any other item specified by the manufacturer.

4.2 This inspection should be repeated at the end of each use to determine if the component sustained any damage during work activities. If the component is found to have any deficiencies, it must be removed from service immediately and tagged “Unstable” or destroyed.

4.3 Maintenance

When needed, wash the fall protection equipment in warm water using a mild detergent. Rinse thoroughly in clean warm water and allow drying at room temperature. Never use high pressure washers on equipment components, which may drive contaminates deeper into fabric materials. Besides regularly scheduled inspections, many components used as part of fall protection systems will require defined manufacturer inspections. When in doubt, check with the manufacturer recommendations or specifications.

4.4 Storage

All fall protection components should be stored in a clean area away from strong sunlight and extreme temperatures which could degrade materials. Check manufacturer's recommendations.

5.0 Fall Protection System Types and Components

5.1 System Types

While there are multiple types of systems and applications, fall protection is most easily classified as belonging to 1 of 2 groups, passive or active.

5.1.1 Passive Systems

a) There are two kinds of passive systems; control zones and safety nets. Both of these are intended to protect workers by keeping them away from the falling edge, catching them in the event of a fall, or preventing contact with lower surfaces below.
b) These passive systems allow workers the ability to perform their work unencumbered by the wearing of fall protection equipment. When properly designed and constructed these systems will protect workers 100% of the time.

5.1.2 Active Systems

These systems are personal fall arrest systems that stop a worker in a fall from a working height. While these systems limit the workers' freedom of movement while performing their jobs, these systems are also designed to limit both the distance fallen and the amount of injury incurred. These systems can be applied to many situations but are generally referred to as belonging to one of three types:

1) Horizontal Systems 2) Restraint Systems 3) Vertical Systems

Temporary and permanent horizontal lifeline systems are engineered systems which allow workers mobility along a working surface. These systems must be designed, installed, and used in accordance with the manufacturers or professional engineers' specifications. These instructions will indicate the intended application, operation, use, training, and inspection requirements.

Restraint systems prevent workers from travelling to an edge or position where a fall could occur. These systems can be anchored using anchor plates or may be used in conjunction with horizontal systems to limit horizontal movement to a given distance.

Vertical systems are typically assembled by the end-user. Accessory component selection for vertical systems may remain similar to that of horizontal systems; however, component selection for vertical systems must be determined in conjunction with total fall distance and fall clearance requirements. This determination is entirely the responsibility of the end-user. End-users must also remain aware of methods by which they might reduce those forces, primarily by limiting their falling distance and/or by selecting a higher anchor point. Regardless of the active system type selected, end users should remain aware of the forces applied to their bodies in the event of a fall.

5.2 Components

Northern Inc. employees must follow the hazard assessment and fall protection planning process prior to selection of either the fall protection system type or accessory components. Should Northern Inc. procedures such as maintenance, inspection and disposal be more defined in their application than their vendors or clients, then Northern Inc. will take precedence.

Components of any active fall protection system will always include the following:

1. Anchors or anchorage system
2. Connecting components

1. A body holding device
2. A fall protection plan.

5.2.1 Anchors

Anchors are the foundation of any active fall protection system. Workers must be able to recognize what can be used as an anchor or anchorage point of attachment. Presently in Canada, there is no CSA guideline on anchors or anchorages. However, there is an American National Standards Institute (ANSI 359.1) guideline which industry presently relies on.

While the ideal anchor strength as defined in OH&S regulations is 22 kN (5000 lbs) per attached worker, determining that a given point has the capability sought remains a subjective decision. If designated and marked anchor points are not available, workers must have enough training to properly select safe anchor points. OH&S regulations generally detail varying anchor strength requirements that must be adhered to if at all possible.

5.2.2-Lanyards and Shock Absorbers/Energy Absorbers

Lanyards are a means of connecting component used to connect the worker via the full body harness to the anchorage point. Shock absorbers are designed to absorb the forces when a fall occurs. Not every system type will require the addition of a shock absorber but, where possible, Northern Inc. employees should use systems that include them. Manufacturers' provide various types, length and varieties of lanyards and shock absorbers. The decision to use one type or combination over other types will be dictated by availability as well as system type and requirements.

All lanyards and shock absorbers must be Canadian Standards Association (CSA) approved and bear marking that indicates the relevant standard. Their selection will be based on the work environment and the type of work being conducted. The following is a list of the different lanyard and shock absorber types:

a) Fibre-rope lanyards with and without shock absorbers;
b) Wire rope lanyards with and without shock absorbers;
c) Web lanyards with and without shock absorbers;
d) Shock absorbing lanyards; and
e) Twin lanyards with permanently attached shock absorbers.

5.2.3 Descent Control Devices

Descent control devices allow a worker to be lowered or to move down a rope in a controlled fashion. These devices provide either automatic or manual controlled descent and are normally used for evacuation or work positioning.

All descent control devices must be Canadian Standards Association (CSA) approved and bear marking that indicates the relevant standard. The selection will be based on the work environment and the type of work being conducted. The following is a list of descent controller types:

a) **1E**: Automatic descent control for emergency egress.
b) **2E**: Manual descent control with automatic lock-off for emergency egress.
c) **2W**: Manual descent control with automatic lock-off for work positioning.
d) **3W**: Manual descent control without automatic lock-off for work positioning.

5.2.4 Self - Retracting Devices

Since self-retracting devices lock-up almost immediately, these devices greatly reduce free fall distances and the consequent forces applied to our bodies in the event of a fall. Their primary application is for vertical system use; however different manufacturer's do permit them to be used in horizontal applications. All self-retracting devices must be Canadian Standards Association (CSA) approved and bear marking that indicates the relevant standard. The selection will be based on the work environment and the type of work being conducted. The following is a list of self-retracting devices:

a) **Type 1:** Usually shorter in length, 1.5 - 3.0 metres (5 -10 ft). These must be removed immediately from service after a fall.
b) **Type 2:** For use over 3 metres (10 ft), These must be removed from service and returned to the manufacturer for repair after a fall if the visual load indicator is deployed.
c) **Type 3**: These devices have a built-in retrieval capability and must also be removed from service and returned to the manufacturer for repair after a fall if the visual load indicator is deployed.

5.2.5 Fall Arresters (Rope or Cable Grabs)

Fall arresters are devices that can be moved along a rope, cable or rail and that lock (grab) in the event of a fall. Some arresters are entirely automatic while others are manually controlled. All arresters are predominantly designed to be used in vertical systems.

Their primary application is for vertical system use; however, different manufacturer's do permit them to be used in horizontal applications. All fall arresters (Rope Grabs) must be Canadian Standards Association (CSA) approved and bear markings that indicate the relevant standard. The selection will be based on the work environment and the type of work being conducted. The following is a list of fall arrester types:

a) **Class AD**: Automatic Dorsal, rear attachment, moves automatically.
b) **Class AS:** Automatic Sternal, frontal attachment, moves automatically.
c) **Class ADP:** Automatic Dorsal panic, rear attachment, arrests even when grabbed in a panic-like situation.
d) **Class MDP:** Manual Dorsal Panic, rear attachment, must be deliberately moved along the lifeline.

5.2.6 Full Body Harness (body holding device)

PHRD's employees are responsible for determining the type of personal fall protection harness required. All harnesses must be Canadian Standards Association (CSA) approved and bear marking that indicates this clearly relevant standard. The selection will be based on the work environment and the type of work being conducted. The following is a list of harness types:

a) **Fall Arresting** Single D-ring located on the upper spine between shoulder blades. (CSA Type "A")
b) **Controlled Descent** Additional side mounted D-rings for use with descent controllers. (CSA Type "D")
c) **Confined Space Entry and Exit** Additional D-rings mounted at each shoulder that allows the wearer to be raised or lowered in a vertical position. (CSA Type "E")
d) **Ladder Climbing** Additional D-rings on the front of the harness allowing for attachment to ladder system. (CSA Type "L")
e) **Work Positioning** D-rings on the front or sides of the harness for the worker to "lean" against. There may be a padded belt incorporated into the harness. (CSA Type "P")

5.2.7 Hazard Assessment Process Pre-work hazard assessments are required by regulatory bodies and Northern Inc. safety standards. Workers must conduct hazard assessments to identify existing or potential hazards before starting work on any Northern Inc. worksite. A thorough and documented worksite hazard assessment must be completed where working at heights is required. All workers should be involved in the assessment process whenever possible. Once this hazard assessment is complete then appropriate controls must be employed, chosen on the merit of their effectiveness, to

eliminate or control the hazard(s) identified. These controls are commonly referred to as the hierarchy of hazard control, there is a best or first choice as well as a last resort choice. The following list gives control methods in order of preference

a) **Engineering:** These controls change the environment to reduce or eliminate the hazard.
b) **Administrative:** These controls communicate hazards and/or change the way in which the work is performed.
c) **Personal Protective Equipment (PPE):** These controls apply changes to the worker but do nothing to reduce the hazard.
d) Active fall protection systems (PPE) are systems that are used as a last resort when engineering controls are not viable or practicable.

5.2.8 Fall Protection Planning

Fall protection planning starts with competent training. Workers must be adequately qualified and informed as to the fall protection systems and components available to them when working at heights. Competent training, including the use of a comprehensive approach to system and component selection, will ensure that all Northern Inc. personnel complete a fall protection plan prior to the start of any work where the uses of fall protection systems and/or components are required.

When having to use fall protection systems in a working alone environment, the fall protection planning must ensure that another worker is on site to perform a rescue if required before the work activities are started. The components within the fall protection plan must include, at a minimum, the following items:

1) Hazard Identification
2) Fall Protection System
3) Fall Protection Components
4) Rescue/Response Plan

5.2.9 General Rescue Procedures

In the event of an injury, or in the event that an employee performing works at heights greater than 3 metres requires assistance, the following emergency rescue procedures will be used:

a) Have someone notify emergency rescue personnel immediately **BY DIALING 911 OR OTHER EMERGENCY NUMBER DESIGNATED AT THE FACILITY.**
b) Commence rescue activities.
c) After rescue is affected, move the employee away from the space, and administer First Aid / CPR, as appropriate and wait for Emergency Services.

Note: Specific rescue procedures may have to be developed for each activity or task requiring the use of fall protection systems.

Fall Protection Plan

Refer to the applicable health and safety legislation and regulations for fall protection

Client:	Date:	
Address:		
Supervisor:	Contract # /Job #:	
Description of work to be performed:		
Duration of work to be performed:		
Identify primary tools and equipment used to complete the work:		
Fall Hazards Identify all existing and potential hazards associated with the site		
Fall Protection Systems to be used Identify the fall protection systems to be used at the worksite to protect workers from fall hazard (i.e.) Travel restraint, personal fall arrest system, safety net, control zone etc.		
Anchors to be used during the work Identify the anchors both engineered and improvised that workers are to use		
Is a swing fall hazard present or can be created? ☐ Yes ☐ No		
If yes describe procedure(s) to use:		
Clearance Distances to be confirmed Clearance distances must be sufficient to prevent a worker from striking the ground, and object or level below the area		
Is there a hazard to the following: unsafe surface, contact with object, exposure to hazardous material? ☐ Yes ☐ No If yes explain:		
Distance to nearest safe surface or water in feet:	(circle one surface or water)	
Procedures Identify detailed procedures to assemble, inspect, use, maintain and dismantle the fall protection system identified above		

Rescue Plan Describe the procedures that will be followed if a worker falls and needs to be rescued		
Can current or forecasted weather conditions affect the work or rescue? ☐ Yes ☐ No		
If yes what controls are in place?		
Designated competent person supervising work:		
Name:	Signature:	Date:
Fall protection plan was developed by:		
Name:	Signature:	Date:

Signature

By signing below, you acknowledge that you have read, understand, and accept this Fall Protection Plan and procedures in entirety. You must be trained in the safe use of fall protection equipment and the procedures you must follow to ensure your personal safety while using this equipment. This training must include the procedures to assemble, maintain, inspect, use, and dissemble the fall protection system or systems in use. Workers expected to rescue a worker who has fallen and is suspended by fall protection must be trained in rescue procedures. These procedures should be practiced at regular intervals.

Print	***Signature***	**Trained in the safe use of fall protection equipment**			
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☐	Yes	☐	No
		☒	Yes	☐	No
		☐	Yes	☐	No

All fall protection equipment must be inspected before use by the user.
Fall Protection Equipment Inspection: Defects include but are not limited to:

- Cuts
- Abrasion
- Loose threads
- Stretching
- Tears
- Mold

Look for Deterioration: Exposure to molten metal or flame from hot work will fuse nylon fibers together. There may be hard shiny spots and the nylon appears shriveled and brown. The nylon will feel brittle, exposure to harsh chemicals-change in color, appearing as a brownish smear. Nylon webbing loses elasticity.
Hardware Inspection: Look for cracks, pitting and any distortion in all hardware components: buckles, D-rings, snap hooks, and carabineers, rivets, and grommets. Belt buckle grommets get a lot of wear from opening and closing. Snap hooks must lock and close tightly; buckles must function properly.

Equipment Type	Inspection Number	Pass / Fail	Comments

Code of practice- Lockout Tagout	
Regulations, Standards and References	Occupational Safety General Regulations
Hazards Identified	Crushing injuries, entanglement, electrical contact caught in pinch points
Hazard-Specific Personal Protective Equipment	Hard hat, safety boots, gloves, eye protection
Hazard-Specific Training	Confined space, lookout procedures

This procedure is to be followed for lock out and tagging equipment undergoing such work where injury or death could result from unexpected motion or contact with energized circuits.

- In the event that the unit must be left shut down for repair or further work, a different system must be used to secure the machinery. Disable the equipment with a method approved by your employer (i.e.) (alternative lock system). Always take your personal lock when you leave.
- When working within the range of energized circuits, pinch points, points of operation, rotating or oscillating parts or where operation is not required, the machinery must be completely de-energized, lock out and tagged. Stored energy must be neutralized. This includes the release of hydraulic or pneumatic pressure and blocking or releasing any spring-driven or gravity-operated· mechanism.
- When working on the hydraulic system of hydraulic equipment, the equipment must be "landed" on pipe stands or similar supports to prevent accidental motion resulting from the loss of hydraulic pressure.
- Equipment using a plugged 110-volt power supply will be considered locked out if the plug is disconnected, and left untagged, with the end clearly in view.
- Personnel must be trained to perform lockout/Tagout procedures and will have access to lockout tags and lockout devices. Only one key or combination shall be available to supervisory personnel to be used in emergency situations.

CAUTION: Power sources may be hydraulic but controls are electric or other combinations. Both the source AND controls need or may need to be locked out.

SUPERVISOR'S RESPONSIBILITY

It shall be the responsibility of all supervisors to:

- Instruct workers in the operation of this procedure.
- Ensure Lockout checklist is followed
- Periodically follow-up to ensure compliance.
- Have a company lock or shift change overlap.
- The supervisor may delegate the instruction of employees and follow-up compliance with this procedure to the Foreman, worker-in charge, or the worker.
- If extraordinary conditions required operation of equipment which is lock out, this is permissible only be direct order of the supervisor who must ensure that it can be done safely before removing the lockout. Ensure communication and complete inspection is done.
- The supervisor must ensure that the equipment is locked out again before work recommences

WORKER'S RESPONSIBILITY

- Understand the equipment; be aware it is potential hazards. If uncertain, contact the supervisor before proceeding.
- All affected workers must be notified that a lock out and tag out system is going to be utilized and the reason for it.
- If more than one worker is assigned to a task, each will be responsible for placing his/her own lock and "DO NOT START" tag, so the controls cannot be operated. If controls are located that only one lock can be accommodated, a multiple lock out device must be used.
- On electrical equipment, where accidental starting would create a hazard, open the switch to shut off the power, apply a personal lock and a "DO NOT START" tag will be placed by the mechanic at the point where the circuit was de-

energized. (Fuse pullers must be used when removing fuses). Box must then be locked to prevent reinstallation of fuses by qualified personnel. ·

- Valves or other energy disconnecting means shall be operated so that the energy sources are isolated from the machinery. Where the potential for injury exits, stored energy in capacitors and hydraulic, spring, or pneumatic pressure must also be dissipated or blocked prior to performing work in their vicinity.
- If a machine is locked out and it becomes necessary, recheck upon returning to make sure the machine is still locked out.
- If more than one shift is involved to complete the work, the relief worker should place his/her lock on the energy-isolating device prior to removal of the original lock and tag.

CAUTION: There may be more than one power source. If necessary, lock out the car lighting supply circuit as well as any other auxiliary source of power.

RETURN TO SERVICE

- After all work is completed, the following procedure shall be used to restore the equipment to service.
- Only the employee who performed the lockout may remove the lock and tag. Then each person must personally remove his or her own lock.
- When the work is complete and the equipment is ready for testing, check the area for personnel, tools, and other equipment before removing the Lock and Tag.
- Before leaving the area notify all other affected personnel that the work is complete.
- Complete Lockout checklist

Lockout Checklist

Contract #/Job #	Locking Out:	Date:
Locked out by:		

Step 1: Before Beginning to Service Equipment	✓
Have the type and amount of energy source on the equipment been identified?	
Have the possible dangers related to the energy source being controlled been identified?	
Are the steps necessary to control the energy source understood?	
Have all affected employees been notified when the equipment will be shut off for service?	
Step 2: Shut Down Equipment	
Have the company's safety procedures been followed?	
Have the manufacturer's instructions been referred to?	
Step 3: Isolate the Machine or Equipment	
Has the main breaker or control switch been shut off?	
Have valves been closed?	
Have process lines been disconnected?	
Step 4: Attach Lock and Tag	
Step 5: Control Stored Energy	
Has the electrical capacitance been bled?	
Have the lock and tag been attached?	
Has pressure or hydraulic lines from the work area been vented or isolated?	
Have tanks been drained?	
Are switches or levels that could be moved into the start position blocked, clamped, or chained?	
Are lines containing process materials that are toxic, hot, cold, corrosive, or asphyxiating cleared?	
Step 6: Verify That the Energy State is at Zero	
Have the start switches on the equipment been tested?	
Have pressure gauges been checked to ensure that lines are depressurized?	
Are blocks or cribs secured?	
Have electrical circuits been checked to verify that voltage is at zero energy?	
Are blanks, used to block feed chemicals, secure and not leaking?	
Step 7: If you have answered yes to the above steps, begin working.	
Safe Start-up Checklist	
Step 1: Inspect the Area	
Are all machine components operational?	
Are all safety guards in place?	
Have all tools been removed from machine?	
Have all braces, pins, blocks and chains been removed?	
Are all pressure tubing, pipes and hoses connected with valves closed?	
Is the work area clear for mechanical operation?	
Step 2: Remove Lockout Devices and Tags	
Step 3 : Notify Affected Employees	
Is the work area cleared before starting up the equipment?	
Has the services been completed and the locks and tags removed?	
Step 4: If you answered yes to all the above, start up the equipment.	
Date returned to service:	
By Whom:	

Code of Practice – Working Alone

DEFINITIONS

"Working alone" means the performance of any work function by a worker who:

a) Is the only worker for that employer at that workplace at any time
b) Is not directly supervised by the employer, or another person designated as a supervisor by the employer, at any time

"Working in isolation" means working in circumstances where assistance is not readily available in the event of injury, ill health, or emergency.

