NCSG and its affiliated companies have adopted the ongoing philosophy of “Not On My Watch” which embraces three key fundamental values;

1. Engagement
2. Involvement
3. Accountability

These values are core to our health, safety and environmental management system, and more importantly our safety culture.
0.1 Foreword

The Company is committed to excellence in safety performance. We strive for continuous improvement in safety performance, and require that, as a minimum, industry standards and legislative requirements be met. Company workers and the Contractor(s) we hire share in the successful implementation of this philosophy.

This Health Safety & Environment Manual has been developed to present a consolidated set of rules, safe work practices, and procedures related to our business. These rules and procedures were drawn from previous manuals, Government Regulations, and accepted industry standard practices.

It is not possible to address all work activities or potentially hazardous situations in a procedures manual. However, it is the intent to present key procedures and methods which the Company expects to be utilized in accomplishing the work. In addition, expects all of our Employees, Contractors and their workers to bring a safe work attitude to the job site.

The Health Safety & Environment Manual provides approved Company practices and procedures and when the words “shall”, “will” and “must” are used, the wording indicates the procedures outlined are mandatory. When the word “should” is used, the wording indicates that the HS&E Advisor or Senior Management is allowed to exercise judgement.

The Health Safety & Environment Manual is a minimum standard and where exceeded by Government Safety Acts, Regulations, and Codes the more stringent shall apply. Conversely, where the Manual is more stringent than regulatory requirements, this manual shall govern.

The Company believes that all incidents are preventable and as such, safety objectives are set at ZERO. It is expected that all Company and Contractor workers take every reasonable precaution to eliminate workplace incidents. No job is so urgent that it cannot be done safely. Unsafe conditions and/or work practices are not acceptable on Company sites and must be corrected before work can continue.

All Policy Statements contained within this manual fall under the approval, context and intent of our Health Safety & Environment Policy, which is signed and endorsed by Executive Management annually. All content is reviewed in accordance with our detailed processes.

The Company is committed to working together to ensure all workers are “Home. Safely.”.
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0.3 Mission Statement

VISION – MISSION – STRATEGY

Our Vision is to be the lifting and heavy haul service provider of choice for our customers, employees, communities and shareholders.

Our Mission is to provide:

- A comprehensive safety program with field level buy-in which directs the actions, policies, procedures and training for the safe delivery of our services and the protection of the environment
- A team of employees with pride, integrity and employee ownership participation
- The best: customer service, knowledge, equipment, and technology available today
- Operational excellence, engineering excellence, continuous improvement, and innovation
- Profitability and outstanding return on invested capital for our shareholders and employees

Our Strategy is to profitably grow our fleet, our team of employees, our geographic presence and the related services we supply to our crane and heavy haul customers.

0.4 Core Values

The Lift and Heavy Haul Solution Provider of Choice by our Customers, our Employees, our Shareholders

1. SAFETY FIRST
   This is Non-Negotiable
   Responsible for your own safety
   Responsible for the safety of your employees and co-workers

2. INTEGRITY & HONESTY
   Doing what you say you are going to do
   Treating customers, employees and suppliers in a fair and ethical manner at all times

3. CUSTOMER SERVICE
   Providing safe, reliable lift and heavy haul solutions to our customers in a professional and courteous manner

4. TEAM PLAYER
   Drive continuous improvement, respect everyone and look after the performance and well-being of everyone on the Team

5. ACCOUNTABLE
   Take ownership and initiative and consistently deliver on commitments
Health, Safety and Environment Policy

NCSG Crane and Heavy Haul Services (NCSG) and its affiliated companies are committed to the protection of our employees, contractors, customers and the general public with respect to health, safety and environment. We view safety as our highest core value, and believe that all incidents are preventable, and that effective health and safety management delivers increased value to our shareholders, customers, employees and contractors.

Our goal is to have no incidents, and to ensure that every worker returns home safely at the end of each day. To achieve this we will;

- Conduct business such that the health, safety and environment of our employees, contractors and customers is our first priority.
- Integrate health, safety and environment considerations into all business decisions.
- Hold management and all employees accountable for providing a safe and healthy working environment, and for creating a proactive safety culture.
- Empower all employees and contractors to create and maintain a safe work environment, and for ensuring the safety of themselves and their co-workers.
- Establish health and safety practices and procedures that meet or exceed regulatory requirements, industry codes, guidelines and best practices.
- Provide sufficient resources to ensure our employees and representatives are fully informed of health and safety responsibilities, requirements and best practices.
- Not tolerate unsafe acts, and address non-compliance in a timely manner.
- Align with companies who share our commitment to health and safety.
- Work with industry peers, regulatory agencies and our customers to continually enhance our health and safety performance.

Ted Redmond
President & CEO

Tim Bennett
Vice President
HS&E, Technical Training & Quality

January 1st, 2016
1.0 PURPOSE
The purpose of this Health and Safety Management System Review Process is to ensure senior management regularly reviews and evaluates the effectiveness of the NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG.

2.0 SCOPE AND APPLICATION
This Process applies to all HS&E policies, practices, processes, codes and standards for all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Health and Safety Management System Review Process.

4.0 EXPECTATIONS
This Process outlines the method employed by senior management to conduct reviews and assign the responsibility for scheduling, performing and documenting the management review activities.

5.0 ROLES AND RESPONSIBILITIES

5.1 HS&E Council
- Council comprises of: CEO, VP HS&E, Director HR, at least 1 VP of Operations, Corporate Manager – HS&E
- Conduct the Management Review;
- Communicate the results of the Management Review; and
- Ensure corrective action is implemented to address areas of concern.

5.2 Corporate Manager - HS&E
- Assemble and provide, to all participants, information relevant to the review process.

6.0 METHOD
6.1 Frequency
The Health and Safety Management System Review will be conducted on an annual basis in Q1.

6.2 Relevant Information
Information considered during the Health and Safety Management System Review Process shall include, but not be limited to:
- Health and Safety Management Process Audits (internal or external);
- Current Objectives;
- Performance Vs. Targets;
- Summary of monitoring and measurement information complete with data trending reports;
- Updated Health and Safety Continuous Improvement Plan within S2web.

6.3 Evaluation
An evaluation is performed to ensure the continuing suitability, adequacy and effectiveness of the Health and Safety Management System (HSMS).

This review shall consist of an evaluation including but not limited to the following:
- Conformance to the NCSG HS&E Processes;
- Compliance with federal, provincial and municipal requirements;
- Compliance with industry recognized practice;
- Control of HS&E hazards and risks;
- Status of continuous improvement plans based on objectives and targets;
- Effectiveness of corrective and preventive actions being taken;
- Evaluation of changes that have occurred within the organization and/or within the HSMS; and
- Currency of HSMS documentation.

6.4 Documentation
Results of the Health and Safety Management System Review shall be documented in S2Web.

The Record shall be acknowledged and approved by the VP of HS&E and the Corporate Manager – HS&E.

6.5 Continuous Improvement
Results of the Health and Safety Management System Review shall be used to consider continuous improvement opportunities within the HSMS. This may include, but is not limited to, potential changes to the Health and Safety Policy, Processes, Codes and/or Procedures.

6.6 Communication
Results of the Management Review shall be communicated to all relevant stakeholders.

7.0 SUPPORTING DOCUMENTS
- Health, Safety and Environment Management System
- Goals and Objectives
- Divisional Safety Statistics
1.3 Social Responsibilities

1.3.1 Anti-Corruption Policy

1.0 POLICY
The Corporation does business in many countries and our operations are subject to many different laws, customs and cultures. The Corporation’s Anti-Corruption Policy is to abide by all laws applicable to the jurisdictions in which we operate, and we expect anyone doing business for or on the Corporation’s behalf also to comply with those laws. The Corporation is committed to compliance with applicable anti-bribery laws, including the [Canadian Act concerning the Corruption of Foreign Public Officials (“Bill S-21”) and the U.S. Foreign Corrupt Practices Act (the “FCPA”), as well as local laws in all countries in which the Corporation does business. This Policy operates in conjunction with the Corporation’s (i) Procedures for Engaging Third Party Representatives and (ii) Procedures for Permitted Gifts, Entertainment, and Other Permitted Payments (the “Anti-Corruption Compliance Procedures”).

2.0 PURPOSE
The purpose of this Policy is to prevent violations of applicable anti-corruption laws and to avoid the appearance of questionable conduct in connection with the Corporation’s operations.

3.0 SCOPE
These Procedures apply to all NCSG Personnel and any Third Party Representatives. Any party, regardless of title, may be considered a Third Party Representative when acting on behalf of the Corporation. For a definition and examples of Third Party Representatives, see the Corporation’s Anti-Corruption Program Definitions.

4.0 DEFINITIONS
For definitions of all capitalized terms used in this Policy, see the Corporation’s Anti-Corruption Policy Definitions. [Insert Link on the Hub]

5.0 BACKGROUND
What is Prohibited: Subject to limited exceptions, the Corporation, NCSG Personnel, and Third Party Representatives acting on the Corporation’s behalf are prohibited from directly or indirectly making or offering to make any Payment, Gift, or providing any other inducement to a Covered Recipient if the inducement is made to corruptly obtain or retain business or gain an improper business advantage.

What Payments are Covered: Prohibited Payments may take many forms, including the Payment or promise of money or anything of value, charitable donations, loans, in-kind services, travel and entertainment, and other payments, gifts, or inducements, even if they appear legitimate.

Who are Covered Recipients? The definition of Covered Recipients includes Government employees and officials, regardless of rank or title. It also includes employees of state-owned companies and public international organizations, and candidates for political office. See the definition of Covered Recipient in the Anti-Corruption Program Definitions.

What Payments are Permitted: Certain Payments to Covered Recipients, including certain types of Gifts, travel and entertainment expenses, and certain limited Payments that facilitate routine, non-discretionary Government actions, may be permitted in particular circumstances. Such Payments may only be made after management approval pursuant to this Policy and the Anti-Corruption Compliance Procedures.

Accounting and Recordkeeping: The Corporation maintains records and accounts which accurately reflect transactions, how the Corporation’s assets have been used, and other such information.

6.0 COMPLIANCE STEPS
The use of the Corporation’s funds or assets for any unlawful, improper or unethical purpose is strictly prohibited. NCSG Personnel and Third Party Representatives are expected to conduct the Corporation’s business in compliance with all applicable laws in the countries in which the Corporation does business. NCSG Personnel and Third Party Representatives must avoid any activity that might involve the Corporation (either directly or indirectly) in any violation of this Policy or applicable laws.

NCSG Personnel and Third Party Representatives shall not, either directly or through an intermediary, including any Third Party Representative:
- make any Improper Payment.
- make, offer to make or authorize the making of any Payment, Gift or thing of value to any Covered Recipient without approval pursuant to the Anti-Corruption Compliance Procedures.

Unless specifically authorized, no Third Party Representative (nor any prospective Third Party Representative) may conduct any business on the Corporation’s behalf until, based on appropriate screening, the Third Party Representative has been specifically approved to act as a Third Party Representative. All Third Party Representatives already engaged at the time this Anti-Corruption Policy takes effect shall undergo appropriate screening on or before December 31, 2009.

Prior to entering into any joint venture or similar partnership, the Corporation shall conduct thorough due diligence regarding the prospective partner(s) to identify and address any compliance issues.

No Public Official shall be employed by the Corporation without approval from the President of the Corporation.

In accordance with this Anti-Corruption Policy and the Corporation’s obligations under applicable law, all NCSG Personnel will maintain accurate records and accounts, in particular with respect to dealings those NCSG Personnel...
1.3.2 Anti-Corruption Policy Definitions

The following defined terms appear in one or more NCSG Anti-Corruption Program documents, including: the Anti-Corruption Policy; the Procedures for Permitted Gifts, Entertainment, and Other Permitted Payments; and the Procedures for Engaging Third Party Representatives.

**Anti-Corruption Compliance Procedures** means the Corporation’s Procedures for Engaging Third Party Representatives; Procedures for Permitted Gifts, Entertainment, and Other Permitted Payments; and other procedures as the Corporation may implement from time to time.

**Anti-Corruption Policy** means the Corporation’s Anti-Corruption Policy.

**Corporation** means NCSG Corporation and any of its divisions, subsidiaries, and affiliates world-wide.

**Covered Recipient** means any of the following:
- any Public Official;
- any parent, sibling, or child of a Public Official; and
- any other person, while knowing that all or a portion of any Payment will be offered, given, or promised, directly or indirectly, to any person described in (a) or (b) above.

**Facilitating Payment** means a small Payment to a Public Official made solely to expedite or secure the performance of routine, non-discretionary government actions such as:
- obtaining licenses, permits and other official documents to qualify to do business in a foreign country;
- processing governmental papers, such as visas and work permits;
- providing or obtaining police protection, telephone service, utilities, and mail services; and
- loading or unloading cargo, inspection of goods and protecting perishable goods from deteriorating.

**Gift** means anything of value bestowed voluntarily, regardless of its value, including:
- nominal, socially customary tokens;
- donations to charitable organizations owned, operated, or affiliated with, or recommended by, a Covered Recipient; and
- the provision of hospitality and entertainment expenses.
Government means any government, whether national, federal, state, local or in any other form.

Improper Payment means any offer, Payment, promise to pay, or authorization of the Payment of any money, Gift or anything of value to any Covered Recipient in order to corruptly obtain or retain business or secure an unfair advantage.

NCSG Personnel means all personnel of the Corporation, including officers, directors, and employees of the Corporation or any subsidiary, affiliate or other entity controlled by the Corporation.

Payment means any payment, whether in monetary or other form.

Permissible Payment means a Payment, or offer of Payment, to a Covered Recipient that:
- is lawful under the written laws and regulations of the Covered Recipient’s country; OR
- is a reasonable and bona fide expenditure, such as travel and lodging expenses incurred by or on behalf of a Covered Recipient, directly related to:
  - the promotion, demonstration, or explanation of products or services; OR
  - the execution or performance of a contract with a foreign Government or agency thereof.

Public Official means any of the following:
- any officer or employee of any foreign Government;
- any owner, director, officer or employee of an organization that performs a governmental function;
- any officer or employee of any agency, department, instrumentality, corporation, board, commission or enterprise that is owned or controlled by a Government;
- any officer or employee of any public international organization (e.g., the Red Cross) and any person acting for or on behalf of any such public international organization;
- any person acting in an official capacity for or on behalf of a Government, or public international organization, or for any agency, department, instrumentality, corporation, board, commission or enterprise that is wholly or partly owned or controlled by a Government, or public international organization; or
- elected officials, candidates for public office, political parties, and officers, employees, representatives and agents of political parties.

Red Flag means any fact pattern, situation, request, or other issue regarding a prospective or existing transaction, Third Party Representative or joint venture partner that indicates possible anti-corruption compliance issues, and which thus requires additional due diligence and review to address those issues before the transaction, Third Party Representative or joint venture partner is approved. Examples of Red Flags include:
- the proposal of unusual payment patterns or financial arrangements;
- history of corruption in the country where transaction is occurring;
- refusals by the transaction partner to certify to its understanding of and agreement to comply with applicable anti-corruption laws;
- requests for unusually high commissions;
- lack of transparency in the transaction partner’s expenses and accounting records;
- apparent lack of qualifications or resources to perform the services offered; and
- recommendations from a Public Official.

Third Party Representative means any sales representative, agent, consultant, or any other third party, regardless of title, engaged to act on the Corporation’s behalf with respect to transactions with Public Officials.

1.3.3 Permitted Gifts

1.0 POLICY
No Improper Payment shall be made to any person or entity.

No Payment, Gift or offer of a Payment or Gift shall be made to a Covered Recipient without approval from the Vice President of the relevant business segment pursuant to these Procedures.

2.0 GUIDELINES
In very limited cases, when permitted under the explicit terms of applicable anti-corruption laws and approved pursuant to these Procedures, it may be permissible for NCSG Crane and Heavy Haul Corporation (NCSG) Personnel to make or offer certain Payments or Gifts to or for the benefit of a Covered Recipient.

There are specific compliance and approval steps NCSG Personnel must take before making or offering to make any Payment or Gift to a Covered Recipient.

The offer and acceptance of Gifts must at all times be in compliance with the policies of the recipient’s employer, the Corporation’s Business Code of Conduct available on NCSG Corporation’s Internet and Intranet web sites and any relevant NCSG Corporation business segment procedures. Consult with your Resources (Section 8 of these Procedures) if you have questions.

3.0 SCOPE
These Procedures apply to all NCSG Personnel and any Third Party Representative when acting on behalf of the Corporation.

These Procedures do not apply to Payments or Gifts to NCSG Personnel or to other third parties who are not Covered Recipients.
4.0 DEFINITIONS
For definitions of all capitalized terms used in these Procedures, see the Corporation’s Anti-Corruption Program Definitions.

5.0 BACKGROUND: PERMISSIBLE PAYMENTS

Affirmative Defenses
In limited situations, certain Payments or Gifts to Covered Recipients are permitted which would otherwise be illegal. A Payment or Gift, or offer of Payment or Gift, to a Covered Recipient is permitted if that Payment or Gift:
• is lawful under the written laws and regulations of the Covered Recipient’s country; OR
• is a reasonable and bona fide expenditure, such as travel and lodging expenses incurred by or on behalf of a Covered Recipient, directly related to:
  • the promotion, demonstrations, or explanation of products or services; OR
  • the execution or performance of a contract with a foreign Government or agency thereof.

Facilitating Payments
• Facilitating payments, or grease payments, are small Payments to a Public Official made solely to expedite or secure the performance of routine, non-discretionary Government actions. See the definition of Facilitating Payment in the Anti-Corruption Program Definitions.
• Facilitating payments may be made up to fifty dollars ($50) without prior authorization provided that they are recorded and accounted for appropriately thereafter.

Liberty Payments
Where any NCSG Personnel must make some Payment to avoid an immediate threat to life or liberty, he or she may make that Payment without prior authorization. Such Payments must be accurately recorded thereafter.

6.0 COMPLIANCE STEPS

Permissible Payments
Before any Permissible Payment or Gift of more than two hundred dollars ($200) to any one Public Official can be made, the following approval process must be completed:
• The party seeking to make such Payment or Gift will be required to submit to the Vice President of the relevant business segment a completed Authorization Request: Payment or Gift to Covered Recipient (the “Request Form”). The Request Form is available on The NCSG Hub [Please insert a link to the Request Form], and requests the following information:
  • The name, title, and other identifying information for the recipient of the proposed Payment;
  • A description of the proposed Payment, including the amount or value of the proposed Payment;
  • The purpose of the proposed Payment; and
  • Other information that might be relevant to considering whether the proposed Payment should be authorized.
• Based on the completed Request Form, any additional information from the NCSG Personnel who submitted the Request Form, or additional information, the Vice President of the business segment will authorize or deny the request for approval. The decision, and the basis for the decision, will be stated on the Request Form as submitted, including with any amendments or conditions on approval. A copy of the approval (or denial) should be provided to the requesting party, and the Vice President of Corporate Affairs will also maintain a copy for the Corporation’s compliance file.
• In the case of approval, the approval will state that no Payment or Gift to a Covered Recipient is permitted until the Covered Recipient certifies in writing that the Covered Recipient will not act in violation of the FCPA in connection with such Payment or Gift.

Facilitating Payments
• NCSG Personnel and Third Party Representatives authorized to make Facilitating Payments should use their authority narrowly. Even though the Anti-Corruption Policy does not prohibit Facilitating Payments, it is the Corporation’s expectation that Facilitating Payments will only be made on rare occasions. Every reasonable effort must be made to avoid Facilitating Payments wherever possible.
• NCSG Personnel and Third Party Representatives may make Facilitating Payments in the amount of fifty dollars ($50) or more if they complete the Request Form and the request is approved by the Vice President of the business segment.
• In addition, for those NCSG Personnel regularly engaged in international transactions on behalf of the Corporation, who might reasonably anticipate making Facilitating Payments, advance authority to make such Payments may be obtained from the Vice President of the business segment for a period of time not to exceed one year, and this authority may be terminated by the Vice President of the business segment at any time.
• Whenever a Facilitating Payment is made under the Procedures described herein, it must be reported immediately to the employee’s supervisor or the Vice President of the business segment. Facilitating Payments must be accurately recorded in the Corporation’s books and records.
Liberty Payments
Where any NCSG Personnel must make some Payment to avoid an immediate threat to his life or liberty, he or she may make that Payment without prior authorization. Such Payments must be reported immediately and accurately recorded in the Corporation’s books and records.

7.0 RECORD-KEEPING AND DOCUMENTATION
All documentation related to requests for approval and other requests and communication pursuant to these Procedures, and the Corporation’s Anti-Corruption Policy, will be maintained by the Corporation for seven (7) years from the date the document is created.

8.0 RESOURCES.
Your supervisor
Darin Coutu, Chief Financial Officer
Whistleblower Policy
human.resources@ncsg.com
Anti-Corruption Policy Definitions
Anti-Corruption Policy
Procedures for Engaging Third Party Representatives
Authorization Request Form: Payment or Gift to Covered Recipient
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
2.1 Health and Safety Management System

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Hazard Assessment Code to represent an important role in the preparation, organizing, and performance of any task. There is a need to identify and prepare for all hazards that may pose potential risk(s) to all personnel, equipment, and property involved in the task.

2.0 SCOPE AND APPLICATION
The focus of this Code is to identify hazards prior to beginning a new job or task, or when conditions change. This Code is to be viewed in conjunction with NCSG Planned General Workplace Inspection Process. Inspections will monitor the risk and hazard potential through a scheduled and appropriately timed process involving a standardized and relevant checklist. Hazard Assessment will use the Field Level Risk Assessment (FLRA) and Task Hazard Assessments (THA) where applicable to evaluate and prioritize potential hazards when performing new tasks, evaluating changing conditions or working on unfamiliar sites.

3.0 DEFINITIONS
Hazard Any circumstance or condition which poses the risk of an incident.

Hazard Assessment A thorough examination of an operation (job site, shop, task, etc.) for the purpose of identifying what actual and potential hazards may exist

Incident Any unplanned event which results in loss to people, property, equipment, production, or the environment.

A Near-Miss is any unplanned event which, under slightly different circumstances, could have resulted in loss to people, property, equipment, production, or the environment.

Inspection An observational tour of the workplace for the specific purpose of identifying unsafe acts and conditions, and for determining the levels of compliance with established Safe Work Practices, Procedures and Safety Rules. Once a job is underway, inspections are conducted on an ongoing basis to maintain the effectiveness of the safety program.

Audit A comprehensive examination and evaluation of the organization’s Health & Safety Management system (safety program). An audit is conducted by a trained and certified safety auditor either from within the organization or from outside.

Emergency control of hazard: If emergency action is required to control or eliminate a hazard that is dangerous to the safety or health of workers,
• Only those workers competent in correcting the condition, and the minimum number necessary to correct the condition, may be exposed to the hazard, and
• Every reasonable effort must be made to control the hazard while the condition is being corrected.

4.0 ROLES AND RESPONSIBILITIES
A hazard assessment (FLRA at a minimum) must be conducted at the start of every shift, before a new job/task is performed, at reasonably practicable intervals between the initial Hazard Assessment and ongoing assessments of regular jobs/tasks, and when there is a change or modification made in a job/task. In addition monthly Formal Hazard Assessments (Inspections) will be conducted on a regular basis.

Management will develop, provide and review a system of analyzing, recording, reporting, and archiving documents related to the assessment of hazardous conditions on the worksite.

Supervisors will ensure that employees understand and comply with their responsibilities under the Occupational Health and Safety Legislation, and company policy. Supervisors will review any bulletins that NCSG receives from outside sources (ie: Prime Contractors, OH&S etc) that apply to our area of work with employees.

In addition to FLRA's which are completed at the start of every shift, Employees will complete a Hazard Assessment (or equivalent process specific to a particular site) prior to beginning a new job/task and to review at timely intervals during the course of the work, or when the job/task has a changed or been modified.

HS&E Advisors will monitor, audit, mentor, inspect, comment and archive Hazard Assessment Reports.

5.0 HAZARD ELIMINATION AND CONTROL
When an existing or potential hazard is identified the following steps need to be taken in this sequence to eliminate the hazard:
• Implementation of Engineering Control methods, if not then,
• Implementation of Administrative Control methods, if not then,
• Implementation of Personal Protective Equipment (P.P.E.) Control methods, if not then
• Implementation of all three methods to minimize the risk associated with the task.
• NCSG will ensure that workers affected by the hazards identified in a hazard assessment report are informed of the hazards, have the ability to provide input/feedback and the methods used to control or eliminate the hazards.

Examples of:
Engineering Methods: Good Engineering design reduces, controls, or eliminates exposure to hazards and provides a safe work environment. Some examples are: Isolation, Removal, Segregation, and Substitution.
Administrative Methods: When Engineering methods are not applicable, Administrative methods need to be introduced. Some examples of Administrative methods are: Policy statements, Safe Job Procedures, Safe Work Practices, and Job Hazard Analysis.

P.P.E: Personal Protective equipment is the last line of defence against hazards. Some examples of P.P.E are: Hard Hat, Safety Boots, Safety Glasses, Hearing Protection, RPE, and Fall Arrest Harness.

6.0 METHODS OF CONTROL
The following forms (with the exception of pre-approved client forms specific to a particular job-site) will be used to evaluate the potential hazards and risks prior to a new job/task being performed by a NCSG employee.

- NCSG Field Level Risk Assessment Process
- NCSG Task Hazard Assessment Process
- NCSG / FLRA – Lift Evaluation Analysis Sheet
- S2Web – Corrective Action Report
- NCSG Job Hazard Analysis Sheet
- Engineered Lift Study when and where it is required.

7.0 EMPLOYEE EDUCATION
NCSG will provide adequate training in the hazard prevention program to prevent hazards applicable to each worker including identification of hazards, and preventative measures to be taken. Whenever new hazard information becomes available it will be distributed to the worker, including a change in job activity which would include new hazards to the worker.

NCSG will review this training and revise if necessary at least once every three years, when hazards change or new information becomes available. This training will be documented and records kept.

8.0 HAZARD ASSESSMENT PROGRAM EVALUATION
NCSG will review the program and evaluate its effectiveness at least once every three years, when there is a change in conditions in respect to the hazards, and when new hazard information becomes available.

To evaluate the program the following documents and information will also be reviewed:

- conditions related to workplace and activities of employees
- workplace inspection reports
- hazardous occurrence investigation reports
- safety audits
- first aid and injury statistics
- any observations given by the workplace health and safety committee
- any other relevant information

Once the evaluation has taken place a formal report shall be prepared and a copy will be submitted where applicable under the appropriate legislation. This report shall be kept for six years.

9.0 INTERNAL COMPLAINT RESOLUTION PROCESS
Workers may raise a formal complaint of where reasonable grounds exist that a contravention to the company rules, processes or regulations has occurred.

In the event of a complaint, the Worker is to take the complaint as soon as reasonably practical to their Supervisor and HS&E Advisor. The Worker, Supervisor and HS&E Advisor will try to resolve the complaint by themselves as soon as possible. If the complaint remains unresolved then the Worker and Supervisor must forward the complaint to the Corporate Health & Safety Manager who may further involve a chairperson of the workplace health and safety committee. This will be investigated jointly by the Worker and an Employee member of the workplace health and safety committee.

Persons investigating the complaint will inform both the Employer and Worker in writing, in the form and manner prescribed, if any is prescribed, of the results of the investigation.

Persons investigating the complaint may also make recommendations to the employer with respect to the situation that gave rise to the complaint, whether or not they conclude that the complaint is justified.

If the complaint is justified the employer shall, upon written notice, ensure that the matter is resolved accordingly and will notify the persons investigating, in writing, of how and when the matter was resolved.

10.0 HEALTH AND SAFETY WORK REFUSAL (AKA - Stop Work Authority)
The worker shall immediately protect themselves and others, where imminent danger is perceived or exists, by refusing work and stopping work involved immediately. The worker is obligated to report this immediately to their Supervisor and HS&E Advisor.

Workers have the obligation to stop work that they have reason to believe is unsafe. As per the Occupational Health & Safety legislation, a worker may refuse to work or do particular work where he/she or another worker may be endangered by (not limited to):

- perception of imminent danger;
- equipment, machine, device or things;
- physical condition of the workplace;
- Equipment, machine, device or thing that is to be used or the physical condition of the workplace is in contravention of the Act or Regulations and may endanger himself / herself or another worker.

Supervisors/ managers receiving the Stop Work notice must immediately stop the work, notify the HSE / Human Resources Managers, investigate the refusal, correct the situation or find a remedy that resolves the issue, notify the
worker/s involved and document the investigation and corrective actions. Reports shall be entered in to the S2web incident management system and shared with all operations.

Workers are obligated to stop or refuse work that they feel is unsafe, immediately notify their supervision, HSE or Human Resource Department, participate openly in the investigation and work cooperatively with management to resolve the situation.

If a solution is not possible the incident is to be raised to the Chief Compliance Officer for formal investigation. The Chief Compliance Officer shall investigate, make a determination on the corrective actions, work with management and the workers in the resolution and document the investigation and corrective actions.
2.2 Imminent Danger Code

1.0 POLICY
It is the policy of NCSG to resolve health and safety concerns before a work refusal occurs and provide a uniform reporting procedure. Workers have the legal obligation to refuse or stop work that they perceive as unsafe.

2.0 PURPOSE
The purpose of this policy is to establish procedural guidelines as per applicable Occupational Health & Safety legislation for a work refusal. NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG are committed to the protection of our employees, the public, the environment and our physical assets. NCSG will continue to maintain a safe work environment in order to prevent occupational injuries and illnesses. All employees are equally responsible for complying with the requirements of the applicable Occupational Health & Safety legislation.

3.0 DEFINITION
Imminent Danger refers to any danger that you do not normally face in your job, or to any dangerous condition that you would not normally work under.

4.0 PROCEDURE

• Health and Safety Complaint
In the event that a worker raises a health and safety concern or complaint to their Supervisor, the Supervisor will:
  • Investigate in the presence of the worker and establish with the worker whether a health & safety issue exists and if it is a complaint or work refusal.
  • If determined to be a safety complaint and the task is unsafe, the Supervisor shall undertake immediate correction action, investigate and document the occurrence.

• Health and Safety Work Refusal
All workers have the Legal Obligation “right” to refuse work that they have reason to believe is unsafe. A worker may refuse to work or do particular work where he/she or another worker may be endangered by:
  • equipment, machine, device or things
  • physical condition of the workplace
  • equipment, machine, device or thing that is to be used or the physical condition of the workplace is in contravention of the Act or Regulations and may endanger himself / herself or another worker

Should there be a work refusal, the following procedure will apply:

• Stage 1
  Worker has reason to believe work or task is unsafe.
  • Stop the work and advise adjacent or affected workers of the reason.
  • Report it immediately to your Supervisor, the work refusal (preferably in writing) should outline the worker’s reason(s) for believing the work to be unsafe.
  • The worker shall remain in a safe place near his or her work area.
  • Supervisor shall forthwith investigate in the presence of the worker, a representative from the HS&E Department.
  • The Supervisor shall respond to the worker verbally (then in writing), outlining remediation timelines, if applicable. If there will not be a remediation plan, then the reasoning behind it must be written as well.
  • Should the issue be resolved and corrective action taken, if required, the worker shall return to work. If the issue is not resolved proceed to stage 2.
  • Refused work may be offered to another worker providing it is offered in the presence of a representative of the HS&E. This second worker shall also be advised of the other first worker’s refusal and his or her reasons for the refusal.

• Stage 2
  Following the investigation, should the worker have reasonable grounds to believe that the work or task continues to be unsafe, they must report it immediately to the Chief Compliance Officer. The Chief Compliance Officer will formally investigate, make a ruling and work with the involved parties on a resolution and then document the occurrence in the S2web Incident management system.
  • If applicable, the refusal may be elevated to the regulatory agency by the Worker, the Supervisor or the Chief Compliance Officer.

5.0 DISCIPLINARY ACTION PROHIBITED
No person shall dismiss or take any other disciplinary action against a worker by reason of that worker acting in compliance with the applicable OH&S legislation.

Stop Work Authority
Every NCSG employee regardless of position or title and while engaged in work has the obligation and authority to stop work or intervene when warranted, if that person believes that an unsafe condition, circumstance or imminent danger situation has been observed or could occur. Any person or persons initiating a stop work in good faith, shall do so without fear of discriminatory action against them.

Supervision and management will reinforce and support the Stop Work Authority with all their employees to promote and
foster a positive culture around stopping work for any unchecked at risk situations, behaviours or unsafe conditions.

When a stop work authority has been initiated by an employee, supervision will immediately respond and work to resolve issues before operations resume. Everyone involved will conduct themselves in a professional and respectful manner.

The following steps are the correct way and order to deal with and resolve these actions;

STOP - NOTIFY - INVESTIGATE – CORRECT- DOCUMENT - RESUME

NCSG processes are to be utilized to aid in the above steps.

Stop work authority must only be used with the intent of risk reduction and incident prevention. Stop work authority is another tool used to assure a safer workplace. Stop Work Authority is supported by the NCSG Imminent Danger Code. Where Stop Work Authority is used and results in a refusal and cannot be readily resolved the NCSG Imminent Danger Code shall be followed.

Abuse of the authority for either personal gain or reasons unrelated to the promotion of a safer work environment shall be considered an abuse and will then be dealt with accordingly.

Notwithstanding any of the above, all NCSG employees have the further obligation to exercise our core values at all times. Consciously and continuously promote safe work and follow all of NCSG's established processes, procedures and codes as outlined in the NCSG safety manual.
2.3 FLRA Process

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG is committed to maintaining a safe and healthy workplace by ensuring hazards are identified and corrected. Through completing Field Level Risk Assessments (FLRA), hazards specific to a task can be identified, assessed and corrected before work commences to reduce the potential for loss.

2.0 SCOPE AND APPLICATION
The FLRA process applies to all employees who are engaged in company business, including contractors. FLRA's will be tracked and evaluated for quality, completion and compliance. Various task specific FLRA cards have been developed to assist in addressing specific hazards and work scopes. Multiple FLRA's may be required depending on the complexity of the worksite or tasks.

3.0 DEFINITIONS
Hazard means the potential to cause harm.
Risk means the likelihood of harm, based on severity, frequency and probability.

4.0 EXPECTATIONS
In an effort to reduce loss in the workplace, FLRA's will be conducted daily by workers or as crew and reviewed (signed) by the supervisor. FLRA's will be gathered and reviewed by Supervisors and Management for quality and compliance. HES Advisors will also conduct regular reviews of the FLRA's in the worksites to coach and monitor compliance.

FLRA's are to be completed daily and/or as work conditions change throughout the shift.

5.0 ROLES AND RESPONSIBILITIES

5.1 HSE Advisors
- Audit overall FLRA summary's and provide feedback to Manager and/or Supervisor.
- Provide training and assistance to supervisors and employees on FLRA's.
- Report FLRA compliance to Branch Manager and VP HSE.

5.2 Supervisors
- Assist workers in FLRA completion and provide feedback.
- Ensure FLRA's are being completed where as required by task or process.
- Ensure all pertinent information is collected.
- Review to ensure all risks identified are eliminated or controlled.
- Review and sign form if properly completed.
- Audit FLRA's to identify opportunities for improvement and re-training, following focus inspector process.

5.3 Management
- Assist Supervisors in FLRA process.
- Ensure FLRA's are being completed and reviewed by Supervisors.
- Review overall audit and compliance summaries and implement corrective actions.
- Ensure all risks identified are eliminated or controlled.

5.4 Employees
- Complete FLRA's daily prior to commencing work and when task or conditions change.
- Consult with the Supervisor or HSE Advisor on FLRA completion.
- Complete FLRA in the field so hazards are assessed accurately.
- Ensure for every hazard identified, an appropriate corrective action is in place.
- Do not assume risk and involve all potentially affected workers in the work area

6.0 METHOD

6.1 FLRA Implementation
The FLRA process will be implemented at all NCSG sites as a tool for the identification and control of risks within an employees work environment. The Process will be a part of new hire orientation, both corporately and for sites. This will be an introduction to the process. Further training will be required and provided by Supervisors and HSE Advisors as necessary.

6.2 FLRA's
FLRA's are a method of identifying hazards and correcting them to prevent loss. In order for the process to be effective FLRA's must be completed at minimum daily by all site workers either individually or as part of a group. FLRA's must be completed when:
- Before starting the job or task.
- New workers or new to work area are introduced;
- New tools or equipment is introduced;
- Conditions change (i.e. Weather);
- The job or task changes.

6.3 Identify, Assess, Control
FLRA's are designed to identify and outline the steps of the job to be completed. Each step is then assessed for potential or actual hazards and risks. Each identified hazard is then controlled by elimination, engineering,
administration or personal protective equipment before work commences. A crew FLRA should be discussed together in the field prior to commencing work and is in addition to the Pre-Job Safety Instruction Meeting. An individual FLRA should be completed by a worker once the area of work; route, lift, load, ramps, etc. have been assessed.

FLRA’s will be conducted in one of the following ways:

1. Crews will conduct FLRA’s as a team activity with a Supervisor. This will be a meeting conducted at the actual work site location.
   - Crew members identify work;
   - Crew members identify job hazards and rank the hazard for “Potential” and “Severity” using the Risk Assessment Matrix(RAM) while indicating the ranking on the FLRA;
   - Crew members identify plans to eliminate or control the risks;
   - Supervisor provides input and complete FLRA Card;
   - Crew members sign onto the completed card.

2. An individual working on mobile equipment completes the FLRA at the actual work site location prior to any work.
   - Individual identifies work;
   - Crew members identify job hazards and ranks the hazard for “Potential” and “Severity” using the Risk Assessment Matrix(RAM) and indicated the ranking on the FLRA;
   - Individual identifies plans to eliminate or control the risks;
   - Supervisor reviews and provides input on the FLRA Card;
   - Any workers in the affected work area sign onto the completed card.

3. Crews working on maintaining equipment, conduct a FLRA with a Supervisor at the start of each shift or when work conditions change.
   - The Supervisor will have a work stoppage to discuss what is pertinent to the activity for the day;
   - Crew members identify job hazards and ranks the hazard for “Potential” and “Severity” using the Risk Assessment Matrix(RAM) and indicated the ranking on the FLRA;
   - Crew members identify plans to eliminate or control the risks;
   - Supervisor will ask for additional input from those who have not volunteered;
   - Supervisor provides input and completes the FLRA Card;
   - Supervisor and crew members will sign onto the completed FLRA Card.

6.4 Tracking and Auditing
FLRA’s will be evaluated based on completion and quality. By utilizing the tracking tool, a random sampling of 10 FLRA’s, either by location, crew or supervisor will be evaluated at least once per shift cycle by an HSE Advisor. Completion and quality are relative to overall compliance of a crew or individual on a job or task. The compliance rating from a sampling will indicate the overall understanding within a crew or site and may prompt additional training.

FLRA’s will undergo an Audit process annually to measure effectiveness, consistency and continuous improvement.

7.0 TRAINING REQUIREMENTS AND MATERIALS
   - Field Level Risk Assessment Training

8.0 RESOURCES
Contact HS&E or the Training Department for more information regarding this Process.
2.4 FLRA Audit Tool and Audit Process

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies (NCSG) have developed a Field Level Risk Assessment Audit Tool and Assessment Process. Performing audits on the Field Level Risk Assessment (FLRA) system is a quantitative measurement to indicate compliance with the NCSG Field Level Risk Assessment Process as well as an indicator of engagement of the workers and supervision at the work place. The FLRA process is a critical component in the execution of safe work on a day to day basis. The FLRA audit tool is designed to measure performance across a range of spectrums. The Audit Tool is a leading indicator that analyses processes and events prior to failure. The audit tool will demonstrate and improve accountability to the FLRA process.

2.0 SCOPE AND APPLICATION
The FLRA audit tool is to be utilised by relevant management, supervision and HSE personnel to qualitatively measure the NCSG FLRA Process and to continually improve the quality of FLRAs in the respective regions. This process applies across all NCSG and affiliated operations.

3.0 DEFINITIONS
Audit Tool Is a generic term for any instrument which may be used to capture data for an audit process.

Element A component of an audit tool used to focus on a specific area.

4.0 ROLES AND RESPONSIBILITIES
All manager’s supervisors and HSE personnel tasked with performing an FLRA audit shall be expected to execute the audit as outlined in the methodology.

Vice President - Operations:
• Ensure process is implemented
• Ensure Management is meeting frequencies
• Monthly review or health check of process performance with applicable Manager
• Corrective actions as required

Manager – Operations
• Ensure process is implemented
• Ensure process is trained
• Ensure supervision is meeting frequencies
• Report and review with VP Ops on a monthly basis the performance and efficiency of this process
• Coach Supervision on quality areas of improvement discovered from trends within the audits
• Mangers are to ensure audits are completed as per scheduled frequency and any action items resulting from audit are communicated and completed
• Ensure data is properly entered into S2W
• Meet with HS&E and Supervision to review trends and common findings, to establish applicable corrective actions

Supervision
• To perform audits as per defined frequency
• Ensure audit is performed and completed as per methodology
• Review and sign off on audit
• Present findings of audit to management
• Participate in formulating action plan for improvement with management
• Implement action plan at a field level

Corporate Manager – HS&E
• Review process on an annual basis to determine effectiveness
• Oversight of forms and process
• Review program efficiency with VP-Ops

HS&E/Training/Compliance
• To provide training, awareness and audit support.
• Participate in trending and corrective action development.
• Coach and mentor management and supervision on process

5.0 METHODOLOGY

5.1 Audit Tool
The FLRA audit tool is available in two different formats. One is from a printable pdf document; the other is available for employees who have a company issued Safety Culture account.

The audit tool is broken down into five elements. Each element will measure a particular section of the FLRA. Examples of the different types of NCSG FLRA forms are listed in the appendices of this document mapping the information on the FLRA for each element of the audit.

5.2 Implementation
Frequency of an FLRA audit can be determined based on the needs of each region. It is recommended that an audit be performed in either a weekly or bi-weekly interval. It is not recommended to perform an audit more frequently than a one week interval, as this may not allow sufficient time to analyse, communicate and correct the information gained from the audit.
5.3 Method
1. Select audit tool in either printable or Safety Culture format.
2. Determine the frequency of your audit interval and randomly select ten samples from that time period.
3. Photocopy these samples for marking purposes and attach with audit submission.
4. While examining each sample, deficiencies are to be noted in red pen for later reference when communicating results.
5. Measure each sample across the five elements of the audit tool.
   • On the printable form, each sample scores with a yes or no answer worth 10% for a yes and 0% percent for a no. When all samples have been measured, add up the element percentage column and divide by 5 to determine overall audit score. Each sample may also be scored for overall quality by adding the yes answers in that sample column and multiplying by 2.
   • On Safety Culture these values will be calculated automatically.

Example;

60+40+60+60+50 = 270/5 = 54% OVERALL SCORE
Sample 1 Y+Y+Y+Y+Y x 2 = 100

6. When audit is complete, management, supervision and HSE are to discuss and analyse the results.
7. An action plan for improvement shall be determined based on the findings. For the most effective results and improvement, audit results and action plan need to be communicated and discussed with the work force.

6.0 ELEMENT CRITERIA
Below are listed the element criteria for the audit. Each element is numbered and separated with a red border on the samples to provide guidance when performing the audit.

When scoring the samples there are no half measures. It is an expectation that the FLRA process be performed and completed properly. If there is missing information on the FLRA for the criteria of each element that particular sample scores a no or 0% for that element.

Element 1
Has the Task been clearly identified?
In this area of the FLRA look for task name, task location, dates, permit numbers etc. All line items in this section must be completed. If any area is not applicable it must be indicated by an N/A or the sample is to score 0 for this element.

Element 2
Have all applicable steps been identified?
Has the task been broken down into individual steps? Are all steps identified, (including lift/equipment planning check-list)? In this area, all boxes checked with a yes require a comment. If there is no corresponding comment the sample scores a zero for this element.

Lines checked off as N/A or No do not require a comment.
Element 3
Have hazards been identified for each step?
Has each hazard been assigned a RAM score?

*Note* - When auditing this portion, observe what hazards are being identified for quality. For example, if a hazard is only identified as Slips/trips/falls this is not acceptable for hazard identification.

Element 4
Have corrective actions for hazards been developed?
Does each identified hazard have a control measure in place or been eliminated? Has crane lift calculation and job completion sections been completed? If any areas in this element are left blank they need to be notated with a line drawn through them and N/A. If this is not done the sample scores zero for this element.

Review and comment on hazard controls when necessary.

Element 5
Has the FLRA been signed off by all necessary personnel?

Has the frontline supervisor signed the FLRA? If a flagger has been indicated is that person signed onto the FLRA? (Refer to NCSG Field Level Risk Assessment Process section 6.3 for guidance). Have third party crews working on the job signed on the FLRA? At a minimum, there must be a supervisor’s signature present or at least one signature from management level. If there is no signature present this indicates no participation in the FLRA process and the sample must score a zero for this element.

7.0 RESOURCES
Contact HSE department for more information and assistance to implement this process.

8.0 APPENDICES
• Appendix A – Field Level Risk Assessment
• Appendix B – Crane Lift Level Risk Assessment
• Appendix C – Mechanical Field Level Risk Assessment
• Appendix D – Over-Dimensional Tailgate Hazard Assessment
• Appendix E – Printable Audit form
• Appendix F – Example of Safety Cloud Audit Form
### APPENDIX A – Field Level Risk Assessment

**FIELD LEVEL RISK ASSESSMENT**

Review the following and check the items which apply to the job.

<table>
<thead>
<tr>
<th>Task</th>
<th>Hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Permits</td>
<td>Required</td>
</tr>
<tr>
<td>Site</td>
<td>Access</td>
<td>Field Level</td>
</tr>
<tr>
<td>Site</td>
<td>Overhead Work</td>
<td>Barrie/Other</td>
</tr>
<tr>
<td>Site</td>
<td>Tools/Materials</td>
<td>Proper tools for the job</td>
</tr>
<tr>
<td>Site</td>
<td>Ergonomics</td>
<td>Reduced body position</td>
</tr>
<tr>
<td>Site</td>
<td>Lifting</td>
<td>Manual lifting (body position)</td>
</tr>
<tr>
<td>Site</td>
<td>Process Hazards</td>
<td>Other</td>
</tr>
</tbody>
</table>

### Creation Details
- **Date:** 08/27/2022
- **Revision:** 05/31
- **Page:** 2 of 12

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**NCSG Crane & Heavy Haul Services**

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**Health, Safety & Environment Manual**

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**NCSG Crane & Heavy Haul Services**
## Mobile Hoisting Equipment Lift Planning Checklist

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are there soft or questionable ground conditions? (If yes, contact Supervisor)</td>
</tr>
<tr>
<td>2</td>
<td>Does the set up area consist of any trenches, excavations, tunnels, underground utilities, sewer or catch basins? (If yes, contact Supervisor)</td>
</tr>
<tr>
<td>3</td>
<td>Are there overhead power lines within 7 meters of radio? (If yes, contact Supervisor)</td>
</tr>
<tr>
<td>4</td>
<td>Are any certain less than 2 feet between crane and structure? (If yes, contact Supervisor)</td>
</tr>
<tr>
<td>5</td>
<td>Is this a tandem lift? (If yes, contact Supervisor)</td>
</tr>
<tr>
<td>6</td>
<td>Will this hoisting activity be unavoidably passing over personnel, occupied buildings, or live process equipment? (If yes, contact Supervisor)</td>
</tr>
<tr>
<td>7</td>
<td>Does the crane require relocation on site? Use Crane Movement PLA (Contact Supervisor)</td>
</tr>
<tr>
<td>8</td>
<td>Is the tail swing and load path barricaded? (i.e., warning signs / tarp in place)</td>
</tr>
<tr>
<td>9</td>
<td>Has the clearance to other structures, power lines, high lines, etc. been identified?</td>
</tr>
<tr>
<td>10</td>
<td>Have non-essential personnel been removed from the area?</td>
</tr>
<tr>
<td>11</td>
<td>Are all loads free and clear to lift, avoiding any possibility of shock or impact loading the hoisting equipment?</td>
</tr>
<tr>
<td>12</td>
<td>Is the Signal Person(s) identified with arm guards? Do they understand their duties?</td>
</tr>
<tr>
<td>13</td>
<td>Are Operator, Signal Person, and Crew aware and in agreement on how to perform the task?</td>
</tr>
<tr>
<td>14</td>
<td>If visibility is limited, have approved hoisting radio been obtained and tested?</td>
</tr>
<tr>
<td>15</td>
<td>Are radio batteries available?</td>
</tr>
<tr>
<td>16</td>
<td>Do the Crane Operators / Riggers have current experience on equipment used?</td>
</tr>
<tr>
<td>17</td>
<td>Housekeeping - Is the work area clean and organized?</td>
</tr>
<tr>
<td>18</td>
<td>Emergency Response procedure known?</td>
</tr>
<tr>
<td>19</td>
<td>Standard PPE worn and in good shape?</td>
</tr>
<tr>
<td>20</td>
<td>Is fall arrest or special PPE required for this task? (Double hearing protection, etc.) Specify:</td>
</tr>
<tr>
<td>21</td>
<td>Has NCSG Hoisting &amp; Matting standard been met? (If no, authorized by):</td>
</tr>
<tr>
<td>22</td>
<td>Are “Overlapping” cranes or man lifts in the area? (If yes, contact Supervisor and see attached completed Overlapping Crane / Critical Lift / Manlift form)</td>
</tr>
<tr>
<td>23</td>
<td>Has a “Lift Coordinator” or “Person in Charge” been identified?</td>
</tr>
<tr>
<td>24</td>
<td>Has a T/LVA been completed?</td>
</tr>
<tr>
<td>25</td>
<td>Has a Journey Management Plan been completed?</td>
</tr>
<tr>
<td>26</td>
<td>Does the work time include travel, exceed “Hours of Service”?</td>
</tr>
</tbody>
</table>

## HFR Hazards

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Hazard</th>
<th>Risk Score</th>
<th>Action Taken</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Crane &amp; Load</td>
<td>Crane #2</td>
<td>Crane #3</td>
<td></td>
<td></td>
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<tr>
<td>-------------</td>
<td>----------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Crawler(s)</td>
<td>HALF</td>
<td>FULL EXT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Front)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crawler(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Rear)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rigging</td>
<td>Extended</td>
<td>Retracted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifting</td>
<td>Boom</td>
<td>Job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>Boom</td>
<td>Lifter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holding</td>
<td>Boom</td>
<td>Job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will Be</td>
<td>Boom</td>
<td>Lifter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crane Style</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crane Type</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rigging</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rigging</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LIFT CALCULATION**

<table>
<thead>
<tr>
<th>Calculation #1</th>
<th>Calculation #2</th>
<th>Calculation #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifting Height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Should be based on given weight and confirmed using the LMI. If there is a large enough discrepancy, a new evaluation should be done.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Block Weight   |                |
| Rigging Weight |                |
| Load Capacity  |                |
| (as shown on chart) |        |
| Ball Weight    |                |
| Hoist Line Weight |            |
| Other          |                |

**TOTAL LOAD WEIGHT**

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Boom Length</th>
<th>Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Load Weight</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**JOB COMPLETION**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock out procedure followed?</td>
<td>Permit or Lift Study/Eng. Lift plan followed?</td>
<td>Hazard Assessment/FLRA followed/complete?</td>
</tr>
<tr>
<td>Any unsafe conditions or remaining issues reported?</td>
<td>All Rigging/Tools/Equipment accounted for?</td>
<td>Area cleaned up and left safe?</td>
</tr>
<tr>
<td>Any injuries/Incidents/Near Misses?</td>
<td>Any logbook completed?</td>
<td></td>
</tr>
</tbody>
</table>

**NON-STANDARD LIFT CRITERIA**

- Any lift where the crane involved is lifting between 75% and 95% of the respective crane chart.
- Any lift involving two or more cranes where the combined total is lifting between 70% and 95% of the respective crane chart.
- Any lift where ground conditions are questionable.
- Any lift where the height of the object is unknown.
- Any lift where the object is in close proximity to power lines.
- Any lift involving a man bucket.
- Any lift involving the lifting of heavy or hazardous materials.