The definition of *working in isolation* refers to those persons whose work sometimes or regularly requires them to be at a worksite that is remote from other workers, depending on the physical set up of the facility in question, and in circumstances where assistance

This Code of Practice will:

1. Assist in the recognition of working alone or in isolation situations
2. Assist in the development of safe work procedures for performing such tasks
3. Supplement an employer's regular training program for workers required to work alone or in isolation
4. assist members of workplace safety and health committees in identifying and making recommendations for hazard evaluation and control

GENERAL INFORMATION

This *Code of Practice* does not cover all circumstances under which a worker may be required to work alone or in isolation. It does not specify monitoring methods required for specific situations.

Northern Inc. will ensure they have considered and addressed the hazards and risks in jobs where workers work alone or in isolation, and that appropriate safe work procedures have been developed and implemented which will reflect

1. The necessity of assessing all jobs requiring employees to work alone or in isolation to determine the risks and reduce the probability of an incident
2. The requirement to develop and implement safe work procedures to eliminate or reduce the identified risks to those workers. This includes training workers and providing help if there is an injury or other incident

When an employee may be required to work alone or in isolation, there is a need to:

1. **Spot the hazard:** Identify tasks where workers may have to perform work while working alone or in isolation.
2. **Assess the risk:** Train workers in identifying and assessing hazards to which there may be personal exposure.
3. **Find a safer way:** Implement measures to reduce, control, or eliminate hazards and try using alternative means of performing the work. Employees can safely work alone or in isolation if they make proper hazard/risk assessments and implement safe work practices and procedures.

4.0 Employers' Duties

4(1) An Employer shall establish a code of practice to ensure, so far as is reasonably practicable the health and safety of an employee who works alone at any time at a place of employment from risks arising out of, or connection with, the work assigned.

Further duties of employers

4.2 Employer shall ensure that the code of practice referred to in section 4(1) includes, without being limited to, the following information

(a) The name, address, location, and telephone number of the place of employment.
(b) The name, address, and telephone number of the employer.
(c) The nature of the business conducted at the place of employment
(d) Identification of the possible risks to each employee who works alone that arise out of or in connection with the work assigned.
(e) The procedures to be followed in order to minimize the risks identified in paragraph(d) and
(f) Details of the means by which an employee who works alone can secure emergency assistance and the employer can provide emergency assistance in the event of an injury or other circumstance which may endanger the health or safety of the employee.
(g) Provide to all his workers such information, instruction, training, supervision, and facilities to ensure, so far as is reasonably practicable, the safety, health, and welfare at work of all his workers;
(h) Is familiar with this Act and the regulations that apply to the work performed at the workplace
(i) An employer shall provide any equipment required in a code of practice established under section (4.1) and shall ensure that the code of practice is adhered to at a place of employment
(j) An employer shall implement a training program in respect to code of practice established under section (4.1) for each employee who works alone at any time and for each supervisor who is responsible for an employee who works alone at any time
(k) Shall ensure a copy of this code of practice shall be readily available to an officer upon request

4.3 Supervisors Duties

Every supervisor shall so far as is reasonably practicable:

- take all precautions necessary to protect the safety and health of a worker under his or her supervision
- ensure that a worker under his or her supervision works in the manner and in accordance with the procedures and measures required by this Act and the regulations
- ensure that a worker under his or her supervision uses all devices and wears all clothing and personal protective equipment designated or provided by the employer or required to be used or worn by this Act or the regulations
- advise a worker under his or her supervision of all known or reasonably foreseeable risks to safety and health in the area where the worker is involved in work
- co-operate with any other person exercising a duty imposed by OH&S Act or the regulations
- comply with OH&S Act and the regulations

4.4General duties of workers

- Every worker while at work shall, in accordance with the objects and purposes of OH&S Act
- take reasonable care to protect his safety and health and the safety and health of other persons who may be affected by his act or omissions at work
- at all times, when the nature of his work requires, use all devices, and wear all articles of clothing and personal protective equipment designated and provided for his protection by his employer, or required to be used and worn by him by Safe Work Procedures and OH&S Regulations
- consult and co-operate with the workplace safety and health committee, where such a committee exists, regarding the duties and matters with which that committee is charged under this Act
- consult and co-operate with the worker safety and health representative, where such a representative has been designated, regarding the duties and matters with which that representative is charged
- comply with this Act and the regulations
- co-operate with any other person exercising a duty imposed by this Act or the regulations

5.0 Risk identification

When a worker works alone or in isolation, supervisor and employee must identify the risks arising from the conditions and circumstances of the worker's work in consultation with:

- Northern Inc. Central Safety committee
- The representative at the workplace when there is no committee or representative, the workers at the workplace.

5.1) An employer must, so far as is reasonably practicable, take steps to eliminate or reduce the identified risks to workers working alone or working in isolation.

(5.2) Safe work procedures

Safe work procedures must include:

- The establishment of an effective communication system that consists of:
    - radio communication
    - telephone or cellular phone communication
- Any other means that provides effective communication given the risks involved any of the following:
    - a system of regular contact by the employer with the worker working alone or in isolation
    - limitations on or prohibitions of specified activities
    - the establishment of training requirements where applicable, the provision of emergency supplies

5.3 Remote Locations

If the work involves remote locations

- Prepare a daily work plan so that you and others know where you are expected to be and when.
- Designate a contact person at the office, plus a back-up person.
- Define under what circumstances you will check-in and how often.
- Keep your designated contact informed of your location and stick to your call-in schedule.
- Call and check in when you first arrive and as you leave any location.
- Have your designated contact call you periodically to ensure that you are okay.
- Develop procedures to be followed if you do not check in as planned.

Permit for Employees Who work Alone
(e.g. truck drivers, field workers, operators)

✓ Yes X No NA Non-Applicable

EMPLOYEE TRAINING	
Do you ensure employees are trained and competent to work alone safely?	
Are employees informed of the hazards associated with working alone?	
For employees who have to travel alone to remote locations, do they have some training in emergency survival?	
RISK ASSESSMENT:	
Has a thorough assessment of the risks inherent in the location or environment been done?	
Was the assessment completed with input from affected employees?	
Is there a history of incidents in similar locations or situations?	
Have the employees been informed of these incidents?	
Are employees aware of the increased risk from working alone?	
SAFE WORK PROCEDURE	
Do you have a safe work procedure for employees working alone?	
EQUIPMENT SAFETY	
Do you ensure vehicles used by employees are in good working condition?	
Are all vehicles used by employees under regular maintenance programs?	
Is necessary equipment in good working order prior to use on this site?	
EQUIPMENT AND SUPPLIES	
Do you provide employees with the appropriate first aid supplies?	
Do employees carry the required first aid supplies?	
Do employees carry emergency supplies when they travel in extreme cold or inclement weather conditions?	
COMMUNICATION **Do you have an effective means of communication for employees to contact persons capable of responding when employees need immediate assistance?**	
Do you have a procedure for tracking "overdue" employees that is appropriate to the hazards?	
Does the method of communication involve the following: Regular telephone, cell phone, or radio contact?	
Reporting to designated locations according to the plan?	
Do you have name and contact number of designate and back up person	
Others? Specify:	

Employee: Print Name	
Signature:	Date: YYYY/MM/DD
Supervisor Print Name	
Signature:	Date: YYYY/MM/DD

Code of Practice Concrete Masonry Cutting or Drilling

Company:	**Client:**	**Date:**
Project:	**Project #**	**Location:**
Project Manager:	**Supervisor:**	**Sub Contractor**

When using concrete or masonry cutting or drilling equipment:

- **Always** follow the manufacturer's instructions for safe use;
- **Always** use the correct blade size recommended by the manufacturer. Oversize blades are dangerous;
- **Never** remove the guards;
- **Never** work off ladders, milk crates, steel drums or chairs. Use a scaffold if the work cannot be safely reached from the ground;
- **Never** hold a hand-held saw or drill higher than shoulder height; and
- **Never** use a hand-held saw for inverted cutting or drilling.

Basic protective requirements for most concrete or masonry cutting or drilling are:

- A safety helmet;
- Safety footwear;
- Safety goggles;
- A face shield;
- Hearing protection;
- Sun and weather protection;
- Gloves to improve grip and reduce force and vibration; and
- Where hazardous dusts or fumes cannot be eliminated, respiratory protection.

Operators should avoid wearing loose fitting clothing or jewellery. Long hair worn loose and long beards can also be hazardous.

Cutting and drilling equipment especially saw blade discs and drill bits, should be removed from machines, and stored where they will not be damaged between uses. Some hazards are common to all concrete and masonry cutting and drilling operations, however there are also hazards specific to individual types of equipment, such as:

Kick-back, push-back or pull-in – these are potentially violent forces that occur suddenly and can be difficult to control. They are most likely to cause injury when hand-held or 'quick-cut' concrete or masonry saws are used, especially when chasing. They can also cause fixed concrete saws to be wrenched from their fittings, with the potential of the saw running free on the ground.

It is important that training for operators includes awareness of safe work practices and the risks of kick-back. Employers and hire equipment suppliers must ensure operators have information and training on safe work practices.

Obstructions or resistance in the materials being cut – these can cause sudden kick-back, push back or pull-in movements of the saw. They occur when different quadrants of the blade come into contact with obstructions or resistance within the concrete or masonry such as from reinforcing steel bars, steel mesh or brick ties.

Crooked or off-line cuts – these can cause the saw to bite or pinch resulting in kick-back, push-back or pull-in reactions. These reactions are also most likely to occur with hand-held saws.

Pinched cuts – these are caused when the object being cut moves, resulting in the cutting groove tightening on the saw blade, thus increasing the risk of kick-back etc.

Blunt cutting edges – these are caused by using a saw blade or drill bit with the wrong diamond cutting bond. If the bond or matrix holding the cutting diamonds together is too hard for the material being cut, the bonding material does not wear away quickly enough, resulting in the surface diamonds becoming blunt.

This means extra force has to be applied by the operator, especially with hand-held saws, increasing the risk of kick-back, push-back or pull-in.

Unsafe grip, stance, or stop-start procedures for hand-held saws – these can cause the saw to swing out of control and come into contact with the operator, or strike objects that may cause the saw to fall and run free on the ground.

Worn, misshapen, cracked, or damaged saw blades, or the wrong type of blade – these can cause the blade to wobble, vibrate, shatter, or fragment and fly off.

Guarding on most concrete and masonry equipment is designed to protect the operator from flying blade fragments, but not others in the workplace. Guarding should, therefore, not be regarded as a total safeguard. Blades are most likely to disintegrate when force is used, for example when the diamond cutting edge becomes dull, an obstruction is encountered, the cutting groove is not straight or the blade is pinched.

Worn blade shaft – incorrectly fitted blades or the wrong type of blade for the job can cause wear on the central shaft causing even new blades to shudder, resulting in early wearing and risk of shatter.

Wrong-size blades – these are blades either too large, too small, or the wrong type for the cutting machine or size and shape of the concrete or masonry item being cut. For example, a small diameter blade used to cut a thick slab may not penetrate sufficiently; increasing the risk of kick-back or blade-shatter should the blade strike resistance.

Hazardous dusts – these are emitted by cutting and drilling operations or equipment that does not use water for cooling cutting parts and capturing dust.

Concrete dust may carry high levels of silica dust and repeated exposure can cause silicosis, which is a scarring and stiffening of the lungs. The effects are irreversible, invariably resulting in death. Coarser rock particles can cause short term throat irritation and bronchitis.

Insufficient flow of coolant water – this can cause overheating and expansion of both metal and masonry, resulting in poor performance, jamming, severe blade damage and projectile hazards.

Incompatible flanges and blades – these can cause uneven blade movement, wear and tear and the risk of blade-shatter.

Incorrectly secured blades – these are caused by nuts and flanges which are not tightened sufficiently on the saw shaft, which can cause uneven blade movement and the risk of blade-shatter.

Inadequate securing of anchor points – these can cause a fixed saw to break free from its track fittings.

A beard, loose hair, or loose clothing – these can cause the operator to become entangled with moving saw blades, drill bits and other moving parts.

Hand-held saw cutting above shoulder or below knee-height – this can reduce operator control and increase the risk of kick-back, push-back or pull-in injury.

Cutting concrete pipes – this requires special safe procedures to prevent the pipe from rolling or moving during cutting, particularly when a handheld saw is used. A specific hazard during pipe cutting is pressure from the raised flange on the pipe-end causing the cut to close and pinch the saw blade, resulting in kick-back or blade shatter injury. Other hazards include the presence of steel reinforcing mesh in concrete pipes, and a practice sometimes used for pipe-cutting involving a series of plunge cuts around a pre-drawn line on the pipe's outer surface.

Toxic fumes – without adequate ventilation, petrol motor emissions containing carbon monoxide and other toxic gases can build up to hazardous levels.

Insufficient guarding – guarding on some concrete or masonry saws is more effective than on others. When purchasing, consider the adequacy of guarding. Part of a safe work procedure should be to ensure that the manufacturer's recommended guarding is fitted to such saws. Removing guarding can greatly increase injury risk.

Electric wires, gas, or water pipes – exposing services, especially in existing structures, can put the operator at risk of slipping, electrocution, exposure to toxic gases, or explosion.

Power cords – when attached to electric-powered cutting equipment and other machinery, these may be cut or damaged. Pools of water coolant and slurry could cause electrocution due to an immersed cord.

Uneven or unstable surfaces – these can increase the likelihood that the operator may trip or stumble, causing an unexpected movement of the blade resulting in kick-back.

Wet, slippery floors – coolant water and slurry on floors can cause slips and falls.

Obstructions in access ways – blocks of masonry and bricks in areas where the operator and others must stand, work, or move can cause trips and falls.

Vibration – whole body or hand or arm vibration caused by prolonged use of cutting or drilling equipment can cause nerve, circulatory and joint damage.

Working alone – this can be hazardous because of the potential need for assistance in the event of an emergency situation or injury.

Noise – excessive noise from concrete cutting and drilling is a workplace hazard.

An appropriately qualified engineer should carry out an on-site assessment before any cutting or drilling of a pre-tensioned or post-tensioned structural component of a building or structure commences.

The assessment should be documented and provided to the person contracted to carry out the work. Also, as all pre-tensioned and post-tensioned cutting will affect the structural integrity of the building or structure.

What are the risks?

The most likely risks of injury or harm come from:

Flying saw fragments;

- Saw kick-back, push-back or pull-in;
- Out-of-control or free-running cutting machines;
- Falling concrete and masonry;

- Inadequate scaffolding;
- Noise;
- Electrocution;
- Hazardous dusts from dry cutting and drilling, such as silica dust, contributing to lung disease;
- Slips, trips, and falls;
- Manual handling or strain injuries;
- Vibration damage to circulation, nerves, and joints; and
- Suffocation or poisoning from hazardous fumes or gases emitted by petrol motors and other equipment or damaged gas supply services.

Identifying hazards should include:

- Regular review of safety procedures for each type of equipment and job;
- Regular checking of information, instruction, training, and supervision provided to operators for each type of equipment and job;
- Regular referral to manufacturers' safety recommendations;
- Regular inspection of equipment before each job, for example checking saw blades, shafts, flanges, guarding, hand grips, drive belts and drill bits, for wear and tear, correct assembly, and the correct functioning of safety features;
- Checking the texture, shape, and composition of each item to be cut or drilled;
- Checking the possible presence and location of obstructions, such as steel reinforcing or plumbing in material to be cut;
- Checking whether the proposed cut will require the operator to raise their hands above shoulder height;
- Identifying toxic or hazardous substances including dust or fumes;
- Identifying concrete or masonry sections that will need to be supported to prevent hazardous or premature falls during cutting;
- Locating embedded electrified wires, cables, and gas or water lines;
- Identifying objects likely to shift during cutting, such as concrete pipes;
- Checking objects likely to pinch on the saw blade during cutting;
- Checking correct assembly of cutting or drilling equipment components;
- Securing the anchoring of guide tracks for fixed sawing of walls or floors;
- Checking correct hardness of diamond cutting bond for the material being cut;
- Checking compatibility of saw blade size to size, thickness, hardness, and shape of material to be cut;
- Identifying the likely presence of workers or members of the public nearby;
- Identifying sections of concrete or masonry likely to fall;
- Checking the presence of water and slurry lying around during cutting operations, causing electrical and slip hazards;
- Identifying manual or mechanical tasks such as moving cut concrete or masonry sections and heavy equipment;
- Identifying any excessive noise exposure; and

Public safety

If cutting or drilling is to be carried out on a road or in a public place, the local government authority will require certain measures to protect the public and provide a safe route around the work area.

Local government legislation and the OH&S Regulations include requirements such as:

- Closing roads or footpaths;
- Barricading or screening the work area to protect pedestrians and prevent vehicle entry;
- Displaying warning signs and caution lighting where necessary;
- Working above moving traffic to prevent falling objects;

I have read the code of practice for Concrete Masonry Cutting or Drilling and understand the material and will follow this code of practice:

Name	Company	Date

Respiratory Protective Equipment Code of Practice

Northern Inc.

554 West River Rd.

Grand Falls, NB E3Z 3E7

Section 1 Introduction

This Code of Practice sets out requirements that Northern Inc. will follow for the proper selection, use and care of respiratory protective equipment at this workplace.

Section 2 Administering the Program

Program Administrator: HSE Department	**Phone No. 506-473-1822**

The program administrator is authorized by the employer to manage the respiratory protection program and ensure employees are trained and use the respiratory protective equipment in a manner that protects their health and safety. Employees are encouraged to bring all respirator issues to their supervisor and then, if necessary, to the program administrator. All employees must co-operate in the performance of the program administrator's duties.

Section 3 Hazards and Respirator Selection

During the Selection process a Job Hazard Assessment will be completed to determine the hazards involved with the task. In doing so the individual will refer to the Safety Data Sheet to ensure the proper use, handling, storage, procedures, and personal protective equipment required is followed, as necessary.

Area / Procedure	Hazards	Respirator Type	Comments
Various Jobsite / Concrete Cutting	Dust produced from Cutting and Drilling Concrete (airborne crystalline silica)	Particulate filter N95 Half Mask / Full Mask	Water is recommended to be used when possible.

Employees may use respiratory protection in other areas as the need arises with the program administrator's approval.

Section 4 Respirator Facial Fit

Employees who may be required to use a tight-fitting respirator must be clean-shaven where the respirator meets the face to ensure an effective facial seal.