**CRITICAL LIFT CRITERIA**

- Any lift involving a lift study/eng. lift plan.
- Any lift involving two or more cranes where any of the cranes involved are lifting above 90% of capacity.
- Any lift involving two or more cranes where the combined total is lifting above 75% of capacity of the respective crane chart.
- Other unsafe conditions not covered by the non-standard criteria.

**Names of Personnel involved in Lift (Print Name and Initial)**

- Supervisor
- HS&E Advisor
- Site Manager

*IF CONDITIONS CHANGE, STOP AND UPDATE THE FLRA WITH ALL PARTIES INVOLVED IN THE TASK.*
## APPENDIX E – Printable Audit form

### FLRA Assessment Evaluation

<table>
<thead>
<tr>
<th>Date:</th>
<th>Evaluated by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch:</td>
<td></td>
</tr>
<tr>
<td>Supervisor:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Quality and Completeness Questions</th>
<th>Sample 1 Y/N</th>
<th>Sample 2 Y/N</th>
<th>Sample 3 Y/N</th>
<th>Sample 4 Y/N</th>
<th>Sample 5 Y/N</th>
<th>Sample 6 Y/N</th>
<th>Sample 7 Y/N</th>
<th>Sample 8 Y/N</th>
<th>Sample 9 Y/N</th>
<th>Sample 10 Y/N</th>
<th>Element %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has the task been clearly identified?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Have all applicable steps been identified?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Have hazards been identified for each task step?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Have corrective actions for hazards been developed?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Has the FLRA been signed off by all necessary personnel?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Overall Score**

<table>
<thead>
<tr>
<th>Sample %</th>
<th>%</th>
</tr>
</thead>
</table>

### FLRA Assessment Evaluation

- **Element 1.**
- **Element 2.**
- **Element 3.**
- **Element 4**
- **Element 5.**

**Miscellaneous Observations / Room for improvement:**
### Audit - 5/50 - 10%

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0 Has the task been clearly identified?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Task name, task location, date, permits, permit number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0 Have all applicable task steps been identified?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Has the task been broken down into individual steps? Are all steps identified, (including lift/equipment check-list)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0 Have hazards been identified for each step?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Is there a RAM score?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0 Have corrective actions for hazards been developed?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Does each hazard identified have a control measure in place or been eliminated? Has crane lift calculation and job completion sections been completed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0 Has FLRA been signed off by all necessary personnel?</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
2.5 Risk Assessment Matrix

The NCSG Crane & Heavy Haul Risk Assessment Matrix (RAM) is based on assessing hazards for the potential or likelihood of the event occurring and the severity that the harm or damage that is likely to occur. The RAM shall be used to standardize how hazards are assessed and rated. The RAM shall also be used when completing JSAs or FLRAs and all other hazard recognition activities including inspections, site observations and training.

The RAM is also to be used in conjunction with other policies and procedures such as the Incident Classification Guideline and Incident Management Processes. When using the RAM, all hazards and consequences should be considered. These consequences include: People, Assets, Environment and Reputation. Complete hazard assessments shall consider each of these consequence categories to ensure all impacts of the hazards are addressed.

### Potential

<table>
<thead>
<tr>
<th></th>
<th>Very Likely - REQUIRES IMMEDIATE CONTROLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has occurred within a comparable industry or in the company’s history on many occasions, or in quick succession.</td>
</tr>
<tr>
<td></td>
<td>If left uncontrolled or uncorrected it will very likely result in an incident.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Has occurred within a comparable industry or in the company’s history at least once over the past year.</td>
</tr>
<tr>
<td></td>
<td>If left uncontrolled or uncorrected it will likely result in an incident.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>May have occurred within a comparable industry or in the company’s history. Left uncontrolled or uncorrected an incident may occur.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Not known to have occurred within a comparable industry or in the company’s history. Not likely to happen but left uncontrolled or uncorrected will likely deteriorate or get worse.</td>
</tr>
</tbody>
</table>

### Severity

- **Class A**
  - **Critical Severity** - REQUIRES IMMEDIATE CONTROLS
    - Damages resulting in permanent loss of use
    - Injuries resulting in death, disability or lost time
    - Regulatory spill or release
    - Loss of revenue in excess of $100,000

- **Class B**
  - **Serious Severity**
    - Damages resulting in temporary loss of use (greater than 5 days)
    - Injuries resulting in temporary disability or restricted duties
    - Spill or release requiring clean up
    - Loss of revenue between $10,001 and $100,000

- **Class C**
  - **Moderate Severity**
    - Damages resulting in temporary loss of use (up to 5 days)
    - Injuries resulting in medical aid
    - Loss of revenue up to $10,000

- **Class D**
  - **Low Severity**
    - General housekeeping
    - Injuries resulting in first aid treatment only

<table>
<thead>
<tr>
<th>RAM</th>
<th>SEVERITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1</td>
<td>1A</td>
</tr>
<tr>
<td>2</td>
<td>2A</td>
</tr>
<tr>
<td>3</td>
<td>3A</td>
</tr>
<tr>
<td>4</td>
<td>4A</td>
</tr>
</tbody>
</table>

**ALARP – As Low As Reasonably Possible** All hazards require controls assigned to mitigate the hazard to the lowest possible level. Hazards should be reassessed and evaluated once controls are in place to measure the effectiveness of the controls. Hazard elimination and control activities shall follow the NCSG Hazards Assessment Code and apply the Hierarchy of Controls; Elimination, Engineering Controls, Administrative Controls and finally PPE.

**Example #1** – Extremely slippery conditions occurred when ice formed on a staircase that is used throughout the day by all workers. RAM rating is subjective but given the “Potential” based on the frequency of use by numerous people, it is foreseeable that someone will slip or fall and will suffer injuries ranging from minor strains and contusions to serious...
fractures or worse “Severity”. Immediate control is required. RAM would likely be a “1B” before controls are applied.

Example # 2 – A driver is required to climb up onto a trailer deck to check load securement. The load and trailer are wet and it is dark outside. There are no steps or ladders to gain access or egress from the trailer. The driver remembers that a coworker suffered a fractured arm by jumping off a trailer in similar circumstances last year. Although the “Potential” seems low due to infrequency of the task for this driver a Medical Aid injury did occur in the past year. The RAM would be a “2C” prior to any controls being applied.

Example # 3 – A Rigger wants to adjust a piece of dunnage under a load that has shifted during a lift. The Rigger would have to crawl under the suspended load to adjust the dunnage. Given the potential and life threatening nature of severity a RAM Rating of “1A” would apply. **Immediate STOP & DO Not Proceed** would apply to this task.

Example # 4 – A worker is asked to pick up garbage and pull weeds around the yard fence line. It is a warm spring day. The yard is dry compacted gravel with no traffic. Given there is a lack of traffic, ground conditions are good and the worker has the proper PPE a RAM of “4D” is likely.
3.1 People

3.1.1 Workplace Violence Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Workplace Violence Code to identify the potential physical assault or aggression, which may be:

• unsolicited and unwelcome conduct, comment, gesture or contact which causes offense or humiliation, and
• physical harm to any individual which creates fear or mistrust, or
• compromises and devalues the individual.

2.0 SCOPE AND APPLICATION
This proper level of protection against a potential physical assault or aggression to employees, contractors, and the public while operating within NCSG areas of responsibility is of paramount importance to NCSG. This code will aid employees in understanding and minimizing this risk. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG when the potential for physical assault or aggression may be present as presented by outside or inside the company.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Workplace Violence Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Personal Harassment Personal harassment includes:
• verbal abuse and threats;
• unwelcome remarks, jokes or innuendos were taunting about a person's body, attire, age, marital status, ethnic or national origin, religion, etc.;
• displaying pornographic, racist or other offensive or derogatory pictures;
• practical jokes which caused awkwardness or embarrassment;
• unwelcome invitations or requests, whether incorrect or explicit, or intimidation, leering or other gestures;
• condescension or patronizing, which undermines self-respect;
• unnecessary physical contact such as touching, patting or pinching, or punching;
• physical assault.

Sexual Harassment Unwanted sexual advances, unwanted requests for sexual favors, and other unwanted verbal and physical conduct of a sexual nature constitute sexual harassment when:
• submission to such conduct is made either explicitly or implicitly, a term precondition of individuals employment
• Submission to the rejection of such conduct by an individual affects that individual’s employment.

Sexual harassment can include such things as pinching, patting, rubbing or leering, dirty jokes, pictures or pornographic materials, comments or suggestions, innuendos, requests or demands of a sexual nature.

Violence Violence means the threatened, attempted or actual conduct of a person that causes or is likely to cause physical injury.

Employee Assistance Program (EAP) A company established program providing assistance and contact information to employees regarding a variety of areas including, but not limited to harassment, drug and alcohol dependency, family social issues, financial assistance, etc.

4.0 EXPECTATIONS
The Workplace Violence Code shall provide required and adequate guidelines to ensure proper training, risk assessment and Emergency Action Plans to eliminate, reduce, or minimize the possibility of Violence in the Workplace for all employees, contractors, visitors and general public within NCSG areas of responsibility. The Workplace Violence Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG. In the event that there is a variance in jurisdictions, NCSG shall require the Corporate Codes and Practices to conform to the higher or more stringent legislation that the company acts in.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Seek appropriate training and become familiar with the potential for violence in the workplace
• Ensure that as an employee of NCSG, the employee shall not subject any other person to violence or harassment.
• Be responsive, through adequate training, to minimize the risk of exposure to potential workplace violence and assist NCSG in the prevention of Workplace Violence.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers are familiar with the company Workplace Violence Code and NCSG’s Prevention Program regarding violence in the workplace.
• Ensure access to the written code, policy and procedures are made available to all workers of NCSG.
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.
• The employer must ensure that a worker reporting an injury or adverse symptom as a result of an incident of violence is advised to consult a physician of the worker's choice for treatment or referral.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure the development of a code respecting violence in the workplace in accordance with provincial legislation as applicable.
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Development of a Workplace Violence Prevention Program
NCSG shall develop a workplace violence prevention program, which is consistent with provincial legislation. This program shall include effective education and training identifying:
• roles and responsibilities
• educating staff about reporting procedure
• training of crisis intervention and dispute resolution persons
• training and educating those responsible to investigate incidents
• communicate with other agencies such as police, community and social services as required and applicable
• assist workers in awareness regarding rights and available Employee Assistance Programs
• increased awareness of applicable legislation and the Employer’s responsibility for policy and procedure
• The need for an Emergency Response Plan that shall address both a Lock – Out and a Lock – Down procedure for all areas of responsibility of NCSG.
• The employer must ensure, so far as is reasonably practicable, that no worker is subjected to violence in the workplace and the employer will take corrective action respecting any person under the employer's direction who subjects a worker to
• When a risk of violence in the workplace is identified, an employer must inform a worker about the risk of violence in the workplace.

6.2 Risk Assessment and Hazard Identification
NCSG shall establish a risk assessment process, which is both generic and site-specific in identifying potential workplace violence. This assessment shall include identification and recognition of violence from outside the company as well as potential internal risks. A number of factors shall be considered including but not restricted to:
• workers, supervisors, and management
• sources of abuse
• work process and physical environment
• interaction with general public
• Previous experience in that workplace, occupational experience in other workplaces, and the location and circumstances in which work will take place.

6.3 Prevention Practices / Disclosure
As detailed in the Emergency Response Plan (ERP) applicable to workplace violence, regular scheduled drills shall be conducted to ensure familiarization of all employees, contractors, visitors in NCSG areas of responsibility. Effective follow-up and debriefing of all conducted drills shall be communicated to all employees,
contractors, and visitors as applicable to ensure improved and proficient application of ERP's. The policy will be posted in all high traffic office locations.

NCSG shall take every step possible to ensure that no information regarding a worker’s complaint or involvement in a workplace violence situation is ever disclosed outside the HR management division or to any uninvolved party. Disclosure will be provided to enforcement law agencies where necessary under the provincial or federal legislation only.

6.4 Harassment
Every worker is entitled to work free of harassment; the employer must ensure, so far as is reasonably practicable, that no worker is subjected to harassment in the workplace; the employer will take corrective action respecting any person under the employer’s direction who subjects a worker to harassment; the employer will not disclose the name of a complainant or an alleged harasser or the circumstances related to the complaint to any person except where disclosure is necessary to investigate the complaint or take corrective action with respect to the complaint, or required by law; the employer’s harassment prevention policy is not intended to discourage or prevent the complainant from exercising any other legal rights pursuant to any other law.

7.0 TRAINING REQUIREMENTS AND MATERIALS
- Alternate Dispute Resolution Training for Applicable Employees
- Familiarization with NCSG Workplace Violence Prevention Program
- Contact information for Employee Assistance Programs
- NCSG orientation

8.0 RESOURCES
- Alberta Employment and Immigration – Workplace Health & Safety Bulletins – VAH001 Violence and Harassment
- British Columbia OH&S Regulation Code Part 4.27-4-31
- Ontario Occupational Health and Safety Act Part III 0.1
- United States Department of Labor: DOL Workplace Violence Program
- Manitoba Regulation 129/2015 Workplace Safety and Health Regulation Part 10-11
- Saskatchewan OH&S Regulation Part III

May all be used to reference additional information pertaining to workplace violence and control methods for minimizing potential exposure and risk.
3.1.2 Behavior Based Safety Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Behavior Based Safety/Work Observation Process as a proactive approach to safety performance improvements by having employees taking preventative measures to protect themselves from hazards and risks.

Behaviour Based Safety/Work Observation promotes safe work practices through enhanced employee engagement, involvement and awareness.

2.0 SCOPE AND APPLICATION
Behavior Based Safety/Work Observation is an innovative improvement technology that focuses on identifying and reinforcing safe behaviors in the workplace. All workers, supervision and management are visible, involved and empowered in the Behavior Based Safety/Work Observation Process.

In a 100% safe culture, Behavior Based Safety/Work Observation techniques are employed to provide positive reinforcement to the workers, promoting increased performance of safe behaviors in the future. The objective of Behavior Based Safety/Work Observations is to create a work environment in which employees encourage each other to use safe behaviors and eliminate at risk behaviors.

This work process is intended to ensure that there is a formal process for NCSG to observe the work practices of workers and provide leadership by ensuring interpersonal interactions occur between employees, senior employees and supervisors for the interest of workplace safety. The Behavior Based Safety/Work Observation Process will improve and enhance the health, safety and environment of NCSG work sites.

A properly implemented and managed Behavior Based Safety/Work Observation Process provides the management team an effective diagnostic tool for controlling and improving the Safety Management System.

3.0 DEFINITIONS
Hazard A situation, condition or thing that may be dangerous to the safety or health of workers.

Behavior A human action that can be observable.

Behavior Based Safety Behavior Based Safety focuses on the use of positive feedback and recognition to motivate and support safe behaviors. The methods and tools are based on more than 50 years of research. Behavior Based Safety employs only the most objective and reliable aspects of the science of behavioral psychology.

At Risk Behavior The unsafe act workers perform.

Safe Behavior The safe and risk free acts that workers perform.

Risk The probability (likelihood) of harm or damage occurring from exposure to a hazard, and the likely consequences of that harm or damage to a person.

Hazard and Risk Assessment The formal process of evaluating the probability and consequences of injury or illness arising from being exposed to an identified hazard.

Control The actions, processes, barriers or control measures available to minimize or eliminate the probability of an incident occurring from an identified risk or hazard.

4.0 EXPECTATIONS
Active participation in the Behavior Based Safety/Work Observation Process is an occupational requirement which promotes health and safety awareness and reduces workplace incidents.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
- Understand that 95% of site or project related injuries are caused by the use of at risk behaviors.
- Participate in the Behavior Based Safety/Work Observation Process in the role of observation team member or as a trade person who agrees to allow them to be observed.
- Communicate knowledge of perceived Hazards and Risks.
- Notify their supervisor if they become aware of factors or circumstances where they feel the measures taken to ensure their safety are inadequate.
- Utilizing Behavior Based Coaching to demonstrate actively caring for the other employees.
- Maintaining the vision of everyone gets home 100% safe and zero harm.

5.2 Supervisors
- Implement and use this Process;
- Use work observations as a coaching tool to focus on positive feedback;
- Be involved in work observation planning; and
- Ensure employees participate in work observations.
- Utilize Behavior Based Safety/Work Observation techniques, such as positive reinforcement during the carrying out of their daily supervisory responsibilities.
- Supporting Behavior Based Safety/Work Observation Process by encouraging the Behavior Based Safety/Work Observation team members to conduct their observations.
- Recognizing and supporting the safe behavior that they observe.
- Giving corrective feedback for at risk behaviors in a way that is accepted by the employee observed.
• Focusing on worker behavior in an actively caring way.
• The goal is helping workers improve themselves of their own free will therefore with no direct forcing, no direct coercion, in order to establish a work atmosphere of genuine helpfulness.

5.3 HS&E Advisors
• Monitor implementation and practice of this Process
• Monitor program use during work observations and audits.
• Provide the appropriate level of Behavior Based Safety/Work Observation education and training to site / project management, supervision and employees.

5.4 Branch / Site Managers
• Ensure the timely and appropriate implementation of this Process;
• Approve work observation plan; and
• Provide support to resolve issues on the application of Work Observations.
• Demonstrating commitment to the Behavior Based Safety/Work Observation Process;
• Ensuring that all site / project related staff participate and are involved;
• Monitoring the Behavior Based Safety/Work Observation Process to assure that the Behavior Based Safety/Work Observation Process is effectively implemented.

6.0 METHOD
6.1 Behavior Based Safety/Work Observation Process
The Behavior Based Safety/Work Observation Process is implemented on a NCSG Site / Project in accordance with the following Behavior Based Safety/Work Observation Process execution steps Behavior Based Safety/Work Observation Process.

6.1.1 Selection of Observers
Behavior Based Safety/Work Observation observers will be selected from the ranks of workers and trades persons. Observers can be members of supervision but the focus should be worker involvement, members of the HSE Department should not be observers. Observers are selected on the basis of their natural leadership abilities.

6.1.2 Duties and Responsibilities of the Behavior Based Safety/Work Observation Team
The Behavior Based Safety/Work Observation Process puts workers in control of safety. Furthermore the Behavior Based Safety/Work Observation Team is empowered to establish the guidelines for conducting work observations, team meetings, activities, etc. The Behavior Based Safety/Work Observation Team is required to receive initial training and participate in a training session in order to learn and develop a Behavior Checklist relevant to the project work activities being performed. The Team will meet on a regular (monthly) basis, with work observations conducted daily by each team member. Observation Checklists are to be returned to the Supervisor by the end of each day. Data from each Work Observation Checklist is to be compiled into and reviewed for trends, and a report measuring observed behaviors in terms of “% Safe” can be issued weekly. The reports are to be discussed at the Safety Meetings, posted and made available at the Site / Project level.

6.1.3 NCSG Behavior Based Safety/Work Observation Process Team establishment
A Behavior Based Safety/Work Observation Team should be initiated at the beginning of the year or the start-up of field project activities. The Site / Project Manager will champion the Committee and its members. The HSE Advisor will work closely with each of the Branch / Site / Project Observation Teams and with the Committee.

6.1.4 100% Safe Team (Audit)
The Branch Manager / Site Manager / Project Manager will chair the 100% Safe Team. The team will be comprised of the Supervisors and HSE Advisor, as well as craft/trade representation, and client representation as appropriate. The Team will meet weekly with a mission to create a 100% safe culture throughout the Branch / Site / Project by anticipating health and safety issues, and by identifying barriers to achieving this goal. Tools at the disposal of the Team may include the weekly Behavior Based Safety/Work Observation Team Report, the Loss Control Reports / incident reports of the past week, any HSE Audits/Assessments.

6.1.5 Maintenance of Safety Standards
This Behavior Based Safety/Work Observation Process holds everyone accountable for the same safe behaviors across the company. Not only does it monitor compliance to safety rules, it demonstrates that the corporate management team is fully dedicated to improving safety and engaging, involving and empowering the workers.

6.1.6 Increasing Safety Awareness
Establishing and maintaining a safe work culture requires managers, supervisors and workers to be aware of and follow safe work practices, rules and regulations. The Behavior Based Safety/Work Observation Process increases supervisors and workers awareness of, safety policies, rules, regulations and work practices.

6.1.7 Measure Behavior
Behavior Based Safety/Work Observation measure what is actually taking place in the field, they also
provide an opportunity to coach and counsel workers to improve their safety performance within an atmosphere of trust, caring and mutual respect and consideration since our workers are our number one resource.

6.1.8 Communication of Expectations and Feedback
Behavior Based Safety/Work Observations are designed to help communicate the safety responsibilities and expectations of management, supervisors and workers. They can be used to notice good work practice as well as provide opportunities to change behaviors when required.

6.1.9 Reveals Weaknesses in the Safety Process
Behavior Based Safety/Work Observations help monitor the effectiveness of training and identify additional training needs. They provide the opportunity to be proactive by noticing at risk behaviors, unsafe practices, and performance issues. Evaluation of the overall process can spot trends and system deficiencies.

6.1.10 Reduces or Mitigates Risk
Proactive interventions of unsafe work practices, will work to reduce risk of or eliminate injuries and property damages.

6.2 Behavior Based Safety/Work Observation Practice
For the Behavior Based Safety/Work Observation Process to provide the most efficient results the emphasis must be on recognizing workers when they perform safely or, intervening to provide correction and coaching to the workers when the required behaviour is being performed unsafely.

Steps to perform a complete observation are:

1) Observe the employee(s) for 30-60 seconds as you approach them, introduce yourself.
2) When doing this the observer should not distract the employee(s) at a critical moment (e.g. operating equipment, welding, cutting, lifting, using ladders etc). Wait until the interruption can occur when there will be no risk posed to the workers.
3) Explain what you are doing and that you will observe them for a short while.
4) Observe them for some additional time.
5) Provide feedback on what you have observed in a positive manner with awareness of the self-esteem of the employee(s) that have been observed.
6) Provide positive reinforcement for all those behaviours that were performed in a safe manner.
7) When at risk behaviours are observed ask for feedback from the workers to help understand why at risk behaviours are being performed, and provide coaching and correction so that the required safe behaviour is obtained.
8) Thank the employee(s) for their assistance; encourage them to continue to work safely.

Feedback will involve positive reinforcement and coaching on safe behaviour. Positive reinforcement does not always require stopping work. When work is performed safely, it can be as simple as a smile and a wave. However, the positive reinforcement the observer provides to the worker when unsafe behaviours are observed is a key part of improving the overall behaviour performance of a work group. It is essential that this reinforcement is given. Whenever “at risk” behaviour is observed, there must be an interaction with the person performing it, so that some coaching and correction can occur as appropriate. If this does not happen, particularly when a supervisor sees “at risk” behaviour and subsequently ignores it, then the workers will get the feedback that doing the “at risk” behaviour is acceptable. They will see that there is no consequence for “at risk” behaviour and there will be no influence on the worker to stop doing the “at risk” behaviour. The comments made by the workers observed should be recorded when possible. Often these comments will give good indications of why the required behaviour is not being performed; i.e. wearing gloves the observed workers’ comments might all suggest that the gloves are not comfortable to wear and might be too big or too small, this points to the need for making a wider range of sizes available to the workers. The more information that can be obtained from the employee(s) as to why they are not performing the correct behaviours make it easy to address the issue and it will help to identify the appropriate changes required to get the behaviours performed correctly.

It is extremely important that all observed behaviours that are immediately dangerous to life, health or the environment are stopped as soon as they are observed. In this situation the observer does not follow the observation steps. The first priority is to stop the dangerous behaviour. The Observer needs to call a “time out”! The observer should stop work and discuss the issue with the employee(s).

6.3 Minimum Required Behavior Based Safety/Work Observations
It is up to each Branch / Site / Project to establish observation schedules. The minimum required observations are established based on the expected duration of the job and number of workers. Work observations are tracked by the HS&E Advisor.

The observation process can take as little as ten minutes to complete or they can last for several hours depending upon the supervisor, workgroup and their situation.

6.4 Forms and Record Retention
The Behavior Based Safety/Work Observation forms are designed to be flexible documents. They target the most common activities that particular work groups face. One work group or project area may require different
forms depending on the activities being performed in any given situation. Management and supervisors can also focus on specific issues in the Behavior Based Safety/Work Observation Process. To determine the areas needing attention, the management group needs to develop a work observation action plan.

Completed Behavior Based Safety/Work Observations should be retained in accordance with the HS&E Document Management and Control Process.

6.5 **Work Observation Action Planning**

**Step 1:** Review the current safety performance.
- Review Incidents and Injuries Reports
- Conduct a field assessment to determine the level of compliance with the rules such as establishing a benchmark number.
- Data should be collected by each project area in order to review incidents and target the common types.
- Office hazards such as lifting and RSI (Repetitive Strain Injuries) are common and very costly both personal and financial and should not be viewed as low priority.

**Step 2:** Identify opportunities for improvement.
- Time should be spent on rules that have weak conformity.

**Step 3:** Develop an action plan to address the opportunities identified in Steps 1 & 2.
- Compare the identified opportunities with the current observation form. Add any additional observation areas to the form.
- Review forms on a periodic basis.

**Step 4:** Conduct observations and measure the behavior.

**Step 5:** Assess the observation plan and revise accordingly

7.0 **TRAINING REQUIREMENTS AND MATERIAL**

- Work Observation Training

8.0 **RESOURCES**

- The Psychology of Safety, E. Scott Geller, Ph.D.
- What Can Behavior- Based Safety Do For Me? E. Scott Geller, Ph. D.

9.0 **REFERENCES**

- NCSG Focus Inspection Process

10.0 **APPENDICIES**

- Appendix A – Observation Checklist
- Appendix B – Hazard / Behaviour Observation Card
### BEHAVIOURAL BASED OBSERVATIONS

<table>
<thead>
<tr>
<th>Categories</th>
<th>Safe</th>
<th>At Risk</th>
<th>What</th>
<th>Why</th>
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<td><strong>Body Mechanics</strong></td>
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<td>1.1 Lifting</td>
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<td>1.2 Body Positioning</td>
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<td>1.4 Staying Out of Line of Fire</td>
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<td>1.5 Keeping Eyes on Work/Path</td>
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<td>1.6 Ascending/Descending</td>
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<td><strong>Personal Protective Equipment</strong></td>
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<td>2.6 Reflective Stripes</td>
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<td>3.1 Pre-Job Planning</td>
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<td>3.2 Communication</td>
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<td>3.3 Work Surfaces</td>
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<td>3.4 Barricading/Flagging</td>
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<td><strong>Tools &amp; Equipment</strong></td>
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<td>4.3 Tool/Equipment Condition</td>
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<td>4.4 Ladders</td>
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<td>5.1 Trash/Debris</td>
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<td>5.2 Material Storage</td>
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<td>5.3 Hoses &amp; Cords</td>
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<td><strong>Equipment/Operators</strong></td>
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<tr>
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<td>6.3 Communication</td>
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**Coaching Moments:**
## APPENDIX B – Hazard / Behaviour Observation Card

### HAZARD / BEHAVIOUR OBSERVATION CARD

<table>
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<tr>
<th>Condition</th>
<th>Action</th>
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#### Initial Action

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#### Procedures & Standards

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#### Tools & Equipment

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#### Line-Of-Fire

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#### Body Mechanics (ergonomics)

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#### Safe / Unsafe

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### Briefly describe the observation:

____________________________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________________________

### What discussion did you have with the worker involved?

____________________________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________________________

### Additional corrective action necessary? ☐ Yes ☐ No

If Yes, define:

____________________________________________________________________________________________________________________________________

### Branch:

Submitted by: [PRINT NAME]

Supervisor: [PRINT NAME & PHONE NUMBER]

Safety: [PRINT NAME & SIGNATURE, DATE]

Completed follow up? ☐ Yes ☐ No

If Yes, describe follow up:

____________________________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________________________

By Who? [PRINT NAME]

Date: [DATE]

### ADMIN USE ONLY:

Audited By: [PRINT NAME]

Date: [DATE]

Time: [TIME]
3.1.3 Working Alone Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Working Alone Code to identify the proper level of protection that will assist all employees in performing their tasks effectively and efficiently when operating or working alone. This code will aid employees in minimizing the risks of exposure and assist in the knowledge of safe work practices to minimize or prevent potential injury.

2.0 SCOPE AND APPLICATION
The guidelines and recommendations are provided to increase awareness of correct control measures to be used by NCSG employees and contractors where there may be a risk of injury due to potential exposure to equipment, environment and / or conditions due to working alone. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
The following definitions are specific to Working Alone Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Work Alone To work alone at a worksite in circumstances where assistance is not readily available in the event of an injury, illness or emergency

Effective Means of Communication A radio, telephone or other electronic communication device

4.0 EXPECTATIONS
The Working Alone Code shall provide required and adequate guidelines to ensure knowledge of potential hazards from equipment, environment, and persons due to working alone which all employees, contractors, visitors and general public within NCSG may be exposed to. The Working Alone Code will be reviewed every year.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Regional Team Lead - Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:

• Use and wear properly the appropriate personal protective equipment as specified in the applicable codes in accordance with the training and instruction received to ensure personal safety
• Ensure equipment is used as intended, and according to manufacturer’s specifications
• Ensure equipment has been inspected prior to use
• Ensure appropriate first aid and emergency supplies are on the site and available.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:

• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Immediately inform the Supervisor of any change in climate or weather conditions, which may adversely affect the safety of employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:

• Ensure that workers use and wear properly the appropriate personal protective equipment as specified in the applicable codes in accordance with the training and instruction received to ensure personal safety.
• Ensure, appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.
• Ensure if required due to climate / weather conditions that adequate work / rest periods are identified, recorded, and maintained to ensure the safety of all employees, contractors, visitors within NCSG areas of operation or active worksites.

5.4 Management
In addition to 5.1, it is the management responsibility to:

• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and
5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.
• Copies of the working alone procedures will be readily available to employees of NCSG

6.0 METHOD
6.1 Establishment of working alone
An employee is considered to be working alone, if the employee works alone at a worksite in circumstances where assistance is not readily available when needed.

Workers who work alone can be grouped into five categories:
1. Workers who handle cash
2. Workers who travel away from their base office to meet clients
3. Workers who do hazardous work and have no routine contact with the public
4. Workers who travel alone and have no routine interaction with the public
5. Workers who are at risk of a violent attack because their work is isolated from public view

Primarily, category three (3) and four (4) apply to NCSG operations on a consistent basis.

NCSG can eliminate the risk of employees working alone, as well as the need to comply with working alone provisions, if they choose to organize work schedules and procedures to remove the occurrence of working alone.

Before a worker is assigned to work alone or in isolation, the employer must identify any hazards to that worker. Before a worker starts a work assignment the employer must take measures to eliminate any hazards, and if it is not practicable to eliminate the hazard, to minimize the risk from the hazard.

6.2 Employer criteria
In the event that working alone circumstances exist, NCSG shall:
• Conduct a hazard assessment.
• Eliminate or reduce the risks
• Establish an effective means of communication
• Ensure employees are trained and educated
• Ensure a contact person is designated for each individual working alone situation and ensure that contact person process is validated.

6.3 Confirmation of Effective Communication
NCSG shall ensure that communication with an employee who is working alone has been analyzed to meet the following:
• Ensure the communication method involves a regular telephone, cell phone, or other electronic communication and whether a communication check been completed or;
• Scheduled check-in points with other employees or;
• An alarm system or process available to alert other employees in the event of an incident.

Regardless of the means of communication established NCSG shall also include a planned “overdue check-in” procedure to initiate action on an employee who fails to report in

7.0 TRAINING REQUIREMENTS AND MATERIALS
• Knowledge and understanding of correct use of cell phone / radiotelephone / communication equipment
• NCSG orientation – Field Level Hazard Assessment training
• NCSG shall ensure that all personnel working alone and those assigned the position as contact person shall receive sufficient training to perform the required tasks in a safe manner and in accordance to this procedure.

8.0 RESOURCES
• Alberta Employment and Immigration – Workplace Health & Safety Bulletins – WA001 Working Alone
• Alberta OH&S Code Part 28
• BC Regulations Part 4

May all be used to reference additional information pertaining to Working Alone Legislation and control methods for minimizing potential exposure and risk.

NCSG understands that there may be questions and concerns regarding the Working Alone Legislation Code.

Please direct any questions regarding the Code to the Regional Team Lead - HS&E.

9.0 APPENDICIES
• None
3.1.4 Heat Stress Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Heat Related Stress Code to identify the proper level of protection that will assist all employees in performing their tasks effectively and efficiently when operating in a hot climate environment. This code will aid employees in minimizing the risks of exposure and assist in the knowledge of safe work practices.

2.0 SCOPE AND APPLICATION
The guidelines and recommendations are provided to increase awareness of correct control measures to be used by NCSG employees, contractors where there may be potential exposure to equipment, environment and/or conditions of a hot or temperate nature. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
The following definitions are specific to Heat Related Stress Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Acclimatization A process of physiological adaptation that occurs when exposure to heat takes place over an extended period. Acclimatization may take weeks, although significant adaptation occurs within a few days. In recent history, acclimatization occurs in exposures of at least 2 continuous hours (i.e. 5 of the last 7 days). Once acclimatization is achieved, working in the heat results in increased production of a more dilute sweat and less of an increase in heart rate and body temperature.

Heat Cramps Heat cramps are muscle pains or spasms – usually in the abdomen, arms, or legs – that may occur in association with strenuous activity. People who sweat a lot during strenuous activity are prone to heat cramps. This sweating depletes the body’s salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. If you have heart problems or are on a low-sodium diet, seek medical attention for heat cramps.

Heat Exhaustion Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, those with high blood pressure, and those working or exercising in a hot environment.

Heat Stroke Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body’s temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

Humidex Humidex is a calculated value that combines temperature and humidity information into one number. This single number tries to describe how hot and humid weather feels to the average person. It is therefore a better measure of how stifling the air feels than either temperature or humidity alone.

Dehydration An abnormal depletion of body fluids. This can occur during hot climate working conditions when an individual perspires due to exertion/additional clothing without replenishing the required fluids in the body.

Wet Bulb Globe Temperature (WBGT) This method uses a portable device called a heat stress monitor to measure heat stress on a worker. WBGT takes into account air temperature, humidity, radiant heating from the sun or other sources, and air movement. Air temperature is measured using a normal thermometer called a dry bulb thermometer. A black metal ball or “globe” that absorbs heat and has a thermometer inside it measures radiant heat. The “wet bulb” portion of the heat stress monitor measures the effect of evaporation and air movement. It consists of a regular thermometer bulb wrapped in a wick moistened with water.

Heat Rash (prickly heat) Tingling and burning of the skin, red itchy rash. Sweat glands plugged due to prolonged exposure of skin to heat, humidity or sweat.

4.0 EXPECTATIONS
The Heat Related Stress Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to working and exposure in a hot environment, which all employees, contractors, visitors and general public within NCSG may come in contact with. The Heat Related Stress Code will be reviewed at a minimum of every three years.

This Code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
• Inspect personal protective equipment before using it, and
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Be responsive, through adequate training, to minimize the risk of exposure when working in a heat related climate / condition.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Immediately inform the Supervisor of any change in climate or weather conditions, which may adversely affect the safety of employees, contractors, or general public within the area.
• Ensure that a “buddy system” monitoring process is exercised if required to minimize the risk of exposure to employees during the course of work activities.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide an adequate supply of cool water to workers exposed to extreme heat.
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.
• Ensure if required due to climate / weather conditions that adequate work / rest periods are monitored and maintained to ensure the safety of all employees, contractors, visitors within NCSG areas of operation or active worksites.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Adequate / Appropriate Clothing
Risk of heat cramps, exhaustion and ultimately stroke may be minimized by the proper use of clothing designed to work in heat climate conditions and hydration. Wear clothing that is designed for hot weather and clothing, which provides adequate ventilation. Use of a hat / helmet with a brim and protection from the sun is crucial in the reduction of possible exposure to ultraviolet (UV) radiation. Additional application of sun protection creams / lotions may also reduce the risk of UV exposure.

Heat stress is unlikely for a person wearing the appropriate clothing, performing light to moderate physical activity, and with the sun being the only heat source. Always have the appropriate hot weather clothing and PPE available – weather changes are frequent and often unexpected.

The clothing that you wear when working hard in hot weather is important to select carefully. Clothing that enables ventilation of perspiration will reduce the collection of moisture from the inside out. This will enable the adequate cooling of the body to continue working. Recommended types of clothing and their beneficial properties are outlined in the Appendices.

6.2 Recognition of Heat Rash / Cramps / Exhaustion / Stroke / Cold Stress
All employees who work or supervise work in hot conditions shall be trained to recognize the symptoms of these problems. Heat stress happens when hot working conditions have the potential to harm a worker. This harm is of two types:
• Non-life threatening – includes conditions such as dehydration and heat exhaustion
• Life threatening – heat stroke

Appendix A summarizes heat exposure problems, including their treatment and prevention.

An increase in the internal body temperature rising to dangerously high levels may cause heat stroke of an individual to occur. This is in part due to not sweating enough to cool the body. If addressed and corrected early proper rest breaks and adequate clothing, heat cramps, exhaustion and stroke may be averted, however, if left to continue, unconsciousness and death may occur.
If an employee exposed to extreme heat conditions shows signs of or reports symptoms of heat stress, the worker must be removed from further exposure and receive treatment by an appropriate first aid attendant or physician.

6.3 Prevention Practices
Job safety analysis, task analysis, and field level risk assessment shall be used to determine the level of PPE that may be required to minimize exposure. Consideration shall be taken by all levels of employees regarding:
- length of exposure,
- type of work,
- air temperature,
- radiant heat (equipment worked on / with, sun exposure, etc)
- air (wind) speed
- clothing worn
- and rest break periods to be used.

The established PPE and schedules relating to heat related stress factors shall be considered the minimum acceptable level for NCSG employees, contractors, visitors and general public, while at the work site. Conditions shall be monitored regularly to ensure any changes are identified and compensated for as required. Appendix E provides clear control methods to reduce or eliminate the potential escalation of heat related stress symptoms.

The Humidex chart shall be consulted as required to ensure that employee safety is maintained during adverse conditions. Copies of the Humidex chart shall be available to all levels of employees to assist in the monitoring of any climate changes.

6.4 Application of WBGT
Wet Bulb Globe Temperature (WBGT) TLV’s shall be used to determine applicable Work / Rest Periods for NCSG work sites. Utilizing a WBGT Monitor will determine the overall temperature and appropriate work/rest schedule (see Appendix B). Monitors will only be used by trained and qualified employees and contractors.

A variety of factors must be considered when applying TLV’s and in doing so, supervisors shall always consider these limits as minimum standards. Hydration is a crucial control method in combating heat related stressors. NCSG shall ensure adequate fluids are available at all worksites.

Company Standard Operating Procedures will further define additional levels of PPE requirements and rest break schedules in conjunction with understanding the work/rest schedule and conditions. All employees are responsible to use additional caution and monitoring skills to identify changes in climate work environments.

WBGT Method will be used for situations related to extreme temperatures where work may need to be stopped.

6.5 Application of Humidex
The Humidex combines temperature and humidity readings into one number as a way of indicating how your body perceives the combination of temperature and moisture in the air. It is expressed as a value not as an actual temperature or degree, because it is an interpretation of how people might feel.

Humidex may not always be appropriate to use as an indication of when work should be stopped. Heat-related illnesses depend on many other workplace factors such as wind speed or air movement, workload, radiant heat sources and a person’s physical condition. Under certain workplace conditions, the humidex may serve as an indicator of discomfort resulting from occupational exposure to heat.

Once the Humidex has been determined, reference Appendix D for work/rest schedules.

7.0 TRAINING REQUIREMENTS AND MATERIALS
- PPE Equipment specific training
- Hot Climate applicable clothing
- NCSG orientation
- First Aid – Heat Related Stress symptoms / Treatment

8.0 RESOURCES
- St John Ambulance
- BC OHS Regulations Part 7, Sec 7.38
- Environment Canada
- Alberta Employment and Immigration – Workplace Health & Safety Bulletins – MG022 General Safety

9.0 APPENDICIES
- Appendix A – Symptom Escalation Chart / Prevention / Treatments
- Appendix B – WBGT –Table of Threshold Limit Values
- Appendix C – Determining Humidex from Temperature and Relative Humidity Readings
- Appendix D – Humidex Response Plan
- Appendix E – Control Methods for Heat Related Stress Factors
### APPENDIX A – Symptom Escalation Chart / Prevention / Treatments

<table>
<thead>
<tr>
<th>Problems and Symptoms</th>
<th>Treatment</th>
<th>Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heat rash (prickly heat)</strong>&lt;br&gt;Tingling and burning of the skin, red itchy rash. Sweat glands plugged due to prolonged exposure of skin to heat, humidity, sweat</td>
<td>thorough drying&lt;br&gt;cool showers</td>
<td>calamine lotion&lt;br&gt;keep the skin as dry as possible&lt;br&gt;rest in a cool place&lt;br&gt;shower often&lt;br&gt;change clothes frequently&lt;br&gt;keep skin clean</td>
</tr>
<tr>
<td><strong>Heat cramps</strong>&lt;br&gt;Painful spasms of muscles that do the hardest work i.e. in the arms, legs, and abdomen</td>
<td>massage the muscle(s)&lt;br&gt;eat salt-containing foods (unless to be avoided for medical reasons)</td>
<td>warm up muscles before heavy work&lt;br&gt;take rest breaks</td>
</tr>
<tr>
<td><strong>Fainting</strong>&lt;br&gt;Increased flow of blood to the skin to get rid of heat means less blood to the brain</td>
<td>lie down in a cool place&lt;br&gt;drink cool fluids to lower body temperature&lt;br&gt;see a doctor if fainting recurs</td>
<td>drink plenty of fluids at regular intervals</td>
</tr>
<tr>
<td><strong>Heat exhaustion</strong>&lt;br&gt;Tired, weak, dizzy, clammy skin, slow weak pulse. Pale or flushed skin colour. Higher than normal heart rate (160 to 180 beats/min)</td>
<td>lie down with knees raised&lt;br&gt;drink cool, not cold, fluids&lt;br&gt;contact a doctor if condition does not improve quickly</td>
<td>take four to seven days to adjust (acclimatize) to the heat&lt;br&gt;drink plenty of fluids at regular intervals&lt;br&gt;take rest breaks in a cool place</td>
</tr>
<tr>
<td><strong>Heat stroke</strong>&lt;br&gt;Person usually stops sweating, body core temperature is high (40°C – 43°C), skin is hot and dry. Person experiences headache, dizziness, confusion, may lose consciousness or have fits. Fatal if treatment is delayed</td>
<td><strong>This is a medical emergency</strong>&lt;br&gt;Person must be taken to hospital as quickly as possible&lt;br&gt;move worker to a cool or shaded area, remove clothing, wrap in wet sheet, pour on chilled water and fan vigorously. Avoid overcooling. Treat for shock once temperature is lowered</td>
<td>take four to seven days to adjust to the heat&lt;br&gt;drink plenty of fluids at regular intervals&lt;br&gt;take rest breaks in a cool place&lt;br&gt;wear clothing appropriate for the conditions</td>
</tr>
</tbody>
</table>
APPENDIX B – WBGT Table of Threshold Limit Values

Source - American Conference of Government Industrial Hygienists (ACGIH)

The monitor uses these measurements to calculate the WBGT temperature.

For outdoor workplaces with direct sunlight, the calculation is:

\[
\text{WBGT} = 70\% \text{ of the wet bulb temperature}
\]

+ 20\% of the black globe reading

+ 10\% of the air temperature

For workplaces without direct sunlight, the calculation is:

\[
\text{WBGT} = 70\% \text{ of the wet bulb temperature}
\]

+ 30\% of the black globe reading

<table>
<thead>
<tr>
<th>WBGT</th>
<th>Acclimatized</th>
<th>Not Acclimatized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work / Rest</td>
<td>Light</td>
<td>Moderate</td>
</tr>
<tr>
<td>Schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100% of Work</td>
<td>29.5</td>
<td>27.5</td>
</tr>
<tr>
<td>75% Work</td>
<td>30.5</td>
<td>28.5</td>
</tr>
<tr>
<td>/ 25% Rest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50% Work</td>
<td>31.5</td>
<td>29.5</td>
</tr>
<tr>
<td>/ 50% Rest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25% Work</td>
<td>32.5</td>
<td>31</td>
</tr>
<tr>
<td>/ 75 Rest</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

Table assumes 8-hour workdays in a 5-day workweek with conventional breaks.

The TLVs assume that workers exposed to these conditions are adequately hydrated, are not taking any medication, are wearing lightweight clothing, and are in generally good health.

APPENDIX C – Determining Humidex from Temperature and Relative Humidity Readings

Source: Environment Canada
# APPENDIX D – Humidex Response Plan

<table>
<thead>
<tr>
<th>Humidex Reading</th>
<th>Moderate physical work, unacclimatized worker or heavy physical work, acclimatized worker</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>45+</td>
<td>50+</td>
<td>• Stop work until the Humidex is 44°C or less</td>
</tr>
</tbody>
</table>
| 42 - 44         | 47 - 49                                   | • If feasible, provide 45 minutes of relief per hour in addition to the provisions listed below  
• If a 75% relief period is not feasible then stop work until the Humidex in 42°C or less. |
| 40 - 41         | 45 - 46                                   | • Provide 30 minutes of relief per hour in addition to the provisions listed below |
| 38 - 39         | 43 - 44                                   | • Provide 15 minutes relief per hour  
• Provide adequate cool (10-15°C) water  
• At least 1 cup of water every 20 minutes  
• Workers with symptoms should seek medical attention |
| 34 - 37         | 40 - 42                                   | • Post heat Stress Warning notice  
• Notify workers that they need to drink extra water  
• Ensure workers are trained to recognize symptoms |
| 30 - 33         | 36 - 39                                   | • Post Heat Stress Alert notice  
• Encourage workers to drink extra water  
• Start recording hourly temperature and relative humidity |
<p>| 25 - 29         | 32 - 35                                   | • Supply water to workers on an “as needed” basis |</p>
<table>
<thead>
<tr>
<th>What to do</th>
<th>How to do it</th>
</tr>
</thead>
</table>
| Lower the temperature                  | Air conditioning  
Ventilation – a good ventilation system can remove hot air from a work area or building.  
If possible, open windows and doors to allow air to circulate. |
| Lower the humidity                     | Ventilation – a good ventilation system can remove humid air. If the work process allows it, try to capture as much of the humidity at its source with air evacuation units.  
Dehumidifiers – these can remove moisture from the air. Where possible, wear clothing that allows sweat to evaporate easily. |
| Reduce worker exposure to radiant heat | Provide workers with shade from the sun or move the work to a shaded location.  
Shield workers from any hot process or relocate equipment that gives off heat.  
Use blinds, curtains, or reflective coatings on windows to reduce direct sunlight.  
In buildings such as prefabricated metal ones, insulate the walls and ceiling.  
Rotate workers into tasks and areas that expose them too less radiant heat. |
| Increase air speed or move air         | Increase air speed without creating an uncomfortable draught. Use fans or air blowers to circulate air.  
Increase the number of air changes per hour. This also helps to remove hot air and humidity. |
| Control physical activity              | Have workers do less physically intense activities.  
If possible to choose a time of day to carry out physical tasks:  
do them in the early morning or once it is cooler in the evening. Avoid intense physical activity during the hottest period of the industrial process or day.  
Use additional workers for the job.  
Select physically fit workers capable of doing the work under hot conditions.  
Rotate workers to less demanding activities / Reduce the pace of work.  
Implement a schedule of work and rest intervals. Provide cooled rest areas. |
| Wear appropriate clothing              | If possible, wear loose-fitting clothing that is light in weight.  
Try to wear clothing made of fabrics that wick sweat away from the skin and allows the sweat to evaporate.  
Aluminized reflective clothing near sources of radiant heat such as hot furnaces.  
Insulated or cooled clothing such as cooling vests may be necessary.  
Sunglasses and sunscreen may be needed to reduce sun exposure. |
3.1.5 Hearing Conservation Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Hearing Conservation Code to outline the requirements and methodology used to protect the hearing of employees. The program includes a strategy to identify noise hazard areas, and implement measures to protect all employees who have the potential to develop occupational noise-induced hearing loss.

2.0 SCOPE AND APPLICATION
This Code of Practice applies to all workers on company and customer facilities where exposure to high noise levels exists. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
Decibel (dB) A measurement of sound pressure where 0dB is defined as being the faintest sound that a person with normal hearing can hear. This measurement scale is logarithmic. For example, an increase from 10 to 13 dB means that the sound pressure has doubled.

Decibel A Scale (dBA) A measurement of sound pressure that has been modified to take into account that the ear is not equally sensitive to all frequencies

Hazardous Noise Hazardous noise is the level at which the noise levels dictated by regulation are exceeded. Hazardous noise is at a level that can cause temporary or permanent hearing damage. Workers in a hazardous noise area would be overexposed unless hearing protections is used.

Impact Noise A noise of short duration where the sound pressure level rises very rapidly to a peak and decays to a background level. (i.e. a nail gun or hammer hitting wood.)

Noise Reduction Rating (NRR) A single number representing the attenuation value for a given hearing protection device.

Noise Unwanted sound that causes harm, either by causing hearing loss, or stress, or interferes with communication.

Sound Energy The amount of energy transmitted to the ear by noise.

Sound Pressure The fluctuations in air pressure caused by noise. The louder the noise, the greater the changes in air pressure. These fluctuations cause the eardrum to vibrate.

4.0 EXPECTATIONS
The Code applies to all workers that work in an environment exposed to noise at 85 dB or more. This does not apply to those who work in an office setting more than 90% of the time. This Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

No worker, employee, contractor or visitor shall be exposed to uncontrolled or protected noise exceeding 85dBA.

Health, Safety and Environment documents will be made available to all personnel.

NCSG shall retain records of all Audiometric Testing for:
1. Annual testing results
2. As long as the worker is with NCSG
3. Education and training purposes with the individual employee

All records shall be retained in a confidential manner in accordance with the current privacy legislation

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Read and understand this Code;
• Report any instances where you have been exposed to loud noise or situations where loud noise exists;
• Attend annual hearing test appointments;
• Wear hearing protection as required (hearing protection is available to all employees at no cost); and
• Inspect and replace hearing protection as required.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Manage employees and contractors Personal Protective Equipment (PPE) compliance;
- Inspect and maintain “High Noise” Warning signs;
- Assist HS&E when conducting noise surveys;
- Provide PPE to employees; and
- Provide training to employees regarding the hearing conservation program at a minimum of annually.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Administer the program;
- Conduct or arrange noise surveys;
- Determine high noise areas;
- Provide recommendations to reduce or eliminate noise; and
- Facilitate audiometric testing
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Monitoring Worker Exposure
Three types of instrumentation can be used to measure noise exposure:
- Sound level meter
- Personal noise dosimeter (PND); and
- Integrating sound level meters (ISLM).