Employees who may be required to use a respirator must be fit tested by the following:

Qualitative Fit Test with the use of Bitrex by a trained individual.

Before using a respirator, every employee must perform a field check.

Section 5 Training

All employees who wear respiratory protection must be trained in the following:

Airborne contaminants in your work areas	☐
Symptoms and toxic effects of overexposure to contaminants	☐
Respirator capabilities and limitations	☐
Donning and field checking your respirator	☐
Maintenance, cleaning, sanitizing and storage of your respirator	☐
What to do in case of an emergency	☐
New Brunswick Legislation on respiratory protection	☐
Company code of practice for respiratory protective equipment	☐

Section 6 Using the Respirators

Employees must wear respiratory protection in the areas and for the work procedures described in Section 3. Supervisors must enforce the use of respiratory protection as described in Section 3.

Section 7 Cleaning, Maintenance and Storage of Respirators

Each employee is responsible for the cleaning, maintaining, and storing their respiratory protective devices. Cleaning supplies, replacement parts and new respirators will be supplied by the company as needed.

Section 8 Health Surveillance of Respirator Wearers

Employees who have questions about their ability to wear a respirator due to health reasons are asked to report their concern to the program administrator. Those employees will be required to have a medical evaluation and obtain clearance from their physician before using respiratory protection. The physician will be asked to inform the program administrator whether or not the employee is able to wear the respirator for the conditions or work procedures required at this workplace. **The employer will not request any other information.**

Section 9 Evaluating the Program

At least once a year, the program administrator will review the respirator program. The program administrator will consult with the respirator wearers during the review.

The review will include the following:

Effectiveness and appropriateness of the respirators being used	☐
Fit testing	☐
Respirator wearer training	☐
Respirator use, maintenance, cleaning, and storage	☐
Health surveillance of respirator wearers	☐
Wearer suggestions for improvements in the respirator program	☐
Possible workplace improvements to minimize respirator use	☐
New respiratory equipment on the market	☐

Signed:

Title:
Program Administrator / Safety Advisor

Date:
January 24th, 2024

Hot work Code of Practice

Any trades activity that uses or produces flames, sparks, or heat that would act as an ignition source for any flammable or combustible material. (E.g. brazing, cutting, welding). This definition does not apply to the controlled laboratory uses of flame or hot plates.

Hot Work Permit

The supervisor's written authorization to perform trades operations capable of providing a source of ignition.

Where repairs or alterations are to be made on a drum, tank, pipeline or other container, the drum, tank, pipeline, or other container shall,

a) have internal pressures adjusted to atmospheric before any fastening is removed;
b) be drained and cleaned or otherwise rendered free from any explosive, flammable, or harmful substance; and
c) not be refilled while there is any risk of vaporizing or igniting the substance that is being placed in the drum, tank, pipeline, or other container.

Welding and cutting operations in buildings shall be carried out in areas that are free of combustible and flammable contents, and that have walls, ceilings, and floors of non-combustible construction or that are lined with non-combustible materials.

When it is not practical to undertake welding and cutting operations in areas described in Sentence (1), combustible and flammable materials shall either be kept at least 11 m from the work area or otherwise protected against ignition by sheet metal, asbestos blankets, or other non-combustible materials.

Suitable portable extinguishers shall be provided in conformance with regulations where welding or cutting operations take place.

Policy:

1. Supervisors and employees are responsible for identifying and controlling workplace hazards before hot work is performed.
2. Hot work permit procedures shall be mandatory for contractors and subcontractors.
3. Hot work permit procedures shall be used at the supervisor's discretion and shall be required when hot work takes place in confined spaces, or near activities involving volatile materials. Hot work is prohibited on foam-insulated metal wall, roof, and ceiling panels.
4. Operational units shall design and implement their own hot work permit procedures as appropriate for their hot work tasks and workplace environments. Copies of the procedures shall be filed with the department (local) joint health and safety committee and with Environmental Health and Safety.
5. Combustible materials shall be removed to a safe distance (i.e., 11 meters) or protected. Enclosed equipment shall be cleaned and purged of combustible vapors and checked with an explosion meter.
6. All arc welding procedures require the use of screening to protect those working nearby.
7. Openings or cracks in walls, floors, or ducts within the work site shall be tightly covered with fire-resistive tarpaulin or metal shields.
8. Appropriate fire extinguishing equipment shall be verified to be operable and positioned for immediate use.
9. Nearby personnel shall be evacuated or otherwise protected from hot work activities.
10. A fire watch shall be maintained for 60 minutes after hot work is finished to detect and extinguish any smoldering fire. The workplace shall be monitored for four hours after the job is completed, including areas adjacent, above, and below.
11. The supervisor shall identify the personal protective equipment (PPE) to be worn and other safety equipment to be used for hot work activity.
12. The supervisor shall sign the hot work permit and forward a copy to Environmental Health and Safety.
13. Employees shall conduct hot work activity in compliance with safety procedures appropriate for other hazards such as confined space, fall protection, lockout/tagout, etc. Incidents shall be reported to the hot work supervisor.
14. The hot work permit system and employee training shall be reviewed annually by the departmental (local) joint health and safety committee.

Guidelines:

Hot work permits shall be issued at the discretion of the job-site supervisor or the construction project co-ordinator. Situations which warrant hot work permits include (but are not limited to) industrial welding and cutting indoors, torch work in congested spaces and in combustible structures, etc. For due diligence reasons (such as property insurance audits), records shall be retained by supervisors for 12 months concerning the hot work permits issued.

HOT WORK PERMIT

To be issued for all temporary hot work including gas/electric welding and cutting; blowtorches; tar boilers; grinding wheels and cutting discs. Hot work to be carried out only by people trained in use of equipment, hazards, and precautions to prevent fires.

Permit No:			
Description of work:			
Equipment to be used:			
Location of work:			
Person in control of work (name):			
Fire precautions required (tick boxes below):			
☐	Smoke/heat detectors to be disconnected/covered for duration of work	☐	Turn off fixed gas supply or protect piping
		☐	Flash back arrestors fitted to gas cylinders
☐	Area cleared of all loose combustible material. Remove or protect flammable liquids or gases.	☐	Gas cylinder secured in upright position
☐	Welding, cutting, or grinding work screened with non-combustible material	☐	Non-combustible, insulating base for tar boiler (essential for use on roof)
☐	Remove combustible material from other side of wall/partition (danger from conducted heat)	☐	Other precautions (specify)

- Appropriate fire extinguishers must be provided in the working area
- People carrying out hot work must be informed of (a) what to do if they discover a fire (b) how to raise the alarm (c) evacuation procedure and assembly point
  - see Emergency Instructions for appropriate building
- Smoke/fire detectors must be reconnected/uncovered immediately after work is completed

Permit issued to name(s):	
Permit valid from (time):	To (time):
Valid on (date):	
Issued by (name):	Date of issue:
PERMIT CLEARANCE AND RETURN	
The above work area has been checked one hour after completion of work Signed (name): Date: Time:	

Hand-Arm Vibration Code of Practice

As a construction company, Northern Construction Inc. ("NCI") understands that its employees will be working with a variety of tools and equipment, including vibrating tools and equipment which can cause, among other things, Hand-arm vibration syndrome (HAVS) or white finger disease (Raynaud's phenomenon). The *Regulations* of the New Brunswick *Occupational Health and Safety Act* established vibration exposure limitations for employees using vibrating tools and equipment which can be seen below:

Exposure of the hand to vibration in either up and down, sideways, or forward and back directions		
Total daily exposure duration*	Values of the dominant **, frequency-weighted, root mean square, component acceleration which shall not be exceeded	
	m/s^2	g***
4 hours and less than 8 hours	4	0.40
2 hours and less than 4 hours	6	0.61
1 hour and less than 2 hours	8	0.81
Less than 1 hour	12	1.22

* The total time vibration enters the hand per day, whether continuously or intermittently.

** Usually, one axis of vibration is dominant over the two remaining axes. If one or more vibration axis exceeds the total daily exposure, then the exposure limit has been exceeded.

*** $1g = 9.81 m/s^2$

1. Purpose

The purpose of this Code of Practice is to have NCI ensure that its employees' exposure to hand-arm vibration is kept as low as is practical and does not exceed the above illustrated exposure limits.

2. Testing Vibration Ratings of Tools and Equipment

The first step in conquering this Code of Practice is to identify the hazards for each vibrating tools and equipment that is used by NCI employees. To do so, one must determine the vibrating rating in metres/second square (m/s^2) for each tool and equipment. The vibrating rating can be determined by either:

1. Using the declared vibration values provided by tool/equipment manufacturers as an estimate; or
2. Measure in-use vibration magnitude with a vibration meter.

Caution: Manufacturers' values are measured according to internationally recognized test standards and the measurements are taken in controlled environments and they may not actually reflect the specific work conditions. The in-use vibration exposure to the user in a specific application may vary compared to the manufacturer's measurements. As such, onsite measurements should be used as the first choice in order to determine the hazard level. If measurements are not available, the employee must apply the manufacturer-declared vibration rating.

2.1. Obtaining the Manufacturer Declared Vibration Magnitude Values

Where in-use vibration measurements are unavailable, the employee can see the tool/equipment manual, which contains the vibration rating. The employee shall rely on such rating and then will evaluate what can be the total daily vibration exposure by using the above table from the *Occupational Health and Safety Act.*

There will be a continuous and ongoing collaborated effort by supervisors, foreman, regular employees and the safety department to create and keep updated a spreadsheet of all vibrating tools and equipment and their respective vibrating rating so that the employees are able to know what their maximum total daily vibration exposure limit is.

2.2. Measuring In-Use Vibration Values and Determining Allowable Exposure Times

Once NCI has a complete spreadsheet with all the vibrating tools and equipment along with their respective vibration rates and their acceptable total daily exposure, a competent person from NCI will use the WorkSafe New Brunswick guidelines found under ***Appendix C*** and hand measure all tools and equipment with the help of a vibrating meter. By doing this measurement, all employees will be able to fully rely on 2 different valid vibration rates in order to determine what would be the maximum amount of daily exposure to that specific tool or equipment.

3. Controlling Exposure to Vibration

3.1. Selecting the Tools/Equipment

Supervisors, Foreman and employees must make sure that the tools and equipment that they are using is the most suitable for the situation/task. In order to decide which tool/equipment to chose, the employee needs to consider three factors:

- Lower vibration ratings
- Decrease exposure time
- Good ergonomic design of tools

The best option should be to use equipment or tools that produce less vibration or that can do the task faster.

3.2. Using the Tools/Equipment

When not sure on how to use a tool or equipment, employees shall refer themselves to the manufacturers manual as if they are not using the tool in its intended manner, the tasks could take longer which would increase the undesired vibration exposures.

Employees and Supervisors should also minimize the use of worn-out tools and equipment as this would increase the working time, hence, would also increase the vibration exposures.

Where applicable, NCI shall provide Supervisors and Employees with trainings on how to properly operate the tools as per the manufacturer's recommendations.

3.3. Limiting Daily Exposure Time

In order to limit the actual finger-on-trigger time, Supervisors shall ensure that rotations between employees is possible when vibration exposure is above the recommended duration. By doing so, it would give a employees the necessary break, while not exceeding the undesired vibration exposure.

3.4. Other Controls

NCI acknowledges that the usage of vibrating tools and equipment is just a normal practice in the construction industry. However, NCI does encourage different modalities used by employees to diminish the intensity of the vibration, while still being able to perform the necessary work. The below sections are examples/ways to diminish or improve the hand-arm vibration exposure of employees:

3.4.1. Anti-Vibrating Tools

NCI acknowledges that some tools may be designed or mounted in ways to help the vibration levels. For example, some anti-vibration hydraulic or pneumatic tools could significantly reduce the vibration exposure, while still being highly performant. NCI encourages employees and supervisors to use such tools, when possible, as this will diminish the vibration rate, while giving the employees more total daily exposure time.

3.4.2. Safe Work Practices

In addition to using anti-vibrating tools, NCI encourages supervisors to ensure that employees reduce their risk of HAVS. This can be done by:

- Using a minimum strength hand grip that still allows the safe operation of the tool;
- Wearing appropriate clothing, including gloves to keep warm;
- Avoiding continuous exposure by taking regular breaks or doing rotations;
- Encouraging employees to stretch and exercise their fingers while working with vibrating tools;
- Resting/mounting the tools on the work piece whenever practical or possible;
- Not using faulty tools, or using faulty tools less as possible;
- Maintaining tools properly given that worn out tools are expected to cause more vibration; and

3.4.3. Employee Education and Training

NCI shall provide employees with trainings that increases awareness of HAVS in the workplace. Such training will include proper use and maintenance of vibrating tools and equipment. This shall ensure that employees avoid unnecessary vibration exposure.

Given that most vibrating tools creates loud noises, NCI shall also make employees aware of concerns about the effect of noise and noise control.

3.4.4. Anti-Vibration Gloves

Even though they have limited effectiveness in reducing the vibration exposure, NCI encourages and urges employees to use anti-vibration gloves whenever practical.

3.4.5. Discomfort Survey

If an employee that is using a vibrating tool or equipment starts having discomfort in the hands or arms following the use of such equipment, then his supervisor shall evaluate the situation and review the Discomfort Survey found under ***Appendix A*** with the employee. The Survey will be completed by the employee along with his supervisor and then the survey will be provided to the Health and Safety Department and the Human Resource Department for documentation purposes.

4. Review

NCI will review this Code of Practice on an annual basis, or as required, and will make the necessary adjustments to ensure that it meets the needs of all legislations and needs of all employees.

APPENDIX A

Discomfort Survey

Name:_____ Date:_____

Job Title:_____

Job Description:_____

1. How many years or months have you been working in this job or set of tasks?
   _____ years _____ months

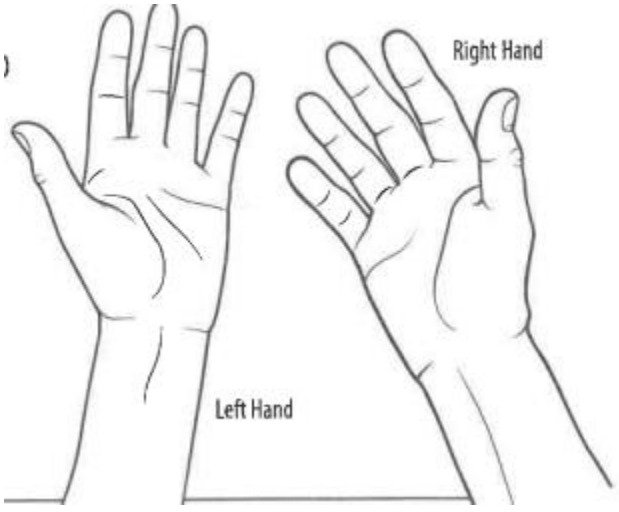
2. Do you have any numbness or tingling of the fingers lasting more than 20 minutes after using vibrating equipment?
   ☐ Yes ☐ No
   If yes, please indicate discomfort using the scale 0 = no discomfort, 10 = worst imaginable discomfort.
   0 1 2 3 4 5 6 7 8 9 10

3. Do you wake at night with pain, tingling of the fingers, or numbness in your hand or wrist?
   ☐ Yes ☐ No
   If yes, please indicate how often 0 = not often, 10 = very often
   0 1 2 3 4 5 6 7 8 9 10

4. Have any of your fingers turned white on cold exposure?
   ☐ Yes ☐ No

5. Which fingers are affected?
   (shade all parts that have ever turned white)

   Witnessed ☐ Not witnessed ☐ by person completing screening



APPENDIX B

Hand-Arm Vibration Code of Practice

Company:_____

Address:_____

1. **Administering the program**
   Program administrator: _____
   Phone: _____ Cellphone: _____

   The employer authorizes the program administrator to manage the hand-arm vibration program and ensure that employees are trained and trained and follow the program.

   Employees are encouraged to bring all hand-arm vibration issues to their supervisor and then, if necessary, to the program administrator. All employees should co-operate with the program administrator in the performance of the administrator's duties.

2. **Identifying the person(s) at risk from hazardous task/jobs/situations:**

Employee	Hazards/Task	Equipment	Comments

3. Identifying the hazards/selecting equipment:

Power hand tools	Make/Model Description	No. Units	Frequency (Hz)	Vibration (m/s)	How often the worker is exposed	Duration of operation	No. Exposed workers
Brush Cutters							
Chainsaws							
Chipping hammers							
Compactors							
Clearing saws							
Compactors							
Cultivators/tillers							
Demolition Hammers							
Die Grinders							
Grinders							
Hammer drills							
Hedge trimmers							
Impact Drills							
Impact wrenches							
Lawn mowers							
Needle scalers							
Pedestal grinders							
Powered mowers							
Rammers							
Riveters							
Road breakers							
Rock drills							
Sanders							
Saws							
Snow Blowers							
Vibratory rammers							
Others							

4. Limiting daily exposure time:

Estimated finger-on-trigger time	Exposure Limit	Allowable work period	Allowable rest period

Comments:

_____
_____
_____
_____
_____

5. Identifying risk controls:

Use a minimum strength hand grip that still allows safe operation of the tool or process.
☐ Yes ☐ No

Wear adequate clothing, including gloves, to keep warm and dry.
☐ Yes ☐ No

Maintain tools properly. Tools that are worn, blunt or out of alignment will vibrate more.
☐ Yes ☐ No

Do not use faulty tools. Inspect tools before use.
☐ Yes ☐ No

Allow job rotation that does not require the use of power tools.
☐ Yes ☐ No

Avoid continuous exposure by taking regular breaks from work involving vibrations and encourage employees to exercise fingers.
☐ Yes ☐ No

Comments:

_____
_____
_____
_____
_____

6. Using the equipment:

Employees have read or are familiar with the manufacturer's operating instructions.

☐ Yes ☐ No

7. Evaluating the program

- Has someone from the workplace been assigned to maintain the program in the workplace? (This person should be competent and have the authority to stop work)
- Are all employees and supervisors receiving training on the risks from exposure to hand-arm vibration?
- Has training been given to supervisors and employees on best practices and how to use the equipment as per the manufacturer?
- Are limited exposure times being monitored and respected?
- Is there a program in place on who, when and how often tools are inspected for defects?
- Are supervisors ensuring safe work practices are being followed by employees?
- Are training records kept for all employees?
- Has a hazard assessment been done for the task; is there documentation identifying the hazards to employees?
- Have employees been consulted for their views on the effectiveness of the code of practice for any problems experienced? (numbness and tingling in the fingers, reduced sense of touch and temperature, difficulty to feel and to work small objects, whiteness in the finger tips due to lack of blood circulation).

8. Discomfort Survey

See **Appendix A – Body Discomfort Survey**

9. Record keeping

Code of practice has been reviewed by employees

☐ Yes ☐ No

Documentation of training

☐ Yes ☐ No

Health assessment discomfort surveys conducted

☐ Yes ☐ No

APPENDIX C

Procedure for testing

Background

The goal of this document is to help you acquire consistent hand-arm vibration data under typical workplace conditions. As per **WorkSafeNB** *Guide for Developing a Code of Practice for Hand-Arm Vibration in New Brunswick*, the specific goal is to determine the vibration in metres/second (m/s^2) for a tool using a vibration meter.

Exposure to vibration while operating equipment can cause health problem, discomfort, and affect work efficiency. This test standard is focused on measuring hand-arm vibration when operating hand-held equipment.

Two methods can be used to establish allowable exposure times ("finger-on-trigger" times):

1. Determining the vibration value of the dominant axis of vibration by measuring the frequency-weighted, rms (root mean square) component acceleration for all three axes of vibration. The value of the axis with the highest rms acceleration will be compared to the exposure limits in section 33.2 of NB *General Regulation 91-191*.
2. Determining the 'vibration total value', which is the root sum of squares of the frequency weighted rms values of all three axes. Allowable exposure times can be calculated using the advice and equation contained in the ACGIH publication entitled *2016 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.*

When determining daily allowable exposure times, all potentially vibrating hand-held tools must be included. For a worker operating two or more different vibrating tools, the cumulative vibration exposure must be considered.

Measurement method specified (per ISO 5349) considers factors known to be significant for measurements of hand-arm vibration when operating hand-held equipment:

- Frequencies present (in the vibration spectrum)
- Magnitude (amplitude) of vibration
- Duration of exposure during a workday
- Cumulative exposure

Other factors do exist, but ISO does not have standardized methods for reporting these.

The guide is divided into four sections:

1. Test preparation
2. Setup and testing
3. Post-analysis
4. Reporting

This document **focuses on testing only and does not address safety or other concerns which may exist in the test scenario.**

1. Test preparation

Equipment to be used – Instruments and sensor selection (outlined in ISO 8041)

Ensure the selected system meets relevant ISO standards (including those listed, at the time of drafting this guideline). Provide the supplier with the approximate anticipated vibration amplitudes (if known) for additional guidance in selecting an appropriate system. Rental companies provide complete systems which include sensor, adapters, and instruments to acquire, store and display data.

System selected should include these components:

- Transducer (accelerometer, piezoelectric most often chosen)
- Mounting system (to place on vibrating surface)
- Connection cable (for electrical input)
- Data acquisition unit (for signal conditioning)

The minimum requirements for human-vibration measurements (including HVM, human vibration meter) are outlined in the relevant ISO standards. These standards also outline numerous physical characteristics and tests to ensure test instruments and transducers are suitable. The following outlines some of the areas covered. Ensure the system meets the criteria either by verifying with an ISO-accredited supplier or following the requirements outlined in the standards.

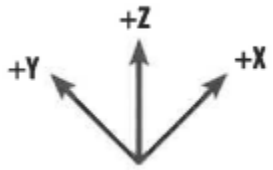
ISO 5349-2 contains further guidance for selecting transducers. A vibration transducer may be a general-purpose accelerometer (suggested for non-percussive tools) or a specifically designed sensor for large peak accelerations (suggested for percussive tools). A triaxial sensor is typically preferred although single-axis sensors may also be used.

2. Setup and testing

Setup – before testing, consider sensor placement and configuration, and the instrument's measurement parameter settings.

Place the sensor(s) so vibration in the three directions of the orthogonal coordinate system can be recorded (typically referred to as X, Y and Z). Use the 'right hand rule' as shown in the below figure (for reference the index finger points in the X, thumb points vertical and indicates Z and the second finger points in the Y direction, all 90 degrees apart).

Figure C1 – orthogonal coordinate system example



If possible, place the sensor so the coordinate axis of at least one direction is in line with the bones in the hand. In the below figure, X is in line with the hand bones, Y is perpendicular to X and Z is 90 degrees to X and Y, coming out of the page.

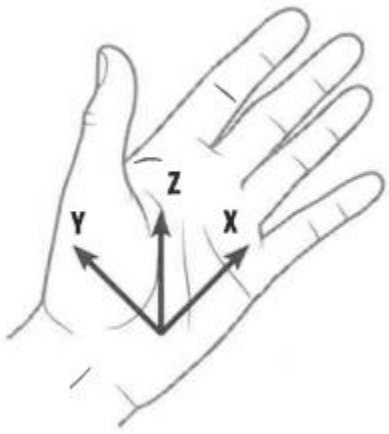


Figure C2 – Human hand image with coordinate axes

The orientation of the coordinate system may be defined with reference to another coordinate system (see ISO 8727for further information).

Generally, sensor(s) should be placed as close to the centre line of the machine as possible. The figure below contains an example of a coordinate system that may be used. Depending on the accelerometer, the X, Y, and Z directions may vary. One triaxial sensor would be able to acquire data in all three directions simultaneously with a multi-channel instrument. Single-axis sensors would likely require one measurement at a time as it would be difficult to mount three sensors on this handle simultaneously, without interfering with operation. Note that single-axis measurements are acceptable provided test conditions are similar for each measurement. The sensor(s) should be mounted rigidly. Note that hand-held adapters may also be used.

Figure C3 – Equipment handle image with superimposed coordinate axes.

Further guidance including images of possible sensor placement is provided in ISO 5348 and ISO 5349-2 for various equipment types with coordinate axes examples.

The following information should be reported (per ISO 5349), so record the following data for each test.

- Equipment operator (person experiencing vibration exposure for the evaluation)
- Operator's posture during operation
- Activity being performed and conditions (the operation causing the vibration exposure)
- Tools involved and particulars (configuration, attachment, settings or other variables, age, or number of hours)
- Material involved
- Location and orientation of the transducers
- Details for the transducer (specifications such as mass, orientation)
- Date and time of each measurement
- The single-axis individual root-mean-square, frequency-weighted acceleration data measured (for each of three directions if possible)
- The vibration total value for each operation.

Confirm instrument time setting matches local time and adjust as required if possible.

Different frequencies are believed to produce vibration-related health effects in the hand and arm, although the frequency weighting using for severity ratings is defined only within a specified frequency range. Therefore, the measurement frequency range should be as broad as practical. Note the sensor natural frequency (typically higher than 5 kHz) must be considered for 'food' data to be acquired (maximum frequency recorded typically 1,250 Hz).

It is recommended to also record frequency spectra (see instrument documentation for more information).

Perform the testing

Ensure the appropriate information is noted (see reporting guidelines section at the end of this document). Ensure the equipment and material used, activity performed, and conditions observed during testing represent normal work operations and conditions.

Ensure equipment is operating correctly before and after testing (both the device producing the vibration to be measured, and the data acquisition system being used to record the vibration).

If the tool can be operated with either hand, acquire data using both hands if possible.

If the tool can be operated with either hand, acquire data using both hands if possible.

Duration of measurements – ensure appropriate amount of time for the evaluation.

- Typical to record samples of vibration (depending on the signal, instrumentation, and equipment operation).
- Long -or short- term measurements may be required. Some tools are operated for short periods of time throughout the day, some are operated continuously for the full day (not required to measure vibration for the full day).
- The time for a machine to get to normal operating speed/load may be excluded from the sample.
- Shorter duration samples are preferred to a single long duration measurement (at least three if possible).
- Minimum time sample – at least one minute is recommended (may be the number of samples multiplied by the duration per measurement if operating time is less than one minute).
- Measurements less than eight seconds should be avoided due to difficulty getting reliable low-frequency data in this short timespan. If unavoidable, collect more than three samples with a total time of more than one minute if possible.
- Averaging - measurements can be averaged over cycles of operation, usually only when the hand is in contact with the source (vibrating surface).

Monitor the vibration testing for errors/anomalies (including overload) if possible and review the data before concluding if the test was successful. If the instrument indicates overload, the measurement should be discarded, and the data acquisition reset.

It is recommended to review the post-analysis section (3) before testing to ensure the test is set up to capture all appropriate data.

Note that exposure to large accelerations of very short durations, which may be associated with other injuries to the hand-arm system, is not covered in this document to the referenced standards.

3. Post-analysis

To determine the in-use vibration magnitude as recommended in WorkSafeNB's *Guide for Developing a Code of Practice for Hand-Arm Vibration in New Brunswick*, calculate the ISO quantity vibration total value Ahv^2 in m/s². Calculate this value using the root-sum-of-squares of the three frequency-weighted root-mean-square values (one for each of the three directions measured), shown in the below equation.

$$a_{hv} = (a^2_{hwx} + a^2_{hwy} + a^2_{hwz})^{1/2}$$

Where: Ahv =vibration total value, m/s²

A^2hv =frequency-weighted r.m.s. acceleration for each axis (X, Y and Z), m/s²

Equation C1 – vibration toal value, m/s²

For most vibrating power tools, the vibration entering the hand contains energy from three measurement directions. ISO standards assumes vibration in each of the three directions may be harmful, so measurements in all three directions should be reported.

The frequency-weighted root-mean-square values may be calculated from raw data exported into a spreadsheet or similar program.

Vibration exposure depends on the magnitude of the vibration and on the duration of exposure. Refer to WorkSafeNB's *Guide for Developing a Code of Practice for Hand-Arm Vibration in New Brunswick.*

The average vibration values or other values may also be noted or analyzed as appropriate or required.

4. Reporting

The following information should be reported (per ISO 5349):

- Equipment operator (person experiencing vibration exposure for the evaluation), activity being performed and conditions (the operation causing the vibration exposure).
- Tools involved and particulars (configuration, attachment, settings, or other variables).
- Materials
- Location/orientation of the transducers
- The single-axis individual root-mean-square, frequency-weighted acceleration data measured
- The vibration total value for each test
- The total duration for each test
- The daily vibration exposure

Depending on the situation additional information is suggested, including:

- Company or customer
- Purpose of the testing
- Test dates
- Who performed the test measurements and evaluation (if different)
- Conditions at test site/workplace
- Details around test location
- Environmental factors – temperature, humidity, etc.
- Description test, machines, and tool details
- Materials or workpieces used
- Instrumentation detail including calibration, verification tests/functionality checks
- Acceleration measurement – locations and orientations (suggest sketch with dimensions)
- Attachment details, any other information
- Test results (each frequency-weighted vibration value, ah, for each test)
- Test duration
- Unweighted frequency spectra if possible
- Multiplying factor (if used)

Biological and Chemical Hazards Program

1.0 Objective

1.1 This procedure aims to make sure that all reasonable steps are taken to ensure that worker's exposure to any substance hazardous to health is kept as low as reasonably practicable and does not exceed its occupational exposure limit.

2.0 Purpose

2.1 To outline the procedure to manage chemical, biological, and harmful substances in the workplace.

3.0 Scope

3.1 This procedure applies to all business units.

4.0 Responsibilities

4.1 Managers and supervisors are responsible for:

- Ensuring adequate training and equipment is provided to personnel required to work with or around hazardous chemicals.
- Ensuring risk assessments are conducted for the tasks to be performed
- Ensuring that the safe work procedures required for protecting the worker while working with or around hazardous chemical are implemented.

4.2 Employees are responsible for:

• Following the safe work procedures
• Reporting hazards, unsafe acts, and unsafe conditions to their supervisor

4.3 HSE representatives are responsible for:

- Coordinating the implementation of this program
- Administrating this program

5.0 References

5.1 Northern Inc. HSE Management System Manual

6.0 Definitions

6.1 Chemical: Element, chemical compound or mixture of elements and/or compounds".

6.2 Exposure Limits: (or Occupational Exposure Limits (OELs)): An exposure limit is the concentration of a chemical in the workplace air to which most people can be exposed without experiencing harmful effects. Chemical, Biological Hazards and Harmful Substances

6.2.1 Time-weighted Average (TWA): time-weighted average concentration of a chemical in air for a normal 8-hour work day and 40-hour work week to which nearly all workers may be exposed day after day without harmful effects.

6.2.2 Short Term Exposure Limit (STEL): average concentration to which workers can be exposed for a short period (usually 15 minutes) without experiencing irritation, long-term or irreversible tissue damage, or reduced alertness.

6.2.3 Ceiling Exposure Limit (C): The concentration which should not be exceeded at any time.

6.3 Biological Hazard: Sources of biological hazards include bacteria, viruses, insects, plants, birds, animals, and humans. These sources can cause a variety of health effects ranging from skin irritation and allergies to infections (e.g., tuberculosis, AIDS), cancer and so on.

6.4 SDS- Safety Data Sheet.

6.5 WHMIS – Workplace Hazardous Materials Information System.

6.6 Controlled Product- A controlled product is any hazardous substance or material that meets or exceeds the criteria for inclusion in one or more of the WHMIS hazard classes. See Annex 1.

6.7 Workplace – Workplace means a location where a worker is, or is likely to be, engaged in any occupation such as offices, field, rig site, shop, warehouse, etc.

7.0 Procedure

7.1 Chemical and Biological Exposure The employees' exposure to any substance, provincial or federal regulations must be kept as low as reasonably practicable and does not exceed its occupational exposure limit. An employee may not be exposed to a substance hazardous to health, at a concentration exceeding its ceiling time at any time. Chemical, Biological Hazards and Harmful Substances

7.2 Workplace Monitoring if the risk assessments for all the tasks listed on the inventory of tasks, suggest that employees are or might be exposed to a hazardous substance, the following must be completed:

- A walkthrough survey must be completed to identify the health hazards and assess the potential for overexposure taking into account all routes of exposure.
- Clearly mark the location of emergency eyewash stations
- A reassessment is conducted when there is a change in work conditions which may increase the exposure.
- If the walkthrough survey reveals that a worker may be at risk of overexposure to an airborne contaminant, air sampling must be conducted to assess the potential for overexposure.
- Personal Protective Equipment must be worn when at risk of overexposure. (PPE) Personal protective equipment such as gloves, respiratory protection and eye protection should be used based on the risk assessment. PPE is often used in conjunction with other controls (engineering and administrative) to provide additional protection to workers. The primary types of PPE are designed to protect the worker from infectious disease by breaking the chain of infection at the "portal of entry or exit" of the microorganisms. This means that all PPE is designed to reduce exposure via specific routes of transmission. Gloves, gowns, and other protective clothing reduce exposure through the dermal (skin) contact route and help contain the microorganisms to the work environment. Eye and face protection reduce exposure through mucous membrane contact. Masks worn by patients reduce exposure through droplet containment at the source, and respirators worn by health care workers reduce exposure to the respiratory system.
- Additional workplace air monitoring shall be completed according to the results of the risks assessments and walkthrough surveys and local regulatory requirements.
- A document will be completed that indicating where the potential to encounter any chemical and biological hazards may be and what the potential health hazards are associated with any exposure to any chemical or biological hazards.
- Safe work procedures must be written.

7.2.1 Employees that might be exposed to a harmful substance at the worksite:

- Are informed of the health hazards associated with exposure to that substance
- Are informed of the measurements of airborne contaminants made at the workplace
- Are trained and understand the safe work procedures completed to control and minimize the exposure to harmful substances.

7.3 Worker Information If a worker is or may be exposed to a chemical or biological substance which could cause an adverse health effect:

- The identity of the substance, it is possible effects on worker health and safety and any precautions required for the health and safety of the worker must be clearly indicated by labels, SDSs, placards, signs, tags, or other similar means. Chemical, Biological Hazards and Harmful Substances
- The content and meaning of the information must be clearly communicated to the worker.
- Effective written procedures must be prepared and implemented to prevent exposure by any route that could cause an adverse health effect, and to address emergency and cleanup procedures in the event of a spill or release of the substance.

7.4 Worker Decontamination. If there is a potential for chemicals to be harmful to the eyes or skin the worker must have immediate access to emergency baths, showers, and eye equipment. Emergency showers and eye wash stations must be readily available in case a worker may be contaminated by a harmful substance.

7.5 Training Northern Inc. employees require competency training in chemical hazards, biological hazards, and harmful substances. The training program used by Northern Inc. to address this training requirement is WHMIS.

7.6 Storage of Harmful Substances used or stored at a worksite; must be:

- Clearly identified, or its container is clearly identified, and they are used and stored in such a way that the use or storage is not a hazard to workers

SPILL REPORT FORM

All Sections of This Form MUST Be Completed

Date Reported:	**Time:**
Reported By: Name: Phone Number:	**Company Info:** Company Name: Address: City: Prov/Postal Code:
Incident Date:	**Incident Time:**
Weather Conditions:	
Material Spilled:	**Volume (L) / Quantity (kg):**
Spill Location: Chainage: Access Rd: Off ROW:	**If spill to land** Describe soil median:
If spill to water Name of watercourse: Estimated width and depth of watercourse: Estimated flow rate (i.e. slow, moderate, Fast):	
Type of Samples Taken: n/a soil water	

Reportable Quantities:

All spills require Spills Report Form to be completed.

All spills to be reported to Project Manager.

Spills greater than 20L to be reported to ENV Regional Office; if after hours to Coast Guard.

Spills less than 20L to be reported the ENV Regional Office; if after hours report the following day.

Sampling Protocol:
Spills greater than 20L require a soil sample to be taken after the site has been cleaned up. Photos of site before, during and after cleanup to be taken.

Contaminated soil to be taken to "Regional Petroleum Products Recycling" for proper disposal. Located in Spruce Lake Industrial Park, 506-635-4837

Spill Notification: *List persons notified of spill*			
	NB	*Coast Guard*	1.800.565.1633
		NBENV Regional Office	(506) 658.2558
	NS	Nova Scotia Environment 24-hr Emergency Response Line:	1.800.565.1633
		Nova Scotia Environment Bedford Regional Office:	(902) 424.7773

Name	**Agency**	**Phone Number**		**Date & Time Contacted**

Spill Details:
Provide cause of spill, detailed description of spill location, remedial action taken, containment measure taken, product disposal and actions taken to prevent future occurrences.

To the best of my knowledge all information submitted on this form is true, accurate and complete.
Completed By:
Date:
Signature:
Response Effectiveness: *To be completed by Site Superintendent*
Evaluated By:
Date:
Signature:

Please return all completed forms to HSE Department

Crane & Hoist Safety Program

1.0 Purpose

The purpose of the Crane and Hoist Safety Program is to:

1.1 Ensure a safe work environment for employees who operate, maintain, or work around cranes and hoists

1.2 Inform employees of requirements for safely working around cranes and hoists

1.3 Comply with all regulations dealing with cranes and hoists.

2.0 Scope

This document is intended as a safe operating program that addresses regulatory requirements. Details specific to implementing the program for a specific department or job can be added by the user in the appendices of the program.
This program is applicable to all employees of Northern Inc.
This program is applicable to all mobile cranes, overhead and gantry cranes, including semi-gantry, cantilever gantry, wall cranes, storage bridge cranes and other hoisting equipment that have the same fundamental characteristics.