The sound level meter is the basic measuring tool for noise. The sound level meter only measures sound at the moment the measurement was taken at a particular location. It is a good tool to determine what noise levels are produced by equipment or while completing tasks.

PNDs or ISLMs are used once a baseline sound survey has been completed. PNDs are worn by the worker under the direction of the person conducting the survey. They measure the sound a worker is exposed to throughout the day. The use of an ISLM allows short term surveys to ascertain the noise levels associated with specific tasks. The HS&E advisor is responsible to ensure that all noise surveys are carried out in accordance with recognized standards by competent personnel. Contact your HS&E Advisor for assistance on such tasks.

All occupations and some workplaces require noise monitoring to be completed to determine if there is a noise hazard exists. An area or location is considered a noise hazard if sound levels are regularly at, or above, 85 dBA. The HS&E advisor or a competent person approved by the HS&E advisor must complete all noise monitoring. Noise surveys must be completed if there are any equipment changes, or other factors that can increase or decrease noise exposure.

TABLE 1: EQUIVALENT NOISE EXPOSURES

<table>
<thead>
<tr>
<th>Duration per 24 hour period (hours)</th>
<th>Maximum Permissible Exposure Durations for Noise without Hearing Protection (Continuous or Intermittent Noise) * (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>85</td>
</tr>
<tr>
<td>8</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>95</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>1</td>
<td>105</td>
</tr>
<tr>
<td>1/2</td>
<td>110</td>
</tr>
<tr>
<td>1/4</td>
<td>115</td>
</tr>
<tr>
<td>None</td>
<td>Over 115</td>
</tr>
</tbody>
</table>

* Based on a 5 dB exchange rate
### TABLE 2: IMPACT NOISE

<table>
<thead>
<tr>
<th>Sound Level (dB)</th>
<th>Maximum Number of Impacts/8 hour Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;140</td>
<td>0</td>
</tr>
<tr>
<td>140</td>
<td>100</td>
</tr>
<tr>
<td>130</td>
<td>1,000</td>
</tr>
<tr>
<td>120</td>
<td>10,000</td>
</tr>
</tbody>
</table>

### 6.2 Warning Signs

Once the sound survey has been completed, warning signs are required to be posted where the noise levels exceeds 80 dBA. All signs must depict a graphic symbol and written warning about the hazard and instructing workers to use hearing protection.

Any alteration or modification to any existing worksite will require a re-assessment of the noise levels in that area resulting from any changes to the operation. NCSG shall install or make all necessary changes to reduce the amount of noise exposure to workers where ever possible.

### 6.3 Audiometric Testing

All staff exposed to hazardous noise levels are required to have their hearing tested biannually, except for those in BC who must be tested annually, if they are exposed to noise levels that exceed the Provincial / State / Federal occupational exposure limits. Testing results will be recorded and maintained on file.

In the Province of Manitoba all audiometric testing shall be conducted on a frequency of 70 days after the worker is exposed to the noise and every year after that where exposure continues.

For US operations; a baseline audiogram is required within the first 6 months of hire, within 14 hours of identified workplace noise observed and more frequent as required.

### 6.4 Noise Control Methods

There are three forms of noise control options available to the company in order to reduce worker exposure to noise. The control options are engineering, administrative, and the use of personal protective equipment.

#### 6.4.1 Engineering Controls

Engineering controls are the most effective way, but most expensive way of controlling excessive noise in the workplace. Examples include but are not limited to:

- Substitution – replacing noisy equipment with more quiet equipment
- Modification – add or remove parts to make equipment more quiet
- Isolate – covering noisy equipment or moving it to another area to reduce noise output, absorbing, and changing the frequency of the noise.
- Maintenance – Ensure all equipment including noise control equipment is working as intended

#### 6.4.2 Administrative Controls

Administrative controls are the next best way to control noise at the workplace, if noise cannot be reduced by engineering controls. Example of administrative controls for noise abatement include, purchasing equipment that uses sound deadening technology, reducing exposure time to a noisy area, training workers, performing noisy operations when the least amount of employees are present.

#### 6.4.3 Personal Protective Equipment

If engineering controls or administrative methods cannot reduce noise exposure, personal protective equipment and related training must be provided.

#### 6.4.4 Selection, Use and Maintenance of Hearing Protectors

Hearing protected must be Class A hearing protection that will provide a NRR of at least 28 or Grade 4 (CSA) sound attenuation. All workers are to be trained on the proper way to use hearing protection. Refer to the PPE Code of Practice for more information or contact the HS&E advisor to ensure proper selection of hearing protection. Regular evaluations of the NRR control of the hearing protector relative to the environment (noise) are to be done; every 6 months or report of noisy conditions from a exposed worker or a identified change in noise on a noise assessment.

### 6.5 Audiometric Testing

All workers exposed to noise that exceeds the Provincial / State / Federal standards must be have their hearing tested within 6 months of being hired. Hearing testing must be completed every two years to monitor hearing function, except in BC which requires annual testing. Hearing testing is performed and interpreted by a certified audiometric technician or audiologist.

Threshold shifts, in the event that a threshold shift is identified on an audiogram the employee will be notified in writing within 21 days of determination and referred to the company audiologist. In addition to referral to audiologist, the employee shall be re-evaluated and refitted to the hearing protection equipment, retraining in the care/use/limitations of the PPE and medically evaluated for the effectiveness based upon consultation with the audiologist.
6.5.1 **Annual Program Review**

The noise management program will be reviewed annually to ensure its effectiveness. The annual assessment will review training program effectiveness, the need for further noise monitoring, and noise control. The most important assessment will consist of a review of the audiometric test results to identify trends among individuals within certain occupations.

### 7.0 TRAINING REQUIREMENTS AND MATERIALS

All noise-exposed workers and their immediate supervisors must have training in the following:

- New Hire Orientation
- Safety Briefing
- Hearing Conservation provided by HS&E.
- Individual counseling will be completed at the review of the audiometric testing by a designate of HS&E Sr. Management.

### 8.0 RESOURCES

- **Alberta** – Part 16, Noise Exposure, Occupational Health and Safety Code, 2009
- **British Columbia** – BC OHS Regulations part 7, Sec 7.9
  - BC OHS Guidelines Part 7, Sec 7.9
- **Manitoba** – Manitoba WS&H Regulation Part 12, sec 12.4(2)(c)
- **North West Territory** - Section 30 to 31 General Safety Regulations (R.R.N.W.T. 1990, c. S-1)
- **Ontario** - Section 139, Industrial Establishments, Occupational Health and Safety Act
- **Saskatchewan** – Sask OHS Regulations part VII, Sec 110
  - Sask OHS Regulations Part VIII, Sec 111(3)
- **Yukon Territory** - Section 4, Noise Control, Occupational Health Regulation, (O.I.C 1986/184)

May all be used to reference additional information pertaining to Hearing conservation and control methods for minimizing potential exposure and risk.

### 9.0 APPENDICIES

- Appendix A – Hearing Conservation Education
- Appendix B – Audiometry
- Appendix C – Purchasing Requirements
Appendix A – Hearing Conservation Education

The following groups of employees shall receive training related to Hearing Conservation:

- Those identified by Health Safety and Environment during noise surveys and Supervisors
- Employees who are required to enter high noise areas.

Training will be delivered through a standard education package offered by the HS&E and when an employee is given the results of his or her annual audiogram.

The content of the training packages is as follows:

**Education Package:**

- Description of NCSG Hearing Conservation Code
- The hazards of noise
- How hearing loss occurs
- The purpose and limitations of audiometric testing
- The purpose and limitations of hearing protectors
- The proper way to wear hearing protectors
- Characteristics of noise in employee's specific working environment and how such noise could affect hearing

**Individual Counseling during Communication of Audiogram Results:**

- The importance of wearing hearing protectors
- How they should be worn.
- The results of the employee's audiogram and how that relates to the maintenance of the employee's hearing

Training requirements specified in this section applies to individuals performing specific functions within the program.

**Noise measurement**

- Employees taking noise measurements shall be trained in the appropriate methods to assess noise source levels and noise exposures according to CSA Z107.56-94 Procedures for the Measurement of Occupational Noise Exposure.

**Hearing Protection Use and Care**

- Employees monitoring hearing protection shall understand the appropriate requirements of CSA Z94.2-02 Hearing Protection Devices - Performance, Selection, Care, and Use.

**Noise Elimination/Reduction**

- Employees/engineers participating in noise engineering solutions shall receive appropriate training on basic noise control engineering principles (reference documents include IAPA's Noise Control: A guide for Employers and Employees; Current edition of the ACGIH Noise and Hearing Conservation Manual).

**Purchasing**

- Persons purchasing materials, equipment and services involving potential for noise; as well as purchasing protective devices or consulting services shall be made aware of the requirements of the HPP standard and relevant engineering standards.

**APPENDIX B – Audiometry**

**Classification of Audiograms:**

Each baseline audiogram will be classified into one of three categories. These categories are:

1. Normal (N)
2. Early Loss Index (ELI)
3. Abnormal (AB)

A brief explanation of each of these categories is given below.

1. Normal (N):
   - Where threshold data does not exceed 25 dBA hearing threshold level (HTL).

2. Early Loss Index (ELI):
   - The presence of a 15 dBA notch at 3000, 4000, and/or 6000 Hz when comparing the threshold to neighbouring frequencies. The deepest part of the notch should display a threshold of 30 dBA HTL or greater.

3. Abnormal (AB):
   - a. Where thresholds exceed 25 dBA at 500, 1000, or 2000 Hz.
   - b. The difference between better and poorer ear exceeds an average of 15 dBA at 500, 1000, 2000 Hz or exceeds an average of 30 dBA at 3000, 4000, and 6000 Hz.
   - c. A loss of at least 30 dBA when compared to the preceding frequency. The loss can be any frequency above 2000 Hz.
   - d. 30 dBA HTL or greater bilaterally from 3000 to 8000 Hz with no evidence of a notch.

**Classification of Threshold Shifts:**

The results of periodic audiometric tests will be used according to a specified protocol for the purpose of detecting changes in hearing (threshold shifts).

Once a baseline audiogram has been done, subsequent audiograms will be compared to this "baseline audiogram". The purpose of this comparison is to determine whether a shift in hearing has occurred.
Each time comparisons are made to the baseline; the comparisons will be classified as either:

• NO SHIFT (NS)
• ABNORMAL SHIFT (ABS):
  • Where two consecutive frequencies from 1000 Hz to 6000 Hz shift 15 dBA or more when compared to the baseline test (or the new reporting baseline).

Once the classifications have been done, the baseline will be adjusted as appropriate:

• Where there is a confirmed ABS, the first of the two shifts will become the new reporting baseline.
• When an audiogram shows an average improvement of at least 10 dBA in 500, 1000, and 2000 Hz, or an average improvement of at least 10 dBA at 300, 4000, and 6000 Hz, in either ear, when compared to the existing baseline on at least two successive tests, then the best audiogram (or the first periodic test showing the improvement) will become the new Baseline.

APPENDIX C – Purchasing Requirements

Purchasing Requirements for Hearing Protective Devices

• As per CSA Z94.2-02, manufactures need to provide the required information as detailed in the first section of this appendix and preference shall be given to manufactures that can provide additional information as detailed in the latter section of this appendix.

Required Information

• The smallest unit in which the hearing protector is sold or dispensed shall include, either on the package or as an insert, the following information:
  • the attenuation Grade and/or Class of the hearing protection device (see Table 2);
  • a warning that full attenuation will not be achieved unless the hearing protection device is properly fitted; and
  • contact details such as telephone number or an Internet Web address for additional information.

Recommended Additional Information

• The following information regarding the construction, performance, and use of the hearing protectors shall be provided by the manufacturer as part of the hearing protection device packaging where practicable, or shall be readily available upon request by the user:
  • instructions on the selection care and use of the hearing protector.
  • mean sound attenuation id dBA at one-third octave bands centered at 125, 250, 500, 1000, 2000, 4000 and 8000 Hz (for each subject, attenuation shall be computed at each frequency by averaging the subject’s trials and the mean for the panel of subjects is the average of each of the individual subject’s multi-trial averages);
  • standard deviation in dBA at each of the frequencies specified in item (b);
  • for earmuffs, a measurement of the force exerted against the side of the head
  • physical performance test requirements that the hearing protection device satisfies
  • the identity of the test laboratory where each of the performance characteristics were determined;
  • the model(s) of hardhat(s) tested in combination with earmuffs
  • a warning for devices containing metallic components that such devices may increase electrical hazards;
  • a warning that users of hardhats combined with earmuffs must refer to CSA Standard Z94.1; and
  • details of any maintenance requirements and a list of the replacement spare parts that are available.
3.1.6 Inclement Weather Code

1.0 PURPOSE
NCSC Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed an Inclement Weather Code to identify the proper level of protection against a potential injury / damage to employees, contractors, and the public / property regarding adverse weather conditions and possible disruption to operations within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct recognition and understanding of weather conditions shall be detailed in order that adequate protection from potential injury / property damage during operational environments is maintained. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Inclement Weather Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

**Cumulonimbus Cloud** Known as thunderstorm clouds; high winds will flatten the top of the cloud into an anvil-like shape. Cumulonimbus clouds are associated with heavy rain, snow, hail, lightning, and tornadoes. The anvil usually points in the direction the storm is moving.

4.0 EXPECTATIONS
The Inclement Weather Code shall provide required and adequate guidelines to ensure knowledge of potential hazards are recognized prior to the requirement to implement Emergency Response Plans and available to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Inclement Weather Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
- Be familiar with and recognize changes in weather patterns that may affect NCSG operations.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to damage or injury due to inclement weather conditions.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Monitor and review weather conditions as applicable to ensure a safe work environment in the areas of responsibility of NCSG.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Tornado
- A tornado is nature’s most violent form of storm activity.
• It can produce upwardly spiraling winds of between 120 to 450 km per hour (75-280 mph).
• Can cause devastating damage along a path 50 to 300 meters in width.
• The forward motion of the tornado funnel may be quite erratic as it zigzags along a southwest to north easterly direction (usually) at a forward speed of 50 to 70 km per hour.
• Tornadoes occur in many parts of Canada and USA between the months of May and September.

6.2 Lightning
• Development of storm clouds in area (20- 30 km range) (12-18 miles).
• If you feel static electricity around your body, you may be in danger of being struck by lightning.
• Use of 30/30 Rule.
• Stop all work and find shelter if lighting is present in area.

6.2.1 30/30 Rule
• If the time between lightning and thunder is 30 seconds or less, go to a safer location
• Wait at least 30 minutes after hearing the last thunder before leaving the safer location.

6.3 Flood
• Excessive water on roads (above the wheels rim)
• Washed out areas due to speed of water
• Increase in depth to dugouts, low lying areas
• Electrical hazards due to connections being under water

6.4 Wildfire
• Forest or grassland fires can begin without warning
• Wind can cause sudden and severe changes in direction and magnitude
• It can spread up to seven kilometers per hour.

6.5 Blizzard
• Blizzards are the most threatening of winter storms
• A typical blizzard will last longer than six hours, combining falling, blowing and drifting snow with wind speeds over 40 km per hour (25 miles), reduce visibility, produce low temperatures and a snowfall of more than 10 centimeters (4 inches).

6.6 Report and Response Procedures
• In conjunction with NCSG and Client Emergency Response Plans and Provincial / State disaster response systems, upon identification of a potential change in weather conditions that may develop into severe weather, any operations / worksite activity that may be at risk shall be halted.
• Equipment, employees, contractors, visitors and general public within the work site shall be directed to applicable safe locations as determined by the ERP.
• Supervisors / Management shall assist ERP teams to ensure all persons are accounted for.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG orientation

8.0 RESOURCES
• Environment Canada – Weather Office - www.weatheroffice.gc.ca/warnings
• Alberta Emergency Management Agency - www.aema.alberta.ca/ps_emergency_public_warning_system.cfm#Potential_uses
• Alberta OH&S Act Section 2
• Alberta OH&S Code Part 2
• BC OH&S Code Part 17
• BC OH&S Code Part 4
• Saskatchewan OH&S Regulations Part VI
• Manitoba OH&S Regulations Part 4
• Ontario OH&S Act Reg. 854, Part IV

May all be used to reference additional information pertaining to inclement weather and control methods for minimizing potential exposure and risk.

9.0 APPENDICIES
• Appendix A – Tornado Information Sheet
• Appendix B – Blizzard Information Sheet
• Appendix C – Lightning Information Sheet

11.0 SUPPORTING DOCUMENTS
• None
APPENDIX A – Tornado Information Sheet

What Does a Tornado Look Like?
- A tornado is recognizable by a funnel cloud hanging from the base of a dark, ominous looking storm cloud. The sound has been described as a tremendous roar which sounds like an express train or jet aircraft (only louder).
- Clouds may be green or yellow tinged.
- In a thunderstorm approaching from a westerly direction, the most likely place for a funnel cloud to appear is near the left-hand side (southern flank) of an approaching curtain of heavy rain and hail.
- There is usually a noticeable lowering of a portion of the cloud that contains a large, swirling, turbulent mass from which the funnel will hang.

Watches and Warnings
- A severe thunderstorm is the driving force behind a tornado.
- Hot, humid weather combined with a cold front could be a sign that a tornado is brewing, and a funnel cloud hanging from a dark cloud may be visible before the tornado actually occurs.
- A tornado may be accompanied by lightning, high winds, and hail.
- The weather office issues warnings and radio and television repeat weather watches and warnings.

A Watch is an advisory only.
- Nothing may happen but a watch could develop into a warning. Stay alert! Listen to your radio.

A Warning means that the event is imminent.
- Take precautions and listen to your radio.

Tornado Watches and Warnings
The word tornado will be used in three different weather announcements.

1. If there is a severe thunderstorm warning, it may include the phrase "Remember some severe thunderstorms can produce a tornado." This is really the same as a tornado watch. It does not mean that there will be a tornado; it means that a tornado could develop. Stay alert and listen to the radio.
2. A Tornado Watch means that all the conditions that make a tornado are present. It does not mean that a tornado will occur. It is a "watch" only. Listen to your radio for half-hour updates.
3. A Tornado Warning means that a tornado has touched down. If the warning is for the area where you live, take precautions immediately and listen to your radio for constant updates.

When Environment Canada or the National Weather Center has reliable evidence that a tornado has been detected or is imminent, a Tornado Warning is issued for a specific area through the media or through Emergency Public Warning System.
NCSG vehicles shall be equipped with supplies which could be useful in an emergency and shall include but not be limited to:

- Blanket
- Booster cables
- Extra clothing and footwear
- Fire extinguisher (rated A-B-C)
- First aid kit with first aid manual
- Flashlight and batteries
- Maps
- Matches and a “survival” candle in a tin can (to warm hands, heat a drink or use as an emergency light)
- Non-perishable high energy foods (raisins, granola bars, etc).
- Sand
- Shovel
- Solar, wind-up or battery radio
- Tool kit
- Water (bottled)
- Warning light or reflectors

In addition to the above listed items, NACG vehicles which travel in remote / isolated areas shall also include at minimum:

- Sand
- Facial Tissue
- Sleeping bag for each passenger
- Pocket knife
- Extra food and water supplies
- Change of clothing along with extra socks, hats, mittens, boots and coats

**During the Blizzard**

- If roads are in poor condition and travel is not recommended, stay where you are until the situation changes.
- If you must travel, take a cellular phone with you or advise someone what route you are taking and your expected arrival time.
- Always drive with extreme caution! If you find yourself caught in a blizzard or stranded in your vehicle take the following safety precautions:
  - Stay with the vehicle.
  - Wait for help. In a blizzard, rescue workers will be looking for stranded vehicles.
  - If you attempt to walk and find help in blowing snow, low temperature storm - disorientation can occur quickly and you can become lost.
  - Keep warm and dry.
  - Stay relaxed and think through possible actions.
  - Slightly open a window on the sheltered side, away from the wind, for ventilation.
  - Leave the car hood up to signal distress.
  - Turn on your emergency flashers to attract the attention of passing motorists or the police.
  - Keep your emergency kit handy in the vehicle.
  - If your vehicle is stuck, think carefully before attempting to push the vehicle manually or shovel during strong biting winds, blinding snow and cold temperatures.
  - Work or walk slowly. Over exertion and exposure to the weather may lead to a heart attack unless you are in prime physical condition.
  - Always think in terms of preserving body heat. Perspiration can mean a dangerous loss of body heat. Your clothing is the closest insulation to your body and it must be kept dry. When you perspire, your clothing will become damp and lose its insulation value.
  - If your vehicle’s exhaust pipe is buried in snow, try to clear the snow away or exhaust fumes will travel into the vehicle when it's running.
  - If you can't run your vehicle, light a candle to keep warm.
  - Run your motor sparingly and only if the exhaust pipe is exposed and exhaust can be taken away by air currents.
  - Avoid overheating - loosen clothing at the neck, wrist and in front or remove layers of clothing.
  - Use the high-energy foods packed in your Emergency Kit. Your body requires fuel to keep warm.
  - Stimulate circulation by moving your arms, hands and feet.
  - After the blizzard or bad weather has past, seek help during daylight hours.
Appendix C – Lightning Information Sheet

30/30 Rule
- Follow the precautions outlined below when thunder is heard within 30 seconds of a lightning flash and wait for 30 minutes after the last thunder is heard to resume your activity.
- If you’re unable to take shelter inside, find the safest accessible location and stay there until the storm has passed.

General Precautions
- Stay away from metal poles, fences, clothes lines etc.
- If driving, slow down or park away from trees, power lines or other objects that may be damaged by storm activity.
- Stay inside metal-bodied (hard top) vehicles or caravans but do not touch any metal sections.
- If undertaking water activities, leave the water immediately.
- Discard all metal objects.
- Remember the 30 – 30 lightning safety rule – go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after the last clap of thunder.
- Rubber soled shoes and rubber tires provide NO protection from lightning. The Steel frame of a hard topped vehicle does provide increased protection if you are not touching metal. Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.

If shelter is near-by:
- Seek shelter in a hard top vehicle or solid building. Avoid small structures or fabric tents.
- Keep clear of windows.

If shelter is not available:
- Crouch (alone, feet together), preferably in a hollow. Make yourself a small target.
- Remove metal objects from head/body.
- Do not lie down (the more of you that is in contact with the ground, the more ‘attractive’ you are to lightning) but avoid being highest object.
- If your hair stands on end or you hear buzzing on nearby rocks, fences etc, move immediately. At night, a blue glow may show if an object is about to be struck.
- Stay away from high and low points (hilltops, ridges & gullies), rock overhangs and shallow caves.
- Keep out of, and well away from, water bodies or watercourses.
- Make sure the group is aware of the Lightning Safe Position. This involves:
  - Squatting or crouching with knees drawn up and feet together, preferably on dry insulating material (eg. foam mat).
  - Keeping hands off the ground.
  - Spread group members out – about ten meters apart, but within calling distance.
  - Never shelter under tree/s.

Rubber Tired Equipment
- If struck by lightning the equipment will NOT remain electrically charged. The charge will typically ground itself through the tire rim base and arc to the ground through the rubber tire. The greatest hazard exists in a tire fire or explosion due to the paralysis of the rubber.
- The operator will walk 300 meters away from the front of the unit in a straight line and in the direction of the tire tread, while minimizing exposure with the tires and sidewalls.
- All equipment shall provide a 300m clearance away from the unit.
- Supervision will place “DO NOT ENTER” signs 300 meters around the unit for at least 24 hours.
- After 24 hours a competent person will use an infrared heat sensor to check for hot spots on the tire. If hot spots remain, the area will continue to be barricaded for another 6 hours. If there are no hot spots on the tires, a competent tire technician will then proceed to inspect the tire.

Track Type Equipment
- If struck by lightning, the equipment will NOT remain electrically charged. The charge will typically ground itself through the tracks of the machine. The greatest hazard exists if the operator is outside the cab of the machine and touching it when lightning strikes.
- The operator will walk 300m away from the unit in a straight line.
- Supervision will place “DO NOT ENTER” signs around the vehicle until the unit has been inspected by a competent mechanical Technician.

First aid
- Apply immediate CPR to lightning victims until medical help arrives. (You won’t receive a shock from the victim.)
3.1.7 Fatigue Management Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Fatigue Management Code to identify the proper level of protection against a potential injury to employees, contractors, and the public when the level of fatigue to an individual may be in question.

2.0 SCOPE AND APPLICATION
The adequate understanding of the effects of fatigue on employees and contractors is essential in maintaining a safe work environment to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
The following definitions are specific to Fatigue Management Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Fatigue A state of being tired.
Stressors An agent, condition, or other stimulus that causes stress to an individual.

4.0 EXPECTATIONS
The Fatigue Management Code shall provide required and adequate guidelines to ensure knowledge of potential hazards which may be experienced due to excessive fatigue by employees, contractors, visitors and general public within NCSG areas of responsibility. The Fatigue Management Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Inform NCSG of any personal fatigue related conditions which may affect reasonable work conditions from being completed.
• Attempt where reasonably practicable to ensure adequate periods of rest are received during normal working conditions.
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to fatigue related stressors.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Ensure “Hazard Assessment” properly evaluates fatigue for each job task, proper tasks and institutes effective control measures.
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Never operate any motor vehicle and / or heavy equipment while excessively fatigued.

5.3 Supervisors
I addition to 5.1, it is the supervisor’s responsibility to:
• Monitor through appropriate record keeping and systems, that workers are where reasonably practicable ensuring adequate periods of rest are received during normal working conditions.
• Ensure that an adequate and appropriate period of rest commensurate to the work being done is provided during the work process to enable employees not become excessively fatigued.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.
5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Establish in conjunction with appropriate NCSG Departments, a recordkeeping and monitoring process to ensure hours of work and operation do not exceed legislative standards.
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Historical Understanding of Potential Risk of Fatigue at Work
Slow reaction to work conditions; failure to respond, poor logic and judgement, damage to property, and an increase in risk taking which may result in injury are potential results of fatigue in the workplace. NCSG shall ensure as reasonably practicable that these conditions are not contributed to through increased pressures to complete a project or task.

6.2 Identifying Factors
Long hours of work, extended consecutive days of work, and inadequate hours of rest are all stressors which contribute to fatigue. Time of day may also be a factor when an individual’s circadian rhythm is considered.

The required use of specific PPE (e.g. full face respirators, additional outer protective clothing) are also factors which may increase an individual’s fatigue.

6.3 Prevention Practices
- NCSG shall ensure all legislative controls are adhered to regarding driver hours of rest.
- Adequate rest periods as detailed in Heat and Cold Stress Codes shall be incorporated to prevent increased fatigue due to work activity.
- NCSG shall ensure employee education regarding travel, road, and weather conditions being part of the “work day” are emphasized.
- NCSG shall actively pursue an employee awareness program which educates employees and contractors of the hazards involved in work related fatigue.
- Company Standard Operating Procedures in conjunction with FLRA’s shall detail if a requirement to stay overnight during road travel is an administrative control method available to employees due to site specific work conditions without penalty

7.0 TRAINING REQUIREMENTS AND MATERIALS
- Defensive Driving Course
- NCSG orientation
- Fatigue and Stress Orientation factors

8.0 RESOURCES
- Alberta Employment and Immigration – Workplace Health & Safety Bulletins – ERG015-1 Fatigue and Safety at the Workplace
- Alberta Employment and Immigration – Workplace Health & Safety Bulletins – ERG015 Fatigue, Extended Work Hours, and Safety in the Workplace
- Canadian Council of Motor Transportation Administrators – Commercial Vehicle Drivers Hours of Service Regulations Application Guide
- Alberta OH&S Code (second edition)
- British Columbia OH&S Code (third edition)
- Ontario OH&S Reg. 213/91, Part 4, 386 - 388

May all be used to reference additional information pertaining to fatigue management and control methods for minimizing potential exposure and risk.

9.0 APPENDICIES
- None
3.1.8 Cold Stress Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Cold Related Stress Code to identify the proper level of protection that will assist all employees in performing their tasks effectively and efficiently when operating in a cold climate environment. This code will aid employees in minimizing the risks of exposure and assist in the knowledge of safe work practices.

2.0 SCOPE AND APPLICATION
The guidelines and recommendations are provided to increase awareness of correct control measures to be used by NCSG employees, contractors where there may be potential exposure to equipment, environment and / or conditions of a cold nature. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
The following definitions are specific to Cold Related Stress Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Dehydration An abnormal depletion of body fluids. This can occur during cold climate working conditions when an individual perspires due to exertion / additional clothing without replenishing the required fluids in the body.

Frostbite The upper layers of the skin begin to crystallize and become brittle. Frostbite will occur if human skin is unprotected from cold temperatures. The frozen extremity may appear completely white or may be mottled with blue and white patches. Depending on the temperature and degree of wind chill, frostbite can occur in less than 5 minutes.

Frostnip Symptoms of frostnip begin with pain and redness and progresses toward frostbite with increased pain, pale skin, tingling and numbness. Hands and feet are the most common areas affected by frostnip and frostbite; however, any unprotected skin is susceptible.

Hypothermia Hypothermia is a serious medical condition in which the body’s core temperature falls below normal, usually due to prolonged exposure to cold and wet conditions. This condition may also be mistakenly referred to as “EXPOSURE”.

Wind Chill Wind Chill can create more challenges to employees when working outside in extremely cold conditions. As the temperature decreases and the wind speed increases, the wind chill indices increase, thus creating a higher potential for frostbite. High wind chill values can cause rapid freezing of human flesh and often damage to human flesh only takes minutes. Therefore, avoid working outside when high wind chills are present, unless adequate protection to the skin can be provided.

4.0 EXPECTATIONS
The Cold Related Stress Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to working and exposure in a cold environment which all employees, contractors, visitors and general public within NCSG may become in contact with. The Cold Related Stress Code will be reviewed at a minimum of every three years.

This Code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
• Inspect personal protective equipment before using it, and
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Be responsive, through adequate training, to minimize the risk of exposure when working in a cold related climate / condition.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Immediately inform the Supervisor of any change in climate or weather conditions which may adversely affect the safety of employees, contractors, or general public within the area.
• Ensure that a ‘buddy system’ monitoring process is exercised if required to minimize the risk of exposure to employees during the course of work activities.
5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:

- Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Ensure, appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.
- Ensure if required due to climate / weather conditions that adequate work / rest periods are monitored and maintained to ensure the safety of all employees, contractors, visitors within NCSG areas of operation or active worksites.

5.4 Management
In addition to 5.1, it is the management responsibility to:

- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:

- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Adequate / Appropriate Clothing
Risk of hypothermia and frostbite may be minimized by the proper use of clothing designed to work in cold climate conditions. Dress in layers for maximum heat retention and temperature adjustability. Wear clothing that is designed for cold weather and layering (don’t just layer a bunch of t-shirts). Use a toque or hard hat liner to prevent significant losses of body heat.

Always have the appropriate cold weather clothing available – weather changes are frequent and often unexpected. Keep cold weather clothing as dry as possible. If extra clothing must be stored outside, use a dry-bag or a plastic bag lined backpack.

The clothing that you wear when working hard in cold weather is important to select carefully. Clothing that does not dissipate heat and vapor can cause you to get wet from the inside-out and when you slow down, you are likely to get quite cold. Recommended types of clothing and their beneficial properties are outlined in the Appendices.

6.2 Recognition of Frostnip / Frostbite / Hypothermia
Exposed extremities of the body will normally become affected first. The fingers, toes, nose, cheeks, ear tips usually feel cold and can begin with pain and redness and progresses toward frostbite with increased pain, pale skin, tingling and numbness. The frozen extremity may appear completely white or may be mottled with blue and white patches.

A drop in the body’s core temperature may result in the initial stages of hypothermia starting. Shivering is the body’s way of warning that it needs to be warmed-up. If addressed and corrected early through warm-up breaks and adequate clothing, hypothermia may be averted, however, if left to continue through moderate and severe stages of the condition, unconsciousness and death may occur.

6.3 Prevention Practices
Job safety analysis, task analysis, and field level risk assessment shall be used to determine the level of PPE that may be required to minimize exposure. Consideration shall be taken by all levels of employees regarding:

- length of exposure,
- type of work,
- wind speed factors,
- equipment worked on / with,
- and warm-up break periods to be used.

The established PPE and schedules relating to cold related stress factors shall be considered the minimum acceptable level for NCSG employees, contractors, visitors and general public, while at the work site. Conditions shall be monitored regularly to ensure any changes are identified and compensated for as required.

The Wind Chill index shall be consulted as required to ensure that employee safety is maintained during adverse conditions. Copies of the Wind Chill Index shall be available to all levels of employees to assist in the monitoring of any climate changes.

6.4 Application of Wind Chill Index
The wind chill factor is a rate of cooling based on the combined effects of wind and low temperature. It will
indicate how fast a human body will cool under certain combinations of wind and temperature. The real hazard with wind chill is that heat will be drawn away from your skin faster than the body can replace it. This may lead to frostbite or worse.

Company Standard Operating Procedures will further define additional levels of PPE requirements and warm-up schedules in conjunction with understanding the Wind chill index. The Wind Chill index shall be used as a minimum guideline and all employees are responsible to use additional caution and monitoring skills to identify changes in climate work environments.

6.4.1 Temperature Guidelines

Low Wind Chill Factors: 0 to -10 Degrees Celsius
- Conditions are slightly uncomfortable for outdoor activity. Dress Warmly. Winter clothing is recommended, including hat, gloves and dry insulating under clothing.

Moderate Wind Chill Factors: -10 to -25 Degrees Celsius
- Cold on exposed skin. Conditions can be comfortable for outdoor activity on sunny days. Hat, gloves and layered dry insulating clothing is a necessity. Risk of hypothermia over prolonged periods.

Cold Wind Chill Factors: -25 to -45 Degrees Celsius
- Important to keep active. Cover all skin. Take frequent warm up breaks. Frostbite is possible on exposed skin over short periods of time so check frequently. Risk of hypothermia over prolonged periods.

Extreme Wind Chill Factors: -45 to -59 Degrees Celsius
- Very uncomfortable. Outdoor activity should be limited to short periods. Cover all exposed skin. Dress in layers. Limit outdoor activities to short periods. Exposed skin freezes in minutes. Serious risk of hypothermia over prolonged periods.

Very Extreme Cold Wind Chill Factors: -60 Degrees and Colder
- Outdoor conditions are hazardous. Exposed skin will freeze in 2 minutes. Stay indoors.

In addition to the Wind Chill Index, assessment of the following must be considered when determining warm-up breaks and PPE Selection:
- individual workers activities,
- physical condition,
- age,
- weight,
- fitness level
- fatigue
- a worker’s use of medication(s)
- consumption of alcohol or use of nicotine

7.0 TRAINING REQUIREMENTS AND MATERIALS
- PPE Equipment specific training
- Cold Climate / Outer Garment material
- Layering and Selection of Correct
- NCSG Orientation
- First Aid – Hypothermia Recognition / Treatment

8.0 RESOURCES
- Alberta OH&S Code Part 2
- BC OH&S Code Part 4
- Saskatchewan OH&S Regulation Part III
- Manitoba OH&S Regulations Part 4
- Ontario OH&S Act Reg. 854, Part IV
- Ontario Weather Page
- Alberta Employment and Immigration – Workplace Health & Safety Bulletins – MG021 General Safety

May all be used to reference additional information pertaining to Cold Related Stress and control methods for minimizing potential exposure and risk.

9.0 APPENDICIES
- Appendix A – Sample of Articles of Clothing
- Appendix B – Threshold Limit Values Wind Chill Chart
- Appendix C – Threshold Limit Values work/warm up schedule for four hour shift
- Appendix D – Signs & Symptoms of Hypothermia
## Appendix A – Sample of Articles of Clothing

<table>
<thead>
<tr>
<th>Article of Clothing</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene long underwear bottoms</td>
<td>A good foundation for many types of weather. Wear with shorts and gaiters for a good versatile set-up.</td>
</tr>
<tr>
<td>Long shorts, etc.</td>
<td>Any breathable pant configuration will help you keep warm but manage for heat and water vapor.</td>
</tr>
<tr>
<td>Long sleeve polypropylene shirt</td>
<td>A great foundation. Breathes very well and does not retain moisture.</td>
</tr>
<tr>
<td>Light fleece vest</td>
<td>Helps keep the core temperature up without impeding movement. Fleece breathes very well unless it is of the Wind stopper variety.</td>
</tr>
<tr>
<td>Windbreaker</td>
<td>Can be put on when a breeze or wind makes your polypropylene and fleece ineffective. Wind breakers with pit zips can be great for heat management.</td>
</tr>
<tr>
<td>Warm fleece jacket or sweater</td>
<td>For when it gets colder or your other clothing gets wet.</td>
</tr>
<tr>
<td>Rain gear (pants and jacket)</td>
<td>For the really wet days.</td>
</tr>
<tr>
<td>Toque / Helmut Liner</td>
<td>A great heat saver that can be easily removed and stored elsewhere on your body until needed.</td>
</tr>
</tbody>
</table>

## Appendix B – Threshold Limit Values Wind Chill Chart

![Wind Chill Chart]

Adapted from: Threshold Limit Values (TLV™) and Biological Exposure Indices (BEI™) booklet; published by ACGIH, Cincinnati, Ohio
APPENDIX C – Threshold Limit Values work/warm up schedule for four hour shift

<table>
<thead>
<tr>
<th>Air Temperature Sunny Sky</th>
<th>No Noticeable Wind</th>
<th>5 mph Wind</th>
<th>10 mph Wind</th>
<th>15 mph Wind</th>
<th>20 mph Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C (approx)</td>
<td>Max. Work Period</td>
<td>No. of Breaks</td>
<td>Max. Work Period</td>
<td>No. of Breaks</td>
<td>Max. Work Period</td>
</tr>
<tr>
<td>-26° to -28°</td>
<td>(Norm breaks) 1</td>
<td>(Norm breaks) 1</td>
<td>75 min.</td>
<td>2</td>
<td>55 min.</td>
</tr>
<tr>
<td>-29° to -31°</td>
<td>(Norm breaks) 1</td>
<td>75 min.</td>
<td>2</td>
<td>55 min.</td>
<td>3</td>
</tr>
<tr>
<td>-32° to -34°</td>
<td>75 min.</td>
<td>2</td>
<td>55 min.</td>
<td>3</td>
<td>40 min.</td>
</tr>
<tr>
<td>-35° to -37°</td>
<td>55 min.</td>
<td>3</td>
<td>40 min.</td>
<td>4</td>
<td>30 min.</td>
</tr>
<tr>
<td>-38° to -39°</td>
<td>40 min.</td>
<td>4</td>
<td>30 min.</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>-40° to -42°</td>
<td>30 min.</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-43° to below</td>
<td>Non-emergency work should cease</td>
<td>Non-emergency work should cease</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX D – Signs & Symptoms of Hypothermia

Signs and Symptoms of Hypothermia:

Mild hypothermia (98 - 90° F)
- Shivering
- Lack of coordination, stumbling, fumbling hands
- Slurred speech
- Memory loss
- Pale, cold skin

Moderate hypothermia (90 - 86° F)
- Shivering stops
- Unable to walk or stand
- Confused and irrational

Severe hypothermia (86 - 78° F)
- Severe muscle stiffness
- Very sleepy or unconscious
- Ice cold skin
- Death
3.1.9 Operator Distraction Code

1.0 PURPOSE
NCSG Crane and Heavy Haul services and its affiliated companies have developed an Operator Distraction Code to identify the proper level of protection against a potential injury / damage to employees, contractors, and the public / property due to the distraction of an operator from the primary area of focus and attention while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The comprehension and application of prevention of operator distraction is essential in maintaining a safe work environment. Emphasis shall be placed on the employee to comply with the direction provided and take a leading role in preventing distraction. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.
Communication devices used for safety and work related transfer of information are excluded from this code however must still be recognized as a potential distraction.

3.0 DEFINITIONS
The following definitions are specific to Operator Distraction Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Distraction Diversion of attention from driving or operating the machine, because the driver/operator is temporarily focusing on an object, person, task or event not related to driving/operating, which reduces their awareness, decision-making, and/or performance, leading to an increased risk of corrective actions, near-crashes, incidents or serious crashes.

4.0 EXPECTATIONS
The Operator Distraction Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Operator Distraction Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Inspect personal protective equipment before using it, and
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Ensure the use of personal protective equipment does not become in itself a distraction to the task assigned.
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to distraction.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Immediately inform the Supervisor of any personal non-work related areas of concern which in the opinion of the employee may cause distraction to the task assigned.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Ensure appropriate PPE as required in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Ensure that all reasonable measures are applied to enable workers to address without fear of reprisal any personal non-work related areas of concern of a worker which in the opinion of the employee may cause distraction to the task assigned.
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.
5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Manufacturer’s Operation and User Manuals
- All employees / contractors shall have readily available access to equipment operator / user manuals in the workplace.
- All employees / contractors shall have reviewed the operator / user manual prior to the first use of equipment and detail any identified caution and hazard distraction notices identified by the manufacturer.
- All employees / contractors shall review on periodic schedule operator / user manuals to maintain a current understanding of potential distractions identified.

6.2 Entertainment / Electronic Devices
- NCSG employees, contractors, visitors shall not use an entertainment / electronic device (I-Pod, Ear Phone Radio, Cell Phone, Blackberry, etc) which prevents the individual from hearing ambient sound or emergency response alarms in the vicinity of the workplace.
- NCSG employee, contractors, visitors shall not drive a vehicle within the workplace or site while operating a cellular phone. Appendix A details the procedure for cell phone use by NCSG employees and contractors.
- All NCSG workplaces shall ensure any ambient entertainment noise (e.g. office radio, portable CD player / radio, vehicle radio) used in the workplace is maintained at a sound level which will not prevent employees in the vicinity from hearing ambient sound or emergency response alarms in the workplace.
- Operators who are in control of equipment shall ensure the vehicle is in park / neutral with park brake engaged or otherwise made inoperable if communicating with other employees / contractors from the operators control area outside the scope of the equipment’s standard operation.

6.3 Other Distraction Considerations
- NCSG employees / contractors shall as reasonably practicable recognize other elements which may distract individuals. This list includes, but is not limited to:
  - Eating while operating equipment / driving
  - Multi-tasking a process to save time resulting in split attention
  - Talking with co-workers
  - “DAY-DREAMING”
  - Fatigue (to be read in conjunction with the Fatigue Management Code)
  - Horseplay in the workplace
  - Personal issues (non-work related)
- NCSG employees / contractors shall upon recognition of a distraction take reasonable steps and procedures to correct / eliminate the distraction prior to continuing with the task assigned.
- New employees are prone to distraction due to sensory overload in a new environment.

7.0 TRAINING REQUIREMENTS AND MATERIALS
- Defensive Driving Course
- NCSG orientation

8.0 RESOURCES
- Alberta OH&S Code Part 2
- OSHA 1920
- Alberta Distracted Driving Legislation

May all be used to reference additional information pertaining to operator distraction and control methods for minimizing potential exposure and risk.

9.0 APPENDICIES
- Appendix A – Steps for Cell Phone Use – NCSG Operated Equipment

10.0 SUPPORTING DOCUMENTS
- None
APPENDIX A – Steps for Cell Phone Use – NCSG Operated Equipment

NCSG Employees shall:
- as reasonable practicable, not use a phone when driving or operating equipment (hands free, hand held, or messaging)
- use message banking if available;
- when it’s safe to do so, pull to the side of the road ensuring the vehicle is completely removed from the flow of traffic prior to making or receiving calls; and / or
- arrange to ring the caller back at a time when the employee is not driving/operating.
3.2 Awareness Codes

3.2.1 Benzene Awareness Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Benzene Awareness Code to identify the proper level of protection against potential injury / damage to employees, contractors, and the public / property relating to working in a potential Benzene environment.

2.0 SCOPE AND APPLICATION
The understanding of risks, recognition and immediate action to be taken in the event of exposure to Benzene is essential in maintaining a safe work environment. The application of this action in the correct manner shall enable employees / contractors to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG Companies.

3.0 DEFINITION, STATE, PROPERTIES
The following definitions are specific to the Benzene awareness Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

**Benzene** Benzene is a flammable liquid made from hydrocarbons and coal. Before the Great War, benzene was used mostly as a solvent or in gasoline to enhance the octane number. Today, benzene is used mostly as a raw material in the manufacturing industry;
- Styrene, an important ingredient in plastics and synthetic rubber
- Phenol, an ingredient in adhesives and dyes
- Nylon
- Pesticides
- Detergents

Crude oil and natural gas condensate contain benzene although the concentration varies considerable depending on the geology and location of the well site. Drilling fluids may contain benzene and can also be contaminated with benzene when they are recirculated down well. Benzene and other hydrocarbons may be released from stacks, flares, hydrocarbon storage facilities, glycol dehydrators and other operations that involve crude oil or fuels.

A small amount of benzene, usually less than 1% by weight is still present in gasoline sold in North America. Workers may be exposed to benzene when gasoline is used or handled or from vehicle exhaust. The chemical is still used as a solvent and reagent in laboratories.

Synonyms for benzene include; Benzol, carbon oil, coal naphtha, cyclohexatriene and phenyl hydride.

4.0 HEALTH EFFECTS

4.1 Acute Health Effects
Workers are usually exposed to benzene by inhaling the airborne vapors or by skin contact with the liquid chemical. The vapors in air can also be absorbed through the skin. This occurs to a much lesser extent than by direct contact with the liquid.

Exposure to benzene at high concentrations can cause depression of the central nervous system, causing drowsiness, dizziness, headache, nausea, vomiting, sleepiness, fatigue, slurred speech, loss of balance and disorientation. These effects are not unusual at concentrations below 25 ppm, and are more common at 50 to 150 ppm. As concentrations of benzene vapors in the air increase, the health effects become more severe (vertigo, confusion, loss of consciousness). Exposure to about 20,000 ppm for 5 to 10 minutes can cause death.

Nose and throat irritation have also been reported after short-term exposure

4.2 Chronic Health Effects
Prolonged or repeated contact with the skin causes redness, drying, and cracking because benzene dissolves and removes the protective natural oils from the skin.

The most important health effect of benzene is its impact on the blood system. Benzene can be metabolized in the liver and bone marrow and its metabolites can damage the bone marrow where new blood cells are produced. At high concentrations these metabolites can cause a serious condition where the number of red blood cells, white blood cells and clotting cells is reduced (pancytopenia). In the initial stages, this effect is thought to be reversible, but with continued exposure it may progress to aplastic anemia (a rare blood disorder that results from the failure of the bone marrow to produce blood cells) or leukemia (a cancer that starts in blood cells).

Benzene can weaken the immune system by lowering the number of white blood cells that are produced. Studies of workers have shown that the damage to the blood system can occur with exposure to benzene at concentrations of 30 ppm to 120 ppm over a time period of 3 months to 17 years. Exposure to benzene below workplace occupational exposure limits (OELs) have not been shown to produce damage to blood cells.

The International Agency for Research on Cancer (IARC) has concluded that benzene is carcinogenic to humans. Benzene is classified as a Group 1 carcinogen. Long-term exposure to benzene may increase the
incidence of a specific type of leukemia (acute myelogenous leukemia) and may be associated with other forms of leukemia and lymphomas (cancers that develop from cells in the lymphatic system).

Studies have shown that Benzene can cross the placenta, but there is no conclusive evidence that it affects the fetus. Benzene can cause mutation of cells, usually when there is exposure to concentrations that are high enough to also cause blood changes.

Exposure to ethanol and benzene together can increase the effects to the blood system. Exposure to toluene and benzene can reduce the body’s ability to remove benzene since the two chemicals are metabolized in a similar way.

4.3 Potential Locations of Exposure
As we operate our equipment within refineries and processing facilities, it is possible that an unplanned event or emergency could occur that may cause the emergency release of benzene into the work area.

Areas of potential release would include (but not limited to):
- Tank farms (hydrocarbon)
- Pressure vessels from refining
- Tanker truck fueling stations
- Refinery process areas

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
- To read and understand this code and attend any educational presentation around this topic where appropriate.
- To immediately notify their immediate supervisor or manager if they suspect the presence of Benzene in or near their assigned work environment.
- Be responsive, through adequate training, to minimize the risk of hazards relating to exposure to Benzene in the work environment.
- Smoking is prohibited in any areas where benzene may be stored, present or have the potential or release due to its flammable and explosive nature.
- Ensure that fire extinguishers are readily available for any areas where benzene may be stored, present or have the potential of release.
- Make themselves aware of the emergency site procedures or contingency plans related to benzene.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to Benzene exposure.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in asbestos exposure or potential exposure a worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure when the potential hazard to benzene exposure exists that all NCSG personnel or contractors working with or on behalf of NCSG are informed and educated as to the particulars of this type of hazard.
- Ensure adequate precautions and appropriate PPE is used to protect all workers, please refer to the appropriate PPE Code.
- Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
- Maintain Health, Safety and Environment records or documents relating to this topic.
- Ensure any necessary education or training required for any NCSG or contractor working on a site containing or thought to contain benzene is provided in accordance with the applicable legislation for that worksite location.

6.0 METHOD

6.1 Property Recognition of Hydrogen Sulphide
NCSG employees shall be familiar with the properties of Benzene.

6.2 Effects upon Exposure of Hydrogen Sulphide
NCSG employees shall be familiar with the effects on the body when exposed to Benzene
6.3 Monitoring and Prevention Practices
Continuous Monitors
In larger plants, a system is used where potentially hazardous areas are sampled by strategically located sensors. An alarm system is activated by any sensor and will give warning when the Benzene concentration rises above pre-set limits for the area sampled.
NCSG shall ensure in conjunction with Company Procedures that all areas of responsibility shall be assessed for the requirement of monitor equipment.

Portable Monitors
NCSG shall ensure that all employees, contractors, visitors on site have been orientated as applicable to the dangers of Benzene exposure and are trained prior to access being given to a site which may have a potential of Benzene exposure.

6.4 Protection Practices
NCSG shall ensure a written code of practice is in place that addresses the requirement to have respiratory equipment on site and have employees, contractors, and as applicable visitors trained in its use. (See PPE Code- Respiratory Protection Code)
Regular hazard assessments of Benzene related sites will identify and prevent potential exposure.

6.5 Special Considerations
If the work shift is more than 8 hours, the OEL for Benzene shall be adjusted in accordance with the applicable legislative regulations and schedules.
NCSG shall ensure that applicable barriers, signage and access control are in place as applicable to a site which may have Benzene exposure potential.

6.6 Emergency Response Procedures
NCSG shall ensure that Emergency Response Procedures are established in conjunction with Client Site Procedures, Company Procedures and are made available to all employees, contractors, and visitors on site. A specific procedure must be followed in the event of a Benzene Alert and to evacuate the area and proceed to the nearest muster point.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG shall ensure regular practice and training in emergency rescue response as applicable by legislative regulations is provided to employees / contractors who may be exposed to Benzene.
• First Aid Training as required (established by level of employee)
• PPE Equipment specific training
  • SCBA Respirator / PAPR
• NCSG orientation
• Recognition of symptoms of the illness of Benzene exposure
• Recognition of a need to seek medical attention as soon as possible if symptoms appear
• Instruction in the use, care and limitations of the assigned personal monitor, as applicable

8.0 RESOURCES
• Alberta OH&S Code (2009) Part 4
• Alberta OH&S Code Part 18
• Alberta OH&S Code Schedule 1
• British Columbia OHS Regulation Part 5
• British Columbia OHS Regulation Part 8
• Saskatchewan Occupational Health and Safety Regulations Part XXI
• Manitoba Regulation 217/2006 Workplace Safety and Health Regulation Part 36
• Ontario Occupational Health and Safety Act, Reg. 833
• Ontario Occupational Health and Safety Act Reg. 213/91
• Unites States Department of Labor 29 CFR 1910.1000 TABLE Z-2
### 3.2.2 Asbestos Identification & Control

#### 1.0 PURPOSE

NCSG Crane & Heavy Haul its affiliated companies referred to as NCSG have developed a Asbestos Identification and Control Code to identify the proper level of protection that will assist all employees in performing their tasks effectively and efficiently when operating. This code will aid employees in minimizing the risks of exposure and assist in the knowledge of safe work practices.

This document was created to provide the reader with the basic information about asbestos and the NCSG requirements for working with asbestos.

#### 2.0 SCOPE AND APPLICATION

This document serves as an approved NCSG HS&E Guideline for worksite encounters with asbestos. This guideline is applicable to NCSG employees, contractors, visitors, operations, or property. This standard is in effect for all NCSG work areas (i.e. field operations and corporate office).

#### 3.0 DEFINITIONS

**Asbestos** The name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are: a) chrysotile, b) amosite and c) crocidolite.

**Asbestosis** A lung disease first found in naval shipyard workers. As asbestos fibres are inhaled, they may become trapped in the lung tissue. The body tries to dissolve the fibres by producing an acid. This acid, due to the chemical resistance of the fibber, does little to damage the fibber, but may scar the surrounding tissue. Eventually, this scarring may become so severe that the lungs cannot function. The latency period (the time it takes for the disease to develop) is often 25-40 years.

**Chrysotile** Also known as white asbestos and a member of the Serpentine mineral group which is the most common. Asbestos can only be identified under a microscope. Asbestos differs from other minerals in its crystal development. The crystal formation of asbestos is long thin fibres.

**Mesothelioma** A cancer of the pleura (the outer lining of the lung and chest cavity) and/or the peritoneum (the lining of the abdominal wall). This form of cancer is peculiar because the only known cause is from asbestos exposure. The latency period for mesothelioma is often 15-30 years.

#### 4.0 EXPECTATIONS

Asbestos is not always an immediate hazard. In fact, if asbestos can be maintained in good condition, it is recommended that it be left alone and periodic surveillance performed to monitor its condition. It is only when asbestos containing materials (ACM) are disturbed or the materials become damaged that it becomes a hazard. When the materials become damaged, the fibers separate and become airborne. In the asbestos industry, the term ‘friable’ is used to describe asbestos that can be reduced to dust by hand pressure. ‘Non-friable’ means asbestos that is too hard to be reduced to dust by hand. Non-friable materials, such as transite siding and floor tiles are not regulated, provided they do not become friable. Machine grinding, sanding and dry-buffing are ways of causing non-friable materials to become friable.

The main properties that make asbestos useful are its incombustibility, strength and flexibility when separated into fibres. It is also effective as a reinforcing or binding agent when combined with cement or plastic. Many products which at one time contained asbestos are either no longer in use or have been replaced. The uses for asbestos ranged from products in which the fibres were well bound to friable products in which the fibres could easily become airborne. The construction industry was the main user of asbestos products. Sprayed insulation, stucco and joint cements manufactured in Canada and the United States no longer contain asbestos in an unbound form. Building materials containing asbestos in a bound form are typically found in the following locations and products:

**Building exteriors**
- Asbestos cement siding panels – flat, corrugated, shingles or accent panels
- Asbestos cement soffits – flat or perforated panels
- Asbestos cement roof panels – corrugated
- Roofing felts and mastics
- Building overhangs – thermal spray
- Stucco
- Brick and block mortar
- Loose fill insulation in exterior wall cavities (vermiculite)

**Flooring**
- Vinyl asbestos tiles (VAT)
- Sheet vinyl flooring (asbestos paper backing)
- Floor leveling compound

**Ceilings**
- Bare ceiling tile
- Asbestos cement ceiling tile
- Acoustic and stippled finishes
- Plaster or drywall jointing materials
3.1 Health, Safety & Environment Manual

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees

- It is the employee’s responsibility to:
- To read and understand this procedure and attend any educational presentation around this topic where
• To immediately notify their immediate supervisor or manager if they suspect the presence of asbestos on or near their assigned work environment.
• Be responsive, through adequate training, to minimize the risk of hazards relating to exposure to asbestos in the work environment.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in asbestos exposure or potential exposure a worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure when the potential hazard to asbestos exposure exists that all NCSG personnel or contractors working with or on behalf of NCSG are informed and educated as to the particulars of this type of hazard.
• Ensure that in the event asbestos or materials thought to contain asbestos are identified that the area around the suspect material is immediately isolated to prevent potential contact and that the Health and Safety Representative for NCSG accountable for that worksite is contacted immediately.
• Ensure through routine inspections that the isolated location of the asbestos or suspect material related to or possibility containing asbestos has not been disturbed or otherwise altered in any way.
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.5 Health, Safety and Environment Team
• Develop Health, Safety and Environment Management System Documents and Procedures relating to the identification, Isolation, and Contracted Removal of materials containing or suspected to contain asbestos or asbestos related materials.
• Maintain Health, Safety and Environment records or documents relating to this topic.
• Ensure any necessary education or training required for any NCSG or contractor working on a site containing or thought to contain asbestos is provided in accordance with the applicable legislation for that worksite location.
• Ensure any contractor employed by NCSG for the purpose of asbestos removal services has retained and maintains the necessary competency and legal certificates and validations for that activity.

6.0 METHOD

6.1 Isolation of a worksite where asbestos is suspected to exist
When a worksite is suspected to contain asbestos the following practices will immediately be implemented;
• All personnel shall immediately halt all activities and vacate the worksite within close proximity to the suspected asbestos material.
• The Supervisor responsible for that worksite shall isolate the suspected worksite and restrict access to the area through the use of barrier tape or some other means of control.
• The Supervisor shall immediately contact the responsible NCSG Health and Safety Representative to arrange for guidance and positive identification of the suspected material.
• Until such time as either the suspected material has been deemed to not contain asbestos by accredited authority no access to the isolated worksite shall be permitted.
• The Supervisor will generated the necessary hazard reporting documentation as deemed by the NCSG Health and Safety Representative for that worksite.

6.2 Asbestos Removal Process
In the event the isolated worksite does contain asbestos of any form listed in this Code and removal of the substance is deemed necessary by NCSG Management, no NCSG personnel shall engage in the removal process in any form or action.

No NCSG materials, tools or equipment shall be employed in an asbestos removal activity unless approved b Management and that the materials, tools or equipment will be disposed of once the removal process is complete. Under no circumstance will materials, tools or equipment be allowed back into a NCSG worksite if it has been used for asbestos removal.

7.0 TRAINING REQUIREMENTS AND MATERIALS
All supervisors and workers on NCSG worksites require training in the application and content of this Code.

8.0 RESOURCES
• Canadian Hazardous Products Act, Part 1
• Alberta OH&S Code
3.2.3 Lead Exposure Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Lead Exposure Code to identify the proper level of protection and control plan required to protect against a potential injury to employees, contractors, and the public regarding potential exposure and work with lead while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct engineering, administrative and PPE controls are essential in maintaining a safe work environment and the understanding lead exposure in the workplace. Proper use of these controls shall enable employees to ensure adequate protection from potential injury during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG. OELs which are provided by specific legislation shall be referenced to ensure limits are not exceeded. These limits shall apply to workers directly involved with tasks using lead, and also to workers in the workplace who may be exposed to lead indirectly from these tasks or from substances such as lead paint.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Lead Exposure Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

HEPA Filter High efficiency particulate air filter

Occupational Exposure Limits (OEL) In respect of a substance, means the occupational exposure limit established in the applicable codes or schedules / tables within the codes

4.0 EXPECTATIONS
The Lead Exposure Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to employees, contractors, visitors and general public within NCSG areas of responsibility. The Lead Exposure Code will be reviewed at a minimum of every three years.

Any Standard Operating Procedures which contain a Lead Exposure Control Plan shall be reviewed annually.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Obey all warning signs and labels indicating the presence of lead containing materials.
• Appropriate work practices will be followed to ensure lead containing materials are not disturbed.
• Inspect personal protective equipment before using it, and
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Follow all hygiene precautions as required to minimize / eliminate exposure to lead contaminants.
• Hands and face should be washed immediately if lead materials are contacted.
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to lead exposure.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Ensure all engineering controls (i.e. Vent hoods, vacuum systems, etc) are operating in serviceable condition.
• Not operate any engineering controls (i.e. Vent hoods, vacuum systems, etc) which are determined to be unserviceable or sub-standard.
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment in accordance with the training and instruction received.
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.
5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Ensure all Lead Exposure Control plans are reviewed at minimum, annually or when the work environment changes.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Tools and Equipment for Lead Removal
• Primary focus shall be the reduction of dust and dispersal of lead in a cloud formation or particulate
• NCSG (although not our work focus) shall ensure any contractor shall have the following to safely remove / contain lead hazards within the work place if required to:
  • Dustless removal equipment(grinder, sander etc)
  • Wet/dry sandpaper, sanding sponge
  • Mist bottle, pump sprayer
  • Tape (painter’s, duct, masking)
  • Heavy duty (4-6 mil) plastic sheeting
  • Heavy duty garbage bags
  • Chemical stripper
  • Utility knife
  • Heat gun
  • Vacuum with HEPA filter
• NCSG shall ensure that respirators with an N-100 (or HEPA) rating or better are approved for use when working on lead-based paint surfaces.
• FLRA’s shall be used to determine if a different type of respirator rated for use around lead may be required depending on work conditions.
• Personal Protective Equipment as required (e.g. disposable coveralls, latex gloves, disposable head cover, etc)
• NCSG shall ensure that:
  • The availability of an isolated area from the work site for the provision of storing food, drinking and eating food.
  • Adequate washing, showering, and change facilities are provided for any lead exposed workers so workers can wash thoroughly before rest and break periods.
  • Adequate change facilities for workers to remove lead laden clothing / coveralls / boots and replace with clothing to worn off site.

6.2 Preparation of Area during Lead Removal (Adjacent worksites)
• NCSG shall through the use of FLRA’s and Company Standard Operating Procedures evaluate the work site for lead exposure hazards
• NCSG shall consider the following as a minimum:
  • Was the property constructed prior to 1978? The majority of buildings constructed before 1978; especially those constructed prior to 1960; contain some lead-based paint.
  • Always presume that painted surfaces from pre-1978 houses include lead-based paint and that all dust generated from these surfaces may contain lead.
  • Has there been significant renovation? If all work will be conducted in an addition to the dwelling that was constructed after 1978 or in a home that was gutted and renovated after 1978, NCSG employees, contractors do not need to utilize lead-safe work practices in the parts of the home that were built/renovated after 1978.
  • Has the property been tested for lead? Lead testing will tell you if there is lead in the property. If documentation that a certified inspector or risk assessor has performed a lead evaluation and found that no lead-based paint is present in the work area, you do not have to utilize lead safe work practices, regardless of the age of the property. If the paint has not been tested for lead, assume that lead-based paint is present and utilize lead safe work practices.
• NCSG shall have or request client to have air sampling and surface testing conducted for a work site which may be suspect of the presence of lead contaminants where work is to be done.
• NCSG shall ensure the following is assessed to control / manage lead in the workplace:
  • Find out where and how lead is used (e.g. tools, weights, solder and old paint may contain lead)
  • Establish where is lead present in this workplace
  • What tasks or products involve the use of lead
  • How or do workers come into contact with lead
• NCSG shall work within the client’s Standard Operating Procedures a Lead Exposure Control Plan as applicable to Site Specific requirements and shall include in the plan but not limit the plan to:
• Statement of purpose and responsibilities of the plan.
• Worker education about the hazards of lead.
• Written Standard Operating Procedures for the control of lead hazards.
• Detailed procedures for worker decontamination.
• Reference to health monitoring as required in this code.
• Reference to documentation and record-keeping as required in this code.
• Application and installation requirements of 6 mil plastic on the doors into the work areas as a temporary containment while work is performed if required.
• 6 mil plastic on the floor in all work areas to contain dust and debris.
• Covering of belongings in the work area with 6 mil plastic and sealing with tape to the floor.
• Seal off ductwork (registers) in work area while doing work.
• Consider getting help from certified or licensed contractors if the amount of deteriorated paint / lead based hazard is significant.
• Place signs and engineered barriers as required at all entrances to work areas to keep all those not performing the work out of the work area.

6.3 General Safe Work Practice
Where applicable, NCSG shall ensure that the removal of lead based paint shall include the following processes:
• Use wet methods to scrape and sand by misting surfaces before scraping and sanding.
• Continue to mist while working.
• Dry scraping or sanding shall only be done in very small areas near electrical outlets and light switches and if flat surfaces below these areas are covered with protective sheeting.
• Mist before drilling and cutting to reduce dust creation and keep dust from becoming airborne and spreading beyond the work area.
• If power tools that sand or grind are used the equipment shall be equipped with a HEPA vacuum attachment.
• Abrasive blasting or sandblasting shall be avoided without the proper HEPA exhaust equipment in use on site.
• Use a heat gun only if set below 1,100°. It is shall only be used for small areas, such as the edge of a door, the top of a window stool, or the friction surface of a window jamb.
• Open torches, infrared scorchers, electric irons, and heat guns operating above 1,100 ° shall not be used due to the danger of release of lead fumes.
• Scoring paint before separating components shall be completed to assist paint from chipping when a paint seal is broken.
• Prying and pulling apart components and pulling nails shall be the preferred method over pounding out components due to the creation of less dust and fewer paint chips.
• No uncontained hydro blasting or high-pressure washing shall be performed in the removal of lead paint or lead hazards.
• No stripping lead-based paint with a volatile stripper unless properly ventilated by the circulation of outside air and adequate PPE shall be performed.

Where applicable, NCSG shall ensure paint stabilization during the removal of lead based paint / hazards with the following process:
• Remove all loose surface contaminants, wetting surface to minimize dust as you work.
• Repair any areas of the component surface or substrate that are not in good condition.
• De-gloss surfaces to be painted using wet sanding or a de-glossing paint.
• Prepare or Remove old paint using general safe work practices as outlined in this code.
• Use a primer before applying new paint to all surfaces.
• Clean the work site frequently.
• Removing debris frequently.
• HEPA Vacuuming horizontal surfaces frequently.
• Collect paint chips as they are created.
• Wrapping and disposing of removed components.

Where applicable, NCSG shall not engage in the following procedures due to the unsafe nature of the methods:
• Power-sanding or grinding without a HEPA vacuum attachment
• Dry scraping and dry sanding
• Uncontrolled abrasive- or hydro-blasting
• Open flame torching or high heat gun settings
• Paint strippers containing methylene chloride
• Using power tools on heavily misted surfaces can be dangerous if they are wet. Tool blades can slip and water can cause electric shock. When misting, lightly mist the surface and use hand tools only. If power tools are to be used, they should be attached to a HEPA vacuum and shall be run through a Ground fault Interrupter Circuit (GFCI).

6.4 Clean Up
• Where applicable, NCSG shall ensure further lead contamination of the worksite is minimized by cleaning thoroughly and often. All visible paint chips and debris created while performing exterior paint work shall be cleaned up at the end of each day’s work.
• Cleaning with a HEPA vacuum and wet cleaning an area shall be completed periodically as work progresses.
• Water used for clean-up shall be filtered and dumped in a toilet.
• Waste water shall not be dumped down a sink, storm drain, on the ground, or in a tub.

6.5 Medical Review
• Where applicable, NCSG shall ensure a medical monitoring (blood lead testing) program is in place where employees are at risk of exposure to potentially hazardous levels of lead.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• Lead Exposure Precautions training shall be provided before initial assignment in areas where lead is suspected and annually thereafter. The training shall contain but not limited to:
  • Proper tool Knowledge
  • Proper tool use
  • Preparation of a site
  • Recognition of potential Lead Exposure environment
  • Clean Up of a Lead Exposure environment
  • Medical Review process / program
• Health Effects of Lead
  • Acute Lead Poisoning
  • Loss of appetite, nausea, vomiting, stomach cramps, constipation, difficulty in sleeping, fatigue, moodiness, headache, joint or muscle aches, and anemia.
  • Long Term (Chronic) Overexposure
  • Severe damage to blood forming and nervous, urinary and reproductive systems
• PPE Equipment specific training
  • Dust Respirator / PAPR
  • Disposable Rubber or Latex gloves
  • Disposable Coveralls
  • Eye / Face Protection to prevent mists / dust particle from coming in contact with eye membrane
• NCSG orientation
Note: All training must be documented including date of training, employee name and trainer name.

8.0 RESOURCES
• Alberta Employment and Immigration – Workplace Health & Safety Bulletins – CH061 Chemical Hazards
• WorkSafeBC – Publications – Lead – Preventing Exposure at Work
• Alberta OH&S Code Part 4
• BC OH&S Regulations Part 6
• BC OH&S Regulations Part 19
• Manitoba OH&S Regulations Part 36
• Saskatchewan OH&S Regulations Part XXI
• OSHA 1926

May all be used to reference additional information pertaining to Lead Exposure and control methods for minimizing potential exposure and risk.

9.0 APPENDICIES
• Appendix A – NCSG Lead Exposure Clean Up Procedures
• Appendix B – NCSG Precautions When Leaving a Lead Exposure Environment

10.0 SUPPORTING DOCUMENTS
• NCSG Code – Personal Protective Equipment - Eye and Face Protection
• NCSG Code – Personal Protective Equipment – Respiratory Protection
APPENDIX A – NCSG Lead Exposure Clean Up Procedures

1. Wear plastic gloves to clean that can be thrown away after the work is complete to protect employees and contractors from exposure to lead.
2. With a gloved hand, use a damp paper towel, or duct tape to pick up larger paint chips.
3. Follow-up by thoroughly vacuuming the areas using a HEPA vacuum.
4. Seal paint chips, paper towels, tape, and vacuum bags in a plastic bag and dispose of safely.
5. Wash household surfaces.
   a. Use any all-purpose, non-abrasive cleaner (ie. dishwasher detergent which has mild phosphates in it) or TSP, a lead-specific detergent. Note, do not make the concentration more than the directions indicate.
   b. For best results scrub the area well being careful not to remove the intact paint.
   c. Especially clean areas such as floors, window wells, window sills, and other horizontal surfaces.
   d. Keep general public away when cleaning.
   e. Keep all cleaners safely away from general public and under control.
   f. Use a spray bottle to keep dust levels down.
   g. Use a cleaner already in a spray bottle, or put the cleaner into a spray bottle.
   h. If you must use a bucket, keep the wash water clean using the “two bucket method”.
6. Use paper towels.
   a. Don’t use dish cloths or sponges to clean.
   b. Use a new paper towel to clean each area.
   c. Seal the used paper towels and gloves in a plastic bag and throw them out.
   d. Rinse after cleaning.
7. Wash your hands when cleaning is done.
8. Pour any wash and rinse water down the toilet, not the sink.

   Two Bucket Cleaning Steps
   • Prepare a two-sided bucket or two separate buckets,
   • A spray bottle with 1/2 ounce of cleaning solution and hot water.
   • In the one side of the bucket place clean rinse water, leaving the other side empty.
   • Clean any large debris from the areas to be cleaned and discard in wastebasket.
   • Wear rubber gloves (throw them away when work is complete) when using cleaning solution.
   • Wet the rag with the sprayer and begin to clean a small area at a time.
   • Wring out excess water in the rag in the empty bucket, rinse in the clean water, and again wring it out into the “empty” side.
   • Continue until the rinse water gets dirty.
   • Place the rag in the trash.
   • Empty both buckets into the toilet and begin again. Keep cleaning the same area until the rinse water stays clean.
   • Repeat this cleaning in all areas (floors, window sills and troughs, and other horizontal surfaces) of each room that needs cleaning.
   • When using a mop instead of rags, follow the same method – throwing away the mop head when it gets dirty, and replacing it with a clean one.
   • After cleaning is complete be sure to rinse cleaned areas again with clean rinse water to thoroughly remove any soap residue that may be harmful to employees, contractors, visitors and general public.
   • Dump wastewater only down the toilet and flush.

APPENDIX B – NCSG Precautions When Leaving a Lead Exposure Environment

Precautions to take when leaving the work site
• When an employee or contractor leaves the work site (the area covered by protective sheeting or the room), the employee / contractor shall take precautions to prevent spreading dust and paint chips to other parts of the work site on clothes and shoes.
• NCSG shall provide materials to wipe or vacuum shoes before employees, contractors, and visitors step off of the plastic sheeting. A large tack pad on the floor may assist to clean the soles of shoes.
• Remove shoe coverings if used.
• At the end of the work shift, employees / contractors shall change clothes and wash adequately to reduce the risk of contaminating vehicles and potentially transferring lead dust to an employee’s / contractor’s residence.
• Throw away disposable clothing or place clothing in a plastic bag to stop dust from getting on other clothing.
• Adequate personal hygiene (e.g. thorough washing, showering, etc) should be concluded at the end of the work day.
• NCSG recommends employees / contractors wash work clothes separately from regular household laundry to stop lead particles from getting on other clothes.
3.2.4 Hydrogen Sulphide (H2S) Code

1.0 PURPOSE
NCSG Crane and Heavy Haul and its affiliated companies referred to as NCSG have developed a Hydrogen Sulphide (H2S) Code to identify the proper level of protection against potential injury / damage to employees, contractors, and the public / property relating to working in a potential H2S environment.

2.0 SCOPE AND APPLICATION
The understanding of risks, recognition and immediate action to be taken in the event of an H2S exposure is essential in maintaining a safe work environment. The application of this action in the correct manner shall enable employees / contractors to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
The following definitions are specific to Hydrogen Sulphide (H2S) Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Hydrogen Sulphide A colourless inflammable gas having the characteristic odor of bad eggs, and found in many mineral springs. It is produced by the action of acid on metallic sulphide, and is an important chemical reagent.

Sulpherated Hydrogen See – Hydrogen Sulphide

4.0 EXPECTATIONS
The Hydrogen Sulphide (H2S) Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Hydrogen Sulphide (H2S) Code will be reviewed at a minimum of every three years.

This Code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

The expectation of NCSG Health, Safety and Environment Team is for all employees, contractors, visitors and general public to respect the Immediate Danger to Life and Health (IDLH) that H2S exposure presents.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment as indicated in accordance with the training and instruction received to prevent injury due to H2S exposure.
- Inspect personal protective equipment before using it,
- Be familiar with the Confined Space Code and be read in conjunction with the H2S Code as applicable,
- Be aware of the location of H2S Emergency Response equipment,
- Take IMMEDIATE and appropriate action when H2S is suspected or detected.
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to H2S exposure.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Maintain current certification of H2S Emergency Response training in accordance with local legislative / company policy and procedure.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Ensure appropriate PPE as required in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Know the workers the supervisor is responsible for well enough to notice any changes in attitude or physical / mental condition that may be due to H2S exposure.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Ensure that employees who may be exposed to H2S gas are provided adequate training through the Health, Safety, and Environment Team to be able to recognize its lethal effects.
- Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Property Recognition of Hydrogen Sulphide
NCSG employees shall be familiar with the properties of H2S. Appendix A outlines the properties in detail.

6.2 Effects upon Exposure of Hydrogen Sulphide
NCSG employees shall be familiar with the effects on the body H2S. Appendix B outlines the properties in detail.

6.3 Monitoring and Prevention Practices
6.3.1 Continuous Monitors
In larger plants, a system is used where potentially hazardous areas are sampled by strategically located sensors. An alarm system is activated by any sensor and will give warning when the H2S concentration rises above preset limits for the area sampled.

NCSG shall ensure in conjunction with Company Standard Operating Procedures that all areas of responsibility shall be assessed for the requirement of monitor equipment.

Personal Monitors
Battery powered H2S monitors shall be carried or worn by individual employees, contractors, visitors to indicate the concentration of H2S to which they are being exposed as applicable to the hazard assessments and safe job procedures.

Portable Monitors
NCSG shall ensure that all employees, contractors, visitors on site have been orientated as applicable to the dangers of H2S exposure and are trained prior to access being given to a site which may have a potential of H2S exposure.

6.4 Protection Practices
NCSG shall ensure a written code of practice is in place that addresses the requirement to have respiratory equipment on site and have employees, contractors, and as applicable visitors trained in its use. (See PPE Code- Respiratory Protection Code)

Regular hazard assessments of H2S related sites will identify and prevent potential exposure.

6.5 Special Considerations
If the work shift is more than 8 hours, the OEL for H2S shall be adjusted in accordance with the applicable legislative regulations and schedules.

NCSG shall ensure that applicable barriers, signage and access control are in place as applicable to a site which may have an H2S exposure potential.

6.6 Emergency Response Procedures
NCSG shall ensure that Emergency Response Procedures are established in conjunction with Client Site Procedures, Company Procedures and are made available to all employees, contractors, and visitors on site. A specific procedure must be followed in the event of an H2S Alert and to evacuate the area and proceed to the nearest muster point.

All NCSG supervisors who, through regular tasks and duties may have workers who are exposed to H2S, shall have a competent working knowledge of artificial respiration and be trained in CPR (Cardiopulmonary Resuscitation).

Site specific emergency response procedures shall focus on the following steps:
In the event of an H2S release the following basic procedure shall apply;
1. Immediately shut down all ignition sources
2. Immediately notify other workers in the immediate area
3. Immediately leave the area to the nearest muster / assembly point using up and cross wind as the route
4. Report to the headcount coordinator and stand by for further instructions
5. Once initial emergency is controlled contact Management to report the event
7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG shall ensure regular practice and training in emergency rescue response as applicable by legislative regulations is provided to employees/contractors who may be exposed to H2S.
• First Aid Training as required (established by level of employee)
• PPE Equipment specific training
  • SCBA Respirator / PAPR
• NCSG orientation
• Recognition of symptoms of the illness of H2S exposure
• Recognition of a need to seek medical attention as soon as possible if symptoms appear
• Instruction in the use, care and limitations of the assigned personal monitor, as applicable

8.0 RESOURCES
• Alberta OH&S Code (2009) Part 4
• Alberta OH&S Code Part 18
• Alberta OH&S Code Schedule 1
• British Columbia OHS Regulation Part 5
• British Columbia OHS Regulation Part 8
• Saskatchewan Occupational Health and Safety Regulations Part XXI
• Manitoba Regulation 217/2006 Workplace Safety and Health Regulation Part 36
• Ontario Occupational Health and Safety Act, Reg. 833
• Ontario Occupational Health and Safety Act Reg. 213/91
• United States Department of Labor 29 CFR 1910.1000 TABLE Z-2,

9.0 APPENDICIES
• Appendix A – H2S Properties
• Appendix B – H2S Effects

APPENDIX A – H2S Properties

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>Colourless</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODOUR</td>
<td>Very offensive, commonly referred to as odour of rotten eggs at low concentration 1.188 at 25°C (77 °F)</td>
</tr>
<tr>
<td>VAPOUR DENSITY</td>
<td>1.189 (Air = 1.0) H2S in its pure form is heavier than air</td>
</tr>
<tr>
<td>EXPLOSIVE LIMITS</td>
<td>4.3 to 46.0 percent by volume in air</td>
</tr>
<tr>
<td>AUTO IGNITION TEMPERATURE</td>
<td>260°C (500°F)</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>(LEL): 4.0% (UEL): 44.0%</td>
</tr>
<tr>
<td>WATER SOLUBILITY</td>
<td>2.9 percent (2.9 g/100 ml water at 20°C) (0.102294oz/3.38 liquid oz at 68°F)</td>
</tr>
</tbody>
</table>

APPENDIX B – H2S Effects

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ppm</td>
<td>Can be smelled.</td>
</tr>
<tr>
<td>10 ppm</td>
<td>Threshold Limit Occupational Exposure Limit (OEL). Allowable for 8 hours of exposure.</td>
</tr>
<tr>
<td>15 ppm</td>
<td>Threshold Ceiling OEL. An unprotected worker may not be exposed above this concentration.</td>
</tr>
<tr>
<td>100-200 ppm</td>
<td>Severe nose, throat and lung irritation. Ability to smell odour completely disappears (150 ppm)</td>
</tr>
<tr>
<td>500 ppm</td>
<td>Severe lung irritation. Headaches, dizziness, staggering, collapse.</td>
</tr>
<tr>
<td>500-1000 ppm</td>
<td>Respiratory paralysis. Irregular heart-beat, collapse or death.</td>
</tr>
</tbody>
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3.2.5 Hantavirus Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services Ltd. and its affiliated companies referred to as NCSG have developed a Hantavirus Protection Code to identify the proper level of protection against a potential Hantavirus infection to employees, contractors, and the public while operating within NCSG areas of responsibility. This code will aid employees in minimizing the exposure to Hantavirus and assisting in the prevention of Hantavirus infections.

2.0 SCOPE AND APPLICATION
The guidelines and recommendations are provided to increase awareness of correct control measures to be used by NCSG employees, contractors where there may be a presence of rodents or rodent droppings within the workplace. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG when the potential for Hantavirus infection is present.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Hantavirus Protection Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

**Deer Mouse** A small, white-footed mouse with sharply bicolor tail, white beneath and dark above; ears usually shorter than hind foot, prominent and leaf like; upperparts bright fulvous or brownish, intermixed with dusky; under parts and feet white. External measurements average: total length, 170 mm; tail, 81 mm; hind foot, 20 mm; ear, 18 (12-20) mm. Weight, 15-32 g.

**Hantavirus** A virus that is found in the urine, saliva, or droppings of infected deer mice and some other wild rodents.

**Hantavirus Pulmonary Syndrome (HPS)** A rare but serious lung disease as a result of exposure to Hantavirus.

**HEPA Filter** A high-efficiency particulate air filter.

**PAPR** Powered air-purifying respirator.

4.0 EXPECTATIONS
The Hantavirus Protection Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to Hantavirus are available to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Hantavirus Protection Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Corporate Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Inspect personal protective equipment before using it.
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to Hantavirus.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Historical Understanding of Potential Risk of Exposure
Hantavirus infection is caused by a virus that is found in some rodents. The principal carrier is the deer mouse or white-footed mouse which is commonly found in Western Canada and Upper Mid West States. This does not preclude the possibility of other rodents being able to carry the virus and as such all rodents should be treated as potential carriers.

If the virus is contracted by humans, it can cause severe illness, HPS and – even death.

The Hantavirus is shed in their saliva, urine and droppings. The virus is usually spread to humans when particles of infected saliva, urine or feces are inhaled. Inhalation may occur through direct contact with the rodent, or from breathing airborne dust particles that are generated when rodent excreta is disturbed. The virus can be spread if infected materials contact broken skin or the membrane lining of the eyelids and eyeball.

Caution must also be observed if:
- a rodent bites you;
- if you touch something that has been contaminated with rodent urine, droppings or saliva, and then touch your nose or mouth; or
- if you eat or drink food or water contaminated by rodents.

6.2 Identification of Environment for Potential Risk of Exposure to Hantavirus
Job safety analysis, task analysis, and field level risk assessment shall be used to determine the level of eye, face and respiratory protection required in the completion of any and all tasks while ensuring compliance with regulatory legislation. The established eye and face protection shall be considered the minimum acceptable level for NCSG employees, contractors, visitors and general public, while at the work site.

Most rodents are found in rural and semi-rural areas, however, many are highly adaptable and can be found in homes as well as commercial and industrial building.

Possible environments may include conditions for Hantavirus Exposure:
- sweeping out barns, shops and other out buildings;
- using compressed air and dry sweeping to clean up waste in workplace;
- entering a barn / out building infested with mice;
- occupying previously vacant dwellings;
- disturbing rodent-infested areas;
- living in or cleaning dwellings with a sizable indoor rodent population;
- locations where rodents may feed or find shelter include:
  **Outside**
  - rubbish piles (i.e. woodpiles);
  - infrequently used equipment;
  - garbage;
  - weeds and long grass.

  **Inside**
  - food storage containers and areas around containers;
  - garbage storage areas;
  - nooks and crannies.

6.3 Prevention Practices
The most important method of prevention is to minimize contact with rodents by controlling them around the work site.

Prevention strategies include:
- (1) Regular inspections for rodents to determine if active rodent control is required.
- (2) Sanitation: reduce the number of locations inside the workplace and in the immediate vicinity where rodents may feed or find shelter. Clean up trash, open stores of papers or other areas that may serve as nesting sites for rodents.
- (3) Eliminate potential food sources or store food in rodent-proof containers with a tight fitting lid.

Key to Prevention is to Rodent proof by:
- Closing openings where rodents gain entry and establish runways. Mice can gain entry through a hole as small as ¼ inch in diameter. Proofing materials include steel wool, fine mesh screens, mortar and sheet metal, etc.
- Placing metal flashing around the base of buildings in which people work if rodents may be able to get in.
• Using gravel or raised (30 cm) cement foundations in new construction of sheds, out-building or wood piles to discourage rodent burrowing.
• Cut grass, brush and shrubbery within 30 metres of buildings.

Rodent population reduction can be achieved by trapping or poisoning with rodenticides.

Rodenticides are hazardous to humans and non-target species, and should be handled by individuals knowledgeable in their safe use.

Kill traps minimize the risk of handling.

### 6.4 Protection Practices

Company Standard Operating Procedures will further define additional levels of Eye, Face, and Respiratory Protection required in accordance to legislation and risk assessment analysis for each task.

#### Work Procedures

Safe work procedures will allow employers to minimize worker exposure to Hantavirus, and should be tailored to the specific work circumstances. In all cases for which specific safe work procedures are developed, have a qualified person assess the work situation and evaluate the risk.

Assessment of the individual workers activities rather than just the occupation is important in the determination of exposure risk.

Following are the minimum NCSG Code requirements when dealing with a potential Hantavirus Exposure environment.

**Handling Rodents:**

When handling rodents or traps containing rodents, workers shall wear:

- Rubber or plastic disposable gloves.
- Disposable coveralls made of material that will resist the penetration of dust particles, with a snug fit at the wrist and ankles.
- Eye or face protection to prevent aerosols from coming in contact with the mucous membranes of the eye.
- Traps contaminated by rodent urine or feces or in which a rodent was captured should be disinfected with a commercial disinfectant or bleach solution.
- Dead rodents should be soaked in a disinfectant solution, double-bagged along with all cleaning materials, labeled and then buried, burned or discarded in an appropriate waste disposal system.
- Decontaminate and remove personal protective equipment and clothing in accordance with the Decontamination Procedure outlined in this code.

**Cleanup of infested areas:**

Workers who are involved in the cleanup of areas where rodents or rodent droppings are present shall also take the following precautions:

- Clear all unnecessary workers from the area.
- Ventilate the area by opening windows and doors, if possible.
- Put on disposable rubber or plastic gloves before starting clean up.
- Wear a NIOSH approved respirator with a HEPA filter.
- If the area has a heavy rodent infestation, the worker should also wear coveralls (disposable, if possible), rubber boots or disposable shoe covers and protective goggles.
- Don’t stir up dust by sweeping up or vacuuming up dry droppings, urine or nesting materials.
- Thoroughly wet contaminated areas with detergent or liquid to deactivate the virus. Most general purpose disinfectants and household detergents are effective; however a solution prepared by mixing 3 tablespoons of household bleach in 1 gallon of water may be used in place of a commercial disinfectant. When using the chlorine mixture, avoid spilling the mixture on clothing or other items that may be damaged.
- Once everything is wet, take up the contaminated materials with a damp towel, and mop or sponge the area with disinfectant.
- Dispose of dead rodents as indicated under Handling Rodents.
- Dispose of all contaminated materials in double plastic bags. Seal the bags and label them to identify the contents. Do not puncture the bags. Bags of waste may be disposed of by burying them in a hole that is at least two feet deep or by incinerating them. Contaminated material may also be disposed of with regular garbage as long as the amount of material can be safely treated by being soaked in a disinfectant solution and the material is in double plastic bags.
- Wipe or mop surfaces with a solution of disinfectant and detergent.
- Decontaminate and remove personal protective equipment and clothing as outlined under the Decontamination Procedure.

**Decontamination procedures:**

After any activity involving the handling of contaminated or potentially contaminated material, and before leaving the immediate work area, the following procedures should be applied.

**Note:** Do not remove respiratory protective equipment until other decontamination steps are complete.

1. Remove coveralls at the perimeter of the work area and place them in a disposal bag. Collapse the bag and temporarily seal it.
(2) Move away from the clean-up or contaminated work area to a location where there are no other workers – preferably outdoors – leaving eye and respiratory protection in place.

(3) Wet wipe exposed reusable respirator surfaces, eyewear, and rubber footwear with a disinfectant solution.

(4) Rinse the outside of gloves in the disinfectant solution. Remove gloves and place them in a plastic bag for disposal.

(5) Place disposable respirators in a plastic bag. Permanently seal the bag and label it. For reusable respirators, tape shut the inlet opening of the respirator cartridges to prevent the release of dusts (cartridges may be reused until breathing becomes difficult), or discard the cartridges. Clean and disinfect the respirator body. Store the respirator in a cool, clean location free from contamination.

(6) Remove eyewear. Clean and disinfect it before storing it, or discard it.

(7) Wash exposed skin surfaces thoroughly with soap.

7.0 TRAINING REQUIREMENTS AND MATERIALS

- PPE Equipment specific training
  - Dust Respirator / PAPR
  - Disposable Rubber or Latex gloves
  - Disposable Coveralls
  - Eye / Face Protection to prevent aerosols from coming in contact with eye membrane
  - NCSG orientation
  - Recognition of symptoms of the illness
  - Recognition of a need to seek medical attention as soon as possible if symptoms appear
  - Rodent Specific Identification

8.0 RESOURCES

- Canadian Centre for Occupational Health and Safety
- Alberta Employment and Immigration – Workplace Health & Safety Bulletins
- Worker’s Compensation Board – British Columbia
- Alberta OH&S Code Part 2
- BC OH&S Code Part 5
- Saskatchewan OH&S Regulations Part XXI
- OSHA 1920
- Ontario OH&S Reg. 851, Part 1
- NCSG Code – Personal Protective Equipment - Eye and Face Protection
- NCSG Code – Personal Protective Equipment – Respiratory Protection

May all be used to reference additional information pertaining to Hantavirus and control methods for minimizing potential exposure and risk.
3.2.6 General Housekeeping Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services Ltd. and its affiliated companies referred to as NCSG have developed a General Housekeeping Code to identify adequate practices of tidiness and cleanliness is maintained in the workplace. Application of appropriate housekeeping practices by employees, contractors, and the public while operating within NCSG areas of responsibility will provide both visible and practical means in which to maintain the workplace.

2.0 SCOPE AND APPLICATION
The housekeeping required in certain environments or with specific equipment shall be detailed within those codes. General Housekeeping Code shall enable employees to understand the minimum requirements to ensure adequate guidelines are in place to provide a safe environment. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG when ensuring a work site free and safe from housekeeping hazards.

3.0 DEFINITIONS
There are no definitions for the General Housekeeping Code.

4.0 EXPECTATIONS
The General Housekeeping Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
- Ensure a safe and hazard free work site is maintained throughout the entire shift.
- Clean up schedules and monitoring shall be conducted as applicable to the nature of the work being done
- If an untidy or hazardous condition is identified, all employees have a responsibility to correct the condition or have it identified to a person responsible to correct the condition.
- Be responsive, through adequate training and understanding, to minimize the risk of injury through keeping the work site clean and free from materials or equipment that could cause workers to slip, trip, or come into unplanned contact with a body.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers maintain a clean and safe work site through on-going general housekeeping as specified in this code in accordance with the training and instruction received.
- Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Use of Field Level Risk Assessment
Through the use of the FLRA, employees and contractors shall identify the work site requirements for cleanliness prior to the start of work. Any and all hazards that may be cleaned and removed shall be done prior to the start of work.
6.2 Toolbox / Safety Meetings
Toolbox / Tailgate / Safety meetings shall be conducted prior to the start of work where applicable and supervisors shall reinforce the need to maintain a clean and tidy workspace. Emphasis must be placed on ALL worksites, not just the traditional “field environment.”

6.3 Prevention Practices
Adequate waste storage bins, locations and containers shall be made available to employees to assist in maintaining a clean and debris free work site. All waste storage bins, locations and containers shall meet or exceed the required standards to comply with any WHMIS regulations.

6.4 Protection Practices
Company Procedures will further define site-specific housekeeping requirements due to environmental hazards, which may be present.

6.5 Facilities
Lighting:
• NCSG shall ensure that all designated work locations and worksites shall be equipped with sufficient lighting to allow all workers to perform their jobs in a safe manner.
• Must be sufficient to protect the health and safety of workers and suitable for the work to be done at the worksite.
• Lighting must be maintained and replaced when damaged or burned out.

Smoking:
• Smoking is permitted in designated areas only.
• Smoking must not occur indoors.
• Smoking must not occur within 5 meters of any building door or window unless an applicable local legislation increases the distance.

6.6 Storing and Handling
• Material and equipment must be placed, stacked or stored in a stable and secure manner. Stacked material or containers must be stabilized as necessary by interlocking, strapping or other effective means of restraint to protect the safety of workers.
• An area in which material may be dropped, dumped or spilled must be guarded to prevent inadvertent entry by workers, or protected by adequate covers and guarding.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG orientation
• Understanding for completion of FLRA
• WHMIS Compliance standards for storage of waste products and materials
3.2.7 Chemical and Biological Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Chemical and Biological Hazards Code to ensure employees and contractors are familiar with and adequately trained in the identification of Hazardous Materials and Substances while operating within NCSG areas of responsibility. This code will aid employees in minimizing the potential risk of exposure to harmful substances.

2.0 SCOPE AND APPLICATION
The correct identification of chemical and biological hazards and the instruction on exposure limits will enable employees to ensure adequate protection. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG when the potential for injury or illness relating to chemical and biological hazards is present.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Chemical and Biological Hazards Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Biological Hazard A naturally occurring substance that can cause harm. Sources of biological hazards include bacteria, viruses, insects, plants, birds, animals, and humans.

Chemical Hazard The release of toxic agents into the atmosphere and environment that can cause harm. Sources of chemical hazards include flammables and combustibles, fumes and dusts.

Exposure Limit Extent to which a person may be safely exposed to a hazardous substance without endangering their health.

4.0 EXPECTATIONS
The Chemical and Biological Hazards Code shall provide required and adequate guidelines to ensure knowledge of potential hazards are available to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Chemical and Biological Hazards Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Use and be aware of chemical and biological hazards that an employee may be in proximity to during the work shift.
• Be aware of and knowledgeable in the use of any personal protective equipment which may be required for the protection against chemical and biological hazards.
• Be responsive, through adequate training, to minimize the risk of exposure to potential chemical and biological hazards.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident, injury or illness to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident, injury or illness to the worker, employees, contractors, or general public within the area.
• Provide, in accordance with NCSG programs, any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.
5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Hazards
Chemical and Biological hazards exist in daily NCSG operations. These hazards may be in the form of a Solid, Gas, Liquid, Vapor, Fume, Virus or Bacteria. It is important to understand how a hazard can enter your body and affect your body in order to prevent contact and exposure. It is necessary to assess the hazards related, implementing controls and develop site specific practices.

6.1.1 Routes of Entry
Chemical and biological hazards can enter the body in one of the following ways:
• Inhalation – By breathing in the hazard
• Ingestion – By eating or swallowing the hazard
• Injection – By injecting the hazard into the body
• Absorption – By absorbing the hazard through the skin

6.1.2 Effects on Health
Chemical and biological hazards have the potential to cause adverse health effects. Effects from hazardous substances range from an eye irritation to chronic lung disease and possibly death. They can cause skin irritation through skin contact, asthma after developing an allergy to substances, losing consciousness after being exposed to toxic fumes or vapors, contracting cancer, or infection from bacteria, viruses and other micro-organisms.
The effect that a hazard will have on an individual will depend on:
• the chemical composition of the hazard;
• the physical form of the hazard (dust, vapor, liquid, etc.);
• the route of entry by which the hazard gets into the body. (Some chemicals can enter the body in more than one way. Different health effects can occur depending on the route of entry);
• the particular tissues and organs in which the hazard collects or localizes;
• the frequency, concentration, and length of exposure; and
• the worker's individual response to the hazard, which can vary a great deal from person to person.

6.2 Exposure
Exposure to hazardous substances must not exceed the 8 hour exposure limit or 15 minute ceiling exposure limit set out by Provincial / State / Federal occupational health and safety regulations.
The Safety Data Sheet must be referenced for every chemical substance used, handled and/or stored. A Field Level Risk Assessment must also be conducted prior to commencing work to determine these hazards and allow controls to be put in place.

6.3 Decontamination
When contact or overexposure with a harmful substance occurs, means of decontamination must be available to employees. This includes, but is not limited to:
• Showers;
• Eye wash stations;
• Neutralizing agents.
Contamination to clothing, materials, equipment and the environment must be addressed immediately. When there is a risk for contamination a site specific practice must be developed and communicated to all affected employees.

6.4 Prevention and Control
Prevention of exposure to chemical and biological hazards starts with assessing the area for the types of hazards and the related health risks.
Having established that a health risk exists, control measures need to be selected that eliminate or reduce exposure to acceptable levels. Those measures need to reduce exposure to below the levels where people can be harmed.
Controls may include:
• Eliminating the hazard by removing the substance;
• Substituting the substance for a less harmful one;
• Containing the substance;
• Properly storing and labeling the substance;
• Ventilating the substance;
• Training employees;
• Developing practices or procedures;
• Providing SDS’s on products and chemicals;
• Personal Protective Equipment
Employers must ensure that the control measures are used and remain effective through regular monitoring and maintenance. Local exhaust ventilation systems, fume cupboards, etc. need to be tested regularly to ensure they continue to work effectively.

All NCSG workers who have the potential to be exposed to chemical or biological hazards at a worksite shall be trained to the emergency response plan and procedures for chemical or biological hazards at that worksite.

6.5 Monitoring
An effective way to ensure controls remain effective and in place is to do an inspection of your workplace, noting all chemicals used and the positions of workers, equipment, ventilation, storage areas, etc.

Air monitoring can also tell you what the types of chemicals and what the levels of chemicals are in the workplace. In some cases, monitoring individuals’ exposure and health surveillance techniques will be required.

7.0 TRAINING REQUIREMENTS AND MATERIALS

- PPE Equipment specific training
  - Dust Respirator / PAPR
  - Disposable Rubber or Latex gloves
  - Disposable Coveralls
  - Eye / Face Protection to prevent aerosols from coming in contact with eye membrane
- Workplace Hazardous Materials Information Systems
- Site specific practices
- NCSG Orientation

8.0 RESOURCES

- Alberta Employment and Immigration – Workplace Health & Safety Bulletins – CH007 – WHMIS Information for Workers
- Alberta Employment and Immigration – Workplace Health & Safety Bulletins – CH008 – WHMIS Information for Employers
- Alberta OH&S Code

May all be used to reference additional information pertaining to WHMIS and control methods for minimizing potential exposure and risk.

Please direct any questions regarding the Code to the Regional Team Lead - HS&E.

9.0 APPENDICIES

- Appendix A – Routes of Entry Diagram

10.0 SUPPORTING DOCUMENTS

- NCSG Code – Personal Protective Equipment - Eye and Face Protection
- NCSG Code – Personal Protective Equipment – Respiratory Protection
- NCSG Code – WHMIS
- NCSG Code – Flammable and Combustible Materials – Handling and Storage
3.3 OPERATIONAL CODES

3.3.1 Overhead Hazards Limits of Approach Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed an Overhead Hazards - Limits of Approach Code to identify the proper level of protection against a potential contact of overhead lines to employees, contractors, and the public while operating within NCSG areas of responsibility. This code will aid employees in minimizing the risk associated with operating around overhead lines.

2.0 SCOPE AND APPLICATION
The correct application of limiting approach areas and operating areas around overhead lines will enable employees to ensure adequate protection during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG. This Process applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
There are no definitions for the Overhead Hazards – Limits of Approach Code.

4.0 EXPECTATIONS
The Overhead Hazards - Limits of Approach Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to contact and unknown voltage are available to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Overhead Hazards - Limits of Approach Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / Federal legislation within the operational areas of responsibility of NCSG. Legislative changes shall be monitored by Corporate Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management System are updated a revision record will be posted to all employees notifying them of the update.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment (PPE) as required during the operation of any equipment when operating around or near overhead powerlines in accordance with the training and instruction received.
• Inspect personal protective equipment before using it, and
• Do not use personal protective equipment that is unable to perform the function for which it is designed.
• NCSG employees shall not operate equipment around or near power lines, unless properly trained to do so.
• Follow the direction of the Supervisor in maintaining the appropriate safe clearance when working in the vicinity of an overhead power line.
• Tools that are used by NCSG employees, contractors to handle energized conductors must be designed and constructed to withstand the voltages and stresses to which they are exposed.
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments, which may be prone to unknown voltage.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment as required during the operation of any equipment when operating around or near overhead powerlines in accordance with the training and instruction received.
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline that is required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Corporate Health,
5.5 Corporate Health, Safety and Environment Team

It is the Corporate Health, Safety and Environment team responsibility to:

- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Prior to Commencement of Work

NCSG shall inform power line owners of the date, time, and type of work involved and if required receive permission before work is done or equipment is operated within 7.0 metres (23 feet) of an energized overhead power line or at distances less than the safe limit of approach. This will determine the voltage of the power line, establish the appropriate safe limit of approach distance and obtain the operators assistance in protecting workers involved. If possible, a request to de-energize and ground power lines or provide insulated barriers shall be performed.

NCSG shall have in place and implement written procedure to assist workers recognize and control the hazards of contact with overhead power lines in the workplace. Field Level Risk Assessments shall be used in conjunction with the procedure prior to the commencement of each shift and as required, should the nature of the work change.

All NCSG employees and contractors shall know the location and voltage of all overhead power lines at the job site and shall be marked with signage as required to indicate safe limit of approach distances in compliance with legislation.

NCSG employees, contractors, visitors and general public shall avoid storing materials under or near overhead power lines.

6.2 During Operation around Overhead Powerlines

- No worker shall approach or operate within 7 metres (23 feet) of an energized overhead powerline unless:
  - The worker is directed by a competent utility company employee, or the minimum clearances outlined in the OH&S regulations, safe limits of approach, are maintained between the worker or the equipment and the overhead power line.
  - A safe work permit may be required and when such, is prepared and applies to all work carried out in close proximity to any energized powerline.
  - When deemed necessary, a dedicated safety watch person shall be utilized to ensure there is no inadvertent contact with an energized overhead powerline.
  - NCSG vehicles will not transport any load, equipment or building greater than 4.15 metres (13.6 feet) in height underneath any overhead power lines during normal operations. However, when transporting loads, equipment or buildings that are greater than 4.15 metres (13.6 feet) in height on public roadways, the safe limits of approach distances apply and the NCSG Management representative on site shall conduct an assessment of the safe approach prior to the load being moved.

- If a load, equipment or building is being moved or operated in the area of energized overhead power lines, the supervisor or a designated worker shall appoint a competent worker whose sole responsibility is to observe the clearance between the power lines and the object within the safe limits of approach. The employee shall be responsible to warn others if the minimum distance is not maintained.
- When mechanical equipment is being operated near overhead power lines, NCSG employees, contractors, visitors or general public shall not stand in a manner as to be on the ground and in contact with the equipment unless it is located so that the required clearance cannot be violated even at the maximum reach of the equipment.
- When working near overhead power lines, the use of non-conductive wooden or fiberglass ladders shall be used. Aluminum ladders and metal scaffolds or frames are efficient conductors of electricity and shall be avoided.