3.0 Elements of the Program

3.1 All crane operators and those working near cranes must be trained in safe operations.

3.2 personnel are responsible for care and maintenance of all cranes used by Northern Inc.

4.0 Administration, Responsibilities, Compliance

4.1 **Environmental Health and Safety Department** is responsible for administering this program, periodically reviewing, and updating the written program, and periodically auditing crane operations on site to ensure compliance with all applicable regulations and safety practices**.**

4.2 **Managers and Supervisors** are responsible for:

- Ensuring all cranes are properly inspected and maintained and in working order.
- Ensuring any worker assigned to work on a crane is properly trained.
- Ensuring all crane operating procedures include appropriate safety instructions.
- Oversight of all crane operations.

4.3 **Employees** are responsible for

- Working only on equipment for which they have received training
- Following all crane operating procedures
- Working safely
- Reporting accidents and incidents to supervisors immediately
- Notifying supervisors when maintenance or repair of the equipment is required.

4.4 **Contractors and sub-contractors** are responsible for complying with all elements of this program.

5.0 Required Training and Recordkeeping

5.1All operators must be familiar with and be trained to operate the equipment they are assigned to use

5.2 Recordkeeping: A record will be kept of each employee's training on crane and/or hoisting equipment. Training records will include the following:

a) Employee's name

b) Employee's signature

c) Training topic and brief summary of content

d) Date and location of training

e) Training instructor's name

6.0 Specific Procedures

6.1 General Operating Information

6.1.1 The safe design capacity of a crane, or other hoisting equipment, must be clearly visible to the operator and must not be exceeded.

6.1.2 All cranes and hoisting equipment must be in safe working condition and be inspected by a competent person before use, and during use, to make sure it is in safe working condition. Proper guards must be in place for exposed gears, belts, electrical equipment, couplings, and fans.
6.1.3 All operators must be familiar with and be trained to operate the equipment they are assigned to operate. Documentation of the operators training must be available upon request.
6.1.4 Equipment shall be inspected by a competent person before each use and during use, and all deficiencies corrected before further use. A documented annual inspection log must be kept with the crane at all times. Boom cable installation documents must be readily available as well.
6.1.5 No persons shall ever be under a load while it is being lifted.
6.1.6 To avoid tipping, outriggers must be fully extended and remain firmly on the ground.
6.1.7 Cribbing is necessary when the ground cannot support outriggers. Boom angle indicators and load charts and a standard hand signal chart must be visibly posted in the crane.
6.1.8 While moving a crane, the “headache” ball must be retracted to avoid swinging.
6.1.9 Minimum clearance between power lines and any part of the crane shall be at least 10 feet. For power lines rated over 50 kV, additional clearance is required.
6.1.10 Overhead cranes shall have stops at the limit of travel of the trolley. Bridge and trolley bumpers or equivalent automatic devices shall be provided. Bridge trucks shall have tail sweeps.
6.1.11 A preventive maintenance program based on the crane or hoists manufacturer’s recommendations shall be established for all overhead and gantry cranes.

7.0 Operating Procedures

7.1 **General Operations**

The operator of the aforementioned devices shall perform his/her duties as follows:
7.1.1 Equipment shall be operated by a qualified operator or trainee that is under the direct supervision of the qualified operator. Exception: Maintenance and test personnel and inspectors, when in the performance of their duties, shall be allowed access only after permission has been granted by the operator.
7.1.2 The operator, when operating the equipment, shall maintain full attention on the task being performed (e.g., no use of headsets, music).
7.1.3 The operator shall ensure that hand signals used during the lift are understood and followed by all involved.
7.1.4 No load in excess of the rated capacity shall be lifted, unless for test purposes, and the test shall be an engineered lift.
7.1.5 Before leaving the crane or carrier unattended, the operator shall land any load, place the controls, or master switch in the off position and open the main line device of the specific crane or carrier.
7.1.6 The main line disconnect shall not be closed until the operator has made sure that no one is on or adjacent to the crane or carrier.
7.1.7 If the crane or carrier has been locked out or tagged out, the operator shall not remove the lock or tag, unless the lock or tag has been placed there by the operator. To remove someone else's lock or tag refer to the Northern Inc. Lockout/Tagout program.
7.1.8 For cab-operated equipment, make sure that all controls are in the "off" position prior to closing the line-disconnect.
7.1.9 During use of cab-operated equipment, if the power should fail, the operator shall turn off all controllers. Before restarting, the operator shall check the motion controls for proper direction to ensure controls are in the neutral position.
7.1.10 Persons boarding or leaving cab-operated equipment shall do so at the designated point of access or egress.
7.1.11Operator shall ensure that a spotter or signaller is used where path is blocked or partially blocked

8.0 Attaching the Load

8.1. Hoist chains or ropes shall be free of kinks or twists.
8.2 Hoist chains or ropes shall not be wrapped around the load.
8.3 The load shall be attached to the load block.
8.4 Prior to lifting the load, the operator shall make certain that the load, sling, attachments, lifting devices and the load block are unobstructed.

9.0 Moving the Load

9.1 The person responsible for directing the lift shall make sure that the load is properly secured, balanced, and positioned in the sling or other lifting device.

9.2 The person responsible for directing the lift shall make another visual inspection of the hoist chain or rope to make sure there are no kinks or twists.

9.3 The load block shall be brought over the load in a manner that will prevent swing.9.4 The chain or rope shall be inspected to ensure that it is properly seated in the
chain sprocket or drum groove.

9.5 Lift equipment shall not be used for side pulls.

9.6 The operator shall not move the load while a person is on the load or hook.

9.7 The operator shall avoid lifting the load over people.

9.8 If the load being lifted approaches the rated load to be handled, the operator shall test the brakes by lifting the load a few inches and applying the brakes.

9.9 The load shall not be lowered below the point where there are less than two wraps of rope on the hoisting drum unless a lower limit device is provided.
If a lower limit device is provided, no less than one wrap shall remain.

10.0 Parking the Load

10.1 The operator shall not leave a suspended load unattended

10.2 The load block of the hoist shall be raised above head level when not in use.

11.0 Hand Signals

Hand signals shall be used unless the participants of the lift are equipped with telephones, radios, or other equivalent means of communication.

ELECTRICAL SAFETY

PURPOSE

Electricity is a serious work place hazard, capable of causing both employee injury (shocks, electrocution, fires, and explosions) as well as serious property damage. By providing maintenance personnel with proper training in safe electrical work practices, Northern Inc. hopes to reduce the risk of such incidents.

RESPONSIBILITIES

Northern Inc. management is responsible for providing employee safety training, conducting electrical safety inspections, correcting all electrical safety hazards, and ensuring that all new electrical equipment and components comply with codes and regulations.

Employees are responsible for the immediate reporting of electrical safety hazards, for not working on electrical equipment without proper training and authorization, for inspecting equipment prior to using it and removing all damaged, defective, or unsafe equipment from service.

DEFINITIONS

Qualified worker: An employee, who is trained, licenced, and authorized to perform work on electrical equipment and components.

Unqualified worker: An employee who has not been trained or authorized to perform electrical work.

HAZARD CONTROL

The following control methods will be used to prevent occurrence of electricity-related incidents:

Engineering Controls

- All electrical distribution panels, breakers, disconnects, switches and junction boxes must be completely enclosed;
- Water-tight enclosures must be used if any of these components could possibly be exposed to moisture;
- Structural barriers must be used to prevent accidental damage to electrical components;
- Conduits must be supported for their entire length, and non-electrical attachments to conduits are prohibited;
- Non-rigid electrical cords must have strain relief wherever necessary.

Administrative Controls

- Only trained, authorized employees may repair or service electrical equipment;
- Contractors must be licensed to perform electrical work;
- Physical barriers must be used to prevent unauthorized persons from entering areas where new installation or repair of electrical components or equipment is being performed;
- Only authorized employees may enter electrical distribution rooms;
- All electrical control devices must be labeled properly;
- Senior facility management must authorize any work on energized electrical circuits.

Work Practice Controls

- Employees covered under this policy must wear electrically rated safety shoes or boots;
- All outdoor electrical equipment or equipment located where dampness could be an issue must be equipped with GFCIs.
- All electrical cords and lines must be maintained in a safe condition.
- Use only tools that are properly insulated;
- All energy must be isolated using Lockout/Tagout prior to working on any electrical equipment.

- Non-conductive gloves will be available for work on electrical equipment.
- No flammable materials can be stored near electrical equipment.
- Electrical-rated matting will be placed in front of all electricity-distribution panels.

ELECTRICAL EQUIPMENT INSPECTIONS

Inspect all electrical equipment for hazards that could cause employee injury or death. Consider the following factors when determining the safety of the equipment:

- Suitability for the intended use;

- Proper insulation;
- Heating effects under conditions of use;
- Arcing effects;
- Classification by type, size, voltage, current capacity and intended use.

PERSONAL PROTECTIVE EQUIPMENT

Northern Inc. will provide personal protective equipment for use by employees working in areas where they could be exposed to electrical hazards.

Employees are required to observe the following procedures for PPE use:

- PPE use is mandatory when contact with exposed electrical sources is likely;
- Only use PPE that is designed for the work being performed;
- Inspect and test all PPE prior to use;
- Use a protective outer cover (leather, for example) if the work being performed might damage the PPE's insulation;
- Wear non-conductive headgear if there is danger of electrical burns or shock from contact with exposed, energized equipment;
- Wear eye and/or face protection any time there is danger of flying objects, flashes or electrical arcs produced by an electrical explosion.

EMPLOYEE TRAINING

Qualified Employees

Training for those employees qualified to perform electrical work will consist of:

- Specific equipment procedures;
- Familiarity with specific pieces of equipment

Unqualified Employees

Employees not qualified or authorized to perform work on electrical equipment and components will be trained in general electrical safety precautions for the purpose of hazard awareness.

The following electrical safety rules also apply to unqualified employees:

- Do not conduct any electrical repairs;
- Report all electrical hazards to your supervisor;
- Do not operate equipment if you believe there is an electrical hazard;
- Do not allow electrical equipment or components to contact water;
- Remember that even low-voltage electricity can be physically harmful;
- Do not use cords or plugs that are missing the 'ground' prong;
- Do not overload electrical receptacles.
- Inspect all electrical cords prior to use

Flammable and Combustible Materials

Flammable materials are substances that can ignite easily and burn rapidly. They can be common materials that are at most work sites in gas, liquid, and solid forms.

Storage of flammable materials

In general, flammable materials must not be stored near exits, electrical equipment, or heating equipment. They should always be stored in a separate, well-ventilated storage area, away from potential sources of ignition. If the material is removed from its original container, it must be placed into a container that is appropriate for flammable materials.

Portable storage containers for flammable liquids

When flammable liquids are transferred from their original container (one they were purchased in), or from bulk storage such as a drum or tank, it is important that the proper type of portable container be used. Containers that are approved for the use and storage of "portable quantities" are usually made of metal or plastic, are vapour-proof and have:

- welded seams,
- spark or flame arrestors,
- pressure release valves or spring closing lids with spout covers.
- Underwriter's Laboratories of Canada, ULC/ORD-C30-1995, *Safety Containers*
- The container meets certain safety standards CSA or CGSB standards

Glass 5 Glass containers may be used for liquids where the purity of the liquid would be affected if it were stored in a metal or plastic container (e.g. laboratory chemicals).

Portable containers must be properly labelled. The labelling should include the following information:

- container contents
- the contents are flammable
- the container should be kept away from ignition sources (heat, spark, open flames)
- the container should be kept closed when not in use
- a reference to the Safety Data Sheet for the product.

Storage cabinets

When individual containers of flammable liquids are not in use, and are stored inside a building, they should be stored in a storage cabinet.

Combustible liquids may be stored in a cabinet; however no more than half of the total volume (up to 250 L) can be flammable liquids.

Storage tanks and rooms

At some work sites, there are many different types of flammable materials or large volumes of particular materials used. At these sites, flammable materials may be stored in large containers (drums or tanks) or there may be a specific flammable material storage room.

Working Procedures

- Do not store other types of chemicals beside bulk storage containers for flammable materials or in storage rooms for these products.
- Bulk storage containers should be located away from potential ignition sources such as heat, sparks, or open flames.
- Workers must receive proper training before handling flammable or combustible materials
- Do not store compressed gases beside flammable material containers.
- Bulk storage areas should be equipped with spill protection.
- Bulk storage areas and rooms must have appropriate signage or placarding.
- Smoking should never be allowed near flammable material storage areas.
- Drums or large containers of flammable materials should never be stored beside exits or in a way that blocks access.
- Make sure that storage rooms have properly designed ventilation systems that are regularly maintained.

Flammable gases

Flammable gases stored in cylinders are usually at very high pressures, so their uncontrolled release can present both physical and flammability hazards. A small amount of the released gas can fill a large area with a potentially explosive concentration very quickly. This is particularly the case with liquefied gases such as Liquefied Petroleum Gas (LPG).

When storing flammable gas in the workplace:

- store flammable gas cylinders in a separate well-ventilated room
- do not store flammable gas cylinders with oxygen cylinders
- ensure that cylinders are properly secured so that they cannot fall over and valves protected from damage
- always use the correct fittings and valves for the specific cylinder, do not mix and match fittings
- protect hoses, connections and containers from damage and inspect them regularly for signs of wear.

Handling flammable materials

Fire prevention

To prevent fires, flammable materials must be properly managed in the workplace. There are three main ways to prevent fires:

(1) Limit the amounts of flammable and combustible materials

- Keep only what you need on-site Purchase materials in the smallest volumes necessary
- At work locations, keep only those chemicals that are needed for the present task
- Do not let hazardous wastes accumulate at the work site
- Store products, including wastes, used at the work site improper containers
- Keep flammable materials separate from other processes and storage areas. May 2007

(2) Provide proper ventilation to ensure flammable vapours do not accumulate

- Install properly designed ventilation in storage area
- Ensure that processes that use or make flammable materials do not exhaust back in the work site
- Ensure that equipment, such as spray booths, where flammable materials are used, are exhausted outside of the building, and away from air intakes
- Ventilation systems must be properly maintained

(3) Control ignition sources

- Ground and bond all work and ignition-proof equipment
- Ensure that there is no smoking in work areas where flammable materials are stored or used
- Never store flammable materials near hot equipment or open flames
- Use intrinsically safe and non-sparking tools
- It is important that the employer assess the work site and identify potential fire hazards. This will allow the employer to identify the best ways to control these hazards.

Incompatible materials

Incompatibility is when undesirable and unplanned chemical reactions occur between two or more chemicals or materials. When incompatibility reactions occur, they can produce hazards such as:

- heat or pressure,
- fire or explosion,
- violent reaction,
- toxic dusts, mists, fumes, or gases,
- flammable fumes or gases.

Chemicals can usually be grouped into five main categories; flammable/combustible, acid, alkaline or basic, oxidizer and reactive.

These groups are incompatible with each other and must be stored separately

Static electricity

Static electricity is an electric charge that cannot move. It is created when two objects or materials that are in contact with each other are separated. While the objects are in contact, the surface electricity charges try to balance each other. When the objects are separated, they are left with either an excess or shortage of electrons, causing them both to become electrically charged. If these charges do not have a path to the ground, they are unable to move and becomes “static”. If

static electricity is not quickly removed, the charge will build up. Eventually, it will develop enough energy to jump as a spark to some nearby less highly charged object. In an explosive or flammable atmosphere, the spark can set off an explosion or fire. The danger is greatest when flammable liquids are being poured or transferred.

Static electricity can be produced by:

- non-polar liquid flowing through a pipe or hose (e.g. hydrocarbons)
- spraying
- blending or mixing
- filling containers or tanks
- movement (and friction) between materials
- movement of dry powdered material through chutes or conveyors
- movement of non-conductive conveyor belts or drive belts
- appliances that are plugged into electrical outlets
- flipping a light switch on or off.

Static electricity can be controlled by:

- bonding and grounding
- humidification
- static collectors
- additives

Personal protective equipment

If it is not practicable or feasible to use engineering or administrative controls to reduce the potential for exposure, or if these measures are not sufficient, the employer must ensure that workers have appropriate protective equipment. This may include a respirator to protect from airborne vapour concentrations above occupational exposure limits, fire retardant clothing, protective gloves, chemical goggles to prevent injury to the eyes from chemical splashes or protect from fire or airborne vapours, and personal gas detectors.

The Body's Response to Cold

Your body works best when it has an internal "core" temperature of 37°C. 37°C might seem warm, but this is your internal temperature (not the air temperature). This temperature is necessary for your vital organs to function normally. During a regular day, your body temperature may vary by about 1°C depending on the time of day, your level of physical activity and how you are feeling (emotional reactions). The body's metabolic processes produce the right amount of heat you need when you digest your food and when you perform physical activity. Employees are to be trained in the recognition of early symptoms and first response measures.

Maintaining Balance

When you work in extreme temperatures, your body has to adapt. To maintain a constant inner body temperature, the body must continually keep or gain heat in cold environments and lose heat in hot environments.
To stay warm in cold environments, the body
• Shivers – moving muscles help increase heat production, and
• Reduces blood flow to the skin and extremities (hands and feet) to reduce heat loss from the surface.
By sweating, shivering, and changing the rate of blood flow, the body can adapt to a fairly wide range of temperatures. However, there are limits to what the body can adapt to and its ability to maintain its core temperature can fail.

Acclimatization

In cold conditions, the body can also adapt. There is some research that suggests that the body does not adapt as well to cold as it does to hot conditions. How the body adapts to cold is not as clearly understood.

Other Factors

A person's general health also influences how well the person adapts to heat and cold. Those with extra weight often have trouble in both cold and hot situations due to the body having difficulty maintaining a good heat balance. Age (particularly for people about 45 years and older), poor general health, and a low level of fitness will make people more susceptible to feeling the extremes of heat and cold.
Medical conditions can also increase how susceptible the body is to heat and cold. People with heart disease, high blood pressure, respiratory disease and uncontrolled diabetes may need to take special precautions.
In addition, people with skin diseases and rashes may be more susceptible to heat, while people with Raynaud's disease (also known as white finger or vibration disease) will be more susceptible to the cold.

Wind Chill

Wind chill is based on a mathematical calculation and represents how on a windy day the temperature would feel on your skin if the wind were reduced to a walking pace of 4.8 km/h (3 mph). Like humidex, wind chill is expressed in temperature-like units but it is not an actual temperature. For example, the weather report will state that the outside temperature is -15°C with a wind chill of -30. This wind chill means that your face will feel as cold as it would on a calm day when the temperature is -30°C. Wind chill only affects objects that are warmer than the air temperature.
Why does wind speed matter? On a calm day, your body is insulated because it warms up a thin layer of air very close to your skin (called the "boundary layer"). Wind removes this

protective layer. Warming up a new boundary layer takes energy. As the wind blows away each new boundary layer, you feel colder. The wind also contributes to evaporation of moisture from

your skin or from damp clothing against the skin, which makes you feel colder by drawing more heat away from the body. In addition, wet skin loses heat much faster than dry skin (a fact that helps you stay cool in the summer, but also makes you colder in the winter).