6.3 Emergency Response Planning

NCSG shall ensure an Emergency Response Plan is established prior to any work beginning around overhead powerlines. NCSG Emergency Response Plans shall include but are not limited to identifying the following:

- When a machine is in contact with an overhead line, DO NOT allow anyone to come near or touch the machine. Stay away from the machine and summon outside assistance by referring to emergency contact numbers.
- Never touch a person who is in contact with a live power line.
- If you should be in a vehicle that is in contact with an overhead power line, DO NOT LEAVE THE VEHICLE. As long as you stay inside and avoid touching metal on the vehicle, you may avoid an electrical hazard. If you need to get out to summon help or because of fire, jump out without touching any wires or the machine, keep your feet together, and hop to safety.
- Be trained in cardiopulmonary resuscitation (CPR).

NCSG shall ensure all employees, contractors, visitors as applicable are made familiar with emergency response planning regarding overhead power lines prior to the commencement of work.
7.0 TRAINING REQUIREMENTS AND MATERIALS
- First Aid / CPR / AED Training for designated personnel
- NCSG orientation

8.0 RESOURCES
- ATCO Electric
- Alberta OHS Code Part 17
- Manitoba Workplace Safety & Health 129/2016 Regulations Part 25
- Saskatchewan OH&S Regulation Part XXIII
- British Columbia OHS Regulation Part 14.52.1
- United States Department of Labor Occupational Safety & Health Administration Regulations (Standards – 29 CFR) 1910 & 1926.1407-1411

May all be used to reference additional information pertaining to overhead powerlines and limits of approach and control methods for minimizing potential exposure and risk.

9.0 APPENDICES
- Appendix A – Minimum Requirements for Operating Near Overhead Lines
- Appendix B – Minimum Requirements for Unqualified Workers and/or Equipment Operating near Overhead Power Lines
APPENDIX A – Minimum Requirements for Operating Near Overhead Lines

APPENDIX B – Minimum Requirements for Unqualified Workers and/or Equipment Operating near Overhead Power Lines

Purpose:
These minimum requirements are for your protection and safety. Contact with power lines is extremely dangerous and could result in death.

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<tbody>
<tr>
<td>1</td>
<td>Danger Zone (unknown voltage) Equipment must NOT be operated within 7 m (23 ft.) of any overhead power line without notifying the electric company or utility owner.</td>
</tr>
<tr>
<td>2</td>
<td>Prohibited Area (voltage confirmed by the electric company or utility owner)</td>
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<tr>
<td></td>
<td>a) no unqualified worker or equivalent can enter the prohibited area</td>
</tr>
<tr>
<td></td>
<td>b) Electric company recommends all workers within the 7 m (23 ft.) Danger Zone, but outside the Prohibited Area required a designated signaler who can communicate by radio or air horn with all workers and equipment</td>
</tr>
<tr>
<td>3</td>
<td>NEVER ALLOW WORKERS OR EQUIPMENT TO ENTER THE PROHIBITED AREA! If work cannot be done outside the Prohibited Area contact the electric company for assistance.</td>
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<tr>
<td>4</td>
<td>Work near power lines must be done during daylight hours only.</td>
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<tr>
<td>5</td>
<td>The electric company recommends installing a minimum of two 50.8 cm x 71 cm (20' x 28') &quot;Danger Overhead Line&quot; signs when operating equipment near the lines. (These can be purchased through most safety supply companies.) The signs must be installed on both sides of the line — at a height of 1.8 m (6 feet) and a distance of 7m (23 feet) from the line. (Refer to the diagrams above.)</td>
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<tr>
<td>6</td>
<td>On-site workers must have a copy of the crossing agreements and all on-site personnel must be knowledgeable of the requirements.</td>
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</table>
3.3.2 Gas Monitoring Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Gas Monitoring Code to identify the proper level of protection against a potential injury to persons due to unsafe or uncontrolled exposure to toxic gases in the workplace.

2.0 SCOPE AND APPLICATION
This code applies to any workplace or designated work area where a NCSG employee or a contractor is exposed to an environment where toxic gases or fumes may exist.

This Process applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to the Gas Monitoring Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

ALARA As Low as Reasonably Achievable, a measure must be taken to keep the worker's exposure to a level as low as reasonably achievable.

Atmospheric Testing A process whereby a select area of atmosphere is through the use of equipment such a monitors, tested on a fix schedule to ensure the exposures of personnel to the effected atmosphere is regulated.

Confined Space A space such as a tank, a silo, storage bin, process vessel, sewer, or other enclosure not designed or intended for human occupancy, or an area, other than underground working such as a tunnel or shaft, that:
• Is enclosed or partially enclosed.
• Is not designed or intended for continuous human occupancy.
• Has limited or restricted means of entry or exit that may complicate the provision of first aid, evacuation, rescue, or other emergency response service.
• Is large enough and so configured, a worker could enter to perform assigned work.

Exposure Limit The maximum concentration of a contaminant that workers are allowed to be exposed to without respiratory protection, as set out in specified regional legislation.

Highly Toxic Gases Gases that have a median Lethal Concentration (LC50) in air of 200 parts per million by volume or less of gas or vapor when administered by continuous inhalation for one hour.

A Threshold Limit Value (TLV) as established by ACGIH or a Permissible Exposure Level as established by OSHA, less than or equal to one part per million.

Hydrogen Sulphide A colorless flammable gas having the characteristic odor of bad eggs, and found in many mineral springs. It is produced by the action of acid on metallic sulphide, and is an important chemical reagent.

IDLH Atmosphere An atmosphere containing the substance in a concentration that is immediately dangerous to life or health (IDLH) because it impairs a worker's ability to escape without serious injury or irreversible health effects.

 Toxic Gases Gases that have a median Lethal Concentration (LC50) in air of more than 200 parts per million, but not more than 2000 parts per million by volume of gas or vapour when administered by continuous inhalation for one hour.

4.0 EXPECTATIONS
The Gas Monitoring Code shall provide required and adequate guidelines to ensure knowledge of requirements regarding NCSG personnel to implement and participate in Gas Monitoring activities on a NCSG worksite.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee's responsibility to:
• Understand and adhere to the conditions of the Gas Monitoring Code.
• Report any violations or deviations from the Gas Monitoring Code by any unauthorized personnel at any time to an immediate supervisor or manager.

5.2 Supervisors
In addition to 5.1, it is the supervisor's responsibility to:
• Ensure that workers are adequately trained in the application of this code as it relates to their specific job tasks or functions.
• Ensure all Gas Monitoring activities comply with the applicable Legislation and this Code.

5.3 Management
In addition to 5.1, it is the management responsibility to:
• Ensure any form of Toxic Gas usage on an NCSG sites shall have onsite monitoring according to this procedure and NCSG Management will ensure the work not commence prior to meeting all applicable elements.
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.

5.4 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Designations of Toxic Gases
In order to determine the appropriate levels of monitoring the following table outlines the Toxic Gas and the monitoring requirement.

<table>
<thead>
<tr>
<th>Type of Gas</th>
<th>Monitoring Requirement</th>
<th>ERP Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Sulfide</td>
<td>Continuous Monitoring throughout operation. Alarms required for exposure limit thresholds. Specialized Respiratory equipment required to mitigate exposure.</td>
<td>Yes</td>
</tr>
<tr>
<td>Benzene</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Specialized Respiratory equipment required.</td>
<td>Yes</td>
</tr>
<tr>
<td>Cadmium</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Specialized Respiratory equipment required.</td>
<td>No</td>
</tr>
<tr>
<td>Ethylene Oxide</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Specialized Respiratory equipment required.</td>
<td>No</td>
</tr>
<tr>
<td>Silica</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Specialized Respiratory equipment required.</td>
<td>No</td>
</tr>
<tr>
<td>Crystalline</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Specialized Respiratory equipment required.</td>
<td>No</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Respirator equipment required.</td>
<td>No</td>
</tr>
<tr>
<td>Isocyanates</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Specialized Respiratory equipment required.</td>
<td>Yes</td>
</tr>
<tr>
<td>Lead and Lead</td>
<td>Continuous Monitoring required throughout operations. Alarms required for exposure limit thresholds. Respirator equipment required.</td>
<td>No</td>
</tr>
<tr>
<td>Compounds</td>
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</table>

Note: The ERP Requirement can be addressed through the application of a Safe Work Permit Process.

6.2 Monitoring of Toxic Gases
To prevent potential exposure to identified toxic gases on a NCSG worksite the following two methods of gas monitoring may be employed by NCSG.

<table>
<thead>
<tr>
<th>Gas Monitoring Equipment</th>
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<tbody>
<tr>
<td>Personal Monitors</td>
</tr>
<tr>
<td>• Designated only in areas where exposure potentials are relatively small.</td>
</tr>
<tr>
<td>• To be employed as an alarm and evacuation device only, not for continuous work.</td>
</tr>
<tr>
<td>• Must be certified to measure the identified gas as well as oxygen breathing limits.</td>
</tr>
<tr>
<td>• Must be calibrated as per the manufacturers’ specification, utilizing the gas mixtures appropriate for the atmosphere to be tested.</td>
</tr>
<tr>
<td>Fixed Gas Monitoring Units</td>
</tr>
<tr>
<td>• To be calibrated in accordance with Manufacture’s requirements.</td>
</tr>
<tr>
<td>• To be installed in locations identified as potential exposure points.</td>
</tr>
<tr>
<td>• Must be accompanied by a site specific Emergency Response Plan prior to commencing work.</td>
</tr>
</tbody>
</table>

7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG orientation
• NCSG Site Specific Orientation

8.0 RESOURCES
• Workers Compensation Board of BC – WorkSafeBC – Breathe Safer – How to Use Respirators Safely and Start a Respirator Program
• Alberta OHS Code Part 18, Sec 244-255
• Manitoba Workplace Safety & Health 129/2016 Regulations Part 4.1-4.3, Part 6
• Saskatchewan OH&S Regulation Part VII
• British Columbia OHS Regulation Part 8.32-8.45
• Ontario Occupational Health and Safety Act - O. Reg. 213/91 Section 21-27
• United States Department of Labor Occupational Safety & Health Administration Regulations (Standards – 29 CFR) 1910.94, 1910.134

9.0 APPENDICES
None

10.0 SUPPORTING DOCUMENTS
• NCSG New Employee Orientation Process
• NCSG PPE – Respirator Code
• NCSG First Aid Code
3.3.3 Equipment Guarding Code

1.0 PURPOSE
NCYG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed an Equipment Guarding Code to identify the proper level of protection against a potential injury / damage to employees, contractors and the public / property while working near machines with hazardous moving parts.

2.0 SCOPE AND APPLICATION
There are a wide variety of mechanical motions and actions on machines, which may present hazards to NCSG employees, contractors, visitors and the general public. These can include movement of rotating members, reciprocating arms, moving belts, meshing gears, cutting teeth, and any part that may impact or shear. This code shall provide guidelines for safeguarding and recognizing mechanical hazards due to dangerous moving parts. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Equipment Guarding Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

**Electrical Guard** Electronic means of protection provided to protect employees from electrical components or accidental equipment start-up.

**Guard** An enclosure designed to protect employees from rotating or moving mechanical parts. All Guards designed for use with NCSG equipment shall be designed based on the location of openings and the estimated reach distance to the hazard being controlled in accordance to CSA Standard Z432-94, Safeguarding of Machinery or the applicable ASME Standard.

**Kickback Device** Any device that protects the operator from equipment throwing the work back towards the operator.

**Portable** Hand-held operated.

**Shield** An enclosure or barrier designed to protect employees from processes involving the possibility of disintegrating machine parts or parts being ground upon, pressed, or struck.

**Point of Operation** A point where work is performed on the material.

**Power transmission components** Parts of the mechanical system that transmits energy to the part of a machine performing the work.

4.0 EXPECTATIONS
The Equipment Guarding Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Equipment Guarding Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Inspect personal protective equipment before using it, and
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments, which may be prone to injury due to failure of equipment guarding.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Ensure appropriate PPE as required in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Identification of Equipment Guarding Hazard Environment
• A requirement for equipment guarding can be identified in the following types of equipment. The list is not exhaustive and NCSG employees / contractors shall endeavour to continually be familiar with any new equipment and guarding applications which may be introduced to the work site.
  • Concrete Circular Saws
  • Woodworking Machines (Circular, Radial, Mitre saw)
  • Power Presses (Drill Presses)
  • Metal Working Machines
  • Abrasive Wheel Machines (Grinders)
  • Pulleys (on machinery, equipment)
  • Sprockets (on machinery, equipment)
  • Chains (on machinery, equipment)
  • Machinery Belts
  • Flywheels (on machinery, equipment)
  • Hand and Portable Power Tools
  • All classes of mechanized field equipment.
• Any employee who is exposed to mechanical hazards due to a machine's moving parts, including machine operators and maintenance and equipment repair personnel.

6.2 Recognizing Where Equipment Guarding Hazards Occur
• In conjunction with FLRA's and Company Standard Operating Procedures, NCSG shall identify areas that require machine guarding. These may include but are not limited to:
  • Point of Operation – Examples of the point of operation may be seen as cutting, shaping, boring, or forming of stock
  • Power Transmission Components – Examples of the Power transmission component may be seen as flywheels, pulleys, belts, connecting rods, couplings, cams, spindles, chains, crank, and gears
  • Other Moving Parts – may include but are not limited to parts which move while the machine is in operation (e.g. reciprocating, rotating, and transverse moving parts, as well as feed mechanisms and auxiliary parts of the machine.)
  • No operator shall start any guarded equipment without first ensuring that starting the equipment shall not endanger themselves or any other worker.

6.2.1 Contact with Tools, Equipment and Machinery
• NCSG shall ensure where contact between moving parts of machinery, electrically energized equipment or part of the work process and a worker's clothing, jewelry or hair is likely, workers must:
  • wear clothing that fits closely to the body,
  • not wear bracelets, rings, dangling neckwear, a wristwatch or similar articles, and
  • have head and facial hair that is short or confined and cannot be snagged or caught.

6.3 Machine Guard Requirements
• NCSG shall designate a competent employee / contractor to ensure that all manufacturer’s guards and barrier devices are in place and in safe working condition prior to the use of any equipment.
• Guards are barriers which prevent access to dangerous areas.
• The four general types of guards which may be seen in the workplace are:
  • Fixed
    • the guard is a permanent part of the machine
  • Is not dependent upon moving parts to perform its intended function.
  • Interlocked
    • When they are opened or removed, automatically shuts off or disengages the machine.
  • Adjustable
    • Allow flexibility in accommodating various sizes of stock.
• Self-Adjusting
  • protect the operator by placing a barrier between the danger area and the operator
  • allow a large enough opening to admit stock
• After the stock is removed, the guard returns to its rest position.
• Appendix C provides illustrations of the types of guards.
• NCSG shall ensure through formal / informal inspections that equipment guarding is maintained in a safe working condition.
• Equipment guarding shall protect employees, contractors, visitors, and the general public by ensuring that the following is achieved. This list includes but is not limited to:
  • Prevent contact of the employee with moving parts
  • If required in accordance with the manufacturer’s specifications, shall be secured to the machine
  • Prevent and protect equipment and personnel from falling objects
  • Through the use of JSA’s, FLRA’s ensure that the guard does not create new hazards
  • Ensure that the guard does not interfere with job performance
  • Allow for safe lubrication and maintenance as required of the machine.
• Required safeguards shall remain in place and un-tampered with.
• In conjunction with Company Standard Operating Procedures, NCSG shall provide required checklists to ensure equipment guarding applications are achieved. Appendix A provides recommended items to be included in these lists.
• NCSG forbids the removal of any safety guard device in any manner other than that which the guard is designed.

6.4 Machinery Maintenance and Repair
• Where reasonably practicable, machine design shall permit lubrication and adjustment without removal of guards.
• If machine guards must be removed, the maintenance and repair shall ensure the lockout procedure required in accordance with the Hazardous Energy Isolation code is adhered to.
• NCSG shall ensure that if required for any mechanical power presses, safety blocks are used as an additional safeguard in conjunction with any lockout procedures being used.
• Equipment blade changes or adjustments shall be performed only when the power source has been disconnected to comply with the lockout, tag-out codes.
• Equipment in which guards cannot be installed shall be removed from service. This includes older equipment which never had factory-installed guards.
• All bearings shall be lubricated and any debris removed from surfaces to prevent fires.
• All adjustments shall be made by an employee / contractor who are trained and knowledgeable about the particular piece of equipment being adjusted.

6.5 Label, Signs, and Marking Requirements
• NCSG shall ensure that equipment labels for guarding are legible and adequately fixed to ensure employees, contractors, visitors, and general public are aware of the hazards of the equipment. Appendix B presents some specific examples of label requirements for machine guarding.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG shall provide site specific training for equipment in conjunction with JSA’s and Task Hazard Analysis which includes but is not limited to:
  • discussion on where hazards occur,
  • machine guarding requirements,
  • machinery maintenance and repair requirements,
  • Label, signs, and marking requirements for machines with hazardous moving parts.
• NCSG shall provide visitors to a work site an orientation, which includes, but is not limited to the identification of equipment guarding labelling for any area that the visitor may be in proximity to during the visit.
• Employee training shall include, but not be limited to the following instructions and hands-on training:
  • Description and identification of the hazard associated with the machine
  • The guards, how they provide protection, and the hazard for which they are intended
  • Precautions to take when machine is unguarded during maintenance and repair
  • What to do and who to contact if a guard is damaged, missing, or defective
  • Review of the Standard Operating Procedures for the specific machines to be used by the employee
• PPE Equipment specific training for equipment used
• NCSG orientation

8.0 RESOURCES
• Alberta OH&S Code Part 25
• Alberta OH&S Code Part 22
• BC OH&S Regulation Part 12
• Manitoba OH&S Regulation Part 16
• Saskatchewan OH&S Regulations Part X
• CSA Z432-94 – Safeguarding of Machinery
• OSHA 1920
• OSHA 1926
9.0 APPENDICIES

- Appendix A – Minimum Machine Guarding Checklist Criteria
- Appendix B – Selected Machine Guarding Labelling Requirements
- Appendix C – Illustrations of Types of Guards

10.0 SUPPORTING DOCUMENTS

- NCSG Code – Personal Protective Equipment - Eye and Face Protection
- NCSG Code – Personal Protective Equipment – Respiratory Protection
- NCSG Code – Hazardous Energy Isolation
### APPENDIX A – Minimum Machine Guarding Checklist Criteria

#### Requirements for All Safeguards

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#### Mechanical Hazards

**The point of operation:**

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#### Power Transmission Apparatus

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**Other moving parts:** Insert Equipment Specific parts as identified through NCSG Standard Operating Procedures

#### Non-Mechanical Hazards

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#### Electrical Hazards

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</tbody>
</table>
Training
Yes No
☐ ☐ Do operators and maintenance workers have the necessary training in using the safeguards and why?
☐ ☐ Have operators and maintenance workers been trained in locating safeguards, how they provide protection, and what hazards they protect against?
☐ ☐ Have operators and maintenance workers been trained in the circumstances in which guards can be removed?
☐ ☐ Have workers been trained in the procedures to follow if they notice damaged, missing, or inadequate guards?

Protective Equipment and Proper Clothing
Yes No
☐ ☐ Is Personal Protective Equipment (PPE) required?
☐ ☐ If PPE is required, is it appropriate for the job, in good condition, kept clean and sanitary, and stored carefully when not in use?
☐ ☐ Is the operator dressed safely for the job (that is, no loose-fitting clothing or jewellery)?

Machinery Maintenance and Repair
Yes No
☐ ☐ Have maintenance workers received up-to-date instruction on the machinery they service?
☐ ☐ Do maintenance workers lock out the machine from its power sources before beginning repairs?
☐ ☐ Where several maintenance persons work on the same machine, are multiple lockout devices used?
☐ ☐ Do maintenance persons use appropriate and safe equipment in their repair work?
☐ ☐ Is the maintenance equipment itself properly guarded?

Other Items to Check
Yes No
☐ ☐ Are emergency stop buttons, wires, or bars provided?
☐ ☐ Are the emergency stops clearly marked and painted red?
☐ ☐ Are there warning labels or markings to show hazardous areas?
☐ ☐ Are the warning labels or markings appropriately identified by yellow, yellow and black, or orange color?

APPENDIX B – Selected Machine Guarding Labelling Requirements

Appropriate labels shall be placed on all machines (old and new) requiring machine guarding when the machine is not in operation or while it is being serviced. If labels have been painted over, defaced, or removed they shall be replaced.

Woodworking Machinery Requirements
Radial Saws - The direction of the saw rotation shall be conspicuously marked on the hood. In addition, a permanent label at least 1-1/2 inches by 3/4 inch must be affixed to the rear of the guard at about the level of the arbor. The label must read as follows:

DANGER: DO NOT RIP OR PLOUGH FROM THIS END

Mechanical Power Presses- Presence Sensing Device Initiation (PSDI) Prior to the initial use of any mechanical press in the PSDI mode, certification as applicable to legislative regulation are required.

A label shall be affixed to the press as part of each installation certification/validation and the most recent recertification/revalidation. The label must indicate:
- The press serial number
- The minimum safety distance
- The fulfillment of design certification/validation
- The employer’s signed certification
- The identification of the OSHA-recognized third party validation organization and its signed validation
- The date the certification/validation and recertification/revalidation are issued

Portable Power Tool Guards
The phrase, "CAUTION. BE SURE THAT GUARD IS IN PLACE BEFORE USE," or similar wording must be clearly visible on or near the guard or starting control point.
**Jacks - Loading and Marking**

The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping, stenciling, or other suitable means. Jacks which are out of order shall be tagged accordingly and removed from service.

**APPENDIX C – Illustrations of Types of Guards**

- Figure 1 provides an example of a fixed guard.
- Figures 2 and 3 provide examples of adjustable guards.
- Figures 4 and 5 shows examples of a self-adjusting guard.
3.3.4 Hazardous Energy Isolation Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services Ltd. and its affiliated companies (NCSG) have developed a Hazardous Energy Isolation (Lockout) Code to identify the proper level of protection against a potential injury / incident due to an unplanned activation of an energy source to employees, contractors, and the public while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The application of an effective lockout program is identified in preparing a written, standardized procedure, necessary training and responsible supervision. The application of this code shall ensure that a sequence for access, de-energizing, lockout, clearance, release, and start-up of equipment is in place. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Hazardous Energy Isolation (Lockout) Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Block Blocks, special brackets, or special stands such as those commonly used under raised vehicles, or equipment. Blocks must be placed under raised dies, lifts, or any equipment that might inadvertently move by sliding, falling or rolling.

Another form of blocking is the placement of a blind. A blind is a disk of metal placed in a pipe to ensure that no air, steam, or other substance will pass through that point if the system is accidentally activated. Before installing blinds or blocks, bleed down steam, air, or hydraulic lines to get rid of any pressure.

Coiled springs, spring-loaded devices, or suspended loads must also be released so that their stored energy will not result in inadvertent movement.

Energy source Any electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other source of energy.

Locks As defined a lock or a code with only one key which is assigned to an individual employee.

The lock should be substantial and durable, and should have the name of the employee on it. In addition, locks can be color-coded to indicate different shifts or types of trades.

When more than one worker is servicing a piece of equipment that must be locked out, a lockout adaptor can be used which allows all the workers to place their locks on the disconnecting means.

Lockout The use of a lock or locks or a computer isolation code specific to the user to render machinery or equipment inoperable or to isolate an energy source in accordance with a written procedure.

Lockout adaptor A device that enables multiple workers to isolate an energy source to complete assigned works on a piece of equipment or task. After the work is completed, each worker removes his lock and only upon removal of all locks can the equipment be returned to serviceable condition.

Tags A recordable one time use item to be attached to the lockout location and able to identify the following:
• Reason for the lockout.
• Name of the employee who is working on the equipment and how that person may be reached.
• Date and time the tag was put in place.

Tagout devices shall be capable of enduring at least 50 pounds of pull, and a non-reusable type.

4.0 EXPECTATIONS
The Hazardous Energy Isolation (Lockout) Code shall provide required and adequate procedure to ensure knowledge of potential hazards of an energy source available to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Hazardous Energy Isolation (Lockout) Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Each new or transferred affected employee shall be instructed by a competent and designated individual of NCSG in the purpose and use of the lockout procedure.
• Employees authorized to perform lockout shall be certain as to which switch, valve, or other energy isolating devices apply to the equipment being locked out
• All employees, contractors, visitors shall not attempt to operate any switch, valve, or other energy isolating device bearing a lock
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments due to the requirement of lockout procedure.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure that each worker involved in the application of a locking out device is the only worker equipped with the key or code to that device and only the company management representative will hold the duplicate key.
• Ensure that in a situation where a lock device is installed by a worker that the installing worker is aware of who holds the duplicate key and when and how that key will be applied.
• Ensure that when a situation exists where a lock device is installed that a lock out logbook be used to track the application and removal of the lock device during the entire process.
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Written Requirements of Hazardous Energy Isolation (Lockout)
All equipment shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel or damage to property. This includes maintenance, servicing, testing, cleaning, repairs and defective machinery or equipment.

If it is not practicable to shut down machinery or equipment for maintenance, only the parts which are vital to the process may remain energized and the work must be performed by workers who are qualified to do the work, have been authorized by the employer to do the work, and have been provided with and follow written safe work procedures.

If the energy isolating device is under the exclusive and immediate control of the worker at all times while working on the machinery or equipment, or a tool, machine or piece of equipment which receives power through a readily disconnected supply, such as an electrical cord or quick release air or hydraulic line, is disconnected from its power supply and its connection point is kept under the immediate control of the worker at all times while work is being done, a lockout is not required.

NCSG shall ensure an effective lockout program through a written standardized code which shall be supplemented by site specific Standard Operating Procedures where applicable and posted. The format shall be consistent with a checklist format that is easily understood and followed by all employees, contractors, and visitors to NCSG areas of responsibility.

This format shall include and verify a sequence for access, de-energizing, lockout, clearance, release, and start-up. Stored energy shall also be considered in addition to conditions, which would not under normal operating circumstances consist of a hazardous condition, which now does exist due to the removal of guards during maintenance and servicing.

NCSG shall ensure the following is applied and included in the standardized forms for Lockout procedures:
• Job objectives and equipment involved.
• Detailing the energy sources for each machine and lockout procedures.
• Lock and key identification and distribution.
• Steps for shutting down and securing machinery.
• Steps to verify lockout effectiveness.
• Procedural steps for applying lockout and tagout.
• Procedural steps for restarting.
• Employees authorized to perform lockout.
• Logbooks records.
• Annual compliance audit.
6.2 Sequence of Lockout Procedure
1. Notify all affected employees that a lockout is required and the reason therefore.
2. If the equipment is operating, shut it down by the normal stopping procedure (such as: depress stop button, open toggle switch).
3. Operate the switch, valve, or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, and other) is disconnected or isolated from the equipment. Stored energy, such as that in capacitors, springs, elevated machine members, rotating fly wheels, hydraulic systems, and air, gas, steam or water pressure, must also be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down.
4. Lockout energy isolating devices with an assigned individual lock as appropriate. Combination locks will not be used.
5. Attach a tag with the person responsible for the lockout’s name, date, and reason for lockout.
6. After ensuring that no personnel are exposed and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. CAUTION: Return operating controls to neutral position after the test.
7. The equipment is now locked out.

6.3 Removal of Lock-Out Devices
1. When the job is complete and equipment is ready for testing or normal service, check the equipment area to see that no one is exposed.
2. When equipment is clear, remove all locks. The energy isolating devices may be operated to restore energy to equipment.
3. The management member responsible for the entire activity shall ensure that all locks are removed in accordance to the NCSG procedure.
4. In the event a worker can not physically remove a lock that he/she has installed the Senior NCSG Management Representative on site can remove the lock using the duplicate key only after he has verified the location and safety of the worker in question and that the action and verification is so noted in the lock out logbook for that event. The verification must be witnessed by another NCSG employee.

6.4 Procedure Involving More Than One Person or a Second Working Shift
1. In the preceding steps, if more than one individual is required to lock out equipment or where a different shift of workers is required to access the locked out equipment, each new worker shall place his own personal lock on the energy isolating device(s).
2. Two designated individuals of a work crew, with the knowledge of the crew, may lock out equipment for the whole crew ensuring the following criteria is maintained:
   a) independently lockout the energy isolating device
   b) security keys for the energy isolating device with a lock or other positive sealing device as designated by NCSG
   c) complete sign and post a checklist that identifies the machinery or equipment components which are covered by the lockout procedure
3. The designated individuals shall not remove a crew lock until it has been verified that all individuals are clear.

6.5 Working On Equipment Which Must Be Running During Servicing or repair
In case where equipment must be operational for servicing and or where it is not possible to lock out equipment for service work, NCSG shall identify such equipment and implement the following:
• A detailed work procedure for tasks being performed around or including the use of that equipment.
• A detailed Hazard Assessment shall be conducted on the equipment prior to working with or around such equipment.
• Sign off for all involved

7.0 TRAINING REQUIREMENTS AND MATERIALS
In training for lockout procedure NCSG shall consider the following:
• The authorized person must be trained in a written procedure and fully knowledgeable of hazardous energies specifically related to equipment.
• Employees reassigned to different equipment shall be retrained.
• Contractors working on site shall have a general understanding of lockout/tag-out and follow NCSG procedures. In large and complex facilities, permits signed by designated supervisors shall be obtained before a lockout is begun. A signed permit is particularly important if maintenance work is being performed by an outside contractor who may be familiar with the particular piece of equipment being serviced, but who will not know about NCSG and site specific operation overall.
• NCSG orientation
• All training and/or retraining must be documented, signed and certified.
8.0 RESOURCES
- Alberta OHS Code Part 15
- Manitoba Workplace Safety & Health 129/2016 Regulations Part 16
- Saskatchewan OH&S Regulation Part X
- British Columbia OHS Regulation Part 10
- United States Department of Labor Occupational Safety & Health Administration Regulations (Standards – 29 CFR) 1910.147

May all be used to reference additional information pertaining to Hazardous Energy Isolation (Lockout) and control methods for minimizing potential exposure and risk.

9.0 APPENDICES
- Appendix A – Lockout Removal Form

APPENDIX A – Lockout Removal Form

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Unit No.</th>
<th>Unit Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Lock No.</th>
<th>Employee Name</th>
<th>Supervisor</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Personal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ I/O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employee is Present?</th>
<th>Reason for Removal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes</td>
<td>□ Lost Key</td>
</tr>
<tr>
<td>□ No</td>
<td>□ Employee no longer works at NCSG</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Signature:</th>
<th>Verification method that employee is off site:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Manager is Present?</th>
<th>I/O and Supervisor have verified the equipment is safe to remove the lock and no personnel are in the hazard area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes</td>
<td>□ Yes</td>
</tr>
<tr>
<td>□ No</td>
<td>□ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manager Name and Signature:</th>
<th>Isolation Officer Name and Signature:</th>
<th>Supervisor Name and Signature:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Logbook Updated?</th>
<th>Lock Destroyed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes</td>
<td>□ Yes</td>
</tr>
<tr>
<td>□ No</td>
<td>□ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
3.3.5 Powered Mobile Equipment Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have a Powered Equipment Code to identify the proper level of protection against a potential injury / damage to employees, contractors, and the public / property regarding the use of ancillary powered equipment while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct set up, handling and maintenance of auxiliary / ancillary equipment is essential in maintaining a safe work environment for employees / contractors to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Powered Equipment Code.

4.0 EXPECTATIONS
The Powered Equipment Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Powered Equipment Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Corporate Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
- Use and set up ancillary equipment only if trained to do so.
- Use and wear properly the appropriate personal protective equipment as required in accordance to this code in accordance with the training and instruction received.
- Inspect their personal protective equipment and powered equipment before using it;
- Not use equipment that is unable to perform the function for which it is designed.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to hazards identified as specific to individual equipment.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment as required for the operation and use of specific ancillary equipment as specified in this code in accordance with the training and instruction received.
- Ensure, appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Immediately correct and document any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.
- Shall ensure that all equipment and machinery:
  - Is capable of safely performing the functions which it is used.
  - Is selected, used and operated in accordance with the manufacturer’s recommended instructions
  - And if necessary that safe operating procedures are readily available to all workers using that equipment.
- NCSG Management will ensure that training processes exist for all equipment maintained by the company and that no employee shall operate any equipment till they have completed the training process and been deemed competent for that equipment.
5.5 Health, Safety and Environment Team
   It is the Health, Safety and Environment team responsibility to:
   • Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
   • Amend and maintain this code within the defined review period (Minimum every 3 years).

6.0 METHOD
6.1 Placement of Equipment
   • Site location of equipment shall be identified prior to start up to ensure hazards are not introduced to the work site.
   • All grounding and electrical requirements shall be made in compliance with provincial /state/ federal legislation and in conjunction with NCSG Electrical Safety Code.

6.2 Operation of Equipment
   • Prior to start up, all safety applications and guards shall be verified for serviceable condition in conjunction with NCSG Equipment Guarding Code.
   • Pre- Start Inspection procedures shall be established in conjunction with manufacturer Operating Procedures to ensure powered equipment is maintained in serviceable condition at the beginning of each shift.
   • Before starting machinery, an operator must ensure that starting the machinery will not endanger the operator or another worker. While operating machinery, an operator must ensure that its operation will not endanger the operator or another worker.
   • Locate the emergency stopping device and ensure it is located in direct view and reach during operation.
   • Any modification of a tool, machine or piece of equipment must be carried out in accordance with the manufacturer's instructions; if available and safe work practices;
   • Jewellery and baggy clothing must not be worn while operating machinery which may contact a moving part of a machine.
   • Under no circumstances will any employee intentionally remove, disable or impair any safe guard on any equipment used at an NCSG worksite. Such actions shall be deemed a violation of the company health and safety program and treated accordingly.
   • Storage of equipment shall be completed as per the manufacture guidelines.

6.3 Correct use of PPE
   • Personal Protective Equipment shall be used in accordance to the manufacturer’s recommended specifications and in conjunction with NCSG PPE Codes and Company Standard Operating Procedures

6.4 Maintenance
   • Formal scheduled maintenance programs shall ensure periodic maintenance is conducted on all ancillary powered equipment as specified by manufacturer’s recommended schedules.
   • A tool, machine or piece of equipment determined to be unsafe for use must be identified in a manner which will ensure it is not inadvertently returned to service until it is made safe for use. Lock Out / Tag out tags shall be used to identify the person that removed the equipment from service, the date and a description of the fault. Where possible the equipment shall be locked out or disabled, taged and removed from the worksite for repair or replacement.
   • Any equipment that has been disassembled or dismantled in whole or in part and then is re-assembled that equipment shall be inspected by a competent and qualified person prior to use again.
   • All equipment used by NCSG shall have a written maintenance log that provides details of the maintenance status of the equipment to the operators.
   • NCSG shall ensure that all records of inspections and maintenance on all equipment shall be made available for operators and retained for review by any outside agency. All maintenance and inspection records shall be retained for 3 years.

7.0 TRAINING REQUIREMENTS AND MATERIALS
   • PPE Equipment specific training
   • NCSG orientation

8.0 RESOURCES
   • Alberta OH&S Code
   • BC OHS Regulations Part 4
   • Saskatchewan OH&S Regulations Part XI
   • Manitoba OH&S Regulations Part 22
   • OSHA 1926

May all be used to reference additional information pertaining to powered equipment and control methods for minimizing potential exposure and risk.

9.0 APPENDICES
   • None

10.0 SUPPORTING DOCUMENTS
   • Health, Safety and Environment Management System Standard
   • NCSG Electrical Safety Code
• NCSG Equipment Guarding Code
• NCSG PPE Code
• NCSG Hazardous Energy Isolation Code (LOTO)
3.3.6 Mobile Equipment Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Powered Mobile Equipment Code to identify the proper level of protection against a potential injury / damage to employees, contractors, and the public / property in the operation of powered mobile equipment while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct operation of powered mobile equipment is essential in maintaining a safe work environment which will enable employees to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Powered Mobile Equipment Code.

4.0 EXPECTATIONS
The Powered Mobile Equipment Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Powered Mobile Equipment Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersedes any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Corporate Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Inspect personal protective equipment before using it, and
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Must not operate powered mobile equipment unless they are trained in the safe operation of the equipment and can demonstrate competency (i.e. Verification of Qualifications Policy) and authorized by supervision or management.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to Powered Mobile Equipment.
- Inspect equipment prior to use and document inspections and deficiency in the logbook;
- Complete and submit “cry sheets” for all deficient items found on daily inspections to supervisor and maintenance staff;
- Report to the employer any conditions affecting the safe operation of the equipment,
- Operate the equipment safely within the restrictions of the manufacturer and training,
- Complete FLRA for scope of work
- Maintain full control of the equipment at all times,
- Use the seat belts and other safety equipment,
- Ensure that passengers use the seat belts and other safety equipment,
- Keep the equipment free of objects that could interfere with the operation or create hazards.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure workers are competent as per the NCSG Policy
- Ensure that workers use and wear properly the appropriate PPE and that PPE is readily available for all employees, contractors, visitors;
- Identify unsafe conditions and apply corrective actions as applicable.
- Ensure logbooks and maintenance requests are being completed and actioned.
- Ensure FLRAs are completed for the assigned tasks;
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.
5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the
general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and
Environment team.
• Ensure maintenance is completed on all equipment including re-certifications as per the manufactures
guidelines.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current
compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Inspection
• Before operating powered mobile equipment, the operator shall complete a visual inspection of the
equipment and the surrounding area to ensure that the powered mobile equipment is in safe operating
condition and that no worker, including the operator, is endangered when the equipment is started up.
• NCSG shall ensure a pre shift inspection is completed and a written record is maintained of the inspection
and is available to a worker who operates the equipment.
• The inspection shall include, but is not limited to:
  • Brakes
  • Transmission, clutch, and shift linkage
  • Windows and mirrors are crack free, clean and provide unobstructed vision
  • Operating controls, Steering
  • Tires
  • Safety devices; alarms, seat belts and other devices are tested and functioning properly
  • Minimal leaks (hydraulic, gas, oil, transmission, brakes)
  • Operation of safety features (Turn signals, backup alarm.)
  • Acceptable emission levels from truck
• All defects must be repaired before operating the vehicle/ equipment

6.2 Operating Practices
• No part of a load must pass over any worker
• No operator may leave the controls unless the equipment is secured against unintentional movement by an
effective method of immobilizing the equipment.
• Forks, buckets or other attachments must be in the lowered position or be firmly supported
• No load may exceed the maximum rated load
• All loads must be in accordance with the height and weight restrictions as per the load chart
• When a load is in the raised position, the controls must be attended by an operator
• If an operator does not have a clear view of the path, assistance from a designated qualified and competent
signaller must be used
• Equipment with head and tail lights shall be one at all times.
• Loads must be carried as close to the ground or floor as the situation permits
• Loads must be secured at all times.
• Personnel working in and around the equipment should have adequate protection against falling objects
and projectiles. The vehicle should have a suitable cab, screen, or guard.
• Where a lift truck is required to enter or exit a vehicle to load or unload, the vehicle must be immobilized and
secured against accidental movement. (LOTO)
• In the event of a swinging load or moving machinery, no worker shall be permitted in the zone of the
movement or counter swing area.
• A lift truck must not be used to support, raise or lower a worker unless the work is carried in a lift truck-
mounted work platform that complies with applicable legislative regulations.
• Barriers, warning signs, designated walkways or other safeguards must be provided where pedestrians are
exposed to the risk of collision.
• Mobile equipment will carry only as many persons as recommended by the manufacturer.
• Seatbelts must be worn.
• Worker’s shall not smoke within 7.5 metres/ 25 ft of a vehicle while it is being refuelled or refuel a vehicle
when there is a source of ignition within 7.5 metres/ 25 ft. of that vehicle.
• All mobile equipment must have a backup warning alarm.
• All mobile equipment parts that can present a hazard to an operator are to be sufficient guarded to ensure
there is no contact between the operator and the identified hazard. All guarding must be installed in
accordance to the operating standard for that vehicle.
• The operator must maintain the cab, floor and deck of mobile equipment free of material, tools or other
objects which could create a tripping hazard, interfere with the operation of controls, or are a hazard to the
operator or other occupants in the event of an accident.
• The operator of mobile equipment must not leave the controls unattended unless the equipment has been
7.0 TRAINING REQUIREMENTS AND MATERIALS

- NCSG shall provide a training process that will ensure employees who are designated to operate powered mobile equipment:
  - have been informed of the hazards associated with operating a powered lift truck in the particular workplace, including the hazards associated with the load, the design of the workplace and the environmental conditions
  - knows how to protect him/herself and others from the hazards
  - has demonstrated skill, knowledge and experience identified and deemed competent
- The training program for an ATV operator must cover:
  - the operator's pre-trip inspection,
  - use of personal protective apparel,
  - operating skills according to the ATV manufacturer's instructions,
  - basic mechanical requirements, and
  - loading and unloading the vehicle, if this is a job requirement.
- NCSG shall maintain a record of workers competence to operate powered lift trucks.
- The record shall include, but is not limited to:
• skills and knowledge demonstrated the class or classes of truck on which the operator was assessed
• name and affiliation of the assessor
• date the assessment took place
• provide operators with certificates of competency
• Certified operators of the lift trucks shall receive retraining at intervals not exceeding three years.
• PPE Equipment specific training – i.e. Protective Headwear
• Standard Operating Procedures
• NCSG orientation

8.0 RESOURCES
• Alberta OH&S Code Part 14
• BC OH&S Regulation Part 16
• Saskatchewan OH&S Regulations Part XI
• Manitoba OH&S Regulations Part 22
• CSA B352.0-95(R2006) Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial and Mining Machines - Part 1: General Requirements
• CSA B335-04 Safety Standards for Lift Trucks

May all be used to reference additional information pertaining to powered mobile equipment and control methods for minimizing potential exposure and risk.

9.0 APPENDICES
• Appendix A – Lift Truck Classifications 1-7
APPENDIX A – Lift Truck Classifications 1-7

Class I: Electric Motor Rider Trucks

The following are examples of Class I powered industrial trucks:

- Lift Code 1: Counterbalanced Rider Type, Stand Up.
- Lift Code 4: Three Wheel Electric Trucks, Sit.
- Lift Code 5: Counterbalanced Rider, Cushion Tires, Sit Down.
- Lift Code 6: Counterbalanced Rider, Pneumatic or Either Type Tire, Sit Down.

Class IV: Internal Combustion Engine Trucks (Solid/Cushion Tires)

The following are examples of Class IV powered industrial trucks:

- Lift Code 8: Fork, Counterbalanced [Cushion Tire].
### Class VII: Rough Terrain Forklift Trucks

Class VII - Rough terrain forklift is a generic term used to describe forklifts typically intended for use on unimproved natural terrain and disturbed terrain construction sites. However, the term "rough terrain" does not imply that the forklift can be safely operated on every conceivable type of terrain.

There are three basic types of rough terrain forklifts:

1. **Vertical mast type.**
   This is an example of a vehicle equipped with a telescoping boom, which enables it to pick and place loads at various distances and lift heights in front of the machine. The ability to reach out in front of the forklift allows the operator flexibility in the placement of a load.

2. **Variable reach type.**
   This is an example of a vehicle equipped with a telescoping boom, which enables it to pick and place loads at various distances and lift heights in front of the machine. The ability to reach out in front of the forklift allows the operator flexibility in the placement of a load.

3. **Truck/trailer mounted.**
   This is an example of a portable self-propelled rough terrain forklift that is typically transported to the job site. It is mounted on a carrier to the back of a truck/trailer and is used to unload heavy items from the truck/trailer at the job site. Note that not all truck/trailer mounted forklifts are rough terrain forklifts.
3.3.7 Manual Materials Handling Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Manual Materials Handling Code to identify the proper level of protection against a potential injury / damage to employees, contractors, and the public / property in the operation of manual materials handling while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct operation of manual materials handling is essential in maintaining a safe work environment which will enable employees to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Manual Materials Handling Code.

4.0 EXPECTATIONS
The Manual Materials Handling Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Manual Materials Handling Code will be reviewed at a minimum of every three years.

This Code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Inspect personal protective equipment before using it, and
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Not operate manual materials handling equipment unless trained to do so
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to injury / damage from manual materials handling.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Ensure appropriate PPE as required in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Identify unsafe conditions and apply corrective actions as applicable
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.
- Ensure a procedure exists for the lifting of heavy loads including the manual lifting of heavy loads where applicable.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.
6.0 METHOD

6.1 Inspection
- Before operating manual materials handling equipment, the operator shall complete a visual inspection of the equipment and the surrounding area to ensure that the equipment is in safe operating condition and that no worker, including the operator, is endangered when the equipment is started up.
- NCSG shall ensure a pre-shift inspection is completed and a written record is maintained of the inspection.
- The inspection shall include, but is not limited to:
  - Brakes (if applicable)
  - Linkage
  - Operating controls
  - Steering
  - Minimal leaks (hydraulic,)

6.2 Operating Practices
- When there is excessive manual handling of materials over 50 pounds, then additional tools and equipment may be required for materials handling.
- A variety of tools and equipment is available to assist in the handling of materials and include but are not limited to:
  - Hooks
  - Dollies
  - Four wheel trucks
  - Rollers
  - Jacks
- a manual handling equipment left unattended shall be immobilized and secured against accidental movement
- no load may exceed the maximum rated load
- all loads must be handled in accordance with the height and weight restrictions on the load chart (if applicable)
- when a load is in the raised position, (ie. pallet jack), the controls must be attended by an operator
- if an operator does not have a clear view of the path, assistance from a signaler who has been instructed in a code of signals for managing traffic in the workplace must be employed
- loads must be carried as close to the ground or floor as the situation permits
- loads that may tip or fall and endanger a worker must be secured
- where a manual handling equipment is required to enter or exit a vehicle to load or unload, the vehicle must be immobilized and secured against accidental movement
- a manual material handling equipment shall not be used to support, raise or lower a worker unless the work is carried out in a lift truck-mounted work platform, which complies with applicable legislative regulations.
- barriers, warning signs, designated walkways or other safeguards must be provided where pedestrians are exposed to the risk of collision

6.3 Load Selection
- In the course of load selection, operators of manual materials handling equipment shall:
  - Ensure that the weight to be lifted does not exceed the capacity of the equipment
  - Ensure that the load is adequately secured. If in doubt, have the pallet re-strapped or otherwise readied for movement
  - Ensure that the forks, if applicable, are adjusted to permit maximum width under the payload
  - Consider all factors affecting off-loading
- In the event the worker must lift or move heavy or awkward loads they shall:
  - Conduct an informal assessment of the load to be lifted and the method to be applied
  - Use a power lifting device such as mobile lift vehicle or
  - Request assistance from a worker if the load can be safely managed by two people

6.4 Maintenance
- NCSG shall ensure that a formal scheduled maintenance program is performed on all Manual Materials Handling equipment in accordance with the manufacturer’s specifications.

7.0 TRAINING REQUIREMENTS AND MATERIALS
- NCSG shall provide a training process that will ensure employees who are designated to operate Manual Materials Handling:
  - has been informed of the hazards associated with operating a manual material handling equipment in the particular workplace, including the hazards associated with the load, the design of the workplace and the environmental conditions
  - knows how to protect him/herself and others from the hazards
  - has demonstrated to a designated skilled and experienced operator that the skills and knowledge identified as final outcomes for operator competence have been learned
- NCSG shall maintain in the workplace a record (VTA) of workers competent to operate manual materials handling equipment.
• The record shall include, but is not limited to:
  • skills and knowledge demonstrated type of manual materials handling equipment on which the operator was assessed
  • name and affiliation of the assessor
  • date the assessment took place
  • PPE Equipment specific training – Protective Footwear
  • NCSG orientation

8.0 RESOURCES
• Alberta OHS Code Part 14
• OSHA 1920
• CSA B335-04 Safety Standards for Lift Trucks

May all be used to reference additional information pertaining to Manual Materials Handling and control methods for minimizing potential exposure and risk.

9.0 APPENDICIES
• Appendix A – Example of Manual Materials Handling Equipment

APPENDIX A – Example of Manual Materials Handling Equipment

Figure 1
hand dolly

Figure 2
typical four-wheel truck
3.3.8 Ladders Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Ladder Code to identify the proper use and safe work procedures for portable ladders to eliminate / minimize potential injury / damage to employees, contractors, and the public / property while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The proper placement, use and storage of portable ladders will enable employees to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Ladder Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

**Combination Ladder** A portable ladder capable of being used either as a stepladder or a single or extension ladder.

**Extension Ladder** A non-self-supporting portable ladder consisting of two or more sections, traveling in interlocking rails, guides, or brackets so arranged to permit length adjustment.

**Portable Ladder** A ladder that can readily be moved or carried and usually consists of side rails joined at intervals by steps, rungs, cleats, or rear braces

**Single Ladder** A non-self-supporting portable ladder, non-adjusting in length consisting of one section only.

**Step Ladder** A self-supporting portable ladder, non-adjustable in length having flat steps and a hinged back.

4.0 EXPECTATIONS
The Ladder Code shall provide required and adequate guidelines to ensure knowledge of potential hazards, which may be present to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Ladder Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Inspect personal protective equipment before using it, and
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Inspect ladder prior to use
• Not use a ladder that is unable to perform the function for which it is designed. (e.g. a step ladder shall not be used as an extension ladder)
• Be responsive, through adequate training, to minimize the risk of injury in the work environments, which may be prone due to the use of portable ladders.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Ensure appropriate ladders are available at the work site for the job description specified.
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.
5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Inspection Prior to Use
NCSG employees shall inspect a portable ladder prior to use to ensure serviceability. The following at minimum shall be verified:
- All rivets, crews and crimp joints are sound
- All end closures, slip resistant foot covers are in place
- All pivot points move freely without binding
- All ropes / pulleys are securely fastened and in good working order
- No excessive debris has been allowed to collect on rungs / steps
- Rungs / steps are still of a skid resistant material in nature

All portable ladders shall be clearly and permanently marked indicating in French and English, the following:
- Manufacturer’s name or trademark
- Date of manufacture
- Nominal length
- Maximum extended length (if applicable)
- Grade, projected use, and load rating
- Safety cautions in words or symbols

6.2 Prep of Work Site Prior to Use
- Use proper ladder for the job. In areas where there is a safer alternative to the use of a ladder the worker shall use that method instead of the ladder.
- A visual inspection shall be conducted in conjunction with a Field Level Risk Assessment to determine hazards such as live wire, overhead obstructions, etc. The area shall be made safe prior to the use of a portable ladder.
- If work is to be done in an energized or potentially energized environment, the ladder used shall be of a non-conductive material.
- Ensure adequate space is available to set a single or extension ladder at the proper (75%) angle resulting in a ladder base distance equal to one quarter of the total working length of the ladder away from the base of the vertical support.
- The base area shall be firm, and level and of a stable nature
- Dust and sand which may be present on a concrete or asphalt floor are cleared from under the foot area of the ladder to prevent slipping
- Placement of the ladder in front of a doorway or entrance / exit shall be avoided if possible, and where not, access shall be prevented until the completion of work.
- In the event the worker is trying to perform a task using a ladder which requires the worker to carry a heavy object, bulky materials or ascend or descend the ladder in an unsafe manner the worker shall instead use a safe elevating platform instead of a ladder.

6.3 Use of Ladder
- Employees, contractors shall be aware of personal physical limitations prior to the use of portable ladders on the work site
- Confirm prior to use a firm level base and the top ends of the ladder rails are secure
- Ensure that the horizontal distance between the base and top support of the ladder is at least ⅛ that of the length of the ladder.
- Use a 1-4 ratio (Base to Height) for extension ladders
- Face rungs when climbing a ladder, and use both hands and ensure three point contact is used
- No more than one person is allowed on a ladder at one time.
- Items shall not be carried in hands while climbing ladders unless required in the assistance of the climb.
- Do not splice short ladders together.
- Do not use ladders with broken or missing steps or rungs.
- Do not place a ladder against a window.
- Always extend ladders 1 metre above roof when climbing to the roof of a building.
- Ladders shall be placed so that the side rails have secure footing.
- The top two rungs of a stepladder shall not be used as steps.
- Do not climb higher than the third rung from the top on straight ladders, or the second tread from the top of stepladders.
• Do not use ladder in high winds
• Do not "WALK" the ladder while on the ladder.
• If constructed on site, a portable constructed ladder shall meet or exceed the required legislation as applicable.

6.4 Storage Before / After Use
• Ladders shall be hung in a dry environment at intervals of 2 metres.
• Ladders while transported are to be securely fastened to vehicles with minimal overhang beyond support points.
• Wooden ladders shall not be painted.
• Ladders shall be secured in a manner that prevents unauthorized use (e.g. restricted access, locks, etc).

7.0 TRAINING REQUIREMENTS AND MATERIALS
• Proper climbing techniques shall be demonstrated and observed in order to establish employee competency
• Proper lifting / carrying / placement techniques shall be demonstrated and observed in order to establish employee competency
• NCSG orientation

8.0 RESOURCES
• WorkSafeBC – Construction Safety Series – Safe Ladder Use
• Alberta OH&S Code Part 8
• BC OH&S Regulations Part 13
• Saskatchewan OH&S Regulations Part 13
• Manitoba OH&S Regulations Part XVI
• Ontario Occupational Health and Safety Act - O. Reg. 213/91 section 78-85
• CSA Z11-M81 Portable Ladders
• ASME
• OSHA 1920
• OSHA 1926

May all be used to reference additional information pertaining to portable ladders and control methods for minimizing potential exposure and risk.
3.3.9 Hand Tools Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Hand Tools Code to identify the proper use and application of hand tools to prevent potential injury to employees, contractors, and the public / property while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct use of hand tools and the correct selection of hand tools is identified to enable employees adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Hand Tools Code.

4.0 EXPECTATIONS
The Hand Tools Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to employees, contractors, visitors and general public within NCSG areas of responsibility. The Hand Tools Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Inspect personal protective equipment before using it, and
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Use hand tools as directed by the manufacturer’s recommendation.
- Use the tool appropriate for the task.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to injury due to misuse of hand tools.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Maintain in good working condition, hand tools which are provided to the worker.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
- Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Ensure hand tools are maintained in a serviceable condition for the task as recommended by the manufacturer’s recommendation.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.
• Establish a maintenance schedule to ensure hand tools are checked for serviceable condition on a timely basis.

6.0 METHOD

6.1 Inspection of Tools Prior to Use
• NCSG employees, contractors shall inspect all hand tools prior to start of shift or each use.
• Damaged or poorly maintained hand tools are not to be used until repaired
• Tools shall be clean at the beginning of the shift and end of shift
• Any tool that is identified during inspection or use that is defective shall be removed from service, tagged with the deficiency and not used until repaired or replaced.

6.2 Use of Hand Tools
• All NCSG employees, contractors, visitors shall wear safety glasses with side shields or other equivalent eye protection or other PPE as identified by the manufacturer’s recommendation or Company Standard Operating Procedures when using hand tools.
• All employees, contractors while using hand tools shall:
  • Ensure the correct tool is used for the correct job. (i.e. Flat Blade screwdrivers are NOT chisels or pry bars),
  • Be trained in the proper use of the hand tool to be used, deemed competent and qualified for the care use and limitations of the tools to be used,
  • Be familiar with the manufacturer’s recommendations for use and shall have access to applicable documentation,
  • Not modify, alter, block off or remove any guard or safety device of a hand tool from the original condition,
  • Be stored in a manner that will protect the tool from damage and deterioration,
  • Not operate a hand tool in a manner that creates a striking / contact hazard to other employees,
  • Call out and make other employees, contractors with hand tools aware when passing by,
  • Be sure you have secure footing and grip,
  • Never leave tools unattended or discarded in a manner that may enable the tool to be fallen onto or be lost,
  • Not use extensions or “cheaters” on tools for leverage. Use a larger tool.
  • Be cautious of posture and stance while sharpening hand tools, and
  • Ensure frequent rests are taken to minimize fatigue, muscle strain, joint strain and exhaustion.
• Assess the tool, PPE and work area for ergonomic considerations (force, vibration, noise, etc. as part of the FLRA pre work hazard assessment.

6.3 Prevention Practices
NCSG shall ensure a preventative maintenance schedule that will;
• Keep cutting tools sharp,
• Identify loose, splintered, or cracked tool handles,
• Identify bent wrenches,
• Identify and remove / replace mushroomed heads on hand tools,
• Prevent greasy and dirty tool accumulation

7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG shall ensure that training is provided for employees who will utilize hand tools prior to first use and refresher training as required if unsafe behavior is observed / reported. Additional training may be required as a result of incident investigations / near miss reporting.
• NCSG training shall include, but not be limited to:
  • How to select the proper tool for the job,
  • How to use these tools properly,
  • Procedures for inspection of tools,
  • Procedures for storage of tools,
  • Procedures for repair of faulty tools, and
  • The importance of planning jobs ahead so that the correct tools are available.
• PPE Equipment specific training
  • Eye / Face Protection to prevent chips, debris from coming in contact with eye membrane
• NCSG orientation

8.0 RESOURCES
• Alberta OH&S Act Section 2
• BC OH&S Code Part 3
• Manitoba OH&S Regulations Part 16
• Saskatchewan OH&S Regulation Part III
• Ontario OH&S Reg. 851, Part 1
• Ontario OH&S Reg. Reg. 213/91, Section 93, 94, 187, 192, 195, 275, 298
• OSHA 1920
3.3.10 Electrical Safety Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed an Electrical Safety Code to identify the proper level of protection against a potential injury / damage to employees, contractors, and the public / property regarding the potential exposure to while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The variety of potential hazards relating to electrical incidents include unsafe conditions, unsafe acts, unsafe electric equipment and installations, presence of damaged insulation, improper grounding, loose connections, defective parts, ground faults in equipment, or energized parts left unguarded. Electrical accidents may occur in environments containing flammable vapors, liquids, or gases; areas containing a corrosive atmosphere and wet and damp locations. Failure to de-energize electrical equipment when it is being repaired or inspected, the intentional removal of grounding pins from electrical cords, the use of defective and unsafe electrically powered tools, or the use of tools or equipment to close to energized parts all contribute to electrical hazards.

Many of these issues are addressed in individual Company Codes and are stipulated in Company Standard Operating Procedures, which are to be read in support of this code.

In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Electrical Safety Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Accessibility for Maintenance In accordance with the National Building Code NCSG shall ensure that all installed electrical equipment in all NCSG worksites shall be located to ensure that passage ways, working spaces, storage areas are not limited or obstructed by those devices. NCSG shall also ensure that all electrical equipment is installed in such a manner as to facilitate maintenance of that equipment in such a manner that does not put any worker at risk.

Classified Location / Hazardous Locations Locations that are classified based on the presence and properties of flammable vapors, liquids or gases, combustible dust or fibers which may be present and the likelihood that a combustible or flammable concentration or quantity is present.

NCSG shall in case where electrical equipment is to be installed in what are deemed Hazardous locals conduct an assessment of the hazards present and ensure the necessary precautions are implemented prior to the installation of the electrical equipment. NCSG shall ensure where there is a gas, dust, vapor or mist that will present a hazard that the electrical equipment installed will not present an additional hazard and shall be rated for use in that environment.

Effective Grounding A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of the earth. All grounding connections shall be of permanent and continuous nature and shall have the capacity to conduct the suitable level of amperage safely.

Electrical Hazards / Shock / Flash Protection Any risk of electrical shock that is not reduced to a safe level by the electrical installation.

In accordance with the National Building Code, NCSG shall ensure that all operating electrical equipment shall be kept in safe and proper working conditions and maintained in accordance with the manufactures published standard.

In accordance with the National Building Code NCSG shall ensure that all electrical equipment such as switchboards, control panels, panel boards, industrial control panels, metre sockets, enclosures and motor control devices shall be designed, installed and serviced with provisions to protect employees from electrical shocks or arc flashes.

Exposed Part of any electrical circuit that is capable of being inadvertently touched or having an unsafe approach distance for an individual.

Flammable Storage / materials / Combustible Gases In accordance with the National Building Code and Fire Code, NCSG shall ensure that no flammable materials shall be located or stored in close proximity to electrical equipment. The minimal distance between flammable materials and an electrical device or equipment shall be 3 metres (9 feet).

In accordance with the National Building Code NCSG shall ensure that no combustible Gases are located or stored near any electrical devices where there is a potential for static electric shock or arcing from the equipment to the combustible gas.

Ground-Fault Circuit-Interrupter (GFCI) A device whose function is to monitor the amount of current flowing from the hot wire to the neutral wire and if there is any imbalance, to trip (interrupt) the electric circuit if the current exceeds some predetermined value that is less than that required to trigger the fuse or circuit breaker.
Illumination / Ventilation  NCSG shall ensure that all electrical equipment will be illuminated in such a manner as to facilitate maintenance work on the equipment in a safe manner.

NCSG shall ensure that adequate ventilation is maintained around any electrical equipment and or device where the must be a specific ambient temperature or other environmental operating conditions. An example of such a condition is the ambient temperatures for location and operations of computer servers or other information technology devices.

Qualified Person  Those persons who are permitted to work on or near exposed energized parts and are trained in electrical safe work practices.

Wet Location  Installations underground or in concrete slabs or masonry in direct contact with the earth, and locations subject to saturation with water or other liquids; such as vehicle washing areas, vehicle service areas, and locations unprotected and exposed to weather.

4.0  EXPECTATIONS
The Electrical Safety Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Electrical Safety Code shall be read in conjunction with NCSG codes which apply to specific areas of responsibility. The Electrical Safety Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0  ROLES AND RESPONSIBILITIES

5.1  Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Inspect personal protective equipment before using it, and
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to electrical hazards outlined in the Electrical Safety code.

5.2  Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Treat de-energized parts or equipment as though they are live.

5.3  Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Ensure appropriate PPE as required in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4  Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5  Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0  METHOD

6.1  Identification of Hazardous Locations
• Portable electric equipment and flexible cords used in highly conductive work locations, or in job locations where employees are likely to contact water or conductive liquids, shall be approved by the manufacturer for those locations.
• NCSG shall use Company Standard Operating Procedures and FLRA’s to establish hazardous locations
that employees, contractors, visitors and the general public shall be made aware of include, wet locations and locations where combustible or flammable atmospheres are present.

• Employees / contractors shall not plug or unplug energized equipment with wet hands.
• Energized plug and receptacle connections shall be handled only with protective equipment if the condition could provide a conductive path to the employee's hand (if, for example, a cord connector is wet from being immersed in water).
• NCSG shall ensure that where the use of GFCI protection is required for some equipment/locations, it shall be made available and be used.
• For combustible/flammable atmospheres, all electric equipment and wiring systems in classified locations must meet The Canadian Electric Code requirements for that particular classification and jurisdiction. See Appendix A for definitions of Classified Locations.

6.2 Portable Electric Equipment
• All portable electric equipment will be handled in such a manner that will not damage or reduce service life.
• Flexible cords connected to equipment may not be used for raising or lowering equipment and will not be used if damage to the outer insulation is present.
• Additionally, to ensure the safety of employees, periodic and pre-use visual inspections of the cords are required and unauthorized alterations of the grounding protection are not authorized. (See Power Tools Code)
• Prior to each shift, a visual inspection will be performed for external defects and for possible internal damage. See Power Tools Code
• Attachment or adapter (cheater) plugs and receptacles shall not be used or altered which would prevent proper continuity of the equipment grounding conductor.
• In addition, these devices may not be altered to allow the grounding pin of the equipment's plug to be bypassed; thereby removing the grounding pins desired safety function.

6.3 Safety Related Work Practices
• Company Standard Operating Procedures, FLRA's and JSA's shall be used to determine the potential of and the prevention of electric shock or other injuries resulting from either direct or indirect electrical contacts.
• Company Standard Operating Procedures, FLRA's and JSA's shall be consistent with the nature and extent of the associated electrical hazards.
• Utilize the Hazardous Energy Isolation Code when applicable.

6.4 Emergency Response
• To reduce the probability of fire from an electrical component or in an electrical installation NCSG shall employ fire stopped partitions, floors, hollow spaces, firewalls and limited ventilation or air conditioning where applicable under the National Building Code.
• In accordance with the National Building Code, NCSG shall ensure that all electrical equipment shall be installed and guarded so that adequate provisions for the safety of persons and property is in place.

6.5 Personal Protective Equipment
Employees working in areas where there are potential electrical hazards shall be provided with and use protective equipment that is appropriate for the work to be performed. Workers shall not wear conductive apparel unless the item(s) have been rendered non-conductive by covering, wrapping or other effective means.

Examples of Personal Protective Equipment (PPE) which might be needed for protection against electric shock include, but are not limited to:
• Nonconductive hard-hats, gloves, and foot protection or insulating mats,
• Portable Ladders shall have nonconductive side rails
• Eye and face protection whenever there is danger from electric arcs or flashes,
• Insulated tools or handling equipment,
• Protective shields and barriers to protect against electrical shock and burn.
• Additionally, alternative solutions to protect employees from the hazards of electric shock may be implemented as identified through Company Standard Operating Procedures as applicable, including insulation and the guarding of live parts.

6.6 Labels, Signs, and Markings
Barricades, safety signs, safety symbols, or accident prevention tags (see below) shall be used where necessary to warn and protect employees, contractors, visitors and the general public from contact with electrical hazards.

Electrical equipment shall not be used unless the manufacturer's name, trademark, or other descriptive marking is placed on the equipment. Other markings shall be provided giving voltage, current, or wattage. The marking shall be of sufficient durability to withstand the environment involved.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• NCSG shall ensure that designated and competent employees are responsible to ensure that employees / contractors have received the training necessary to safely perform the tasks and duties assigned.
• Employees shall be trained in specific hazards associated with their potential exposure. This training may include but is not limited to:
  • isolation of energy,
• hazard identification,
• premises wiring,
• connection to supply,
• generation, transmission,
• distribution installations,
• clearance distances, and
• emergency procedures.

• Qualified Persons shall, at a minimum, be trained in and be familiar with:
  • The skills and techniques necessary to distinguish exposed live (energized) parts from other parts of electric equipment.
  • The skills and techniques necessary to determine the nominal voltage of exposed live (energized) parts.
  • The clearance distances specified in Appendix A and the corresponding voltage to which the qualified person will be exposed.
  • PPE Equipment specific training – Non Conductive PPE
  • NCSG orientation

8.0 RESOURCES
• National Building Code
• National Fire Code
• NFPA 70E
• OSHA 1920
• OSHA 1926
• Alberta OH&S Code Part 40
• British Columbia OH&S Code Part 19
• Saskatchewan OH&S Regulations Part XXX
• Manitoba OH&S Regulations Part 38
• Ontario Electricity Act, 1998, S.O. 1998, c. 15, Schedule A
• CSA C22.1-06 Canadian Electric Code, Part 1, Safety Standard For Electrical Installations

9.0 APPENDICIES
• Appendix A – Classifications of Location

APPENDIX A – Classifications of Location
Classified Locations
Class I Locations
Locations which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures. Class I locations include the following:

Class I, Division 1:
Those locations in which hazardous concentrations of flammable gases or vapors may exist under normal operating conditions; or in which hazardous concentrations of such gases and vapors may exist frequently because of repair or maintenance operations or because of leakage; or in which breakdown or faulty operation of equipment or processes might release hazardous concentrations of flammable gases or vapors, and might also cause simultaneous failure of electric equipment. Those locations in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquids, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in case of abnormal operation of equipment.

Class II Locations
Locations which are hazardous because of the presence of combustible dusts. Class II locations include the following:

Class II, Division 1:
Those locations in which combustible dust is or may be in suspension in the air under normal operating conditions in quantities sufficient to produce explosive or ignitable mixtures; or where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes; or in which combustible dusts of an electrically conductive nature may be present.

Class II, Division 2:
Those locations in which combustible dust will not normally be in suspension in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus.

Class III Locations
Locations that are hazardous because of the presence of easily ignitable fibers or flying’s but where such fibers or flying’s are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures. Class III locations include the following:

Class III, Division 1:
Those locations in which easily ignitable fibers or materials producing combustible flying’s are handled, manufactured, or used.

Class III, Division 2:
Those locations in which easily ignitable fibers are stored or handled, except in the manufacture process.
3.3.11 Compressed Gas Cylinders Code

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed a Compressed Gas Cylinder Code to provide general guidance for the protection against a potential injury / damage to employees, contractors, and the public / property in the use, handling, transport and storage of compressed gases while operating within the areas of responsibility of NCSG.

2.0 SCOPE AND APPLICATION
The correct storage of compressed gas cylinders is essential in maintaining a safe work environment. Compressed gas cylinders are typically stored under pressure in metal cylinders, which are designed and constructed to withstand high pressure. Improper handling and use of compressed gas cylinders can result in devastating consequences. The understanding of proper procedures will enable employees to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Compressed Gas Cylinder Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Compressed Gas (Non liquefied) A gas, other than a gas in solution, which under the charging pressure is entirely gaseous at a temperature of 70°F.

Cylinder A portable compressed gas container, fabricated to Transport Canada (TC) or the "Rules for the Construction of Unfired Pressure Vessels," Section VIII, ASME Boiler & Pressure Vessel Code.

Flammable Gas A gas that is flammable in a mixture of 13 percent or less (by volume) with air, or the flammable range with air is wider that 12 percent regardless of the lower limit, at atmospheric temperature and pressure.

Handling The moving, connecting, or disconnecting a compressed or liquefied gas cylinder.

Inside Diameter (I.D.) Inside cylinder diameter.

Liquefied Gas A gas, which under charging pressure, is partially liquid at a temperature of 20oC (70oF).

Non-flammable Gas A gas that does not meet the definition of a flammable gas.

Outside Diameter (O.D.) Outside cylinder diameter.

Oxidizing Gas A gas that can support and accelerate combustion of other materials.

Safety Relief Device A device intended to prevent rupture on a cylinder under certain conditions of exposure.

Standard Cubic Foot (SCF) One cubic foot of gas at 70oF (21oC) and 14.7 psi (an absolute pressure of 101 kilopascals [kPa]).

Storage An inventory of compressed or liquefied gases in containers that are not in the process of being examined, serviced, refilled, loaded, or unloaded.

Toxic Gas A gas having a health hazard rating of 3 or 4 defined in NFPA 704, Standard System for the Identification of the Fire Hazards of Materials.

Use The consumption of a compressed or liquefied gas in a non-recoverable manner.

User An individual, group, or organization who utilizes the compressed or liquefied gas in a non-recoverable manner.

Valve Protection Device A device attached to the neck ring or body of the cylinder for the purpose of protecting the cylinder valve from being struck or damaged from impact resulting from a fall or an object striking the cylinder.

Valve Protective Cap A rigid, removable cover provided for compressed gas container valve protection.

4.0 EXPECTATIONS
The Compressed Gas Cylinder Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Compressed Gas Cylinder Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Inspect personal protective equipment before using it, and
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments, which may be prone to injury from compressed gas cylinders.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Ensure appropriate PPE as required in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
• Ensure that workers are adequately and competently trained in the use, handling and storage of compressed gas cylinders.
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Work in conjunction with NCSG Operations to ensure that all newly purchased compressed gas cylinders, equipment and supplies comply with current safety regulations in accordance with the applicable legislative direction.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Types of Gas Cylinders
• NCSG worksites may have a variety of gases contained in compressed gas cylinders. These gas cylinders fall into the following categories:
  • Flammable
  • Toxic and Poison
  • Liquid
  • Inert

6.2 Inspection
• Compressed gas cylinders shall be visually inspected daily for leaks, cracks, etc. or prior to use at the beginning of each shift.
• This visual inspection will include but is not limited to:
  • the cylinder,
  • adequate marking identifying legibly either the chemical or trade name of the gas
  • safety relief devices,
  • valves,
  • fittings,
  • protection caps and stems.
• If a cylinder is thought to be defective, it shall be tagged out and returned to the supplier for replacement.
• Under no circumstances will NCSG employees / contractors attempt to repair defective cylinders.
• Gauges shall be checked to ensure that the gas under pressure is not left in hoses when operations are completed.
• NCSG shall ensure that all compressed gas cylinders shall be pressure tested in accordance with the manufacturer’s specification or current legislation and that the results of testing and the date of the test shall affixed to the cylinder for confirmation.

6.3 Marking
• For the purpose of identifying the gas content, compressed gas cylinders shall be legibly marked with either the chemical or trade name of the gas.
• NCSG shall ensure such marking shall be by means of stenciling, stamping, or labelling, and shall not be
6.4 Transportation

- NCSG shall ensure the transporting of gas cylinders is completed in a careful and appropriate manner utilizing all precautions as necessary. These considerations and precautions shall include but are not limited to the following:
- Motor vehicle transport of cylinders:
  - Motor vehicle transport of cylinders shall only be done with vehicles equipped with racks or other means of securing the cylinders.
  - Cylinders containing liquefied hydrogen or toxic gases shall be transported in open body vehicles.
  - NCSG vehicles shall not be used to transport cylinders without an adequate valve protection device in place on all cylinders.
- Flammable gas and oxidizer cylinders:
  - Shall not be transported together, or with poisons or corrosives.
  - Of oxygen and acetylene cylinders may be transported together if:
    - The cylinders are transported in the rear truck bed below the cab level
    - A roll bar is installed over the rear truck bed to prevent the cylinders; from falling out of the truck bed in the event of the vehicle overturning.
- Hand truck (dolly) transport of cylinders:
  - Shall be used for the transfer of compressed gas cylinders from loading / storage area to shop
  - Shall ensure the cylinder is secured in a manner that will prevent tipping or falling
- General cylinder transport precautions:
  - Cylinders have the valve protection cover in place while being transported
  - Cylinders are not to be rolled or lifted by the valve or valve cap for moving
  - Cylinders that are dropped during transit will be taken out of service and returned to the supplier for inspection
  - Cylinders will be securely supported at all times during transport
- Smoking is prohibited during loading, unloading, and hand transportation of flammable gas cylinders

6.5 Storage

- The storage of compressed gas cylinders requires some basic precautions and guidelines as detailed in Appendix A, B, and C.
  - General cylinder storage precautions
  - Specific gas cylinder storage guidelines
  - Cylinder storage room guidelines

7.0 TRAINING REQUIREMENTS AND MATERIALS

- NCSG employees / contractors who use and handle compressed gas cylinders shall be trained before any work is to be conducted on the work site.
- NCSG employees / contractors shall be trained in the safe use, inspection, handling, and storage of compressed gas cylinders.
- Refresher training shall be provided through regular scheduled programming as detailed by the Health, Safety, and Environment Team.
- PPE Equipment specific training
  - General Purpose Non-Slip Work Gloves
  - Disposable Coveralls
  - Eye / Face Protection to prevent accidental discharge material from coming in contact with eye membrane
- NCSG orientation

8.0 RESOURCES

- Alberta OH&S Code Part 10
- BC OHS Regulations Part 5
- Saskatchewan OH&S Regulations Part XIX
- Manitoba OH&S Regulations Part 27
- OSHA 1926

9.0 APPENDICES

- Appendix A – General Cylinder Storage Precautions
- Appendix B – Specific Gas Cylinder Storage Guidelines
- Appendix C – Cylinder Storage Room Guidelines
- Appendix D – Safe Handling Guidelines
APPENDIX A – General Cylinder Storage Precautions

- Cylinders shall be secured in an upright position in a safe, dry, well ventilated location, prepared and designated for that purpose.
- Cylinders shall not be kept in unventilated enclosures such as lockers.
- Cylinders shall be stored in a separate location away from flammable substances, such as oil and volatile liquids or near sources of heat, such as radiators or furnaces.
- Cylinders shall not be stored near elevators, gangways, stairwells, or other places where they can easily be knocked down or damaged.
- Cylinders shall be stored on a level fire retardant floor.
- Cylinders that are stored in the open shall be protected from contact with the ground and against weather extremes.
- Cylinder storage and receiving shall be planned so that cylinders are used in the order that they are received from the supplier.
- Empty and full cylinders shall be stored separately, with empty cylinders being plainly identified to avoid confusion.
- Empty cylinders shall be grouped together in a manner that items that have held the same contents are identified appropriately.

APPENDIX B – Specific Gas Cylinder Storage Guidelines

This Appendix includes additional precautions and guidelines for oxygen, hydrogen, and acetylene and liquefied fuel gas cylinders.

**Oxygen**

- Cylinders shall not be stored where reasonable practicable, within 6 metres of highly combustible materials, oil, grease, wood shavings, or cylinders containing flammable gases.
- If a requirement exists to be closer than 6 metres, cylinders shall be separated by a divider with a fire resistance rating of at least 30 minutes.

**Hydrogen**

- Cylinder storage locations shall have a permanent placard as follows: "HYDROGEN-FLAMMABLE GAS-NO SMOKING-NO OPEN FLAMES," or equivalent (see Hazard Communication Signage Code).

**Acetylene and liquefied fuel gas**

- Cylinders shall be stored with the valve end up.
- If storage is within 30.5 metres of each other and not protected by automatic sprinklers, the total capacity of acetylene cylinders stored and used inside the building should be limited as detailed in applicable legislative regulations.
- Acetylene storage areas shall be well ventilated and open flames shall be prohibited.
- Acetylene storage rooms shall not be stored with other compressed gases not specified within this code.

APPENDIX C – Cylinder Storage Room Guidelines

**Cylinder Storage Room Guidelines:**

- Storage rooms for cylinders containing flammable gases shall be well ventilated to prevent the accumulation of explosive concentrations of gas.
- No ignition sources shall be permitted within 30 metres.
- “No Smoking” shall be marked as identified in the Hazard Communication Signage Code and shall be prohibited within 30 metres.
- All permanent wiring located in conduit and be in accordance with NFPA and applicable legislative regulations.
- Electric lights (portable and fixed) shall be equipped with guards to prevent breakage.
- Electric switches shall be located outside the room.

APPENDIX D – Safe Handling Guidelines

- Do not remove or change the marks and numbers stamped on the cylinders.
- Cylinders must never be dragged, pushed, or pulled across the floor.
- Transport cylinders weighing more than a total of 40 pounds (18.2 kg) shall be on a hand or motorized truck and be secured to prevent them from falling.
- Keep the cylinders clean and protect them from damage.
- Do not lift compressed gas cylinders with an electromagnet. Where cylinders must be handled by a crane or derrick, as on construction jobs, carry them in a cradle or suitable platform and take extreme care that they are not dropped or bumped. Do not use slings.
- Do not drop cylinders or allow them to strike each other violently.
- Do not use cylinders for rollers, supports, or any purpose other than to contain gas.
- Do not tamper with safety devices in valves or on cylinders.
- Consult the supplier of the gas when in doubt about the proper handling of a compressed gas cylinder or its contents.
- Clearly write EMPTY in chalk or non-permanent marker on empty cylinders that are to be returned to the vendor.
- Close cylinder valves and replace valve protection caps, if the cylinder is designed to accept a cap.
- Load cylinders to be transported to allow as little movement as possible. Secure them to prevent violent contact or upsetting.
- Always consider cylinders to be full and handle them with corresponding care.
• Securely support compressed gas cylinders at all times. Cylinders must not be left "free-standing" at any time, e.g., cylinders unloaded from truck to loading dock must be secured until placed on a hand truck for delivery within the building.
• Compressed gas cylinders shall never be subjected to a temperature above 1250F.
• Never place cylinders where they might become part of an electrical circuit.
• Do not re-paint cylinders.
• Never use a flame to detect flammable gas leaks. Only use soapy water.
3.3.12 Battery Charging and Servicing Code

1.0 PURPOSE
NCSG Crane & Heavy Haul its affiliated companies referred to as NCSG have developed a Battery Charging and Servicing Code to identify the proper level of protection against a potential injury to employees, contractors, and the public while operating within NCSG areas of responsibility. This code will aid employees in minimizing the risk of exposure and incident occurrence when dealing with batteries.

2.0 SCOPE AND APPLICATION
The application of correct procedures to charge, service and maintain battery condition will enable employees to ensure adequate protection from activities which may involve hazards to individuals or property. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Battery Charging and Servicing Code.

4.0 EXPECTATIONS
The Battery Charging and Servicing Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to employees, contractors, visitors and property when involved with batteries. The Battery Charging and Servicing Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment when required to operate, service or maintain acid batteries in accordance with the training and instruction received.
- Inspect personal protective equipment before using it, and
- Inspect servicing equipment to be used for batteries and ensure equipment is serviceable,
- Not use personal protective equipment or servicing equipment for batteries that is unable to perform the function for which it is designed.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to acid exposure, back injury, and pinch points.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code during battery operation and servicing in accordance with the training and instruction received.
- Ensure, appropriate PPE as specified for use with battery operation and servicing is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.
6.0 METHOD

6.1 Maintain Proper Battery Condition
NCSG employees shall perform proper battery terminal checks as part of a pre-shift inspection for any equipment as applicable to company Standard Operating Procedures.

NCSG shall ensure operators are responsible to have confirmed on a scheduled routine:
• Have NCSG Fleet Maintenance check battery for sufficient voltage as recommended by manufacturer’s specification
• Have the charging system and belts inspected.
• If necessary, replace or have make to have replaced, the battery and
• Make or have to make system repairs.

6.2 Safe Operating Procedures in Proximity to Batteries
• Never create a spark or allow a bare light bulb near a battery; they give off a certain amount of gas which is explosive.
• Always disconnect the battery ground (−) cable at the battery before working on the fuel or electrical systems.
• If possible, loosen the fillers caps or cover when charging the battery from an external source (this does not apply to sealed or maintenance-free batteries).
• Do not charge at an excessive rate or the battery could burst.
• Always wear safety glasses and face shield, neoprene gloves, and apron as applicable when cleaning the battery to prevent the caustic deposits from entering eyes, or coming in contact with clothing.
• Vent caps should be tight and level. Placing a damp cloth over vent caps when charging may act as a flame arrester
• Use proper lifting techniques when moving batteries. Batteries are small, but heavy and awkward to lift.

6.3 Hazard Prevention Practices.
• Remove wrist watches, which might make electrical contact and create sparks.
• Wash your hands immediately after completing the job.
• Clean up all acid spills and flush clothing with a water and baking soda solution.
• Smoking or open flames should never be present in a battery area, and ventilation is important.
• Store batteries in a cool, dry place. Storage temperature should be between 80ºF and 32ºF.
• Don’t make live connection directly to the battery. Explosive gases can be set off by a match, incorrect connection of battery cables, and careless use of tools around the battery.

6.4 Emergency Response Procedures
• If acid does enter the eye, immediately flood with running water for at least 30 minutes. See a doctor as soon as possible.
• If acid contacts the skin, wash the affected area immediately with plenty of water.
• Avoid chemical burns by not rubbing eyes or skin while working with the battery.
• Be familiar with the location and content of applicable MSDS Sheets.

7.0 TRAINING REQUIREMENTS AND MATERIALS
NCSG shall ensure proper training is provided to employees who are designated responsible to service / maintain batteries.
• Recognition of types of batteries (lead-acid, sealed, maintenance-free, etc)
• PPE Equipment specific training
  • Disposable / Reusable Rubber gloves
  • Disposable Coveralls / Aprons
  • Eye / Face Protection to prevent lead-acid / vapors from coming in contact with eye membrane
• NCSG orientation

8.0 RESOURCES
• Alberta OH&S Code Part 36
• Saskatchewan OH&S Regulations Part VI
• Manitoba OH&S Regulations Part 4
• Ontario Fire Protection and Prevention Act, Part 3
• OSHA 1926

9.0 SUPPORTING DOCUMENTS
• NCSG Code – Personal Protective Equipment - Eye and Face Protection
• NCSG Code – Personal Protective Equipment – Respiratory Protection
3.3.13 Fall Protection Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Fall Protection Code to identify the proper level of protection against a potential injury occurring to employees, contractors, and the public while operating within NCSG areas of responsibility. This code does not include rescue personnel involved in training or in providing emergency rescue services using equipment or practices other than those described in the occupational health and safety code sections pertaining to fall protection.

2.0 SCOPE AND APPLICATION
The correct identification of applicable safety equipment and the use of that equipment will enable employees to be adequately protected from activities involving hazards due to fall from a height described as hazardous within this code. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
The following definitions are specific to Fall Protection Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Anchor A secure point of attachment for a lifeline or lanyard.

Fall Arrest System A system that will stop a worker’s fall before the worker hits the surface below.

Fall Protection System Is identified as:
- a fall restraint system,
- a fall arrest system, or
- work procedures that are acceptable to minimize the risk of injury to a worker from a fall.

Fall Restraint System A system to prevent a worker from falling from a work position, or from traveling to an unguarded edge from which the worker could fall.

Full Body Harness A body support device consisting of connecting straps designed to distribute the force resulting from a fall over at the least the thigh, shoulders, and pelvis, with provision for attaching a lanyard, a lifeline or other components.

Lanyard A flexible line of webbing, or synthetic or wire rope, it is used to secure a safety belt or full body harness to a lifeline or anchor.

Lifeline A synthetic or wire rope, rigged from one or more anchors, to which a worker’s lanyard or other part of a personal fall protection system is attached.

Personal Fall Protection System A worker’s fall restraint system or fall arrest system composed of:
- a safety belt or full body harness, and
- a lanyard, lifeline and any other connecting equipment. Individual to the worker that is used to secure the worker to an individual point of anchorage or to a horizontal lifeline system.

Safety Belt Means a body support device consisting of a strap with the means for securing it about the waist and attaching it to other components.

4.0 EXPECTATIONS
The Fall Protection Code shall provide required and adequate guidelines to ensure knowledge of potential hazards resulting from a fall to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Fall Protection Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Inspect personal protective equipment before using it, and
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Be responsive, through adequate training, to minimize the risk of hazards relating to a fall from a height that is considered hazardous.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Ensure, appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites.
- Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Identify a Hazardous Height (Fall Distance)
For the purpose of this code:

Work Area is defined as a hazardous height if:
- A worker who is working at a height of 1.8 metres (6 feet) or more, or
- There is an unusual possibility of injury if a worker falls less than 1.8 metres (6 feet).
- There is no separation or designation for a sloped roof. A fall protection system shall be used in all cases that a hazardous height is established.

6.2 Fall Protection Plan
NCSG shall develop a code, and if applicable standard operating procedures to ensure a fall protection plan for a worksite if a worker at the work site may fall 1.8 metres (6 feet) or more, and workers are not protected by guardrails.

NCSG Fall Protection Plan shall include and specify:
- the fall hazards at the work site,
- the fall protection system to be used at the work site,
- the Standard Operating Procedures as detailed for the specific worksite, which shall be used to assemble, maintain, inspect, use and disassemble the fall protection system, and
- the Emergency Response Plan and rescue procedures to be used if a worker falls, is suspended by a personal fall arrest system or safety net and needs to be rescued.

NCSG shall ensure a fall protection plan is made readily available at a worksite before the risk of falling begins and shall ensure all employees, contractors, visitors who may be affected are aware of the plan.

NCSG shall ensure that the equipment used in the fall protection system is:
- A certified full body harness with adequate attachment points and a compatible lanyard with a shock absorber or similar device. The lanyard shall be attached to a suitable anchor point or lifeline at all times.
- Inspected by a competent worker as required by the manufacturer at the start of each shift or workday.
- Kept free from substances and conditions that could cause deterioration of the materials that compose the equipment.
- Is suitable for the conditions in which the lifeline is to be used, having regard to factors including strength, abrasion resistance, extensibility and chemical stability.
- Made of wire rope or synthetic material, is free of imperfections, knots and splices, other than end terminations, is protected by padding where the lifeline passes over sharp edges, is protected from heat, flame or abrasive or corrosive materials during use and is maintained to manufacturer's recommendations.
- Where a snap hook is used as an integral component of a personal fall arrest system, connecting linkage, fall arresting device, full body harness or lifeline, an employer or contractor shall ensure that the snap hook is self-locking and is approved and maintained.
- Fastened to a secure anchor point that has a breaking strength of at least 22.2 kilonewtons (5000 lbs) in any direction, and is not used to suspend any platform or other load.
- The fall protection equipment must be re-certified as per the specifications set forth by the manufacturer.
- In the event of a fall the fall protection equipment must be removed from active service until it is re-certified.
- Where a defect or unsafe condition that may create a hazard to a worker is identified in a safety belt, connecting linkage, fall arresting device, full body harness or lifeline, steps are taken immediately to protect
the health and safety of any worker who may be at risk until the defect is repaired or the unsafe condition is corrected and as soon as is reasonably practicable the defect is repaired or the unsafe condition is corrected.

- In situations where a guardrail cannot be used NCSG workers can be adequately protected in one of four ways:
  - Using a travel restraint system
  - A fall restriction system
  - A fall arrest system or
  - A safety net

7.0 TRAINING REQUIREMENTS AND MATERIALS
All workers who are required to use fall protection are required to complete a fall protection-training course and maintain competency through on-going training

- Fall Protection Coursing / Certification
- NCSG orientation

Equipment used in a fall arrest system must be compatible with each other, be sufficient to support the falling force, and meet CSA certification.

8.0 RESOURCES
- CSA Standards pertaining to Fall Protection Equipment and Standards:
  - Z259.1-95
  - Z259.10-06
  - Z259.11-05
  - Z259.11-M92
  - Z259.16-04
- Alberta OH&S Code (second edition)
- British Columbia OH&S Code (third edition)
- Ontario OH&S Regulations 213 Section 26.1(2)

9.0 APPENDICIES
- Appendix A – Full Body Harness Types
APPENDIX A – Full Body Harness Types

All full body harnesses must meet the CSA Standard Z259.10 or the ANSI Standard Z359.1-1992.

Functions of Full Body Harnesses
- To securely hold the worker’s body during a free fall, deceleration and final arrest.
- To distribute forces to those parts of the body able to absorb those forces without significant injury.
- To keep the body in an upright position or near upright position after the fall and until the worker is rescued.
- To allow workers to do their work without restricting their movement.

Classes of Full Body Harnesses

Group A – Fall Arresting
- Group A harnesses have one D-ring attachment for fall arrest affixed to both shoulder straps at the back

Group E – Confined Space Entry (raising and lowering)
- Group E harnesses have a sliding D-ring on each shoulder strap

Group P – Work Positioning
- Group P harnesses have D-rings mounted at waist level
Safety Belts
All safety belts must meet the CSA standard Z259.1-95 (1999);
Safety Belts and Lanyards are acceptable. Safety Belts are prohibited from use in a fall arrest system due to the possibility of worker death or injury resulting from:
• The worker falling out of the belt.
• Abdominal injuries.
Safety belts are restricted to use as part of travel restraint and fall restrict systems.

Travel Restraint Systems
• Prevent workers from reaching an edge from which they could fall.
• Have no fall arrest capabilities.

Fall Restrict Systems
• Often used in conjunction with a work positioning system.
• Have no fall arrest capabilities.

Lanyards
Only lanyards approved to the CSA Standard Z259.1-95 (R1999), Safety Belts and Lanyards are to be used. Whenever possible, a lanyard used for fall arrest should be equipped with a shock absorber. All shock absorbers must be approved to the CSA Standard Z259.11-M92 (R1998).

Self-Retracting Devices (SRD)
All SRD’s must meet the CSA Standard Z259.2.2-98. A SRD is a fall arrest device that performs a tethering function while allowing vertical movement to the maximum working length of the device.
To minimize free fall distance when using an SRD, the device must be anchored above the worker’s location.
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
6.1 Life Saving Rules

1.0 PURPOSE
Not on My Watch! At NCSG Crane & Heavy Haul Services (NCSG) Safety First is our top core value. The company aims to have zero fatalities and no incidents that harm people, our contractors or the public. After reviewing work related incidents from both ourselves and industry we found that a failure to comply with a limited number of safety rules was a significant contributing factor.

In response, NCSG Crane & Heavy Haul Services and its affiliated companies (referred to as NCSG) have adopted 12 Life-Saving Rules. The guiding principle is “If you choose to break the rules, you choose not to work for NCSG”.

2.0 SCOPE AND APPLICATION
NCSG’s Life-Saving Rules apply across our entire corporation and all our affiliated companies. Every employee, contractor and subcontractor is expected to adhere to them. The Life-Saving Rules are intended to aid NCSG in meeting the following objectives:
• improve compliance with safety standards/procedures/policies
• achieve zero work related fatalities and serious injuries caused by non-compliance with the Life-Saving Rules
• contribute to our culture of “Not on My Watch” where we believe that through engagement, involvement and accountability we can ensure no one will be harmed while working for or with us.

The 12 Life-Saving Rules are:
1) Use fall protection when working at height (1.8 meters / 6 feet).
2) Do not walk under a suspended load.
3) Wear your seat belt.
4) While driving, do not use your phone and do not exceed speed limits.
5) Follow Journey Management Plan and Transportation Standard
6) Verify isolation before work begins and use the specified life protecting equipment.
7) Position yourself in a safe zone in relation to moving or energized equipment.
8) Do not work under or near overhead electrical power lines.
9) No alcohol or drugs while working or driving.(aka report fit for work)
10) Do not smoke outside designated smoking areas.
11) Follow prescribed lift plan.
12) Obtain authorization before overriding or disabling safety devices or equipment

The Life-Saving Rules apply, without exception, to all NCSG companies.

3.0 DEFINITIONS

Use fall protection when working outside a protective environment where you can fall over 1.8 meters (6 feet) to keep you safe.

A Protective environment includes approved scaffolds, stairs with handrails and man lifts.

You must:
• have authorization to work at height outside of a protective environment
• be aware of what fall protection equipment to use and how to use it
• check equipment before using it
• always tie off when at height outside of a protective environment

Working or walking immediately under a suspended load is unsafe as the load can fall on you.

A suspended load is an object that is temporary lifted and hangs above the ground.

You must:
• never cross a barrier controlling an area with a suspended load without authorization.
• follow the instructions of the signal person or the person in charge of the lift.
A seat belt protects you from injury in the event of an incident while driving and keeps you safe.

Wearing seat belts in (rental) cars, taxi’s, buses, trucks, cranes, or forklifts, and involves persons in moving vehicles to be engaged on company business.

You must:

- check that your seat belt works properly
- keep your seat belt properly fastened while in a moving vehicle
- check that everyone in the vehicle is wearing a seat belt properly before starting to drive
- intervene when your fellow passengers are not wearing seat belts properly.

Speeding or using your phone and or other electronics while driving increases the risk of losing control of your vehicle.

While driving, you must:

- not use a mobile phone, pager, or other electronics, send or receive a text, or use a hands free mobile phone device
- stay at or below the maximum allowable speed for the road you are driving on as indicated by road signs or journey management instructions
- stay at or below the maximum allowable speed for the vehicle you are driving
- adjust your speed to the prevailing conditions

A journey management plan is a plan for you as a driver that will help you to travel and arrive safely.

If you are a driver you must:

- confirm if a journey management plan is required before starting the journey
- discuss the journey management plan with your supervisor
- understand the journey management plan before starting the journey
- comply with the duty, driving and rest hours specified in the journey management plan
- follow the route specified in the journey management plan
- follow the NCSG Transportation Standard
- tell your supervisor immediately if changes occur

Isolation separates you from danger, such as electricity, pressure, toxic materials, poisonous gas or hot liquids to keep you safe.

You must:

- understand the isolations that protect you from danger
- confirm with the supervisor or the person in charge of the work that isolations are in place
- confirm with the supervisor or the person in charge of the work it is safe to start work
- confirm that no stored energy or other dangers remain

Working “in the line of fire” of moving equipment (e.g. cranes and other vehicles) and energized equipment (e.g. rotating, electrical or pressurized machinery) is unsafe and has the potential for serious injury including death.

You must:

- confirm the safety precautions with the supervisor or the person in charge of the work when working near moving or energized equipment
- follow the instructions of the signal person or person in charge for equipment movements
- confirm with the person in charge that it is safe to enter and/ work in the restricted zone
- make sure that the driver/operator sees you
Working with equipment immediately under or near overhead lines is unsafe as an electrical current or flashover can kill you. Maintain adequate distance to keep you safe.

Be aware that a flashover can happen if you work within the clearance distance (e.g. 7 meters or 23 feet for 275kV line), even if you do not touch an overhead line.

You must:

- never work with equipment under or near overhead lines unless authorized to do so by your supervisor
- confirm that the correct precautions have been taken and that it is safe to work

Using alcohol or illegal drugs or other substances, will reduce your ability to do your job safely.

You must:

- always inform the supervisor or the person in charge of the work if you are taking medicine that may have an effect on your performance
- if in doubt always check with your safety advisor or human resources
- not use, keep, sell or distribute illegal drugs
- intervene if you see a case of alcohol or drug use in the workplace
- When reporting to work, you must be fit for work

Smoking or use of matches or cigarette lighters could set flammable materials on fire. Designated smoking areas, such as a smoking pit or smoking area, will keep you from causing fire and explosion.

You must:

- know where the designated smoking areas are
- intervene if you see someone smoking outside a designated area

Obtain authorization before overriding or disabling safety devices or equipment

Follow prescribed lift plan

A lift plan describes how to lift and hoist safely. For routine lifts, there needs to be a general lift plan. For non-routine lifts, including critical lifts, the plan is specific.

Lifting equipment operators must:

- understand the lift plan before starting work and follow it
- confirm that the load does not exceed the capacity of the lifting equipment
- confirm that the crane or lifting device is level and positioned on a solid surface
- verify that safety devices on the lifting equipment are installed and operational
- confirm that the signaling methods and communications are agreed and clear
- verify that the lifting equipment has been inspected, maintained and certified
- Reaffirm or check the calculations of the lift plan prior

Do not work under or near overhead electric power lines

No drugs or alcohol while working or driving

Do not smoke outside designated areas

Follow prescribed lift plan
4.0 EXPECTATIONS
These Life-Saving Rules shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Employees/Workers/Contractors who; violate the Life-Saving Rules will be disciplined up to and including termination of employment.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees/Workers/Contractors
It is the employee’s responsibility to:
• Understand, apply and comply with these rules
• Intervene and immediately report any violations of these rules
• Ask questions when applicable

5.2 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that employees/workers/contractors have been provided copies of our Life-Saving Rules, understand how they apply and the importance of them.
• Follow up with any intervention or violation to ensure appropriate corrective actions have taken place.
• Notify Management of any intervention or violation immediately.
• Monitor for compliance.

5.3 Management
In addition to 5.1, it is the management’s responsibility to:
• Ensure compliance with these Life-Saving Rules, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Ensure adequate training and monitoring for compliance is provided.
• Notify Executive Management of any intervention or violations along with the corrective actions implemented.
• Ensure progressive discipline has taken place where applicable.
• Audit for compliance.

5.4 Health, Safety and Environment Team
It is the Health, Safety and Environment team’s responsibility to:
• Amend and maintain these rules within the defined review period.
• Provide training, awareness and coaching as required
6.2 Code of Ethics and Professional Conduct

1.0 Policy

The code of ethics and professional standards are to be observed by all NCSG Crane and Heavy Haul Services and its affiliated companies (NCSG) personnel. All personnel shall, in their professional activities, sustain and advance the integrity, honor, and prestige of the profession by adherence to these standards. These standards apply at all times during the course of employment, both on and off Property.

STANDARDS

1. Hold paramount the safety and health of people, the protection of the environment and protection of property in the performance of professional duties and exercise their obligation to advise clients, workers and the public of dangers and unacceptable risks to people, the environment, or property.

2. Undertake assignments only when qualified by education and/or experience in the specific technical craft/field involved. Demonstrate responsibility and competence for their craft/field by continued professional development and education.

3. Conduct themselves in a professional manner, recognizing that discrimination or improper conduct on the basis of race, creed, color, language, national origin, political or religious affiliation, sex, sexual orientation, age, marital status, family relationship and disability is strictly prohibited by the Company.

4. Engage only in activities that maintain, enhance and improve their professional skills and avoid circumstances that compromise their conduct.

5. Recognize and respect the work and skills of others.

6. Recognize their professional limitations and level of competence.

7. Protect the confidentiality of Company information and disclose such information only when properly authorized or when legally obligated to do so.

8. Conduct their professional relations by the highest standards of integrity and avoid compromise of their professional and ethical judgment by conflicts of interest.

9. Enforcement of Company safety rules, policies and procedures as well as any and all federal, state and local safety rules and regulations.

10. Properly report all incidents, no matter the size or nature to Supervision immediately.
6.3 General HS&E Duties Code

1.0 PURPOSE
NCSG Crane and Heavy Haul Services (NCSG) and its affiliated companies have developed General HS&E Duties Code to identify the responsibility and accountability of NCSG and its employees.

2.0 SCOPE AND APPLICATION
Jurisdictional Legislation requires general duties for employers and employees be outlined and defined. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
There are no definitions for the General Duties Code.

4.0 EXPECTATIONS
The General HS&E Duties Code shall provide required and adequate guidelines to ensure knowledge of responsibilities to all employees, contractors, visitors and general public. The General HS&E Duties Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Use, maintain and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Comply with the policies, processes and practices laid out in this manual and NCSG training.
• Utilize all safeguards in the workplace;
• Lockout any equipment being serviced, repaired or maintained;
• Not use compressed air for any purpose other than what it is intended;
• Report, tag and repair or replace any defective tools or equipment.
• Stop, report and refuse unsafe work. This includes protecting others from the hazards.
• Immediately take action to correct unsafe conditions or actions.
• Immediately report incidents and openly participate in investigations.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received.
• Immediately respond and investigate any report of unsafe work, stopped work or imminent danger. Involve any employees in the investigation process that may have stopped the work or reported the hazard/danger. Investigate and document the occurrence and corrective actions taken.
• Ensure reporting processes are in place for workers.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide corrective actions or discipline where required to ensure compliance with this code and document.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.
6.0 METHOD

6.1 Employer General Responsibilities (Supervision or higher)

All employers shall:
- make the workplace safe
- prevent risks to health, property and the environment
- ensure equipment, vehicles and machinery are safe to use, and that safe working practices are established and followed.
- make sure that all materials are handled, stored and used safely
- provide adequate first aid facilities
- tell employees about any potential hazards for the assigned tasks, chemicals and other substances used for the task, instructions on safe work and hazard control, training and supervision as needed.
- set up emergency plans for each worksite,
- make sure that ventilation, temperature, lighting, and toilet, washing and rest facilities all meet health, safety requirements
- check that the right work equipment is provided and is properly used and regularly maintained
- prevent or control exposure to substances that may damage your health
- take precautions against the risks caused by flammable or explosive hazards, electrical equipment, noise and radiation
- avoid potentially dangerous work involving manual handling (and if it can't be avoided, take precautions to reduce the risk of injury)
- provide health supervision as needed
- provide protective clothing or equipment free of charge (if risks can't be removed or adequately controlled by any other means)
- ensure that the right warning signs are provided and looked after
- report certain accidents, injuries, diseases and dangerous occurrences to either the Health and Safety & Environment Executive (HSE) or the local authority, depending on the type of business
- provide current reference and copies of the Provincial /State / Federal occupational health and safety legislation as well as Safety Data Sheets.