Wind Chill Hazards and Risk of Frostbite

In most of Canada, wind chill is included in the forecast when it reaches –25, as this is the point where frostbite becomes a risk. A *wind chill warning* is issued by Environment Canada when conditions become hazardous.

Table 1: Environment Canada's Wind Chill Chart (for general public, with limited outdoor exposure)

Wind Chill	Risk of frostbite	Health Concern	What to do
0 to -9	Low	Slight increase in discomfort	Dress warmly, with the outside temperature in mind.
-10 to -27	Low	Uncomfortable Risk of hypothermia if outside for long periods without adequate protection	Dress in layers of warm clothing, with an outer layer that is wind-resistant. Wear a hat, mittens, and scarf. Keep active.
-28 to -39	Increasing risk: exposed skin can freeze in 10 to 30 minutes	Check face and extremities (fingers, toes, ears, and nose) for numbness or whiteness Risk of hypothermia if outside for long periods without adequate protection	Dress in layers of warm clothing, with an outer layer that is wind-resistant. Cover exposed skin: wear a hat, mittens and a scarf, neck tube or facemask. Keep active.
-40 to -47	High risk: exposed skin can freeze in 5 to 10 minutes*	Check face and extremities (fingers, toes, ears, and nose) for numbness or whiteness (frostbite) Risk of hypothermia if outside for long periods without adequate protection	Dress in layers of warm clothing, with an outer layer that is wind-resistant. Cover all exposed skin: wear a hat, mittens and a scarf, neck tube or face mask. Keep active.
WARNING LEVEL** -48 to -54	High risk: exposed skin can freeze in 2 to 5 minutes*	Check face and extremities frequently for numbness or whiteness (frostbite) Serious risk of hypothermia if outside for long periods	Be careful. Dress very warmly in layers of clothing, with an outer layer that is wind-resistant. Cover all exposed skin: wear a hat, mittens and a scarf, neck tube or facemask. Be ready to cut short or cancel outdoor activities. Keep active
-55 and colder	High risk: exposed skin can freeze in less than 2 minutes	DANGER! Outdoor conditions are hazardous	Stay indoors.

Heat loss also depends on:

Quality of clothing - good quality clothing with high insulating properties will trap air creating a thicker boundary layer

Wet clothing or footwear - wet items lose their insulating value and cause heat loss nearly equal to that of exposed skin

Body type – while everyone is different, people with a tall slim build tend to become cold much faster than those that are shorter and heavier

Metabolism - physical activity (e.g. walking) increases your body's metabolism and generates more body heat

Exposure to the sun - bright sunshine may reduce the effect of wind chill (make it feel warmer) by 6 to 10 units. (Wind chill index does *not* take into account the effect of sunshine.)

Age and physical condition – for example, elderly people and children have less muscle mass, so they generate less body heat

Adaptation - Over time, the body can adapt to the cold. People who live in a cold climate are often able to withstand cold better than those from warmer climates.

Injury or illness – a person who this being weakened due to illness, injury, lack of food, fatigue.

Cold

Health problems associated with cold exposure include:

Frostnip is the mildest form of a freezing cold injury. It occurs when ear lobes, noses, cheeks, fingers, or toes are exposed to the cold and the top layers of the skin freeze. The skin of the affected area turns white and it may feel numb. The top layer of skin feels hard but the deeper tissue still feels normal (soft). The top layer of skin sometimes peels off the affected area.

Frostbite is caused by exposure to extreme cold or by contact with extremely cold objects (e.g., metal). It may also occur at normal temperatures from contact with cooled or compressed gases. Frostbite occurs when tissue temperature falls below freezing (0°C), or when blood flow is obstructed under cold conditions. Blood vessels may be severely and permanently damaged, and blood circulation may stop in the affected tissue.

In mild cases, the symptoms include inflammation (redness and swelling) of the skin in patches accompanied by slight pain. In severe cases, tissue damage without pain, or burning or prickling sensations and blistering can happen. Frostbitten skin is highly susceptible to infection, and gangrene (local death of soft tissues due to loss of blood supply) may develop.

Hypothermia occurs when the body is unable to compensate for its heat loss and the body's core temperature starts to fall. You first feel cold followed by pain in exposed parts of the body. As the body's core temperature continues to drop, the feeling of cold and pain starts to diminish because of increasing numbness (loss of sensation). If no pain can be felt, serious injury can occur without the victim noticing it.

As the body continues to cool, muscular weakness, an inability to think clearly, and drowsiness are experienced. This condition usually occurs when the body's internal or core temperature falls below 33°C. Additional symptoms include shivering coming to a stop, diminished consciousness, and dilated pupils. When the core temperature reaches 27°C, coma (profound unconsciousness) sets in.

More details about the signs and symptoms of cold exposure are listed in **Table 2.**

Other health effects of cold exposure include:

Chilblains are a mild cold injury caused by prolonged and repeated exposure for several hours to air temperatures from the freezing point (0°C) to as high as 16°C. Where the skin is affected, there will be redness, swelling, tingling, and pain.

Immersion foot occurs in individuals whose feet have been wet, but not freezing cold, for days or weeks. It can occur at temperatures up to 10°C. The primary injury is to nerve and muscle tissue. Symptoms include tingling and numbness; itching, pain, swelling of the legs, feet, or hands; or blisters may develop. The skin may be red initially and turn to blue or purple as the injury progresses. In severe cases, gangrene may develop.

Trench foot (or hand) is "wet cold disease" resulting from prolonged exposure in a damp or wet environment from the freezing point to about 10°C. Depending on the temperature, symptoms may begin within several hours to many days, but the average is three days.

Important

Any worker who was shivering but has now stopped shivering is at extreme risk for severe hypothermia. Do not assume that they are "getting used to the cold". The survival of the victim depends on their co-worker's ability to recognize the symptoms of hypothermia. The victim is generally not able to notice his or her own condition.

Table 2: Symptoms of cold exposure

Stage	Body Core Temperature	Signs & Symptoms
Mild Hypothermia 36.1-35ºC	37.2-36.1ºC	Normal, shivering may begin "Feeling cold", goose bumps, unable to perform complex tasks with hands, shivering can be mild to severe, hands numb
Moderate Hypothermia	35-33.9ºC	Shivering, intense loss of muscular coordination, movements slow and laboured, stumbling pace, mild confusion but may appear alert. Use a sobriety-like test - if unable to walk a 9-metre straight line, the person is likely hypothermic
	33.9-32.2ºC	Violent shivering continues, difficulty speaking, sluggish thinking, amnesia starts to appear, gross muscle movements sluggish, unable to use hands, stumbles frequently, signs of depression or withdrawn.
Severe Hypothermia	32.2-30ºC	Shivering stops, exposed skin is blue or puffy, muscle coordination very poor, inability to walk, confusion, incoherent/irrational behaviour, but may be able to maintain posture and appearance of awareness
	30-27.8ºC	Muscle rigidity, semiconscious, stupor, loss of awareness of others, pulse and respiration rate decrease, possible heart fibrillation.
	27.8-25.6ºC	Unconscious, heartbeat and breathing is erratic, a pulse may not be obvious.
	25.6-23.9ºC	Pulmonary edema, heart and breathing failure, death. Death may occur before this temperature is reached.

First Aid for Cold Exposures

Prevent frostnip by covering exposed skin surfaces. Cover the cheeks, chin, nose, ear lobes and forehead. A thin layer of petroleum jelly a product such as Vaseline® may help.

Treat frostnip or frostbite by gentle rewarming (e.g., holding the affected tissue next to unaffected skin of the victim or of another person). For cold-induced injuries, never rub the affected parts - ice crystals in the tissue could cause damage if the skin is rubbed. Do not use hot objects such as hot water bottles or electric blankets to rewarm the area or person.

First aid for frostbite, as well as immersion or trench foot, includes:

• Get medical help.

• If possible, move the victim to a warm area.

• Gently loosen or remove constricting clothing or jewellery that may restrict blood circulation.

• Loosely cover the affected area with a sterile dressing such as gauze. Place some gauze between fingers and toes to absorb moisture and prevent them from sticking together.

Quickly transport the victim to an emergency care facility.

• DO NOT attempt to rewarm the affected area on site (but do stop the person from getting any colder). If there is a chance that the affected area will get cold again, do not rewarm the skin. If the skin is rewarmed and then freezes again, severe tissue damage can result.

• DO NOT rub the area or apply dry heat.

• DO NOT allow the victim to drink alcohol or smoke.

• DO NOT rub the area with snow or ice.

First aid for hypothermia includes the following steps:

• Get medical help immediately. Hypothermia is a medical emergency.
• Remove any wet clothing.

- Place the victim between blankets (or towels, newspapers, etc.) so the body temperature can rise gradually. Be sure to cover the person's head. If medical help is not available immediately, body-to-body contact can help rewarm the victim slowly as long as it does not put your safety at risk. Do not use hot water bottles or electric blankets, as these can heat the victim too quickly.
- Give warm, sweet (caffeine-free, non-alcoholic) drinks unless the victim is rapidly losing consciousness, is unconscious, or is convulsing.
- Quickly transport the victim to an emergency medical facility.
- Perform CPR (cardiopulmonary resuscitation) if the victim stops breathing. Continue to provide CPR until medical aid is available. The body slows when it is very cold and, in some cases, hypothermia victims that appeared "dead" have been successfully resuscitated.

- **TIP!** Staying hydrated is also important when you are working in the cold. Do not forget to drink regularly – warm fluids can include caffeine-free drinks, soup, and water.

Noise Control Program

1.0 Introduction and Scope

1.1 Introduction

Northern Inc. shall take all precautions reasonable to protect employees from hazardous noise exposure in the workplace. The objective of the Northern Inc. Noise Control and Hearing Conservation Program is the identification and control of noise hazard areas and the recognition and protection of all employees who have the potential to develop occupational noise-induced hearing loss.

1.2 Scope

This program applies to all Northern Inc. employees, contractors and subcontractors who work in noise hazard areas or who have the potential to develop noise-induced hearing loss as a result of their occupation. It is the intent of the Northern Inc. that, whenever practical or feasible, efforts to reduce or eliminate excessive noise exposure in the workplace by means of engineering controls or proper work practices will precede a requirement for mandatory use of hearing protection.

2.0 Criteria for Noise Exposure

2.1 Individual Exposure

An employee is considered noise-exposed if he/she has the potential to develop occupational noise-induced hearing loss, as a result of his/her work activities. Regular exposure to sound levels greater than a time-weighted average of 85 dBA or an "equivalent" noise exposure (using a 3-dB exchange rate), as listed in Table 1, is associated with the development of noise-induced hearing loss.

2.2 Area Noise Levels

An area or location is considered a noise hazard area if sound levels are regularly at, or above, 85 dBA.

3.0 Responsibilities

3.1 Management

Northern Inc. is responsible for ensuring that all components of the Noise Control and Hearing Conservation Program are implemented and enforced in noise hazard areas under their jurisdiction.

Managers and Supervisors, in conjunction with the Environmental Health and Safety Department, are responsible for:

1) Identifying noise hazard areas and employees who may be noise-exposed;
2) Maintaining an up-to-date list of noise hazard areas/operations and noise-exposed employees and providing this information to the Office of Environmental Health and Safety and/or Health and Well-Being Programs and Services upon request
3) Ensuring that employees receive general noise awareness training (Office of Environmental Health and Safety) and specific training on the use, care, inspection, maintenance and if applicable, disinfection, of the types of hearing protectors used in their departments;
4) Taking appropriate steps to minimize the risk of noise-induced hearing loss, including elimination/substitution, engineering, and administrative controls and where these controls are not practicable, the use of hearing protective devices (e.g. earplugs and/or earmuffs);
5) Where hearing protective devices are used, the devices should be selected based on the sound levels workers may be exposed to, the attenuation level provided by the hearing protectors and the manufacturer’s information on the use and limitation of the devices;
6) Ensuring that noise-exposed employees are advised of and offered participation in the audiometric testing program conducted by the Occupational Health Nurse (Office of Environmental Health and Safety);
7) Noise testing of areas where exposure can exceed the auditory limits.

3.2 Supervisors

Supervisors are responsible for ensuring that all noise-exposed employees under their jurisdiction are trained, are aware of the noise hazards, and are provided with the means to protect his/her hearing.
That proper warning signs are displayed in areas that exceed acceptable levels.
If hearing protection devices are necessary, selection must be based on the information regarding the sound levels employees are exposed to, the attenuation level offered by the protectors and the manufacturer's information on the use and limitations of the devices. The Supervisor must enforce the use of it and be prepared to take appropriate disciplinary action in the event an employee does not comply with this requirement. Enforcing the proper use of hearing protection should be viewed in the same manner as the enforcement of other types of personal protective equipment (safety glasses, hard hat, safety shoes/boots, etc.).

3.3 Employees
Employees exposed to hazardous noise levels are responsible for:
1) Reporting noise concerns to the Supervisor;
2) Using and caring for hearing protective devices where these devices are required;
3) Attending noise training workshops as required; and,
4) Responding to requests for participation in the audiometric screening program;

3.4 Joint Health and Safety Committee
The local Joint Health and Safety Committee's duties include the inspection and identification of hazards in the workplace. If noise hazards are detected or suspected, the JHSC shall inform line management and/or the Environmental Health and Safety Department for further investigation and follow-up.

3.5 Environmental Health and Safety Department
Environmental Health and Safety Department is responsible for:
1) Defining the Noise Control and Hearing Conservation Program;
2) Conducting noise surveys and personal dosimetry assessments;
3) Providing technical services and advice regarding control measures and hearing protection;
4) Providing appropriate general noise training and education;
5) Conducting audiometric screening and maintaining confidential medical records; and,
6) Providing confidential (individual) counselling and, where necessary, referral to an appropriate health care practitioner;

3.6 Health and Well-Being Programs and Services
Health and Well-Being Programs and Services are responsible for:
1) Reporting noise-induced hearing loss cases to Worksafe NB.
2) Reporting general summaries of the results (stripped of individual identities) to the pertinent supervisors and Joint Health and Safety Committees as appropriate.

1.0 Program Components
The components of the Noise Control and Hearing Conservation Program are:
4.1 Noise Hazard Assessment
4.2 Noise Control Measures
4.3 Hearing Protection Devices
4.4 Employee Education and Training
4.5 Audiometric Testing (including, as appropriate, Counselling and Referral)
4.6 Worksafe NB
4.7. Records and Reporting

4.1 Noise Hazard Assessment
Noise-exposed employees and/or noise hazard areas will be identified by the appropriate Manager or Supervisor in conjunction with the Environmental Health and Safety Department. Where necessary an assessment will be carried out by means of workplace noise surveys and/or dosimetry. If conditions in the workplace change at any time (e.g. new equipment or process), the Department Manager or Supervisor is responsible for contacting the Environmental Health and Safety Department to arrange for a re-assessment.

4.2 Noise Control Measures

The Department is responsible for ensuring that appropriate noise control measures are investigated and, if feasible, implemented.

4.2.1 Engineering Controls

In a noise hazard area, an investigation of the feasibility of applying engineering controls to reduce noise levels must be conducted and, where feasible or practical, noise levels are to be reduced through engineering controls. Depending on the circumstances, engineering controls may include barriers, vibration damping, source isolation and sound absorbing enclosures.

When new equipment is to be purchased, consideration must be given to the noise levels generated and the potential exposure of employees working with or near the equipment. Before equipment is purchased, the noise specifications should be checked and consideration given to the long-term implications of equipment which produces noise levels in excess of 85 dBA in the workplace.

4.2.2 Administrative Controls

In instances where engineering controls are not practical or feasible, administrative controls such as changes in work procedures, rescheduling of the noisy activity or decreasing the duration of exposure must be considered.

Clearly visible warning signs must be posted at the approaches to an area where sound levels regularly exceed 85 dBA. These warning signs must clearly indicate that the use of hearing protection is mandatory for entry. In situations where a piece of equipment or machinery presents a noise hazard, a sign must be affixed to the machine, in a clearly visible location, indicating that the operator must wear appropriate hearing protection.

Regular equipment maintenance is an important noise control measure since well maintained equipment, in addition to being more reliable, also tends to be quieter.

4.3 Hearing Protection Devices

Engineering and/or administrative controls are the preferred methods for reducing noise exposure. If this is not feasible or practical, hearing protection devices must be used where sound levels regularly exceed 85 dBA or where an individual's personal exposure may exceed the limits set.

Department managers and supervisors are responsible for selecting appropriate hearing protection devices. Hearing protection devices should be selected based on the information regarding the sound levels employees are exposed to, the attenuation level offered by the protectors and the manufacturer’s information on the use and limitations of the devices.

For regular noise exposures between 80-85 dBA, hearing protection is optional but should be provided on request.

4.4 Employee Education and Training

All noise-exposed employees who are required to wear hearing protection must attend the general noise awareness training from Office of Environmental Health and Safety. This seminar will include:

1) What noise is;
2) How we hear;
3) Health effects of noise;
4) Assessment and control measures; and
5) Legislation and the Noise Control and Hearing Conservation Program.

Individual departments are responsible for providing training to employees on work-site specific control measures used to reduce noise and tracking this training (i.e. attendance sheet). Where hearing protection devices are provided, department-specific training must include:

1) Care and use;
2) Limitations;
3) Proper fit;
4) Inspection and maintenance; and,
5) If applicable, cleaning and disinfection

4.5 Audiometric Testing

Noise-induced hearing loss (NIHL) is gradual in onset and usually goes unrecognized until communication and comprehension are affected. Once noise damage has occurred, hearing loss is permanent and irreversible. However, NIHL is completely preventable through noise control and hearing conservation measures.

Regular audiometric testing allows the early detection of NIHL. Changes in an employee's audiometric results may indicate that noise conditions in the workplace have changed or that hearing protection is not being used correctly. It should be emphasized that audiometry does not in any way prevent hearing loss but rather it is a measure of the effectiveness of the program.

4.5.1 Claims

All Northern Inc. employees at risk of developing noise-induced hearing loss shall be offered confidential audiometric testing for hearing loss.

Noise-induced hearing loss arising from occupational noise exposure is a compensable occupational disease in New Brunswick. Health and Well-Being Programs and Services will report suspected cases of noise-induced hearing loss to Worksafe NB once written consent to release audiometric information has been obtained from the employee.