6.2 Employee General Responsibilities

Employees shall:
- take reasonable care of your own health and safety, and others around you
- immediately stop any work that poses or may pose imminent danger and report it immediately to supervision.
- avoid wearing jewelry or loose clothing if operating machinery
- tie or tuck out of the way long hair when working with machinery
- take reasonable care not to put other people - fellow employees and members of the public - at risk by what you do or don't do in the course of your work, Coordinate the FLRA with the other workers.
- co-operate with your employer, making sure you get proper training and you understand and follow the company's health and safety policies
- not interfere with or misuse anything that's been provided for your health, safety or welfare
- report any injuries, strains or illnesses you suffer as a result of doing your job (your employer may need to change the way you work)
- tell your employer if something happens that might affect your ability to work (e.g. becoming pregnant or suffering from an injury) because of the employers legal responsibility for your health and safety.
- wear, use and maintain all PPE provided.
- if you drive or operate machinery, to tell your employer if you take medication that makes you drowsy - they should temporarily move you to another job if they have one for you to do.

6.4 Young Workers

- no person under the age of 16 years shall be employed or permitted to work within NCSG due the hazardous nature of the work at NCSG and legislative requirements.

6.5 Supervisors

Supervisors shall have sufficient knowledge of all of the following with respect to matters that are within the scope of the supervisor’s responsibility:
- Legislation that applies to the worksite and scope of work,
- any occupational health and safety program at the place of employment,
- the safe handling, use, storage, production and disposal of chemical and biological substances,
- the need for and safe use of personal protective equipment,
- emergency procedures and planning,
- any other matters that are necessary to ensure the health and safety of workers under their direction.

6.6 Contractors

Contractors shall:
- Comply with site health and safety requirements;
- Give notice in writing to NCSG setting out the name of the person who is supervising the work on behalf of the contractor, any emergency facilities provided by the contractor for the use of the employers workers or self-employed persons and the existence of a committee or representative, if any, at the place of employment and the means to contact the committee representative.
6.7 **Information for Employees**
NCSG will ensure at all times the following documents are available and easily accessible to employees:

- Applicable Occupational Health and Safety legislation;
- GHS / WHMIS - Safety Data Sheets;
- Codes, practices and procedures;
- Committee meeting minutes;
- Guidelines and responsibilities.

6.8 **Right to Refuse**
Every employee has the Legal obligation “right” to refuse work that is classified as unsafe. No employee will be reprimanded for exercising their obligation to refuse work providing they can provide a reasonable cause. Please refer to the Imminent Danger and Stop Work Authority Process’s in section 2.0.

Employees must report any unsafe, act, condition, tool or equipment to ensure it can be corrected or controlled and reduce the risk. All unsafe work conditions reported must be investigated and documented by a supervisor. Supervisors will utilize control methods to bring the hazard to an acceptable level of risk if possible.

If emergency action is required to correct a condition which constitutes an immediate threat to workers only those qualified and properly instructed workers necessary to correct the unsafe condition may be exposed to the hazard, and every possible effort must be made to control the hazard while this is being done.

6.9 **Equipment and Tool Defects**
Tools and equipment must have maintenance scheduled and followed through with at regular intervals. Reference the manufacturers specifications for maintenance scheduling.

Any defective or damaged tools or equipment must be immediately, tagged/locked out and reported to the supervisor. Repair or replacement must then be arranged for by the supervisor.

6.10 **Inspection**
NCSG will perform regular inspection of premises, equipment, work methods and work practices, at appropriate intervals, to ensure that prompt action is undertaken to correct any hazardous conditions found.

6.11 **Serious Incidents**
Any incident shall be quickly followed up with an investigation led by the supervisor and HSE Advisor to determine the cause. All necessary measures must be taken to ensure that the incident will not occur in the future and that the workplace is safe and free from hazards. Unsafe or harmful conditions found in the course of an inspection must be remedied without delay. Whenever a person observes what appears to be an unsafe or harmful condition or act the person must report it as soon as possible to a supervisor or to the employer, and the person receiving the report must investigate and document the reported unsafe condition or act and must ensure that any necessary corrective action is taken without delay.

6.12 **Workplace Conduct**
All employees of NCSG shall act in a professional manner and keep in mind that their actions are a reflection of the company they work for. The attempted or actual exercise by a worker towards another worker using physical force to cause injury, and including any threatening statement or behavior which gives the worker reasonable cause to believe he or she is at risk of injury. Horseplay, practical jokes, sleeping, unnecessary running or jumping or similar conduct will not be tolerated in the workplace. A person must not engage in any improper activity or behavior at a workplace that might create or constitute a hazard to themselves or to any other person. Improper activity or behavior must be reported and investigated.

6.13 **Life Saving Rules**
NCSG Employees and Contractors Shall:

The 12 Life-Saving Rules are:

1) Use fall protection when working at height (1.8 meters / 6 feet).
2) Do not walk under a suspended load.
3) Wear your seat belt.
4) While driving, do not use your phone and do not exceed speed limits.
5) Follow Journey Management Plan and Transportation Standard
6) Verify isolation before work begins and use the specified life protecting equipment.
7) Position yourself in a safe zone in relation to moving or energized equipment.
8) Do not work under or near overhead electrical power lines.
9) No alcohol or drugs while working or driving.(aka report fit for work)
10) Do not smoke outside designated smoking areas.
11) Follow prescribed lift plan.
12) Obtain authorization before overriding or disabling safety devices or equipment

The Life-Saving Rules apply, without exception, to all NCSG companies. Compliance with these Rules is a condition of employment. Failure to comply may lead to termination.
7.0 TRAINING REQUIREMENTS AND MATERIALS

- NCSG shall ensure workers and supervisors are trained in all matters that are necessary to protect the health and safety of the themselves and their co-workers when the employee begins work at a place of employment or is moved from one work activity or worksite to another that differs with respect to hazards, facilities or procedures.
- Training shall include:
  - procedures to be taken in the event of a fire or other emergency,
  - the location of first aid facilities,
  - identification of prohibited or restricted areas,
  - precautions to be taken for physical, chemical or biological hazards,
  - any procedures, plans, policies and programs to perform the work,
  - any other matters that are necessary to ensure the health and safety of the worker while the worker is at work.
- Training shall be documented including the employee name, date of training, subject of training and the name of the person providing the training. Training records shall be maintained.

8.0 RESOURCES

- Alberta Occupational Health and Safety Act
- British Columbia Occupational Health and Safety Act
- Saskatchewan OH&S regulations Part III
- Manitoba WS&H Regulations Part 2
6.4 General and Sexual Harassment Policy

1.0 NCSG CDN HARASSMENT & DISCRIMINATION POLICY

NCSG and its member companies, in cooperation with its unions, are committed to providing our employees an environment in which all individuals are treated with respect and dignity. Our employees have the right to work in a professional atmosphere free from harassment and discriminatory practices based on race, ancestry, religion, place of origin, colour, ethnic origin, citizenship, creed, pregnancy, sexual orientation, age, marital status, family status, mental or physical disability, social conditions or political beliefs.

It is the responsibility of every employee of NCSG and its member companies to raise concerns about harassment and discrimination. Every employee is responsible to respond in a professional and appropriate manner and not allow or condone harassment or discrimination within NC Services Group or its member companies.

It is the responsibility of a director, manager or supervisor within NCSG and its member companies to take immediate and appropriate action to report or deal with incidents of harassment or discrimination that they have personally observed or have had brought to their attention. These incidents are not to be disregarded or downplayed, regardless of the positions the individuals may hold within the group of companies.

NCSG views all incidents of harassment and discrimination as serious in nature and will investigate any and all complaints. All complaints will be viewed as confidential and private in nature and will be treated with discretion. Corrective steps may include counseling, reprimand, suspension, or dismissal of the offender. Should the accusations prove to be false and not filed in good faith, the plaintiff may be subject to similar corrective or disciplinary action.

2.0 OBJECTIVES

- Provide all employees of NCSG and its member companies a safe working environment free from harassment, discrimination, violence and bullying
- Ensure that all employees, not only management, understand they have a responsibility not to condone harassment or discrimination and to act immediately in a professional and appropriate manner should they witness such behaviour
- To create a method for NCSG of companies to receive complaints regarding incidents of harassments or discrimination and establish a system with which these complaints shall be dealt with in a confidential, fair and consistent manner
- To outline the preventative, corrective and disciplinary actions to be taken should a complaint be filed and subsequently confirmed through the companies investigations

3.0 DEFINITIONS

Workplace Harassment
Involving another employee in conduct, actions or conversation that is unwelcome, threatening or offensive within a work environment that any reasonable person ought to know is not appropriate

Workplace Violence
Exerting physical force against another worker, in the workplace, or at a work related function, in such a way that could or does cause the worker bodily harm
An attempt to exert physical force against a worker, in the workplace, or at a work related function, that could or does cause the worker bodily
A threat to exercise physical force against a worker, that any reasonable person would interpret as legitimate, in a workplace, or at a work related function, that could cause bodily harm to the worker

Sexual Harassment
Unwanted yet deliberate sexual attention from a co-worker who knows or should reasonably know that such attention is inappropriate and unwelcome;
A promise of reward, either explicit or implied, for participating in a request of a sexual nature;
Threat of punishment, either explicit or implied, for failing to comply with a request of a sexual nature;
A relationship of a sexual nature where the balance of power and authority between the employees involved is unbalanced constituting an abuse of trust;
Remarks, comments, jokes or behaviours of a sexual nature that may be perceived by the intended employee, or employees within hearing distance, as inappropriate and cause a negative work environment either psychologically or emotionally

Abuse of Authority
Where an employee works, performance or career is jeopardized, interfered with or influenced by a person in power. The authority being exerted offers no value from a work perspective and is often viewed as humiliating, intimidating or threatening by the employee

4.0 COMPLAINT PROCEDURE

All complaints of Harassment and Discrimination reported to NCSG and its member companies will be taken seriously and treated with respect and discretion. However, should a complaint be made that is determined to be false and filed out of spite or as a hoax, the complainant will face serious consequences.

- An employee that believes they are the subject of harassment or discrimination is advised as an initial step to inform the individual involved; that their actions are inappropriate and unwelcome. They are to further inform the individual that the applicable behaviours need to stop as they will not be tolerated
Should this discussion be ineffective, or should the employee feel they are unable to have the conversation, they are requested to complete the “Harassment/Discrimination Occurrence Report” and submit the form to the attention of Human Resources without fear of reprisal. This form is located on the s:drive (s:drive/Policies and Procedures/Human Resources Policies/Harassment and Discrimination Policy). Whenever possible, it is suggested that an employee that believes they are the subject of harassment or discrimination, keep a detailed record of incidents leading up to the filing of a formal complaint. Once Human Resources receives the confidential complaint, the HR Manager and an unbiased member of the Sr. Management team will conduct an investigation into the complaint. The complainant will be kept informed of the progress and findings of the review. Both the individual that files the complaint and the alleged defendant will be interviewed. Witnesses will be interviewed as required, in all cases confidentiality and discretion will be stressed to all involved and depending on the circumstances of the incident, confidentiality agreements may be utilized. In cases where harassment or discrimination is proven, NCSG and its member companies will take appropriate disciplinary and corrective measures. Documentation regarding the incident will be kept under separate cover within Human Resources and will not become a part of the complainants employee file. When harassment or discrimination is not established, however it is determined the accuser made the complaint in good faith, no disciplinary steps will be taken and no documentation will be placed in either employees file. Providing a complaint has been made in good faith, the employee filing the complaint and any employee that offers information, will be free from reprisal of any form. As a reminder all employees have 24/7 access to assistance through our Employee Assistance Plan (EAP). Telephone Numbers for company/location specific providers are available on the s:drive (s:drive/Policies and Procedures/Human Resources Policies/Benefits Providers Forms and Contact Information).
6.5 Company Rules

- All workers are to wear the appropriate PPE clothing and equipment when and where required.
- Report all substandard acts, conditions and near miss incidents immediately.
- Report all incidents including injury or damage incidents immediately and freeze the scene.
- Perform all work following the company’s safety work practices and safe job procedures.
- Maintain good housekeeping in your work area, mobile equipment and vehicles.
- Operate vehicles and/or mobile equipment in accordance with applicable legislation.
- Possession or consumption of alcohol or illegal drugs while at work is prohibited.
- Arrive to work “Fit for Duty”. This includes Alcohol, Drugs, Prescription Medication, Fatigue and Emotional Stress. If you are not fit contact your supervisor prior to coming to work.
- Possession of weapons (firearms) at the worksite will result in immediate dismissal.
- No fighting, horseplay, practical jokes or gambling. No theft or vandalism.
- No damaging, disabling or interfering with safety, fire-fighting or first aid equipment.
- Smoking is allowed in designated smoking areas only during scheduled breaks, company vehicles and equipment are not designated smoking areas.
- It is the employee’s responsibility to notify his/her supervisor if they are going to be absent from work prior to the start of their shift.
- Employees must refrain from sleeping while on the job.
- Employees must refrain from acts of violence, discrimination or harassment and address and/or report incidents of discrimination or harassment they observe or become aware of.
- Jewelry (dangling necklaces, earrings, etc) is not to be worn while on shift.
- No music players, games or electronic devices are permitted in mobile equipment or yards.
- Operation of cell phones including hands free operation is prohibited while driving or operating. This includes all forms of text messaging and emails and social media applications.
- Do not perform any mechanical repair or servicing on machinery while it is in motion. Keep all safe guards in place while machine is in operation.
- When workers are using or need to use prescription medication that may interfere with their ability to do their tasks, it is mandatory that they inform their Supervisor or HS&E Advisor.

Any violation of Company Policies or Company Rules may result in disciplinary action.

Additional company policies and rules can be located on the NCSG HUB http://www.ncsg.com located in each department tab or by contacting department representatives.

Corporate rules and policies include;
- NCSG Anti-Corruption Policy
- NCSG Code of Ethics
- NCSG Code of Conduct
- B&G Code of Conduct

The Human Resource department maintains specific company policies and rules regarding the following;
- Harassment & Discrimination Policy
- Termination Policy
- Disciplinary Action Policy
- Smoking Policy
- Fleet Vehicle & Equipment Use Policy

Human Resource polices are also available in the Employee handbook.

The NCSG I.T department has rules and policies regarding information and technology use outlined in the following policies;
- Equipment System Entry Policy
- Mobile Device Usage Policy
- General IT, Internet and Email Policy
7.1 General PPE Code

1.0 PURPOSE
NCSG Crane and Heavy Haul Services (NCSG) and its affiliated companies have developed a General Personal Protective Equipment Code to identify the proper application of appropriate protective equipment by employees, contractors, and the public while operating within NCSG areas of responsibility. This code will aid employees in proper use, care, maintenance and selection of personal protective equipment.

2.0 SCOPE AND APPLICATION
The General Personal Protective Equipment Code will standardize the type of equipment workers will wear as their last line of protection from workplace hazards. This code will also serve as a guideline to the selection, inspection, use and care of applicable PPE. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG when using and selecting protective equipment.

This Process applies, without exception, to all NCSG companies and affiliates.

3.0 DEFINITIONS
The following definitions are specific to the General Personal Protective Equipment Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

American National Standards Institute (ANSI) ANSI is the American equivalent to CSA.

Canadian General Standard Board (CGSB) The CGSB is one of the largest Standards development and conformity assessment organizations in Canada. They are responsible to develop standards for consumer goods, textiles, and other industry.

Canadian Standards Association (CSA) The CSA is a non-profit organization that creates Standards for all industry in terms of health, safety and the environment.

Flame Resistant Clothing (FRC) Single to multi-layer protective clothing including, but not limited to: coveralls, trousers, shirts, jackets, rainwear and parkas, designed to provide protection against hydrocarbon flash fire. FRC is not designed for prolonged exposure to high heat.

Flash Fire A rapid moving flame front which can be a combustion explosion and may occur in an environment where fuel and air become mixed in adequate concentrations to combust and where all sources of ignition have not been controlled.

Fall Protection Personal protective equipment that is designed to arrest falls, support the body and limit fall hazards.

Gloves Gloves are designed to protect the hand from electrical, chemical and physical hazards, and can consist of leather, rubber, and nitrile; but are not limited too.

Hard Hat Head protection that meets either CSA or ANSI Standards.

Hearing Protection PPE that consists of Class A ear plugs or ear muffps that provides a NRR of 28 or more.

Noise Reduction Rating (NRR) The average noise reduction across the human hearing range. The NRR does not mean an actual decibel noise reduction.

Respirator PPE that provides protection from particulates vapors, fumes, and gases.

Safety Boots Footwear that provides an CSA Industrial Class 1 steel or Kevlar toe cap, puncture resistant sole plate, 6 inch high ankle support and where required, di-electric.

Safety Glasses Eye protection that meets the CSA Standard Z94 or ANSI 87 for lens thickness and penetration resistance and side shield minimum standards. The Standard applies to “Over the Glasses” (OTG), and prescription and non-prescription safety glasses.

4.0 EXPECTATIONS
The General PPE Code will be reviewed every year.

This code shall supplement, but not supersede any regulatory Provincial / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management System is updated a revision record will be posted to all employees notifying them of the update.
### 5.0 ROLES AND RESPONSIBILITIES

#### 5.1 Employees
All employees are responsible to:
- Use and wear properly, the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Participate and request any training in regards to PPE care, use and limitations.
- Inspect all personal protective equipment before using it.
- Refrain from wearing protective equipment outside of the work area where it is required if to do so would constitute a hazard.
- Report any equipment malfunction to the supervisor or employer.
- A worker who is assigned responsibility for cleaning, maintaining or storing personal protective equipment must do so in accordance with training and instruction provided.
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- NCSG will provide all necessary PPE appropriate to the risk assessed to all employees at no cost, with the exception of Foot Protection and winter FRC.

#### 5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Workers are responsible to provide clothing suitable to the environmental conditions they are working in. Such as cold weather clothing for use under coveralls.

#### 5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
- Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Ensure appropriate protection is readily available for all employees, contractors and visitors within NCSG areas of operation or active worksites.
- Provide training (at least annually for hearing conservation/protection) to all employees on the care, use and limitations of PPE.
- NCSG shall replace any defective PPE.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

#### 5.4 Management
In addition to 5.1, it is the management responsibility to:
- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

#### 5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

### 6.0 METHOD

#### 6.1 Hazard Assessment and Control
To establish the required PPE for the job, a field level risk assessment must be conducted prior to commencing any work. FLRA's identify hazards and appropriate controls, including PPE.

PPE must only be used if it does not itself endanger the worker. Engineering and Administrative controls must be utilized prior to PPE selection.

MSDS and Standards of Practice shall be referenced as well.

#### 6.2 Training
All employees must be training in the correct use, care and maintenance of their PPE. (for hearing conservation/protection this training is a minimum of annually)

Employees must use and wear properly, the appropriate PPE in accordance with the training and instruction received, inspect the PPE equipment before using it, and not use PPE that is unable to perform the function for which it is designed.
6.3 **Head Protection**

**Selection**
- All hardhats must, at a minimum, meet the requirements of ASNI Standard Z89.1-1997 or CSA Standard Z94.1-92; and
- Ensure the class of headwear selected meets the requirements of the hazard assessment results for the job task (i.e. general use, chain saw use, electrical, etc.).

**Use**
- Wear hard hats on all work sites and where an overhead hazard exists.
- Ensure peak is to the front and follow Manufacturer Specifications;
- Install winter fire resistant liners when appropriate; and
- Never modify hard hat by painting, cleaning with solvents, drilling holes, or altering the suspension.

**Maintenance**
- Inspect the shell and suspension of the hard hat regularly for cracks, cuts, excessive wear or contact with chemicals (i.e. bug spray) or other damage that may make the hard hat less effective;
- Clean using a mild detergent and rinsing in clean, hot water;
- Maintain winter liners in accordance with manufacturer specifications;
- Avoid storing in direct sunlight; and
- Ensure components (i.e. shell and harness) are not combined from one manufacturer to another.
- Replace hard hat and hard hat components as per manufacturer’s recommendations or when damaged (i.e. on impact).

6.4 **Foot Protection**

**Selection**
- Select protective footwear that meets the NCSG PPE Footwear Code; and
- Select high cut, above ankle (min 6”), grade 1 safety footwear with sole protection;
- Grade 1 is identified by a green triangular patch on boot; and
- Di-electric foot wear is marked with an omega symbol (Ω) on a white rectangular patch on the right boot.

**Use**
- Employees are required to provide their own foot protection to meet the selection requirements.
- Protective footwear will not be provided to visitors. Visitor without protective footwear will be restricted to areas where there is a low injury risk;
- Laces must be tied all the way up the boot and snug to provide the most ankle protection and support; and

**Maintenance**
- Clean and maintain footwear as per manufacturer’s recommendations; and
- Ensure protective toe cap is always covered, and laces are replaced as required.

6.5 **Eye and Face Protection**

**Selection**
- Refer to the PPE- Eye and Face Protection code for standards of eye protection;
- Select safety glasses and face protectors that meet the requirements of CSA Standard Z94.03-02; or ANSI equivalent for industrial eye wear.
- Those with prescription glasses that are not CSA or ANSI approved must wear over the glasses (OTG) safety glasses that meet the CSA Standard.

**Use**
- Wear eye protection with side shields at all times. Exceptions include, but are not limited to: lunchrooms, office areas and company motor vehicles;
- Use face shields, in addition to safety glasses or goggles/mono goggles, during grinding operations and/or where corrosive chemical splashes may occur (i.e. acid splashes);
- Ensure goggles are contoured to the face and fit properly; and
- Wear the goggles so that the strap rests against the back of the head and not over the back of the hard hat.
- Arc welding may only be performed if workers exposed to the radiation are wearing eye protection or the welding area is protected by a screen.

**Maintenance**
- Repair or replace eye protection as required; and
- Clean as per manufacturer / supplier recommendations.

**Prescriptive Safety Glasses and Contact Lenses**
- Receive an eye exam if prescription safety glasses are required.
- Ensure glasses are stamped with CSA or ANSI OG Z87 on arm or bridge of glasses and have rigid, form fitting and fixed side shields.
- Prescription Safety Glasses with bifocals, trifocals or progressive lenses may not be used if there is a danger of impact.
- If the use of plastic prescription lenses is impracticable and there is no danger of impact, a worker may use lenses made of treated safety glasses meeting ANSI requirements.
- If wearing contact lenses poses a hazard to workers eyes during work, the worker must be advised of the hazards and the alternative to wearing contact lenses.
6.6 Hearing Protection

Selection
- Select Class A - hearing protector (plugs or muffs) that meet the requirements of CSA Standard Z94.2-02 and have a minimum noise reduction rating of 28 (NRR 28).

Use
- Use hearing protection (plugs or muffs) in identified areas and where noise levels are 85 dBA or greater;
- Use dual hearing protection (plugs and muffs) in identified areas and where noise levels are 105 dBA or greater; and
- Ensure hearing protection is worn where the peak sound pressure level.

To wear disposable earplugs
- Ensure your hands are clean;
- Roll each earplug to compress it before insertion. This will ensure the earplug conforms to the shape of the ear canal and does not protrude excessively from the ear;
- Pull up on the top of the ear and insert the earplug; and
- Discard soiled earplugs after one time use.

To wear muffs
- Check the condition of the earmuffs prior to putting them on. The muff should be clean and in good condition. Replace the cushions according to manufacturer’s specifications if they are loose or damaged;
- Place muff on head ensuring the ears are completely enclosed and that hair and / or eyewear does not hamper a good seal;
- Check for comfort and ensure the weight of the muff is evenly balanced; and
- Do not modify the earmuffs in any way.

Maintenance
- Clean and maintain hearing protectors according to manufacturer’s instructions

6.7 Hand Protection

Selection
- Reference the Material Safety Data Sheet (MSDS) if chemicals or controlled products are being used.
- Ensure appropriate hand protection has been selected prior to being exposed to:
  - Chemicals
  - Corrosive Materials
  - Extreme Temperatures
  - Abrasive Surfaces
  - Sharp Edges
  - Electricity

Use
- Inspect gloves for leaks and defects prior to each use; and
- Refer to PPE Matrix to determine where and when hand protection is required.

Maintenance
- Ensure chemical protective gloves, which are being reused, are not left turned inside out;
- Replace gloves as needed;
- Store cuffs or gauntlets out of the sunlight in a cool, dark place, and ensure they have not been left turned down.

6.8 Selection
- Reference the Material Safety Data Sheet (MSDS) when chemicals or controlled products are being used.
- Ensure appropriate chemical protection has been selected prior to being exposed to:
  - Chemicals
  - Corrosive Materials

Use
- Inspect gloves, aprons or suits for defects prior to each use.

Maintenance
- Ensure chemical protective gloves, which are being reused, are not left turned inside out; and
- Replace gloves, aprons or suits as needed.

6.9 High Visibility Markings

Selection
- All high visibility markings must meet the CSA Z96-02 High Visibility Safety Apparel and should be worn in areas where exposed to traffic or other vehicular activity such as other industrial mobile equipment.

Use
- Regularly inspect high visibility apparel for defects.

Maintenance
- Ensure apparel is clean, and follow manufacturer instructions while cleaning and repaired/replaced as required.
6.10 Respiratory Protection Equipment
- Refer to PPE - Respiratory Protection Code

6.11 Fall Protection Equipment
- Refer to Fall Protection Code

6.12 Skin Protection

Selection
- Skin protection will be based on the type of work being performed. Leather sleeves and aprons are available for hot work. For protection from Chemicals, reference the Chemical Protection section.
- Flame resistant clothing will be utilized in addition to leathers when hot work is performed, when a worker may be exposed to a potential flash fire or if it is a site requirement.

Use
- Regularly inspect leathers for holes or tearing;
- Ensure leathers are worn as per the manufacturer’s instructions;
- Flame resistant clothing must be clean and free of holes and tears;
- Clothing made of natural fibers must be worn underneath flame resistant clothing.
- Flame resistant clothing must be worn correctly and per the manufactures instructions.

Maintenance
- Ensure apparel is clean, and follow manufacturer instructions for cleaning.
- Repaired/replaced as required.

6.13 Limb and Body Protection

Selection
- If there is a danger that a workers hand, arm, leg or torso may be injured, an employer ensures that the worker selects protection for that specific area of the body.

Use
- Wear properly fitting hand, arm, leg or body protective equipment that is appropriate to the work, the work site.

Maintenance
- Ensure protective equipment and clothing is clean, and follow manufacturer instructions for cleaning.
- Repaired/replaced as required.

7.0 MINIMUM APPLICATIONS

7.1 Mandatory PPE Required

Project Sites
- Approved hardhat with reflective stripes.
- Approved safety eyewear
- Approved safety footwear
- Hearing protection in any area exceeding 82 dBA
- Approved coveralls with reflective stripes. Approved reflective vests for supervision and safety.
- Where applicable approved FR Coveralls with reflective stripes.

Shops
- Approved safety eyewear
- Approved safety footwear
- When risk of overhead impact exists, an approved hardhat, or where applicable, bump cap or impact resistant welding helmet/grinding shield is required
- Hearing protection in any area exceeding 82dBA

Facility Yards, Storage Compounds, Laydown Areas
- Approved safety footwear
- Approved safety eyewear
- Coveralls, Jacket or vest with reflective stripes.
- When risk of overhead hazard or impact exists, an approved hardhat

8.0 TRAINING REQUIREMENTS AND MATERIALS
- Use, care and maintenance of PPE
- Safety briefing - PPE
- NCSG orientation
- Site Specific orientation
- FLRA training
- WHMIS

9.0 RESOURCES
- ANSI Z89.1-1997, American National Standard for Industrial Head Protection
- CAN/CGSB 155.20-2000 Work wear for Protection Against Hydrocarbon Flash Fire
- CAN/CSA Z94.3-02 Eye and Face Protectors
- CAN/CSA Z94.2-02 Hearing Protection Devices - Performance, Selection, Care, and Use
• CAN/CSA Z94.1-92 Industrial Protective Headwear
• CAN/CSA Z96-02 High Visibility Safety Apparel
• CAN/CSA Z195-02 Protective Footwear
• Alberta Occupational Health and Safety Code
• Saskatchewan Occupational Health and Safety Regulations
• BC OHS Regulations Part 8
• Manitoba WS&H Regulation Part 6

Manufacturer’s operating, use, and care instructions included with all classifications of personal protective equipment may be used to provide employees additional information for the proper use. Additional information may be sourced from specific manufacture’s websites.

NCSG understands that there may be questions and concerns regarding the General PPE Code. Please direct any questions regarding this Code to the applicable Regional Team Lead HS&E.

10.0 SUPPORTING DOCUMENTS
• PPE – Eye and Face Protection Code
• PPE – Respiratory Protection Code
• PPE – Footwear Code
7.2 Footwear Code

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed a PPE – Footwear Protection Code to identify the proper level of protection that will assist all employees in performing their tasks effectively and efficiently when operating within NCSG areas of responsibility. This code will aid employees in proper use, care, maintenance and selection of footwear protection.

2.0 SCOPE AND APPLICATION
The correct identification of applicable footwear protection will enable employees to ensure adequate protection from activities involving hazards to the foot, ankle, and lower leg during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG when using and selecting Footwear protection.

This Process applies, without exception, to all NCSG companies and affiliates.

Although specific protection required by the below mentioned applications is not covered, impact, puncture, and static-dissipative criteria may be applied to other types of footwear as appropriate.

This Code does not specifically address the criteria for:
• Electrical flash and flame protection,
• ankle protection,
• firefighter’s footwear,
• spiked climber’s footwear, and riot boots

3.0 DEFINITIONS
The following definitions are specific to PPE – Footwear Protection Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Conductive Footwear A boot or shoe with a sole made from a conductive compound, chemically bound to the bottom components, for permanent control, to electrically ground the foot.

Disruptive Discharge A phenomenon associated with the failure of insulation under electrical stress, in which the discharge completely bridges the insulation under test, reducing the voltage between the electrodes to zero or nearly zero (i.e., less than 10% of the applied voltage).

Electric-shock-resistant sole A sole and heel design and method of attachment to: the footwear that at the point of manufacturing has electrical-insulating properties.

Insole The inner part of footwear upon which; the foot rests and that conforms to the bottom of the last.

Metatarsal protection A protective covering designed to provide adequate protection to the top foot from the point in which the protective toe caps (aka steel toes) end and the lacing begins.

Outsole The bottom surface of footwear; which is exposed to wear

Protective footwear A boot or shoe that provides the wearer with a degree of protection against injury as specified in this Standard.

Protective sole An integral component, that provides puncture protection to the sole of the foot.

Protective toecap The component which, when incorporated into a boot or shoe, provides protection against impact at the toe of the boot.

Slip-resistance A property of sole materials that reduces slipping on specific surfaces

Static-dissipative footwear A boot or shoe with a sole made from an anti-static compound, chemically bound into the bottom components, for permanent control, to dissipate an electrostatic charge.

4.0 EXPECTATIONS
The PPE – Footwear Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to the foot and lower leg which may be present to all employees, contractors, visitors and general public within NCSG areas of responsibility. The PPE – Footwear Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management System is updated a revision record will be posted to all employees notifying them of the update.
5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
• Inspect personal protective equipment before using it,
• Maintain in a serviceable condition, personal protective footwear owned or provided to employees,
• Not use personal protective equipment that is unable to perform the function for which it is designed.
• Be responsive, through adequate training, to minimize the risk of exposure when working in a heat related climate / condition.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Ensure that if a change of hazards occurs during the course of the work day where alternate footwear is required, that adequate steps are taken to replace existing footwear.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites who are not in possession of their own prior to access being granted.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Classification of Protective Footwear
To establish the acceptable minimum standard of protective footwear protection to be used by NCSG employees, contractors, visitors and the general public, the following classifications shall be utilized:
• Grade 1 Footwear
• Grade 2 Footwear
• Electric-Shock-Resistant Footwear
• Static-Dissipative Footwear
• Conductive Footwear
• Chainsaw Protective Footwear
• Protection Marking Code

Detailed criteria are outlined in Appendix A.

6.2 Development Process
Job safety analysis, task analysis, and field level risk assessment shall be used to determine the level of footwear protection required to complete any tasks. The assessment shall ensure compliance with regulatory legislation.

The following potential hazard areas shall be considered:
• Materials handled by the employee during the normal course of his/her job;
• Evaluate the risk of objects falling onto or striking employees’ feet.
• Consider any material or equipment that might roll over employees’ feet.
• Consider any sharp or pointed objects that might cut the top of employees’ feet.
• Foreign objects that may penetrate the bottom or side of the foot;
• Exposure to corrosive or irritating substances;
• Exposure to explosive atmospheres: evaluate the risk of static electrical discharges igniting an explosion or fire;
• Risk of damage to sensitive electronic components or equipment due to the discharge of static electricity;
  Note: Check with protective footwear suppliers or manufacturers regarding the level of electrical resistance
  provided by the footwear.
  • Risk of coming into contact with energized conductors of low to moderate voltage (i.e. 220 V or less);
  • Risk to ankles from uneven walking surfaces or rough terrain (in which case ankle support is required);
  • Risk of foot injury due to exposure to extreme hot or cold environments / substances / surfaces;
  • Risk of slips and falls on slippery walking surfaces;
  • Exposure to water or other liquids that may penetrate the footwear causing damage to the foot and the
    footwear; and
  • Risk of exposure to rotating or abrasive machinery (i.e. chainsaws or grinders).

The established footwear protection shall be considered the minimum acceptable level for NCSG employees,
contractors, visitors and general public, while at the work site.

6.3 Standard Use of CSA Class 1 Footwear- Canada/ANSI - USA

The minimum application of class (1) footwear, work boot style (non-shoe) shall be used by all persons engaged
in any activity on an NCSG active worksite.

Safety footwear shall be worn correctly, and at all times with the exclusion of the following:
  • Interior of Control Offices
  • Administrative buildings
  • Site Specific areas identified and signed as not requiring the minimum application of class (1) footwear.

6.4 Increased Levels of Footwear Protection

Standard Operating Procedures (SOP’s) will further define additional levels of footwear protection required
in accordance to legislation and risk assessment analysis for each task. Electrostatic Discharge, Grounding
Requirements and exposure to Chainsaws and other cutting tools are examples of site specific hazards that shall
be considered. Once identified through signage and / or task analysis, appropriate PPE Footwear Protection
shall be worn prior to the commencement of any work.

Use of the “Protective Footwear Markings” matrix should be used in conjunction with SOP’s and Risk
Assessments to identify minimum levels of protection.

6.5 Selection of Correct Footwear

General Guidelines
  • Ensure correct fit
  • Ensure correct lacing
  • Ensure correct socks are worn
  • Ensure addition of any insoles / orthotics do not compromise the integrity of any toecap protection

Fitting Recommendations
  • Fit shoes midday due to swelling
  • Walk and flex footwear to ensure correct fit
  • Do not under / oversize

Maintenance
  • Refer to manufacturer’s recommendations on care and use
  • Inspect for cracks, wear and tears of soles, toecaps, and uppers
  • Replace if leather is deteriorated
  • Do not recycle old / replaced footwear

Sole Design / Work Factors
  • Sole design factors that affect slip resistance include the following:
    (a) the shape of the sole;
    (b) tread design;
    (c) the shape of the heel; and
    (d) the softness/hardness of the sole.
  • Work Environmental Factors:
    (a) type of surface material;
    (b) smoothness of walking surface;
    (c) whether it is a dry or wet surface;
    (d) the type of liquid on a wet surface;
    (e) the temperature of the surface; and
    (f) the temperature of the air.

In general, smooth and/or wet surfaces are more slippery. Be aware also that cold temperatures can affect the
soling material by making it harder and less slip-resistant.
7.0 TRAINING REQUIREMENTS AND MATERIALS
- PPE Equipment specific training
- Recognition of Footwear Classifications
- Recognition of Danger areas of foot / ankle / sole makeup
- NACG orientation

8.0 RESOURCES
Manufacturer’s operating, use, and care instructions included with all classifications of Footwear Protection may be used to provide employees additional information for the proper use. Additional information may be sourced from specific manufacture’s websites.
- Alberta OH&S Code Part 18
- BC OH&S Code Part 8
- Saskatchewan OH&S Regulations Part VII
- CSA Z195-02 – Protective Footwear
- CSA Z195-02 – Protective Footwear – Selection, Care and Use

9.0 APPENDICIES
Appendix A – Marking and Classification of Footwear
Appendix B – Protective Footwear Marking
APPENDIX A – Marking and Classification of Footwear

Manufacturer’s ID
At least one shoe or boot of each pair shall bear the following information permanently marked in a conspicuous location:

(a) the manufacturer’s or listees name or trademark; or
(b) the trade name and the certification agency’s identification number; and
(c) the month and year of manufacture (a date code may be used).

Grade 1 Footwear
Grade 1 protective footwear with protective soles shall have a green equilateral triangle with sides measuring no less than 20 mm sewn or otherwise permanently attached to the right shoe upper or tongue as a means of indicating that sole protection and Grade 1 toe protection are provided (see Figure 14). The green patch shall be permanent in nature and of a material compatible with the footwear involved. The green patch shall be permanently marked with the registered identifying logo or mark of the certifying agency.

Grade 2 Footwear
Grade 2 protective footwear with protective soles shall have a yellow equilateral triangle with sides measuring no less than 20 mm sewn or otherwise permanently attached to the right shoe upper or tongue as a means of indicating that sole protection and Grade 2 toe protection are provided (see Figure 14). The yellow patch shall be permanent in nature and of a material compatible with the footwear involved. The yellow patch shall be permanently marked with the registered identifying logo or mark of the certifying agency.

Electric-Shock-Resistant Footwear
Footwear incorporating electric-shock-resistant soles shall be marked as follows:

(a) with a rectangular patch sewn, embossed, or otherwise permanently attached on the outside of the right boot or shoe. The patch shall be white and shall measure approximately 16 x 25 mm. The patch shall be permanently marked with the Greek letter omega (Ω) and the registered logo or mark of the certifying agency, both in orange (see Figure 14); and

(b) with a printed label or tag attached to the footwear that states, “WARNING: Electric shock resistance deteriorates rapidly in a wet environment and with wear”; and «AVERTISSEMENT: La résistance aux chocs électriques se détériore rapidement en milieu humide et avec l’usure».

Static-Dissipative Footwear
Footwear incorporating static-dissipative soles shall be marked as follows:

(a) with a rectangular patch, sewn, embossed, or otherwise permanently attached on the outside of the right boot or shoe. The patch shall have a fluorescent yellow background and shall measure approximately 16 x 25mm. The patch shall be permanently marked with a prominent green “SD” notation. Below the “SD” notation the patch shall show an electrical grounding symbol and the registered logo or mark of the certifying agency, both in green (see Figure 14); and

(b) with a printed label or tag attached to the footwear that states, “WARNING: This footwear should not be used in areas where there is hazard of electric discharge” and «AVERTISSEMENT : Cette chaussure ne doit pas être portée dans des endroits où il y a risque de décharge électrique».

Conductive Footwear
Footwear with electrically conductive soles shall be marked as follows:

(a) with a rectangular patch sewn, embossed, or otherwise permanently attached on the outside of the right boot or shoe. The patch shall be red and shall measure approximately 16 x 25 mm. The patch shall be permanently marked with a black “C” with an electrical grounding symbol and the registered logo or mark of the certifying agency (see Figure 14); and

(b) with a printed label or tag attached to the footwear that states, “WARNING: This footwear should not be used in areas where there is hazard of electric discharge” and «AVERTISSEMENT : Cette chaussure ne doit pas être portée dans des endroits où il y a risque de décharge électrique».

Chainsaw Protective Footwear
Chainsaw protective footwear shall be marked with a square patch sewn, embossed, or otherwise permanently attached on the outside of the right boot or shoe. The patch shall be white and shall measure approximately 16 x 25 mm. The patch shall be permanently marked with a green fir tree symbol and marked with the registered identifying logo or mark of the certifying agency (see Figure 14).

Protection Marking Code
A five-place alphanumeric code, a minimum of 3 mm in height, shall be permanently marked on the inside or outside of at least one shoe or boot of each pair, indicating the protection offered by the footwear, and marked with the registered identifying logo or mark of the certifying agency. This marking shall have the following appearance:

1 P M E X
Example Code
Position 1 shall indicate the level of toe protection (1 for Grade 1 or 2 for Grade 2, 0 if not present).
Position 2 shall indicate the presence of a puncture-resistant sole (P if present, 0 if not).
Position 3 shall indicate the presence of metatarsal protection (M if present, 0 if not).
Position 4 shall indicate the type of electrical protection (E if shock-resistant; S if static-dissipative; C if conductive; 0 if no electrical protection).
Position 5 shall indicate whether or not the footwear is chainsaw protective (X if chainsaw protective, 0 if not).

The certification mark ® follows the last place of the code.

*Note: Trailing 0s may be omitted (i.e., the marked code may include only the one or two characters)*

### APPENDIX B – Protective Footwear Marking

<table>
<thead>
<tr>
<th>Outside Labels</th>
<th>Location</th>
<th>Criteria</th>
<th>Intended Application</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Green Triangle" /></td>
<td>The label shall appear at ankle height on the tongue of the right shoe.</td>
<td>Green triangle indicates sole puncture protection with a Grade 1 protective toe to withstand impacts up to 125 joules.</td>
<td>For any industrial environment, especially that of construction, where sharp objects (such as nails) are present; heavy work environments.</td>
</tr>
<tr>
<td><img src="image" alt="Yellow Triangle" /></td>
<td>The label shall appear at ankle height on the tongue of the right shoe.</td>
<td>Yellow triangle indicates sole puncture protection with a Grade 2 protective toe to withstand impacts up to 90 joules.</td>
<td>For light industrial work environments requiring puncture protection as well as toe protection.</td>
</tr>
<tr>
<td><img src="image" alt="White Rectangle with Orange Omega" /></td>
<td>The label shall appear at ankle height on the tongue of the right shoe.</td>
<td>White rectangle with orange Greek letter omega indicates soles that provide resistance to electric shock.</td>
<td>For any industrial environment where accidental contact with live electrical conductors can occur. Warning: Electrical shock resistance deteriorates with wear and in a wet environment.</td>
</tr>
<tr>
<td><img src="image" alt="Yellow Rectangle with &quot;SD&quot; and Grounding Symbol" /></td>
<td>The label shall appear at ankle height on the tongue of the right shoe.</td>
<td>Yellow rectangle with green “SD” and grounding symbol indicates soles are static dissipative.</td>
<td>For any industrial environment where a static discharge can create a hazard for workers or equipment.</td>
</tr>
<tr>
<td><img src="image" alt="Red Rectangle with Black &quot;C&quot; and Grounding Symbol" /></td>
<td>The label shall appear at ankle height on the tongue of the right shoe.</td>
<td>Red rectangle with black “C” and grounding symbol indicates soles are electrically conductive.</td>
<td>For any industrial environment where low-power electrical charges may create a hazard for workers or equipment.</td>
</tr>
<tr>
<td><img src="image" alt="White Label with Green Fir Tree Symbol" /></td>
<td>The label shall appear at ankle height on the tongue of the right shoe.</td>
<td>White label with green fir tree symbol indicates chainsaw protective footwear.</td>
<td>For forestry workers and others exposed to hand-held chainsaws or other cutting tools.</td>
</tr>
</tbody>
</table>
7.3 Eye and Face Protection Code

1.0 PURPOSE
NCSC Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Personal Protective Equipment Code – Eye & Face Protection to identify the proper application of appropriate eye and face protective equipment by employees, contractors, and the public while operating within NCSG areas of responsibility. This code will aid employees in proper use, care, maintenance and selection of eye and face protection.

2.0 SCOPE AND APPLICATION
The correct identification of applicable eye and face protectors will enable employees to ensure adequate protection from activities involving hazards to the eye or face during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG when using and selecting Eye and Face protection.

This Process applies, without exception, to all NCSG companies and affiliates.

This code does not apply to:
- x-rays
- gamma rays
- high energy particulate radiation
- radioactive materials
- lasers / masers

3.0 DEFINITIONS
The following definitions are specific to PPE - Eye and Face Protection Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Automatic Darkening Welding Filter An optical filter that; automatically switches from light state (shade) to a dark state (shade) in response to a change in incident light intensity.

Chin Protector The part of a face shield that extends over and around the chin and upper throat.

Cover Lens/Plate A clear lens for; use in front of a filter lens to protect it from weld spatter, pitting, or scratches.

End Piece The part of the front, that attaches to the temple.

Eye Protector Any form of eye protective equipment worn or held by the user that covers at least the eye area and permits vision.

Face Shield A device that has a transparent window or visor supported in front of the face to shield the eye and face.

Filter A lens that; reduces dangerous light intensity and ultraviolet and infrared radiation to a predetermined level.

Front The part of a spectacle frame that holds the lenses or lens, exclusive of the temples.

Glare An uncomfortably bright light without: hazardous levels of ultraviolet or infrared radiation.

Goggles A device contoured for full facial contact and held in place by a headband or other suitable means, for the protection of the eyes and eye sockets.

Hand Shield A rigid handheld protector that; shields the eyes and face during welding operations.

Headgear (suspension) The part of a protective helmet; or face shield that supports the device on the wearer's head.

Hood A non-rigid protector that; completely covers the head, neck, and portions of the shoulders.

Impact Resistance The ability of a protector to resist the force of an object that comes into contact with the lens or protector at the speed specified in the referenced standard.

Lens The transparent component of the hypertext or through which the user sees.

Protective Frame A device pattern after a conventional spectacle frame but of more substantial construction and fitted with side shields.

Protective Spectacles A device that: enhances eye protection and usually consists of two lenses in a protective frame.

Respirator Face Piece The portion of a full face respirator that covers the nose, mouth, and is designed to make a seal or partial seal (in the case of a loose fitting hood or helmet) with the perimeter of the face.

Side Protection The protection against hazards directed at the temporal area of the head afforded by any combination of lenses, housing, temple, and/or separate side shield.

Side Shield A component permanently affixed to or integral with the spectacles, providing side protection.

Welding Helmet A rigid protector to be worn: on the head to protect the eyes and face during welding operations.
4.0 EXPECTATIONS

The PPE – Eye and Face Protection Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management System is updated a revision record will be posted to all employees notifying them of the update.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees

All employees are responsible to:

- Use and wear properly, the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Inspect all personal protective equipment before using it.
- Not use personal protective equipment that is unable to perform the function for which it is designed.

5.2 Workers

In addition to 5.1, it is the worker’s responsibility to:

- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors

In addition to 5.1, it is the supervisor’s responsibility to:

- Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Ensure, appropriate eye and face protection is readily available for all employees, contractors. Visitors within NCSG areas of operation or active worksites.
- Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management

In addition to 5.1, it is the management responsibility to:

- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team

It is the Health, Safety and Environment team responsibility to:

- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Classification of Eye and Face protection Devices

To establish the acceptable minimum standard of eye and face protection to be used by NCSG employees, contractors, visitors and the general public, the following classifications shall be used.

A. Class 1: spectacles
B. Class 2: goggles.
C. Class 3-5: welding protection
D. Class 6: face shields
E. Class 7: respirator face pieces (to be read in conjunction with PPE- Respiratory Protection Code).

6.2 Development Process

Job safety analysis, task analysis, and field level risk assessment shall be used to determine the level of eye and face protection required to complete any tasks. The assessment shall ensure compliance with regulatory legislation.

The established eye and face protection shall be considered the minimum acceptable level for NCSG employees, contractors, visitors and general public, while at the work site.

6.3 Standard Use of Class 1 Spectacles (Safety Glasses)

The minimum application of class (1) spectacles (Safety Glasses) shall be used by all persons engaged in any activity on an NCSG active worksite.

Goggles shall be worn correctly, and at all times with the exclusion of the following:
• Interior of Control Offices
• Administrative buildings
• Lunch Room facilities
• Site Specific areas identified and signed as not requiring the minimum application of class (1) Spectacles (Safety Glasses)

6.4 **Increased Levels of Eye and Face Protection**
Standard Operating Procedures (SOP’s) will further define additional levels of Eye and Face Protection required in accordance to legislation and risk assessment analysis for each task. Once identified through signage and / or task analysis, appropriate PPE Eye and Face Protection shall be worn prior to the commencement of any work.

Use of the “Selection of Eye Protection” matrix should be used in conjunction with SOP’s and Risk Assessments to identify minimum levels of protection.

7.0 **TRAINING REQUIREMENTS AND MATERIALS**
- Equipment specific training
- NCSG orientation

8.0 **RESOURCES**
- CSA Z94.3-07 Eye and Face Protectors
- Alberta OH&S Code Part 18
- BC OH&S Code Part 8
- Saskatchewan OH&S Regulations Part VII

Manufacturer’s operating, use, and care instructions included with all classifications of Eye and Face Protection may be used to provide employees additional information for the proper use. Additional information may be sourced from specific manufacture’s websites.

NCSG understands that there may be questions and concerns regarding the PPE –Eye and Face Protection Code. Please direct any questions regarding this Code to the applicable Regional Team Lead HS&E.

9.0 **APPENDICES**
- Appendix A – Selection of Eye Protection Matrix for Use

10.0 **SUPPORTING DOCUMENTS**
- Hazard and Risk Analysis Training
## Selection of Eye Protection Matrix for Use

### Personal Protective Equipment

#### Selection of Eye and Face Protection

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<th>Hazardous Activities Involved</th>
<th>Recommended Protection</th>
<th>Legend</th>
</tr>
</thead>
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<td></td>
<td></td>
</tr>
<tr>
<td>Flying Objects</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Chipping/Drilling/Scraping</td>
<td>-</td>
<td></td>
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<tr>
<td></td>
<td>Grinding/Pounding/Hammering</td>
<td>+</td>
<td></td>
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<tr>
<td></td>
<td>Twisting/Punching/Shearing</td>
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<tr>
<td></td>
<td>Hammer Mitre/Cutting</td>
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<td>Heavy Sawing/Placing</td>
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<tr>
<td></td>
<td>Wire &amp; Strip Heading</td>
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<tr>
<td></td>
<td>Hammering/Unpacking/Nailing</td>
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<tr>
<td></td>
<td>Punch Press/pipe Work</td>
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<td></td>
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<tr>
<td></td>
<td>Woodworking/Sandblasting/Turning</td>
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</tr>
<tr>
<td><strong>Group B</strong></td>
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<tr>
<td>Flying Particles</td>
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<td>Dust/Fumes</td>
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<td>Light Metal Working/Machining</td>
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<td>Exposure to Weld/Dust</td>
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<td>Resistance Welding*</td>
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<td>Sand/Cement Handling</td>
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<td>Plastering/Concrete Work</td>
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<td>Material Batching/Mixing</td>
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<td><strong>Group C</strong></td>
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<td>Heat/Glare/Sparks/Spash from Melon Metal</td>
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<td>Bonding/Casting/Pouring/Molen Metal</td>
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<td>Soldering/Brazing</td>
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<td>Hot Dipping Operations</td>
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<td><strong>Group D</strong></td>
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<td>Chemical Splash</td>
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<td></td>
<td>Acid/Alkali Handling</td>
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<td></td>
<td>Pickling/Plating/Degreasing</td>
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<td>Glass Breakage</td>
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<td>Chemical Spraying</td>
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<td>Liquid Blasting Handling</td>
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<tr>
<td><strong>Group E</strong></td>
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*For additional information on eye protection and face protection, refer to Safety chapter 01.*

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250 Main Street East, Hamilton, Ontario L8N 1B6 phone (905)570-8094 fax (905)572-2208 email inquiries@ccohs.ca
7.4 Respiratory Protection Code

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Personal Protective Equipment - Respiratory Protection Code to identify the proper level of protection against a potential hazardous environment where respirators are used at the worksite resulting in potential exposure to employees, contractors, and the public while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct identification of applicable respiratory protection will enable employers and employees the ability to ensure adequate protection from activities where dusts, chemicals, or reduced oxygen in the air create health hazards for workers. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG Companies and affiliates.