4.5.2 Follow-up

Where applicable, after group audiometric results (stripped of individual identifiers) for an area are available, representatives from the Environmental Health and Safety Department shall meet with the appropriate Management and/or Joint Health and Safety Committee to discuss the results and identify any emerging noise problems or trends. Potential corrective action and program responsibilities will also be reviewed.

4.6 Reporting

Environmental Health and Safety Department will forward a copy of noise surveys and/or personal dosimetry reports to:

1) The Department Supervisor or Manager;
2) The appropriate Joint Health and Safety Committee; and
3) The Employee (personal dosimetry results).

4.7 Records

Records of current noise levels and noise control/hearing conservation measures will be kept by the Department as well as the Environmental Health and Safety Department.

Department management is responsible for maintaining a list of hazardous noise areas, noise-exposed employees, and training records (general noise awareness training and any department-specific training including hearing protective devices).

Health and Well-Being Programs and Services will maintain records of all audiometric tests. These shall be maintained in a manner consistent with the principle of medical confidentiality

Temporary Work Platforms

Scaffolding

Potential Hazards impalement, eye injury, punctures, falls, respiratory illness

Personal Protective Equipment Required: Hard hat, CSA Boots, Eye protection, Hand protection Hearing protection, Skin protection and Face protection (clothing)

Preliminary Activities

Where multiple trade activity is scheduled, the general contractor is to review in advance the priority of work and schedule the appropriate time frame to allow each trade to complete their scope of work.

Prior to any work commencing supervisors must conduct a hazard assessment of all applicable work areas. Any hazards that are found during the hazard assessment must be addressed prior to any work commencing.

Do's:

1. Install, use, maintain and dismantle scaffolds in accordance with manufacturer's and/or engineer's specifications.
2. Make sure a competent person has inspected the scaffold before you go up.
3. Inspect the scaffold prior to each use.
4. Provide a stable and level foundation
5. Ensure all bracing, base plates and guardrails are in place and secure.
6. Provide a safe means of access to the working deck.
7. Wear a hard hat whether you work on or under a scaffold.
8. Be sure to wear sturdy shoes with nonslip soles as well.
9. Use a personal fall arrest system whenever required.
10. Watch out for co-workers on the scaffold as well as people below.
11. Always use common sense when working on any scaffold and move around slowly and carefully.
12. Ask a supervisor if you are not sure if a scaffold or working conditions are safe.

Don'ts:

1. Take chances.
2. Load a scaffold in excess of its rated load.
3. Use a scaffold if there are any defects.
4. Keep debris or unnecessary materials on a scaffold where someone could trip over them or accidentally knock them off the platform.
5. Hit a scaffold with anything heavy—a truck, a forklift, a load of lumber, etc.
6. Leave materials and equipment on the platform at the end of the day.
7. Erect scaffolds in proximity to energized electrical lines.
8. Move scaffolds with workers on the platforms.
9. Climb or stand on cross braces or guardrails.
10. Use an outdoor scaffold in stormy or windy weather, or if it is covered with ice or snow.

General Safe Work Procedures

A scaffold is a very effective means to provide a temporary safe work platform. However, care must be taken to ensure scaffolds are erected, maintained, and used in a manner to ensure worker safety. Serious accidents and fatalities have resulted from improper design, erection and use of scaffold systems.

1. Ensure that you understand and follow the engineer and/or manufacturer's specifications and instructions on the installation, use, maintenance, and dismantling of a scaffold.
2. Identify competent persons to supervise and inspect the scaffold.
3. Determine a suitable fall protection system to be used when erecting and dismantling scaffolds.
4. Conduct an inspection of all scaffold components to ensure they are undamaged and in proper working condition, prior to the erection of the scaffold.

5. An open access scaffold more than 10 m high, or an enclosed or hoarded access scaffold more than 7.5 m in height, must be designed by an engineer.
6. If the scaffold platform is 3 m or more above the level a worker may fall, it must be equipped with a guardrail.
7. If a scaffold system is 6 m in height, it is equipped with a suitable hoisting device for hoisting materials.
8. If a scaffold is more than 9 m in height it must be equipped with an internal stairway or ladders, and if any ladder exceeds 3 m in height, the ladder must be equipped with fall protection attachments.
9. A scaffold must be anchored and securely guyed or tied back to the building or structure at vertical and horizontal intervals of no more than 3 times the minimum lateral dimension of the scaffold.
10. Protect all planked or working levels with proper guardrails, mid rails, and toe boards along all open sides and at the ends of scaffold platforms.
11. Scaffolding shall be erected plumb and level and all connections shall be fastened.
12. Workers shall be aware of the regulations on specific types of scaffolds (refer to WorkSafe NB Regulation);
13. The upright supports of scaffolds shall stand on firm foundations or sills. Pallets, boxes, building blocks, bricks and other unstable materials shall not be used for this purpose.
14. The stability of a scaffold, having a height exceeding three times its minimum base dimension, shall be ensured by securing the scaffold to the structure, or by other appropriate means.
15. Scaffolds, 10 feet (3m) or more above grade, shall have guardrails around their open sides.
16. Toe-boards shall be installed around the open sides of scaffolds to prevent tools and equipment from falling from the scaffold.
17. Scaffold planks shall: be not less than 2 by 10 inches (5cm x 25cm), nominal dimension; extend not less than 6 inches (15cm), and not more than 12 inches (30cm) beyond the supports at each end; be supported at intervals not exceeding 7 feet (2.1m) for heavy work, such as bricklaying and masonry, 10 feet (3m) for light work; be of the same thickness as adjoining planks.
18. Work platforms on scaffolds shall have two or more scaffold planks side by side, or manufactured platforms. Whichever method is used must give a work surface of at least a nominal width of 20 inches (50.8cm).
19. When the distance between the front and rear upright scaffold support is greater than 30 inches (76cm), additional planks shall be used so that there is no opening greater than the width of one scaffold plank.
20. Scaffold planks shall not be sloped more than 2 feet (61cm) vertically and 10 feet (3m) horizontally. Sloped planks shall be secured against slipping. They shall be fitted with cleats on their topside at not more than 16-inch (41cm) intervals. Other non-skid surfaces may be used instead of cleats.
21. Scaffolds shall only be put up or taken down by, or under the supervision of, qualified workers.
22. No damaged or weakened scaffold shall be used until it has been repaired.
23. Only material, which is being used at the time, shall be kept on any scaffold. Scaffolding shall not be overloaded.
24. Access to scaffolds up to 30 feet (9.1m) in height may be gained by: use of the end-frames, where the design provides a ladder-like structure of uniformly spaced horizontal members; or use of fixed vertical ladders, portable ladders, or stairways.
25. Access to scaffolds over 30 feet (9.1m) high shall be by fixed ladders, stairways, or temporary passenger hoists.
26. Never jump onto or off of scaffold planks.

Tower and Rolling Scaffolds Construction and Erection

Scaffolds shall be constructed and erected in accordance with the manufacturer's specifications and recommendations.

1. All applicable members shall be utilized, including the diagonals in both the vertical and horizontal planes. All necessary fasteners specified and recommended by the manufacturer shall be property installed and secured.
2. If not using manufactured aluminum planks, a horizontal brace must be affixed to the bottom frame section to prevent the rolling scaffolding from scissoring when moving or using the scaffold.

Guardrails

Scaffolds with work platforms 10 feet (3m) or more above floor level shall be equipped with guardrails and intermediate rails.

Safe Access
Access to the platform shall be gained by means of fixed vertical ladders, stairways, or hoists in accordance with the requirements of WorkSafeNB Regulations.

Casters
At least two of the four wheels shall be of the caster type.

1. The caster height adjusting pines or screws shall be installed so that they cannot fall out, or be inadvertently screwed out, from their housings when a scaffold leg is raised clear off the floor.
2. Such pins or screws shall not extend more than 2/3 of their total length or in excess of 12 inches (30cm) from their housings.

Wheel Locks
Except as provided by the WorkSafeNB regulation wheels shall be provided with effective locking devices and kept locked when workers are required to work on scaffolds at heights in excess of 10 feet (3m) above floor level.

Wheels
Wheels shall be not less than 5 inches (12.7cm) in diameter. When the scaffold is used in proximity to energized electrical equipment, the wheels shall be fitted with non-conductive resilient tires and the provisions of WorkSafeNB Regulations shall be complied with. Wheels on at least one end of a rolling scaffold must be of the swivel type. Where metal scaffolds are used in any situation where the high electrical potentials involved would result in capacitive or induced current in the scaffold structure, the structure shall be grounded.

Decking
Scaffold planks shall extend not less than 6 inches (15 cm), and not more than 12 inches (30 cm), beyond the end supports or bearers of the structure. They shall be fitted with means to retain planks on the bearers (cleats). The entire area within the scaffold structure shall be decked at those levels where workers work or ride except where guardrails are installed immediately about the perimeters of partially decked areas.

Height Limitation
The height of any free-standing tower or rolling scaffold shall not exceed three times the minimum dimension of the base unless the scaffold is securely tied or guyed to prevent overturning.

Outriggers
If outriggers are used to increase the minimum base dimension of a tower or rolling scaffold, they must be installed on both sides of the scaffold structure unless the scaffold is adjacent to a building or structure, the scaffold must be braced against the structure, and outriggers used on the opposite side.

Rolling Scaffolds; Riding by Workers
No worker shall remain on a rolling scaffold while it is being moved by other workers if the platform height exceeds twice the minimum base dimension.

1. No worker shall remain on a rolling scaffold while it is being moved by his own efforts if the platform height exceeds 1.5 times the minimum base dimension.
2. If the platform height exceeds 1.5 times the minimum base dimension of the scaffold, a worker on the work platform is not permitted to move the scaffold.

Floor Requirements
The floor or surface on which the scaffold is moved shall be within three degrees of level and shall be free from pits, holes, depressions, or obstructions. The floor or surface over which an occupied rolling scaffold is moved must be sufficiently firm, within 3 degrees of level, and free from pits, holes, depressions, waste material, or obstructions so as to ensure stability of the scaffold.

Assembling Multiple Scaffolding Frames

When assembling multiple scaffold frames for deck form work it must be done in a consistent manner, particularly when workers will be working above 10 feet.

1. A control zone should be established to limit access to the work area to authorized personnel only.
2. Set one level of scaffold frames up before commencing work on the second level. When the height of the work is approaching 10 feet, we must ensure that adequate anchor points are provided. By constructing width first instead of height we minimize the scaffolding system being tipped over in the event a worker fall.
3. It is important that all components of the scaffolding system be braced together. Scaffold towers should be connected together using cross braces if practicable.
4. Any non-standard components used in the scaffold system must be engineered and the applicable drawings must be available on site and reviewed with the workers responsible for installing those components.
5. When assembling scaffolding for the support of formwork the following procedures will be followed;
6. Place the first set of frames on the deck where the formwork will start. Install two (2) angle braces, one on each side of the frame. Frames should be supported on flat feet, either screw jack or fixed. U heads should not be used as supports for scaffolding frames under any circumstances. Do not use scaffold frames without adequate supports installed.
7. Continue erecting the first level of scaffolding frames until the entire area to be decked is covered. Connect frame sets together using angle braces to ensure stability in the entire scaffold system.
8. Position a 20 inches work platform on the first level of frames and add the second level of scaffolding. The work platform must be constructed out of 2-inch x 10-inch planks or manufactured components. The platform must be capable of supporting the number of workers who will be on the platform. It is recommended that not more than two (2) workers are on a scaffold set at once. Add cross braces as each set of frames is installed.
9. Work platforms are required on each level of scaffolding when working at 10 feet or higher and fall arrest must be used by all workers.
10. Continue erecting the second level of scaffolding frames adding cross bracing between frame sets as required.
11. Continue erecting scaffold frames for additional levels until the required height is achieved.
12. Depending on the height of the frames being used workers may be working above 10 feet. If workers will be assembling scaffolding above 10 feet, they must use fall arrest equipment consistent with the way they were instructed.
13. Anchor to the frame of the scaffolding and not the cross braces. Lanyards used for anchoring must have a ladder type self locking hook on them.
14. Lanyards must be kept as short as possible.
15. Workers are not permitted to stand or step onto cross bracing for any reason.

Working with Lead

Protective measures and procedures should be implemented when working with lead. Specific measures and procedures will depend on how the work is classified. This section of the guideline outlines general measures and procedures for all work with lead, followed by specific recommendations for Type 1, Type 2, and Type 3 operations. No workers can be exposed to lead that is above the occupational exposure limit.

1.0 General Measures and Procedures for Type 1, Type 2, and Type 3 Operations

The following is a list of general measures and procedures that should be followed for all work with lead:

- washing facilities consisting of a wash basin, water, soap, and towels should be provided and workers should use these washing facilities before eating, drinking, smoking, or leaving the project;
- workers should not eat, drink, chew gum or smoke in the work area;
- drop sheets should be used below all lead operations which produce or may produce dust, chips, or debris containing lead;
- dust and waste should be cleaned up and removed by vacuuming with a HEPA filter equipped vacuum;
- clean-up after each operation should be done to prevent lead contamination and exposure to lead;
- dust and waste should be cleaned up at regular intervals and placed in a container that is:
  - dust tight
  - identified as containing lead waste
  - cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area
  - removed from the workplace frequently and at regular intervals;
- the work area should be inspected daily at least once to ensure that the work area is clean; and
- compressed air or dry sweeping should not be used to clean up any lead-containing dust or waste from a work area or from clothing.

1.1 Measures and Procedures for Type 1 Operations

Respirators should not be necessary if the general procedures (above) are followed. Careful monitoring and evaluations should be carried out to assess the exposure limit to the worker. However, any worker who requests a respirator should be provided with a half-mask particulate respirator with N-, R- or P-series filter, and 95, 99 or 100% efficiency.

1.2 Measures and Procedures for Type 2 Operations

Preparation of the Work Area

For all Type 2 operations, signs should be posted in sufficient numbers to warn of the lead hazard. There should be a sign, at least, at each entrance to the work area. The signs should display the following information in large, clearly visible letters:

1. There is a lead dust, fume, or mist hazard.
2. Access to the work area is restricted to authorized persons.
3. Respirators must be worn in the work area.

Personal Protective Clothing and Equipment

Suitable protective clothing and equipment should be worn by every worker who enters the work area.

Where lead-containing paints or coatings are being applied by spraying, all workers in the work area should wear a powered air purifying respirator equipped with a hood or helmet and a high efficiency filter, or a supplied air respirator equipped with a hood or helmet and operated in a continuous flow mode should be adequate.
For all other Type 2 operations, a half-mask particulate respirator with N-, R- or P-series filter, and 95, 99 or 100% efficiency should be adequate.

1.3 Measures and Procedures for Type 3 Operations

Preparation of the Work Area

Warning signs should be provided for all Type 3 operations. Signs should be posted in sufficient numbers to warn of the lead hazard, and at least at each entrance of the work area. The signs should display the following information in large, clearly visible letters:

1. There is lead dust, fume, or mist hazard.
2. Engineering control method cannot reduce the lead below the occupational exposure limits
3. Access to the work area is restricted to authorized persons.
4. Respirators must be worn in the work area.

1.3.1Barriers, Partial Enclosures and Full Enclosures

Barriers, partial enclosures, and full enclosures are used to separate the work area from the rest of the project, and in some cases, to prevent lead exposure to other workers not directly involved in the operation. Partial and full enclosures can also prevent or reduce the dispersion of lead into the surrounding work area and environment. Barriers should only be used where full and partial enclosures are not practicable.

Barriers

Ropes or barriers do not prevent the release of contaminated dust or other contaminants into the environment. However, they can be used to restrict access of workers who are not adequately protected with proper PPE, and also prevent the entry of workers not directly involved in the operation. Ropes or barriers should be placed at a distance far enough from the operation that allows the lead-containing dust to settle. If this is not achievable, warning signs should be posted at the distance where the lead-containing dust settles to warn that access is restricted to persons wearing PPE. For example, the removal of mortar and cutting operations, ropes or barriers should be located at least 10 metres away. All workers within the barrier or warning sign zone must be adequately protected.

Partial Enclosures

Partial enclosures allow some emissions to the atmosphere outside of the enclosure. Partial enclosures may consist of vertical tarps and floor tarps so long as the tarps are overlapped and securely fixed together at the seams. A partial enclosure is not a recommended containment system if significant dust is being generated.

Full Enclosures

Full enclosures are tight enclosures (with tarps that are generally impermeable and fully sealed joints and entryways). Full enclosures allow minimal or no fugitive emissions to reach the outside environment. For full enclosures, the following requirements should be met:

- the enclosure should be made of windproof materials that are impermeable to dust
- the enclosure should be supported by a secure structure
- all joints in the enclosure should be fully sealed
- entrances to the enclosure should be equipped with overlapping tarps or air locks
- the escape of abrasive and debris from the enclosure should be controlled, at air supply points, by the use of baffles, louvers, flap seals and filters
- general mechanical ventilation should be provided to remove contaminated air from the enclosure and filtered air should be provided to replace the exhausted air
- equipment venting such air should be equipped with filters adequate to control vented air to provincial environmental standards
- the air velocity within the enclosure should provide an average minimum cross-draft or down-draft past each worker during abrasive blasting operations as follows:
  - cross-draft velocity of 0.5 m/sec (100 ft/min)
  - down-draft velocity of 0.25 m/sec (50 ft/min)

Indoor Operations

- For Type 3a operations conducted indoors, barriers, partial enclosures, or full enclosures should be provided.
- For Type 3b operations (abrasive blasting, removal of lead-containing dust using an air mist extraction system) conducted indoors, full enclosures should be provided.

Outdoor Operations

- For Type 3a and 3b operations conducted outdoors, barriers, partial enclosures, or full enclosures should be provided.
- For dry abrasive blasting conducted outdoors, full enclosures should be provided.

1.3.2 Decontamination Facility

A decontamination facility should be made available for workers carrying out for the following Type 3 operations:

Type 3a Operations

- removal of lead-containing coatings and materials using power tools without an effective dust collection system equipped with a HEPA filter
- demolition or clean-up of a facility where lead-containing products were manufactured

Type 3b Operations

- abrasive blasting of lead-containing coatings or materials
- removal of lead-containing dust using an air mist extraction system

The decontamination facility should be located as close as practicable to the work area and should consist of:

- a room suitable for changing into protective clothing and for storing contaminated protective clothing and equipment
- a shower room as described below
- room suitable for changing into street clothes and for storing clean clothing and equipment

The rooms in the decontamination facility should be arranged in sequence and constructed so as to prevent the spread of lead dust.

The shower room in the decontamination facility should be provided with the following:

- hot and cold water or water of a constant temperature that is not less than 40° Celsius or more than 50° Celsius
- individual controls inside the room to regulate water flow and, if there is hot and cold water, temperature
- clean towels.

Prior to each shift in which a decontamination facility is being used, a competent person should inspect the facility to ensure that there are no defects that would allow lead-containing dust to escape. Defects should be repaired before the facility is used. The decontamination facility should be maintained in a clean and sanitary condition.
Workers using the decontamination facility should do the following in the order shown:

- decontaminate protective clothing that will be reused on site by vacuuming with a HEPA-filter-vacuum or by damp wiping
- remove the decontaminated protective clothing
- place protective clothing that will not be reused on site in a container suitable for lead-containing dust and waste
- shower without removing the respirator
- remove and clean the respirator

1.3.3 Dust Control Measures

General and Local Mechanical Ventilation

Where the work area is enclosed, general mechanical ventilation should be provided. The air exhausted from an enclosed work area should pass through a dust collector effective for capturing the size of particulate matter being generated and for the volume and velocity of air moving through the enclosure.
Where a dust generating operation is carried out, local mechanical ventilation should be provided to remove dust at the source. Local mechanical ventilation is highly recommended for welding, burning, and high temperature cutting of lead-containing coatings and materials, and for the removal of lead-containing coatings and materials using power tools. Where local mechanical ventilation is used, the following should be met:

- Air velocity at any point in front of or at the opening of the ventilation hood should be sufficient to overcome opposing air currents and capture the contaminated air by causing it to flow into the hood.
- Air velocity at the source should be at least 0.5 m/sec (100 ft/min)
- Air discharged from the local mechanical ventilation system should pass through a HEPA filter and be routed out of the workplace in a way that will prevent the return of contaminants to the workplace.

If local ventilation is not practicable, an appropriate respirator should be provided. However, the decision that local ventilation is not practicable should not be made without first consulting the joint health and safety committee or health and safety representative, if any, and without considering the following:

- any undue economic hardship to the employer that providing a local ventilation system would cause
- the frequency and duration of the operation
- any potential risks to the workers by not providing a local ventilation system.

Wet Methods

Wet methods should be incorporated in the operation to reduce dust generation. Examples of wet methods include wetting surfaces, wet scraping, and wet shovelling.
Wetting should not be used if it would create a hazard or could cause damage to equipment or to the project. Power tools should be equipped with a shroud, and the shroud should be kept flush with the surface.

1.3.4 Personal Protective Equipment

Protective Clothing

Every worker who enters a Type 3 operation work area should wear protective clothing

Respirators

For most Type 3 operations, workers should wear a respirator with a NIOSH approved assigned protection factor of 50 (see Respirator Requirements in Table 1). Where the operation is abrasive blasting, the operator should wear a Type CE abrasive blast supplied air respirator operated in a pressure demand or positive pressure mode with a tight-fitting half-mask or tight-fitting full-facepiece.
It is recommended that compressed air used to supply supplied air respirators meet the breathing air purity requirements of CSA Standard Z180.1-00. Where an oil-lubricated compressor is used to supply breathing air, a continuous carbon monoxide monitor/alarm should be provided.

1.3.5 Clean-Up

Dust and waste should be cleaned up and removed by vacuuming with a HEPA filter equipped vacuum, wet sweeping and/or wet shovelling. Clean-up after each operation should be encouraged to prevent lead contamination and exposure to lead.
When abrasive blasting is finished, cleanup and removal of lead-containing dust and waste should take place

Workplace Hazardous Materials Information System Program

1.0 Purpose

The purpose of this program is to ensure employees are informed about hazardous materials used in the workplace so they can use that information to protect themselves from accidents, injuries, and illnesses. This hazard communication is accomplished through the three main components of WHMIS:

- Labels: Containers of controlled products are required to be labeled
- Safety Data Sheets: Technical sheets that provide detailed hazard and precautionary information about the hazardous material.
- Education: To ensure employees understand the contents and significance of labels and Safety Data Sheets and apply that knowledge to work safely with hazardous materials.

2.0 Scope

This program applies to all Northern Inc. employees and contractors who are exposed to or likely to be exposed to hazardous materials used in the workplace.

3.0 Responsibilities

Suppliers of hazardous materials are responsible for:

- Determining whether their products are considered “controlled products” under the Controlled Products Regulations and classifying the material into the appropriate hazard class(es).
- Preparing a materials safety data sheet for their products and providing copies of the SDS to purchasers.
- Labeling containers of controlled products or providing a supplier label to purchasers.

Supervisors are responsible for:

- Ensuring containers of controlled products used in the workplace are properly labeled or identified.
- Ensuring Safety Data Sheets are up to date (less than 3 years old) and readily available for employees to review.
- Maintaining an inventory of hazardous materials used in the workplace.
- Ensuring employees who work with or in close proximity to hazardous materials complete WHMIS training. Refresher training is recommended at least every three years or more frequently as required.
- Ensuring employees use the required equipment and protective measures and work safely with hazardous materials.
- Ensure hazardous waste is disposed properly in accordance with Local Regulations.

Employees are responsible for:

- Applying their WHMIS training to work safely with hazardous materials used in the workplace.
- Reviewing the Safety Data Sheets for hazardous materials used in the workplace prior to using them.
- Following safe procedures and using required equipment when handling hazardous materials.
- Reporting hazardous or unsafe chemical incidents or exposures to their supervisor.

Environmental, Health and Safety Department is responsible for:

- Developing and reviewing the WHMIS program with the Joint Health and Safety Committee and updating as required. Program review to be done annually.
- Responding to or providing advice in the event of a chemical emergency where necessary.
- Assisting departments with the disposal of hazardous waste in accordance with environmental requirements.
- Ensuring containers of controlled products brought onto Northern Inc. sites are labeled properly.
- Maintaining Safety Data Sheets for controlled products used on site.
- Ensuring workers are trained in WHMIS.
- Informing the supervisor of any WHMIS or other health and safety related problems.

4.0 Training

4.1 General Requirements

WHMIS training is required for employees who are exposed to or likely to be exposed to hazardous materials in the workplace. Northern Inc. has developed two levels of WHMIS training based on an employee's degree of exposure to hazardous materials. Employees, in consultation with their supervisor, are responsible for determining which WHMIS program is required. The EH&S Department can also be contacted for further information.

Basic Level WHMIS: Intended for employees who are not likely to be exposed to hazardous materials in the course of their work.

Advanced Level WHMIS: Intended for supervisors and employees who work with or in close proximity to hazardous materials Examples include employees working in: Garage, Heavy Equipment operators and their supervisors.

4.2 Training Frequency

WHMIS training is recommended every three years or more frequently as required by the department or when there are changes to an employee's degree of handling hazardous materials.

4.3 On-Line Training

On-line WHMIS training and the annual review quiz can be taken through Yow Canada or NBCSA

4.4 Classroom Training

Classroom training sessions may be arranged by contacting the EH&S Department

Fleet Safety

1. Introduction & Responsibilities
2. Accident Review Committee
3. Maintenance & Inspection
4. Abstract of Driving Record Review Statement
5. Vehicle Operation

Note: all related information for Fleet Safety is contained within this manual in the appropriate section. (E.I. Policies, Safe Work Practices, Safe Job Procedures, Codes of Practices and Emergency Preparedness)

1. Introduction

The purpose of this Vehicle Fleet Safety Manual is to provide our employees and managers with tools and materials to ensure the safety of all employees who drive company vehicles. Vehicle accidents are costly to the company, but more importantly, they may result in injury to our employees, occupants of other vehicles or pedestrians. It is the driver's responsibility to operate the vehicle in a safe manner and to drive defensively to prevent injuries and property damage.

Policy

This policy sets the standards for managing and operating Northern Inc. fleet vehicles as well as personal vehicles when used on "Company business."

Scope

This company policy and its associated programs apply to all drivers who may be engaged in the operation of any company owned or leased motor vehicles on either public or private property.

Compliance

Company employees who are found to have violated this policy or found to have any indications of misconduct involving vehicles may be grounds for disciplinary action up to and including termination. Certain offenses may result in immediate termination due to the severity of the infraction. Examples may include:

- DWI / DUI
- Driving under the influence of drugs
- Reckless Driving
- Driving with suspended or revoked license

It is the intent of this policy that unsafe behavior be identified and corrected. Should discipline become necessary, it shall be according to company disciplinary policies.

Definitions

Company Vehicle - Any owned, leased or rented passenger car, pick-up, truck, or other similar type vehicle in or by which a person or property is or may be transported or drawn on public highways or roads. **This definition includes personal vehicles when operated on "company business."**

Operation - The process of driving, operating, or manoeuvring a vehicle in a forward, backward, or sideward motion.

Driver - Means an individual who is authorized to use a company vehicle as a part of their job duties.

Preventable - Any incident in which the operator failed to take reasonable action to avoid such an occurrence.

Non-preventable - Any incident where the operator exercised all reasonable means to avoid the incident.

Vehicle Accident - Any event where a Company vehicle, other vehicle or property is damaged during the operation or as a result of the operation of the Company vehicle.

Service Manager - Is an individual responsible for ensuring that maintenance is performed on company's vehicles.

Overall Responsibilities
Any additional responsibilities are outlined in individual sections of the Fleet Manual.

Fleet Manager
Fleet Managers are responsible for the following:

- Implementing this fleet safety policy.
- Directing all employees within their department to endorse and comply with this policy.
- Enforcing compliance with this policy.

Supervisor
Supervisors are responsible for:

- Communicating the goals and objective of this policy to employees under their supervision.
- Identifying and training existing and newly selected fleet operators to comply with this policy.
- Ensuring that all vehicles can be operated safely or are taken out of service for repairs.
- Enforcing compliance with this policy.

Service Manager
Service Manager is responsible for the following:

- Works with Lead Mechanic to schedule department vehicles or equipment for maintenance or repair work;
- Ensures all vehicle and equipment reports are completed;
- Ensures that maintenance is current on all department vehicles or equipment.

Driver
Each driver is responsible for the actual possession, care, and use of the company vehicle in their possession. Therefore, a driver's responsibilities include, but are not limited to, the following:

- Comply with the Nation Safety Code Hours of Service Rules. No driver shall exceed 13 hours of driving time and/or 14 hours of on-duty time in a day.
- Record of duty is kept to ensure hours of service limits are not exceeded.
- Operation of the vehicle in a manner consistent with reasonable practices that avoid abuse, theft, neglect, or disrespect of the equipment.
- Obeying all traffic laws.
- As a condition for driving company vehicles, drivers will give the company a recent copy of their Abstract of Driving Record (ADR) check and provide all necessary information for the check.
- The use of seat belts and/or shoulder harness is mandatory for drivers and passengers.
- Adhering to manufacturer's recommendations regarding service, maintenance, and inspection. Vehicles should not be operated with any defect that would prevent safe operation. Vehicle must be repaired before allowed to be operated on a public road.
- Reporting the occurrence of moving violations.
- Accurate, comprehensive, and timely reporting of all accidents.

The safety coordinator shall:

- Audit each department's compliance with this policy on a periodic basis.
- Track and document all reported vehicle accidents.
- Assist with the identification of preventable and non-preventable vehicle accidents, as requested

2. Accident Review Committee

The purpose of the Accident Review Committee (ARC) will be to determine why vehicle accidents occur and whether accidents are preventable or non-preventable. The ultimate goal for the committee is to prevent losses by recommending corrective action for drivers to discourage future accidents.

Composition
The ARC shall consist of representatives from the following areas:

a. Safety Department-One representative from Northern Inc. Safety staff.
b. Insurance- One Representative from Insurance staff.
c. Fleet Garage – one representative appointed by the Shop Manager.
d. Fleet Manager- One representative from fleet
e. Human Resources – One representative from Human Resources

Duties and Responsibilities

1. Review all vehicle accidents. Make a determination whether the accident was preventable or non-preventable, based on the accident report (physical area and conditions).
2. Notify driver and Department Director, in writing, of the Committee's finding.
3. Recommend any corrective action to be taken to discourage future reoccurrence. Factors to be considered in determining corrective action to be taken include: preventability or non-preventability of the accident, nature of the accident, number of accidents by the driver, past performance of driver, and any other issues of importance. Corrective action may include: retraining of driver, written or verbal reprimand, suspension without pay, or termination.

Administrative Action
Finding of a preventable accident in a Company vehicle within a three (3) year period immediately preceding the accident will result in:

- Retraining
- Job / duty change
- Appreciate disciplinary actions

3. Maintenance & Inspection

Purpose
The intent of this section is to implement an aggressive and ongoing vehicle maintenance and inspection program which will ensure that Northern Inc. fleet vehicles are properly serviced and maintained.

Scope
This Company policy applies to all departments engaged in the operation of any Company owned or leased motor vehicle.

Compliance
Company personnel who fail to comply with the requirements of this policy shall be subject to disciplinary action.

Service Manager
Service Manager is an individual responsible for ensuring that maintenance is performed on the Company's vehicles.

Responsibilities

Service Manager
Service Manager is responsible for the following:

- Work with Lead Mechanic to schedule department vehicles or equipment for maintenance or repair work;
- Ensures all vehicle and equipment reports are completed;
- Ensures that maintenance is current on all department vehicles or equipment.

Supervisors
Supervisors are responsible for:

- Communicating the goals and objective of this policy to employees under their supervision.
- Ensure vehicles within their area of responsibility are clean and empty before bringing to garage for service.

Driver
Each driver is responsible for the following:

- Perform and document daily vehicle pre-operation inspection, including deficiencies and noted on their Log sheets.
- Perform authorized maintenance (i.e. replacement of fluids) based upon type of equipment being operated.
- For the general daily upkeep of their assigned vehicles or equipment. Vehicles and equipment are to be washed when required due to safety, health and sanitary issues, vehicles must be clean and empty (unless the problem with the vehicle prohibits cleaning) prior to delivering the vehicle to the fleet garage for maintenance.
- Each vehicle is required to have appropriate vehicle registration and insurance information kept with the vehicle. Missing information is to be reported to supervisory personnel who will ensure that the necessary replacement is obtained promptly.

Emergency Maintenance
Emergency maintenance is required when a vehicle or piece of equipment breaks down and cannot be driven or operated safely. When a vehicle or piece of equipment becomes inoperable during normal operating hours, the problem is to be reported to Supervisor. Supervisor will be responsible for dispatching a service truck or tow truck to the scene to either repair or transport the vehicle to the Company compound.
If the vehicle becomes inoperable after normal operating hours, on weekends or holidays, the operator is required to contact their supervisor and advise them of the problem. Once reported, a service truck or tow truck will be dispatched to either repair or transport the vehicle back to the Company compound.

Non-Emergency Maintenance
In the event that maintenance needs arise that are above and beyond that required by the Preventative Maintenance schedule, the following process shall be adhered to:
1. Supervisor will make the necessary arrangements to schedule the repair.
2. The Service Manager will schedule the work based on the current work load.

The requesting party will be notified within 24 hours as to when they can bring the vehicle into the garage for servicing.

4. Abstract of Driving Record Review Statement

Purpose
The intention of this section is to establish guidelines that will assist the Company in determining those employees who will be authorized to drive Company vehicles.

Scope
Abstract of Driving Record (ADR) reflect driving behaviors both on and off the job and are useful in evaluating driver risk. It is a Northern Inc. practice and requirement for employment that every employee position with driving duties requires an ADR meeting the grading requirements stated below.

Statement
This ADR statement applies both to drivers of company owned vehicles as well as employees using personal vehicles in the course of company business. The Company recognizes that this information is highly sensitive to the individual whose record is being checked. Therefore, ADR information will be gathered by the Human Resources Department and will be shared only with those with a legitimate need to know.

ADRs will be examined prior to the start of employment and at least annually thereafter. Any job offers made to an employee-candidate for a position with driving duties shall be contingent upon an ADR meeting the required standards; continued employment in a position with driving duties also requires an ADR meeting the industry standard.

5. Vehicle Operation

Every time a Company vehicle is moved, the driver has a duty to drive in a safe and courteous manner that will reflect favorably on the Northern Inc. Drivers are expected to take extra precautions and drive defensively; this includes:

Impairment – No driver is permitted to operate a motor vehicle when their ability and/or alertness is impaired by fatigue, illness, drugs, alcohol, or any other cause that makes it unsafe to begin or continue to drive the vehicle.

Lights – For vehicles without daytime running lights, driving with headlights on, day or night.

Riders and Passengers – No unauthorized riders are allowed in or on Company vehicles. Seats will not be overcrowded beyond the capacity of the available seat belts. In no cases will workers be allowed to ride in a standing position in the back of a truck, sitting on the wheel wells, or with any part of their body extending over the side or rear of the truck body. Exemption of this rule would only be in the situation of an emergency or if the vehicle is designed for rear or side riding.

Distractions – Employees shall refrain from engaging in activities that may distract them from their primary task of safe driving while operating Company vehicles. Distractions include but are not limited to cell phones, changing radio stations, reading, eating, texting or conversations. datory in all Company vehicles. This applies to both the driver and all passengers in seating locations equipped with seat belts. In operations where a seat belt would hinder the ability of the operator to safely perform the job, will not be required provided that the Department head approves the operation and the vehicle speed does not exceed 10 miles per hour.

Parking – Company vehicles or personal vehicles driven by Company employees during the course of their employment shall not park in “NO PARKING” zones except in emergency situations or in the required performance of their duties. If a vehicle is parked in a “NO PARKING” zone, emergency flashers will be activated. No vehicle or piece of equipment is to be left unattended with the keys left in the ignition.

Backing - Backing of vehicles should be discouraged unless the driver cannot avoid it and he has a clear view of the entire area to be backed into. If such a view is not present, the driver, if alone, will get out of the vehicle and inspect the area to be backed into or, if a second person is in the vehicle, the second person will get out and guide the driver using appropriate hand and/or voice signals. A back-up alarm or collision avoidance device may be installed on those Company vehicles that have an increased risk for backing accidents (poor rear visibility, blind spots, etc.).

Load Securement - cargo must be firmly secured and immobilized on or within a vehicle by structures of adequate strength, tie-downs, dunnage and dunnage bags, and shoring bars.

Citations – Should an employee receive a citation for speeding, seatbelt, dangerous operations of vehicle or alcohol or drug related offence while operating a Company vehicle, he or she is responsible for fines, cost of court, and any increase in personal insurance as a result of the citation.

Each driver is required to report all moving violations to the Supervisor. This requirement applies to violations involving the use of any vehicle (personal or other) while on Company business. Failure to report violations will result in appropriate disciplinary action.

Drivers also need to be aware that traffic violations incurred during non-business (personal use) hours will affect their driving status as well and are subject to review as outlined in the Company’s Abstract of Driving Record Review Statement.

Vehicle Marking Company owned, or operated automobiles or trucks shall be marked in plain lettering of a readable size. Appropriate markings for company vehicles include:

1. Asset number
2. Company logo where applicable.

Company-owned vehicles are to be kept free of any stickers or signs which indicate any political candidate, party, organization or theme; are in poor taste; or relate to specific social concerns that may be found objectionable by citizens.