3.0 DEFINITIONS
The following definitions are specific to Personal Protective Equipment - Respiratory Protection Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

ALARA As Low As Reasonably Achievable, a measure must be taken to keep the worker's exposure to a level as low as reasonably achievable.

Confined Space A space such as a tank, a silo, storage bin, process vessel, sewer, or other enclosure not designed or intended for human occupancy. Or an area, other than underground working such as a tunnel or shaft, that:
• Is enclosed or partially enclosed.
• Is not designed or intended for continuous human occupancy.
• Has limited or restricted means of entry or exit that may complicate the provision of first aid, evacuation, rescue, or other emergency response service.
• Is large enough and so configured, a worker could enter to perform assigned work.

Dust Find solid particles dispersed in here that has been formed by mechanical means such as grinding, crushing, blasting or drilling.

Exposure Limit The maximum concentration of a contaminant that workers are allowed to be exposed to without respiratory protection, as set out in specified regional legislation.

Fit Test A quantitative or qualitative test to; check the respirators fit by detecting leakage of a test compound into the face piece. Fit tests must be performed in accordance with procedures found in CSA standard Z94.4.93, Selection, Use, and Care of Respirators.

Fume Solid particles formed as a result of vaporize Asian and condensation of the material. Produced when solid material (such as metal or plastic) is heated, causing some of the material to boil off, cool in the air, and condensed into tiny solid particles

HEPA Filter High efficiency particulate air filter; meeting the specifications of a nuclear great filter providing 99.97% filtration efficiency at a particle size of 0.3 micrometer. For respirators, a HEPA filter is a NIOSH 100 series filter (N, R, or P).

IDLH Atmosphere An atmosphere containing the substance in a concentration that; is immediately dangerous to life or health (IDLH) because it impairs a worker's ability to escape without serious injury or irreversible health effects.

Mist Tiny airborne drops of liquid usually formed when liquid is sprayed, shaken, mixed, or stirred.

Protection Factor A value assigned to a particular class of respirators that is the anticipated level of protection that would be provided to a properly fitted user.

Seal Check A negative or positive pressure check of the respirator's fit, performed in accordance with the respirator manufacturer's instructions; May also be called a fit check.

Vapour The gaseous form of a substance that is normally liquid or solid at room temperature.

4.0 EXPECTATIONS
The Personal Protective Equipment - Respiratory Protection Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to respiratory hazards in the workplace which employees, contractors, visitors and general public within NCSG areas of responsibility. The Personal Protective Equipment - Respiratory Protection Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / Federal legislation within the operational areas of responsibility of NCSG.

In cases where a worker is required to enter or work in an area where IDLH or oxygen deficient atmosphere situation exist the worker will be attended by at least one other worker.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.
Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management System are updated a revision record will be posted to all employees notifying them of the update.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees

It is the employee’s responsibility to:

- Use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- Inspect personal protective equipment before using it.
- Not use personal protective equipment that is unable to perform the function for which it is designed.
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments, which may be hazardous to respiratory conditions.
- In the case of a tight-fitting face piece, maintain their required clean-shaven condition, and refrain from having any object or material that would interfere with the seal or operation of the respirator.
- Remove from service a respirator that they determine to be defective and report it to their immediate supervisor or other responsible person.
- Use the respirator in accordance with the written instructions and training received.

5.2 Workers

In addition to 5.1, it is the worker’s responsibility to:

- Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Report to their supervisor or other responsible person any condition or change that may impact on their ability to use a respirator safely.
- Leave the area to wash or change cartridges or if they detect break-through or resistance.

5.3 Supervisors

In addition to 5.1, it is the supervisor’s responsibility to:

- Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received.
- In the presence of dust, fumes, gas, mist, aerosol, or any airborne contaminant that may be present in any amounts that are harmful or offensive to the worker, ensure appropriate respiratory PPE is readily available for all employees (at no cost to the employee), contractors, and visitors within NCSG areas of operation or active worksites.
- Ensure that health screening, fit testing, and training are completed prior to assigning a user any task that requires the use of a respirator.
- In the case of a tight-fitting face piece, ensure respirator users maintain their required clean-shaven condition, and do not have any object or material that would interfere with the seal or operation of the respirator.
- Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
- Ensure that respirator equipment designated specifically for emergency response and or emergency rescue situations is identified and maintained in accordance with CSA Z94.4-02 – Selection Use and Care of Respirators.
- Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management

In addition to 5.1, it is the management responsibility to:

- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
- Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.
- Provide adequate training in the selection, care and use of respirators if those personnel are assigned to any type of emergency rescue unit.
- Provide a written procedure ensuring the availability of respiratory protective equipment to personnel working on NCSG sites.
- NCSG Management shall implement a process to ensure where required all personnel are wearing the appropriate respirator.

5.5 Health, Safety and Environment Team

It is the Health, Safety and Environment team responsibility to:

- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
- Amend and maintain this code within the defined review period.
6.0 METHOD

6.1 Respiratory Code of Practice

NCSG shall be responsible for preparing and implementing the respiratory protection program, including all of the elements listed in this section. NCSG shall designate competent employees to administer the PPE – Respiratory Protection Code. The respiratory code shall conform to CSA Z94.4-02 – Selection Use and Care of Respirators.

The contents of the PPE- Respiratory Code shall consist of:

- roles and responsibilities;
- hazard assessment;
- selection of the appropriate respirator;
- respirator fit testing;
- training;
- use of respirators;
- cleaning, inspection, maintenance, and storage of respirators;
- health surveillance of respirator users;
- program evaluation; and
- record keeping.

NCSG shall ensure fit testing of all employees who are required to use respiratory protection through the course of their work duties is conducted at a maximum two-year cycle. Records shall be maintained in accordance with this code and regulatory legislation. NCSG shall ensure any contractors or visitors who are required to use respiratory equipment have completed adequate fit testing within the last two years and may if requested be able to produce evidence of same.

6.2 Hazard Assessment

A hazard assessment of the work area shall be conducted to determine the respiratory hazards present. The results of the hazard assessment for each work area are documented in specific Industrial Hygiene reports.

The following factors shall be considered during the hazard assessment, prior to selecting the type of respiratory protection:

- Oxygen concentration less than 19.5% by volume
- Nature and physical state of airborne contaminants
- Concentration of airborne contaminants
- Duration of worker exposure
- Warning properties of the contaminants
- Toxicity of the contaminants
- Need for emergency escape

If breathing conditions at a work site are or may become immediately dangerous to life or health, work must stop. The supervisor will conduct a risk assessment with the HSE Advisor to determine the necessary controls to resume work. If Self Contained Breathing Apparatus are required, NCSG we contract an approved and qualified contractor to conduct the work. The contractor must have a procedure to ensure that a worker wears self-contained breathing apparatus or an airline respirator that meets Provincial/Federal regulations and CSA Standard Z94.4-02

6.3 Selection of Applicable Respirator

NCSG shall use the Hazard and Risk Assessment and Field Level Risk Assessment processes to establish the correct selection of Respirator to be used. Reference may be viewed in the resource material identified.

NCSG shall ensure a procedure for the selection and wearing of respirators on work sites that is in accordance with the NIOSH standard and the CSA Z94.4-02 Standard for Selection, Use, Care and Maintenance of Respirators.

If a respirator is to be shared amongst workers it must be cleaned and re-fitted before another individual uses it.

NCSG shall ensure there is written procedure to ensure the quality of supplied air used in self-contained breathing apparatus meets the standard laid out in the CSA Z180.1 –00 Air Quality Table 1

The respirator selected for both emergency and non-emergency environments may be the same however; respirators approved for escape only shall not be used for nonemergency applications.

6.4 Use of Applicable Respirator

Applicable respirators are grouped as follows for the correct application and use:

- Atmosphere-Supplying Respirators:
  - Supplied-air: demand, pressure-demand, or continuous-flow.
  - Self-contained breathing apparatus: demand or pressure-demand.
  - Combination supplied-air with auxiliary self-contained air supply.
- Air-Purifying Respirators:
  - Non-powered air-purifying respirators.
  - Powered air-purifying respirators.
  - Gas masks.
• Special-Use Respirators:
  • Supplied-air suits.
• Emergency Rescue Respirators:
  • Self-contained breathing apparatus: demand or pressure-demand.

6.5 Maintenance of Respirator
NCSG shall provide for a competent and qualified person to establish an inspection and change-out schedule for the replacement of in use or stored respiratory protection equipment including air-purifying elements of respirators before their useful service life is ended. Inspections shall occur once every month and the dates and name of the inspector are kept in an orderly fashion where the equipment is stored.

Self-contained breathing apparatus or air-line respirators shall use air that is of a quality that meets the requirements of Table 1 of CSA Standard Z180.1-00, and does not contain a substance in a concentration that exceeds 10 percent of its occupational exposure limits.

NCSG shall establish through a training program, competency criteria for all employees and contractors, to maintain respirators in a serviceable condition. This training program shall ensure that care and maintenance shall include:
• Cleaning and sanitizing.
• Inspection, testing, and repair.
• Storage

6.6 Fit Testing
Fit testing procedures shall meet the requirements outlined in CSA Standard Z94.4-02. NCSG employees required to wear respiratory protection shall undergo the medical assessment and fit testing within the first month of employment. Workers must be clean-shaven when a fit test is to be conducted. Before a respirator is used it must be pressure tested (positive or negative) to ensure a proper seal.

Medical evaluations shall be kept confidential, provided during normal working hours in a method that is both convenient and understandable to the worker. The employee shall be given a chance to discuss the results with the physician (or other licensed health care professional).

Fit testing is repeated for every new type of tight-fitting respirator the employee may use. Fit testing will need to be repeated for any worker that has a change in their physical condition that could affect fit of the respirator. The physical changes could include significant weight gain or loss, introduction of dentures, facial scarring or changes in facial structure.

All contractors will be expected to ensure that their employees have access to appropriate respiratory protection that provides an adequate facial seal as per Alberta OH&S Act, and OH&S Code, Part 18 Sections 244 through 255.

6.7 Recordkeeping
The Regional HS&E Advisor shall ensure that appropriate records are kept of all respiratory protection program activities as required by applicable legislation and NCSG policy.

An acceptable program of recordkeeping shall include
• A list of individuals fulfilling the roles and responsibilities, which include corresponding with users, qualified persons, and Program Administrators.
• Ongoing hazard assessment, including periodic monitoring of the workplace atmosphere if applicable.
• Selection of the appropriate respirator.
• Respirator facial fit.
• Training.
• Cleaning, maintenance, and storage of respirators.
• Health surveillance of respirator users (inclusive with Medical Fit Testing if applicable).
• Program evaluation.

For the purpose of compliance to BC OHS Regulation Part 32, Section 32.6 all maintenance records will include:
• Manufacture name
• Equipment type
• Date of service
• Purpose of use
• Last date of Inspection
• Any type of damage or additional maintenance required due to use

Note: It is recommended that records be maintained for a minimum of 10 years.
7.0 TRAINING REQUIREMENTS AND MATERIALS
NCSG shall ensure all employees, contractors required to use respiratory protection in the course of their duties are familiar with the care and practical use regarding respiratory equipment. The training shall initially be completed before being assigned work applicable to this code and annually thereafter. This shall include but not be limited to the following:

Care and practical use refers to
- Hands-on training relating to the choice of the appropriate respirator for a given hazard.
- The operation of each respirator, including:
  - user seal checks;
  - care;
  - cleaning;
  - inspection;
  - end-of-service recognition;
  - change-out of filter elements;
  - replacement of air cylinders;
  - identification of problems;
  - use under failure or emergency modes;
  - storage;
  - removal from service;
  - basic maintenance; and
  - familiarity with and adherence to the manufacturer’s instructions.

- PPE Equipment specific training:
  - Dust Respirator / PAPR
  - Fit Testing
  - Employee Responsibilities
- NCSG orientation

8.0 RESOURCES
- Workers Compensation Board of BC – WorkSafeBC – Breathe Safer – How to Use Respirators Safely and Start a Respirator Program
- Alberta OH&S Code Part 18
- BC OH&S Regulation part 32
- BC OH&S Regulations Part 8
- CSA Z94.4-02 Selection, Use, and Care of Respirators (R2007)
- CSA Z180.1-00 Air Quality Table 1 Requirement

May all be used to reference additional information pertaining to PPE – Respiratory Protection and control methods for minimizing potential exposure and risk.

9.0 SUPPORTING DOCUMENTS
- NCSG Code – Personal Protective Equipment - Eye and Face Protection
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
8.0 PREVENTATIVE MAINTENANCE

3/10/2016

8.1 Preventative Maintenance Policy

1.0 PURPOSE

NCSG Crane and Heavy Haul Services (NCSG) and its affiliated companies are committed to becoming an industry leader in providing productive, quality crane lifts and heavy haul solutions to its customers, in the most safe and efficient manner possible.

To achieve this, NCSG has established a Preventative Maintenance Program. Supervision shall ensure that all preventative maintenance is carried out by qualified personnel according to established schedules and that records are maintained.

2.0 SCOPE AND APPLICATION

All tools, vehicles, and equipment owned, leased, and / or otherwise operated on behalf of NCSG and operated by personnel employed by the company shall be properly maintained so as to reduce the risk of injuries to employees, damage to equipment, and impact to the environment.

3.0 ROLES AND RESPONSIBILITIES

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

4.0 PROCESS

In this policy, “company equipment” refers to any and/or all equipment owned, leased and/or otherwise operated on behalf of NCSG and operated by personnel employed by the company.

- Company equipment must be included and documented as part of the preventative maintenance program.
- All company equipment will be maintained at a level that meets and or exceeds all local, Provincial/State and Federal requirements, manufacturer recommendations and industry standards.
- All manufacturers recommended maintenance procedures are to be available for the appropriate piece of equipment.
- All repairs performed, outside a company-operated facility, must be done by a licensed mechanic and at a company-approved facility.
- Each piece of equipment will have a separate maintenance file. All repairs and/or regularly scheduled maintenance, to any company equipment, will be recorded in the appropriate equipment files. In addition, any repair done by a facility, other than the company facility, will be recorded in the accounting program and a copy of the invoice must be placed in the appropriate equipment file.
- All company equipment requiring an annual CVI or DOT Inspection (Commercial Vehicle Inspection Program) will be “flagged” one month (minimum) prior to the expiry date of the current certification. This is to ensure the equipment can be scheduled at an approved facility, inspected and re-certified in the required time.
- To ensure the safety of personnel working on any company equipment, the person working on the equipment must, before the work begins, ensure the equipment is locked out or isolated as applicable to the task. Refer to the isolation of hazardous energy code for more details.
- No equipment will be operated with a known safety defect.

This policy also applies to contractors operating vehicles and/or equipment registered under and/or bearing a NCSG Company name. These companies and/or person(s) are required to prepare and submit, once monthly, a summary report of maintenance completed on their vehicles and/or equipment. In addition, a copy of the annual CVIP inspection must be included with the monthly report, in the month the inspection occurred.

Mechanical Failure

Road "breakdowns" are time consuming, costly and a source of bad publicity. In the event of a mechanical failure enroute, it is important to accurately determine, whenever possible, the nature of the problem. Once the problem has been identified contact dispatch and/or the maintenance department. The problem will be further assessed and a course of action will be determined as quickly as possible.

Ensure the vehicle is parked where it will not become a hazard to other traffic. Warning devices must be set out if the vehicle is in a position to create a hazard. All repairs must be approved beforehand.

Inspections – Tractors, Trailers, and Mobile Cranes

The “professional” driver is responsible for completing vehicle, tractor, crane and trailer inspections in accordance with Provincial/State/Federal requirements and the National Safety Code (NSC) guidelines. In addition, the “professional” driver is responsible to ensure the vehicle they are operating is safe, well maintained and does not pose a hazard to themselves and/or the general motoring public.

Frequent inspections are an integral part of the overall Health & Safety Program. Equipment inspections are to be completed prior to, at regular intervals (once every 8 hours) during and at the end of a job and/or operation of the equipment.

Defects as well as an indication that the observed defects will and/or will not affect the safe operation of the vehicle, are to be recorded on the “Drivers Vehicle Inspection Report” form and a maintenance repair request form. All said
forms must be submitted to the company, on a daily basis or as soon as practical.

Do not operate a vehicle with a defect(s) that would put it “out of service” as per the “CVSA - Out of Service” criteria. If in doubt, contact the company maintenance department before proceeding.

As part of vehicle maintenance, drivers are responsible to maintain a clean vehicle, especially the interior. The outside of the vehicle is to be washed whenever possible, depending on time and job conditions.

A “professional” driver knows their vehicle better than anyone. Therefore, it is important to ensure the vehicle is operating properly, at all times. Major problems can be avoided by early detection and can often be less expensive to repair.

- Listen for unusual or abnormal sounds; they could be an indication of a potential problem. Report them promptly and accurately describe the sound(s) to maintenance personnel.
- Smell for unusual odors (i.e.: burning insulation, rubber or wood, scorched fabric, hot oil and other abnormal smells.
- Feel changes in the vehicle that affect steering, shifting, braking or other handling functions. If the vehicle does not respond in the usual manner, promptly report the problem.
- Observe all equipment components carefully during routine inspections. Defects in lights, wiring, cables, tires, airlines, coupling devices, landing gear, brakes, suspension, etc. must be corrected.

Drivers are responsible for the care of any equipment they may be working with. Tractors, Trailers and Cranes are to be greased at least once every week; more often in dusty/muddy conditions or to manufacturer’s recommendations, whichever is most frequent. All lubrication and “on road” repairs must be recorded on the vehicle inspection form.

**Mobile Cranes**

All crane owners and/or operators are, in accordance with the “General Safety Regulations”, legally responsible for the following:

**Logbooks**

All cranes with a lifting capacity of 2,000 kgs (4400 lbs) or more are required to have a maintenance logbook. All repairs, maintenance, certifications and other relevant safety-related information must be documented and signed by the crane operator.

**Equipment Maintenance**

All cranes must be maintained in accordance with the crane manufacturer's specifications, by qualified and competent trades people. Structural or welding repairs must be completed under the direction and control of a Professional Engineer. All maintenance must be documented in the crane maintenance logbook.

**Certification**

Annual mechanical and structural inspections must be performed by competent, qualified personnel. Where applicable, necessary structural repairs must be adequately supervised and entered in the maintenance logbook. Structural repairs or modifications must be certified by a Professional Engineer.

**Mounting**

All trucks to which cranes are mounted must meet or exceed the crane manufacturer’s minimum chassis requirements or be certified by a Professional Engineer that the chassis is adequate and will safely allow the crane to operate at its rated load capacity.

**Maintenance Program**

Preventative maintenance is an integral part of ensuring equipment does not present a hazard to those operating the equipment, a hazard to other personnel or the general public and create unscheduled delays.

Personnel operating company equipment are responsible for inspecting the equipment they are operating and recording the condition of the equipment, including any defects, on the appropriate inspection forms.

**Tractor (Power Unit)**

Regular scheduled maintenance and inspections is the primary means of ensuring all company equipment is in the best condition possible. The following “Maintenance Schedule” information is intended to assist in achieving and maintaining that goal.

- **“A” Service:** daily, operator pre and post trip inspections
- **“B” Service:** every 20,000 km / 300 hours
- **“C” Service:** annually (CVIP)

**Trailer(s)**

- **“A” Service:** daily, operator pre and post trip inspections
- **“B” Service:** mechanical service and inspection every 10,000 KM on highway trailers, 6000 KM on hydraulic steering trailers
- **“C” Service:** annually (CVIP)

**Tire / Wheel Assemblies**

All wheel nuts will be:

- Hand torqued, according to the manufacturer specifications.
- Torque checked within the first 80 - 160 km after installation.
- Torque rechecked at regular maintenance schedule intervals.
All tire pressures will be checked at regular maintenance schedule intervals. Tire pressures are not to exceed manufacturer recommendations.

Any tire showing excessive, abnormal and/or unusual wear must be reported immediately. Management, in conjunction with the supplier, will determine the necessary action.

**Steering Tires**
All steering tires will be radials and new (no recapped tires). Steering tires will be replaced when there is 5/32” wear remaining. This is subject to operating conditions and is to be used as a guideline only.

**Drive and/or Trailer Tires**
All drive and/or trailer tires will be radials and can be either recapped or new tires. Maintenance personnel and/or management must approve installation of recapped tires. Drive tires will be replaced when there is 3/32” wear remaining. This is subject to operating conditions and is to be used as a guideline only.

**All Terrain Crane Tires**
All tires will be radials and new (no recapped tires). Tires shall be replaced when there is 5/32” wear remaining. This is subject to operating conditions and is to be used as a guideline only.
8.2 Maintenance Filing Supplement

Filing Procedures Supplement
NCSG Crane and Heavy Haul Services Ltd. (NCSG) is committed to becoming the crane and heavy haul services provider of choice in all of its market areas providing its customers safe and innovative hoisting and transportation solutions.

To ensure our success, NCSG has established a Maintenance Program. The Maintenance Program will be a comprehensive guide to ensure that all pieces of equipment are in repaired and maintained in accordance with the manufacturer’s specifications as well as in compliance with all Federal and State / Provincial regulations. This supplement will outline the proper documentation procedures which will ensure up to date equipment files containing the complete maintenance and repair history of each piece of equipment affected by legislation.

The foundation of the program will be based on (but not limited to):

• Federal / State / Provincial Legislation that governs equipment maintenance and operation and personnel training and qualifications.
• Local Construction Owners Association’s “Best Practices”.
• Industry Standards.
• NCSG Safety Manual.

NCSG is also committed to expanding the Maintenance program. It is the company’s intention to adopt new practices, procedures, equipment, and methods that help increase the efficiency and safety of the organization, and its employees. The purpose of embracing new technologies, procedures and practices is to ensure continued delivery of high quality efficient hoisting and heavy haul solutions to our clients.

The Maintenance program will be reviewed annually as a minimum and more frequently if new products or technologies are introduced into our fleet.

Equipment Types
Mid Duty Vehicles over 4500 kg (10,001 lbs.)
Highway Tractors (including winch trucks and planetary drive heavy haul tractors)
Trailers (including standard and heavy duty as well as road style and conventional platform trailers)
All Terrain Cranes (including Boom Dolly’s)*
Hydraulic Truck Cranes (including Boom Dolly’s)*
Boom Trucks (including Stand Up, Swing Cab and Knuckle Boom Types)*

*Indicates that only the running portions of these types of equipment are covered under this policy. Maintenance, inspection and testing of the hoisting mechanisms are covered under separate policy and in accordance with the appropriate CSA and ASME Standards.

Summary
In order to provide safe and efficient service to our customers as well as provide a safe work place for our employees and the general public, it is important that all equipment is maintained in accordance with the specific manufacturer’s specifications, with all appropriate Federal, Provincial and State D.O.T regulations and within industry “Best Practices”. The measure of any maintenance program is the documentation of any services or repairs performed on any individual unit. It is paramount to be able to provide complete and concise maintenance and service records as required to a sanctioned auditor, to any equipment appraiser and to any employee should the records be requested.

The intent of this Supplement is to establish a baseline for recording requirements as well as maintenance and service activities for each of the aforementioned equipment types. This Supplement will also reference specific forms to be used for each activity complete with instruction on its use. A sample form for each activity is included in the attached Appendices for reference.

Maintenance and Repair Record Keeping

Work Orders / Record Keeping
All Preventative Maintenance (PM) activities are to be scheduled in accordance with the manufacturer’s recommendations or, in the absence of such recommendations, in accordance with industry “Best Practices”. Any non-PM maintenance or repair activities are to be completed based on information received through Daily Vehicle Inspection Reports (DVIR) or Maintenance / Repair Request form (MRR). Any DVIR or MRR that triggers a maintenance or repair activity must be included in the affected unit’s file with the accompanying repair documentation. Similarly, any MRR that triggers a repair request must be accompanied by the appropriate DVIR. Any of the aforementioned forms that do not trigger any maintenance or repair requests when completed are to be filed in accordance with the Transportation Compliance Policy. The accompanying repair documentation is as outlined in the following paragraphs and attached Appendices.

Prior to commencing any maintenance activity on any piece of equipment, a Work Order must be opened. The purpose of the Work Order is to provide a record of all activities completed, the parts used, time required to complete and finally the cost associated with the activity. Without a complete and correct Work Order, there is no mechanism to track any of the activities completed or capture any of the costs associated with repairs or maintenance. The
completed work order, including all supporting documents, is to be included in the equipment files.

Upon completion of any activity, the completed paperwork is to be scanned and entered into Fleet Cost and Care NexGen under the appropriate work order. Original records are to be kept in a hard copy file for the appropriate unit number at the facility completing the activity.

If the repairs are completed at a third party facility, the original invoice complete with the entire repair is to be photocopied and scanned into NexGen under the appropriate work order. The photocopy is to be kept in a hard copy file for the appropriate unit number at the facility responsible for the machine. The originals are to be sent to Corporate AP for processing and payment to the Vendor.

There are no exceptions to this requirement.

**Equipment Inspections**

All equipment inspections including activities and intervals will, as a minimum, be conducted in accordance with this document. If there are and Federal, Provincial or State regulations that exceed the requirements as outlined herein, the more stringent Regulation shall be adhered to. It is the intent of this Supplement that all inspections will be recorded on the forms as included in the appendices. The Inspection types are defined in tabulated form below.

<table>
<thead>
<tr>
<th>Inspection Type</th>
<th>Vehicle Type</th>
<th>Inspection Interval</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type - A</strong></td>
<td>Cranes, Tractors, Trailers and Boom Dollies</td>
<td>Prior to the start of each shift</td>
<td>“A” Service Complete written Daily Trip Inspection form. Report all defects and document all repairs.</td>
</tr>
<tr>
<td>Sample Forms Appendix I DVIR/MRR:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type - B</strong> Sample Form Appendix II</td>
<td>Cranes:</td>
<td>Every 1,000 hours</td>
<td>“B” service Schedule 2 work sheet</td>
</tr>
<tr>
<td>Scheduled Maintenance Inspection:</td>
<td>Tractors:</td>
<td>Every 20,000 kms (12,500 mi) or 300 hours</td>
<td>“B” service Schedule 2 work sheet</td>
</tr>
<tr>
<td></td>
<td>Trailers and Boom Dollies:</td>
<td>Every 10,000 kms (6,250 mi) or 6,000 kms (3,750 mi) on hydraulic steering trailers</td>
<td>“B” service Schedule 2 work sheet</td>
</tr>
<tr>
<td><strong>Type – C</strong> Sample Form Appendix III CVIP Inspection:</td>
<td>All Types (Cranes, Tractor, Trailers and Boom Dollies)</td>
<td>Annually</td>
<td>“C” Service Required every 12 months before next CVIP expires - to be completed by a Certified CVIP Station.</td>
</tr>
</tbody>
</table>
9.1 Hoisting Policy

1. INTRODUCTION
NCSG Crane & Heavy Haul and its affiliated companies (NCSG) are committed to safety in its hoisting and rigging practices. Our Hoisting Policy and Practice are based on those set by applicable OSHA standards, Provincial OH&S, CSA Z-150, ASME B30 (5,9,10,20&26), BTH-1, ANSI A10, WSTDA (RS1,WS1).

This Policy and Practice supplements manufacturer and industry standards and must be adhered to by NCSG employees but it should not be considered as comprehensive. The standards listed in section 1.1 as well as applicable jurisdictional legislation, codes and practices must also be adhered to. When in doubt contact your supervisor or manager for clarification of this Policy and Practice

Equipment Manufacturers manual must always be kept with the equipment and the Manufacturer’s specifications, limitations, and procedures must be adhered to.

Equipment operators must be aware of and follow all manufacturers’ requirements, including but not limited to:
• Setup
• Ground conditions
• Rated capacity
• Operational considerations
• Wind
• Temperature
• Dynamic loading
• Etc.

1.1 Scope
This Policy applies to the use, operation and maintenance all Lifting Devices.

A Lifting Device is any device that is used to raise or lower any material or object and includes its rails and other supports.

Lifting Devices include, but are not limited to;
• Cranes and Boom Trucks
• Jacks, Jack and Slide components, etc.
• Gantry and their components
• Overhead Cranes
• Horizontal Rigging Components
• Forklifts
• Below the Hook Lifting Devices
• Self-Propelled Modular Trailers (SPMT) and Conventional Platform Trailers (CPT)

These devices must be engineered for the purpose for which they were intended and must have at a minimum the WLL, manufacturer’s name and device weight marked on them. If there is more than one possible configuration it must have capacity charts readily available to the operator to indicate the WLL for each configuration, these capacities must not be exceeded. All devices must have a manufacturer’s manual readily available to the operator that details the care, use and limitations of the device.

Cranes: A substantial and durable chart with clearly legible letters & figures shall be provided with each crane and securely fixed to the crane cab in a location easily visible to the operator while seated at this control station. Electronic charts may be kept but the LMI may not be relied upon as the only source of capacity.

2. ROLES AND RESPONSIBILITIES

2.1 Overview
It is important to note here that the following roles and responsibilities are intended to define the work to be done and not to prescribe specific “jobs or positions”. In many cases it is very likely that one individual may be held responsible for multiple roles during a lifting operation. However, although these roles and responsibilities are assigned at the job site, it is critical that these roles and responsibilities are clear and understood by all involved.

In this chapter you will find information on the roles and responsibilities of:
• Crane Operators
• Lift Coordinator/Director
• Lift Engineer/Rigging Specialist
• Rigger/Signalman
• Assembly/Disassembly Director (Boom Crew)

2.2. Person in Charge (PIC)
This is the person designated by NCSG or the Client to be the person in charge of the lift.

The PIC:
• Knows the hazards existing and likely to exist;
• Knows how to control or eliminate the hazards;
• Has been given the authority to promptly correct hazards
2.3. **Crane Operator**

**Definition**
A competent worker in control of the crane, who, for mobile cranes, must be,

- a) Certified to the applicable state or provincial standards, or,
- b) An indentured apprentice working under the direction of a certified journeyman crane operator

**OSHA 1926.1427 Operator qualification and certification.**

(i) The employer must ensure that operators of equipment covered by this standard are competent to operate the equipment safely.

(ii) Where an employee assigned to operate machinery does not have the required knowledge or ability to operate the equipment safely, the employer must train that employee prior to operating the equipment. The employer must ensure that each operator is evaluated to confirm that he/she understands the information provided in the training.

**Responsibilities**

- In the absence of an assigned ‘Person in Charge’ or ‘Lift Coordinator’, the operator would default to the responsibilities of this position. The operator always has the last say for lift/no lift
- Operate the crane in a safe, controlled and smooth manner and only at the level they are signed off on.
- Maintain the following crane and lifting information:
  - Crane log book – equipment log book
  - Operators Experience Log Book – record of Operators work experience and crane sign offs
- Confirm the load and rigging weight
- Select the appropriate boom, jib and crane configuration to meet lift requirements and determine the net lifting capacity of this configuration.
- Determine the number of parts of line required.
- Have an understanding of the information in the crane’s operating manual (must demonstrate the ability to find and utilize the correct information) and to understand the crane’s limitations.
  - All manufacturer procedures applicable to the operational function of equipment must be complied with.
- Barricade the crane’s swing circle whenever a hazardous situation is identified that could result in property damage or harm to individuals in the area. Only workers essential to the work at hand are allowed in the fall zone. [Fall Zone is the area defined by the ‘load path’ where if failure of the rigging were to occur the load could land here.]
  - Barricades must be in place whenever there is less than 2 feet (60cm) between any part of the crane and a stationary object.
- Know, understand and properly use the crane’s load charts
- Inspect the crane daily and perform daily maintenance as prescribed by manufacturer and crane owner. Confirm operating aids and safety devices are operational (i.e.: load moment indicator, etc.) and record the information in the crane log book. Any deficiencies that prevent the safe operation of the crane will be cause to remove the crane from service until the deficiencies are corrected.
- Check that the site is adequately prepared for the crane.
- Check that all hazards have been identified, e.g., power-lines, underground pipe-ways, culverts, etc.
- Assemble, set up, rig and operate the crane properly in accordance with manufacturer’s specifications
- Inform site supervision of any dangerous conditions observed before or during crane operations.
- Move the crane around the work-site either with or without a suspended load.
- Assess weather conditions at time of lift to confirm lift can safely proceed.
- Shut down and secure the machine properly when it is unattended
- Complete a “Lift Calculation” for each lift in excess of 75% or for the lift of highest percentage of capacity for that particular set up. (See NCSG FLRA as per SWP015 NCSG Lift Evaluation Criteria)
  - Cease operations if an unsafe situation or condition is present, or if the signals between the operator and signal person are interrupted until communication is reestablished. The operator has the final say on all lifts and is required to stop the lift whenever the safety of the lift is in question.
  - The operator (in conjunction with the designated signal person) must test the devices being used to transmit signals before the beginnings of operations to ensure the signal transmission is effective, clear and reliable.

**Lifting Equipment Operator (other than mobile crane)**

Although operators of lifting equipment such as gantries, jack and slide, platform trailer, forklift do not require certification through a governing body they must still be trained and deemed competent through NCSG Policies and Procedures. The preceding responsibilities 2.3.2 still apply.

2.4. **Lift Coordinator/Director**

**Definition/Responsibilities**

This position, if provided, will be the ‘person in charge’ of the lift

- Assess lift specifics to determine what classification of lift applies.
- Employ a lift plan appropriate for the classification of lift.
- Participate in the development of lift plans for all Non-Standard and Critical lifts.
- Ensure appropriate personnel review lift plans.
  - Ensure that the ground beneath the crane can support the loads imposed by the crane.
• Ensure that adequate space is provided to safely assemble, erect, and operate the crane, as well as materials such as timber mats, cribbing and blocks.
  • Ensure cranes are placed in the suitable locations for capacity and clearance from obstacles.
  • Ensure cranes are currently certified with all known deficiencies corrected.
  • Inform the crane operator of any hazardous site conditions, e.g., water lines, sewers, overhead powerlines, etc.
  • Ensure that the load weight, center of gravity and maximum radius required for the lift have been accurately determined.
  • Check the crane charts to ensure the machines are rigged in the suitable configuration.
  • Confirm initial pick and final set locations and orientations of the object are correct and the best possible.
  • Communicate the load weight to the crane operator.
  • Ensure pre-lift meetings to discuss all hazards in detail to minimize risks and ensure and that the workers all have an opportunity to input and participate and that everyone is aware and ready for the work to be performed.
  • Verify that the Crane Operator is properly certified and competent to safely perform the lift and signed off on the equipment designated.
  • Verify only competent rigging personnel to work with the crane. Sub-contractors are responsible for the competency of their workers.
  • Ensure the lift procedure and plan are followed explicitly and that any required changes to the plan are reviewed with the Lift Engineer/Rigging Specialist prior to implementing the change. If the lift cannot be carried out as per the engineered plan, then the lift must be stopped until a formal review has been conducted and all parties understand the revised plan.
  • Work with the site owner to develop an emergency action plan and communicate it to all personnel involved with the lift.
  • Designate a competent signal person, regardless of whether or not the operator’s view is obstructed, and identify this person to the crane operator. Radio communications will be necessary if signal man cannot maintain a direct line of sight with both the operator and the load. No relaying of signals is allowed
  • Ensure that each load is properly rigged for lifting. Determine that the load is secure and balanced before lifting more than a few centimeters above the support
  • Assess weather conditions at time of lift to confirm lift can proceed safely.

2.5. Lift Engineer Rigging Specialist

Definition

A person who is:
  a) A Professional Engineer, and/or
  b) Deemed by the employer to be appropriately trained in the preparation and development of lifting studies.

Responsibilities

The requirement for using the expertise of a Lift Engineer/ Rigging Specialist will be determined by NCSG and the Client based on the specifics of the lift to be done.

Primary Duty

• The primary duty of the Lift Engineer/Rigging Specialist with respect to lift studies is, as with all engineering functions, to ensure the protection of life, limb and property, of both the company and personnel involved and the public, through the sound application of knowledge, training and experience.
• The Lift Engineer/Rigging Specialist will provide technical support and resources for the planned lift.

General Duty

Investigate and understand the nature of the lift
  • What is to be lifted, size, weight, center of gravity, special conditions, etc.?
  • What is the initial and final position, orientation, elevation, etc. of the load to be lifted?
  • Are there any special weather/climate conditions or concerns?
  • Are there any special ground or area conditions or concerns? Soil compaction, matting requirements to ensure stable ground conditions for the crane.
  • Has the equipment been pre-determined and what is available?

Design the Lift (plan how to make the lift)

• Identify the suitable location for the cranes for capacity and clearance from obstacles.
• Will the crane(s) have to travel or swing?
• Size the crane(s) to suit the requirements, both primary and secondary as may be required. Crane capacity must be calculated through each phase of the lift.
• Calculate the point loading on all cranes involved in the lift, i.e. tracks and outriggers.
• Size, design and/or detail the rigging hardware to suit the lift.
• Prepare drawings, plans and specifications as required.

Communicate the details of the lift

• Issue drawings, plans and specifications to the people who will make the lift.
• Review, discuss and revise as required with the people who will make the lift.
• Planning
• Review drawings and/or site information to verify access, clearances, identify obstructions and eliminate
interferences with respect to the lift.
• Verify lift lug information, both head and tail if required.
• Verify crane charts, boom length, and accessories required.

Design
• Plan how the crane(s) will physically make the lift.
• Specify the rigging, sling diameter, length and quantity.
• Select shackle size, clearance and quantity.
• Select and detail any new items required. (i.e. Spreader Bars, Equalizer Bars, etc.)
• Prepare sketches/drawings.

2.6. Rigger/Signal Person

Definition

A competent worker designated as the rigger.

In the USA must be a competent worker who knows and understands the relevant signal person qualification
requirements specified in subpart CC (1926.1419-1926.1422; 1926.1428).

No employee may perform rigging tasks un-supervised unless they have been trained and tested.

Note: The degree of competency and responsibilities for the rigger must meet and be consistent with the
requirements of the lift to be performed.

Responsibilities
• Designate signalmen; usually one person is the rule, but if more are required, (ground crew and an erection
crew), two-way radios with a dedicated frequency are recommended. Signal person must be readily
identifiable by some means (high visibility gauntlet etc.)
• Must test the devices (in conjunction with the operator performing the lift) being used to transmit signals
before the beginnings of operations to ensure the signal transmission is effective, clear and reliable.
• Must be competent to perform rigging activities
• Rig loads and equipment to the Rigging Equipment Manufacturer’s recommendations
• Interpret the sling charts and lift plans
• Identify appropriate rigging components for the load to be lifted
• Visually inspect rigging components on a regular basis and prior to each lift to ensure compliance with
appropriate Standards, Codes, Specifications and
• Procedures (see OSHA 1926.CC, CSA Z-150-98, ASME B30 Standards [9,20,26])
• Know and understand the operating parameters of cranes.
• Be capable of identifying different rigging components and to be knowledgeable in their proper application.
• Be capable of performing inspections of applicable rigging components to ensure they are in an adequate
condition to perform the lifting tasks. (as per ASME B30-9.20.26, WSTDA)
• Wire rope inspections should be performed to manufacturer’s specifications and/or to the wire rope
specifications established in ASME B30-9.
• Be able to produce documentation showing hours of training accomplished in understanding and applying
principles and components.
• Be capable of reading Wire Rope/Synthetic Sling capacity charts.
• Be knowledgeable of the different sling configurations available and know which to use on different load
applications.
• Be knowledgeable of the weight of the load to be lifted.
• Be knowledgeable and capable of using the hand signal chart for hoisting and moving loads.
• Give all signals in a slow, smooth and decisive manner. Also be able to clearly communicate appropriate
signals via radio.
• Understands the operations and limitations of the equipment, including the crane dynamics involved in
swinging, raising, lowering and stopping loads and in boom deflection from hoisting loads.
• Be aware of overhead hazards and obstructions.
• Be aware that the swing path must be kept clear of vehicular and pedestrian traffic.
• Be aware that the load should not be brought over the top of people unless unavoidable (as per Local
government regulations)
• Communicate with the crane operator throughout all stages of the rigging process.

2.7. Assembly/Disassembly Director

Definition

A person who is in charge of, and directs the work, for the Assembly and Disassembly of Cranes including
attachments.

All assembly and disassembly operations must have a qualified A&D Director signed off for C-Attachments for
the crane they are assembling

They must be qualified and competent to perform these tasks as per the NCSG Verification of Qualifications
policy and procedure
Responsibilities

The A/D director must understand the applicable procedures and must comply with all manufacturer prohibitions regarding assembly and disassembly

• The A/D director must review the manufacturer’s procedures immediately prior to beginning work unless he or she understands the procedures and has used them before for that equipment type and configuration.
• The A/D director must ensure that each member of the crew understands his or her tasks, the hazards of the tasks, and any hazardous positions or locations to avoid.
• The A/D director must verify all capacities of any equipment used, including rigging, lifting lugs, etc.
• The A/D director must also address hazards associated with the operation, including 12 specified areas of concern:
  • Site and ground conditions,
  • Blocking material,
  • Proper location of blocking,
  • Verifying assist crane loads,
  • Boom & jib pick points,
  • Center of gravity,
  • Stability upon pin removal,
  • Snagging,
  • Struck by counterweights,
  • Boom hoist brake failure,
  • Loss of backward stability,
  • Wind speed and weather.

Inspection

Upon completion of assembly, but before use, the equipment must be inspected by a “qualified person” to ensure that it is configured in accordance with the manufacturer equipment criteria. If these criteria are unavailable, the employer’s “qualified person,” with the assistance of a registered professional engineer if necessary, must develop the appropriate configuration criteria and ensure that these criteria are met.

3. TRAINING, COMPETENCY AND CERTIFICATIONS

3.1. Overview

NCSG Crane & Heavy Haul and its affiliated companies (NCSG) will comply with all local and federal regulatory bodies pertaining to the verification of qualification and competency of Operators of powered mobile equipment. NCSG has a system in place that evaluates and tracks competencies based on training, testing and evaluation by a person deemed competent for the task being performed. The company will make certain that only employees signed off as competent at the required operational level are assigned to and operate NCSG equipment. Finally, the company will ensure that only an employee signed off as an evaluator may sign off an Operator and only at the level that the evaluator is signed off at (reference: NCSG Qualification Verification Policy)

3.2. Minimum Requirements

As an on-going action, development and implementation of our continuing education plan will include the following ‘in house’ courses.

• Basic Lift Operating Principals
• Chart Reading Basics
• Chart Reading Crane Specific (LTM 1080, Grove RT, Liebherr Crawler)
• Fundamentals of Rigging (Basic, Advanced and Engineered Lifts)
• WHMIS CBT (Computer Based Training Module)
• Fire Extinguisher Training

Also included are:

• Hire on Qualification Exam and Practical Evaluation (Equipment Specific)
• Fundamentals of Rigging Challenge Exam
• Periodic Crane Specific Re-Evaluations
• Apprenticeship preparation Exams for 1st and 3rd period AIT exams.

3.3. Minimum Competencies

Lift Engineers Rigging Specialist

• Knowledge of hardware and equipment (cranes, rigging, slings, wire ropes, load charts, etc.)
• Experience with lift procedures
• Working knowledge of American Institute of Steel Construction (AISC) and other relevant standards codes and practices.
• Ability to prepare and interpret site and lift plans and drawings
• Drafting and/or auto-cad experience

Lift Coordinators

• Ability to read and understand Lift Plans and drawings
• Sound working knowledge and understanding of the use of hardware and equipment (cranes, rigging, slings, wire ropes, load charts, etc.)
• Task leadership abilities
• Communication skills
• Ability to work under stressful conditions
• Ability to make critical decisions
• Previous experience with lift execution and familiarity with the type of lifts being conducted
• Ability to identify hazards and risks associated within the lift area

Crane Operators
• NCCCO, Provincial or Inter-Provincial Certification or an Indentured Apprentice
• Sound working knowledge and understanding of the hardware and equipment (cranes, rigging, slings, wire ropes, load charts, etc.)
• Ability to read, understand and implement lift plans, lift studies and drawings
• Ability to recognize hazards and risks within the lift area
• Clear understanding of lift dynamics
• Previous experience or familiarity with the type of lift to be performed
• This person must be signed off as competent and have a record in their Operator Experience Logbook as either:
  • A Basic Operation includes operation with attachments
  • B Dolly on/off Highway driving
  • C Attachments includes Assembly and disassembly of attachments and components
  • D Fully Qualified (All of the above)
• Mechanics setting up and testing cranes must be appropriately certified for the jurisdiction they are in and signed off as:
  • M Basic operation for mechanics

Assembly/Disassembly Director
• This person must be deemed competent to perform these tasks by management using the NCSG Verification of Qualifications procedures and signed off as either C-Attachments or D-Fully Qualified.

4. STANDARDS FOR INSPECTIONS, PERFORMANCE MONITORING

4.1. Overview
Inspections and Performance Monitoring has been broken out into two broad categories, 1) the physical lifting device itself, and 2) the related equipment commonly used in lifting operations

4.2. Minimum Critical Specifications for Crane or Lifting Equipment Inspections and Monitoring
Crane or Lifting Equipment Log Book
Pre-use checklists must be filled out daily and must include the following;
• Mechanical inspection
• Structural condition
• Time, Date, Weather conditions
• Modifications
• Hour Meter reading
• Damages
• Running repairs
• All incidents involving the crane or lifting equipment
• "Shock loading" incidents

Operator’s Manual
The current and complete Crane or lifting equipment Manufacturer’s Manual must be available in the operating cab of the crane or lifting equipment at all times.

Crane or Lifting Equipment Maintenance Records and Reports
The crane maintenance records will include, but not be limited to the following items:
• Preventative maintenance program:
• Checklists – what was checked
• Frequency of Preventative Maintenance checks
• Date of last Preventative Maintenance check
• Any repairs made during the Preventative Maintenance check
• Whether the Preventative Maintenance program complies with the Manufacturers’ specifications.
• Any incidents or shock loading events involving the crane
• What happened
• When the incident happened
• Evaluation results for equipment inspection post incident

Inspection Reports
The types of Inspection Reports included in this section are generally prepared by qualified Engineers and will require Engineers stamp of verification on the report.

These inspections are typically performed to re-certify the crane or lifting equipment and serve as a Quality Assurance function. Inspection will be performed as per the following:
• At a frequency indicated by the Manufacturer specifications or
• At least annually (NCSG Annual Inspection Report) or
  • Monthly inspection records on critical items in use such as brakes, crane hooks, and ropes must be kept
  • Keep and maintain written reports on rated load tests showing the test procedures and confirming the adequacy of any repairs or alterations.
  • Once a month perform rope inspection and certify the date, signature of person performing inspection.
  • All ropes must be thoroughly inspected before crane is used certified by record of date of inspection, ID of the rope inspected & signature of person performing inspection.
  • All ropes must be thoroughly inspected before crane is used certified by record of date of inspection, ID of the rope inspected & signature of person performing inspection.
• After any incident involving the crane or lifting equipment
• The Inspection report must include the specifics of what was looked at and what was found during the inspection.

NOTE: All repairs for any damage must be documented to record that proper repair procedures have been followed, Quality Assurance inspections have been performed and crane or lifting equipment recertification has been completed., modifications or additions that may affect the capacity or safe operation of the equipment must not be made without written approval from the manufacturer or approval from a registered professional engineer

Physical Conditions Inspections

Physical Condition Inspections are typically performed prior to issuing the crane or lifting equipment through a lease agreement; (In-going) as well as when the crane is returned from a lease. (Out-going) The purpose of the inspection is to verify the physical condition of the equipment before turning it over to, or returning it from, operation.

Other types of Physical Conditions Inspection are those conducted on a Daily, Weekly and Monthly basis. These are typically considered equipment Pre-use checklists used by Crane Operators and Lift Coordinators on a regular basis.

4.3. Hoisting & Lifting Inspections and Monitoring

Hazard Assessments

Hazard Assessments must be conducted prior to any hoisting or lifting operation.

These assessments may vary dependent on the site specifics and location as well as the classification of the lift. Hazard Assessment review teams should include all key parties involved in the lift as well as members of the local Operating Units (if applicable). In some situations an independent third party review may be deemed appropriate.

Each Hazard Assessment will be:
• Percent of crane or lifting equipment capacity
• Changes or transition of critical personnel associated with the lift
• Ground conditions
• Compaction
• Overheads – lines, obstructions, etc.
• Underground equipment or hazards
• Trajectory of load if dropped (which way will it fall)
• Electrical equipment – conductors
• Weather conditions
• Outrigger and track loading
• Matting
• Process operations – local process hazards
• Area personnel
• Multi-lift plans

FLRA (Field Level Risk Assessment)

FLRA is completed in the field to identify and mitigate hazards associated with the tasks at hand. Forms currently being used are:
• Crane FLRA (for all crane set up and hoisting)
• Crane Movement FLRA (for all crane movement except travel on public roads)
• JIB Change FLRA (for all reconfiguration of any jib on wheel mounted cranes)
• Crawler Crane Assembly FLRA (for all assembly of Crawlers)
• Gantry FLRA
• Jack and Slide FLRA

Use and Inspections of Personnel Lifting Devices:

Inspections required for Personnel Lifting Devices are well documented in the OH&S Legislation. Compliance to this Legislation is mandatory. (CSA – Z 150 - 98)(OSHA 1926.1431).
The design, assembly and use of personnel lifting devices must comply with all applicable Codes, Legislation and Industry Standards. Two line work on a single crane with a Manbasket on either hook is prohibited. Man Baskets must be properly certified and maintained in accordance with applicable Standards. Lift calculation form must be filled out (as per NCSG SWP017 Man Baskets available upon request).

Inspections of Rigging Equipment

Records for Rigging Inspection will include: Visual daily inspections, maintenance and history.

All Rigging must be inspected and used by competent workers according to OSHA and OH&S Regulation, ASME B30 (9,10,20,26) manufacturer specifications and in some cases, site specific rules.

Proof testing is available at the client’s request or for all repaired rigging.

BTH lifting devices and auxiliary lifting devices (i.e. forklift mounted lifting devices) must receive NDT annually. Lifting and rigging equipment must:

• Be engineered and certified for intended use.
• Be in good working condition as verified through pre-use and periodic inspections.
• Be properly installed and supported.
• Have all safety devices installed and in proper working condition.
• Be used and stored in accordance with equipment manufacturer specifications, applicable legal requirements and NCSG standards.
• have a legible tag or other markings with (at a minimum):
  • WLL
  • Manufacturer’s name or logo
  • ID Number (unique identifier)
  • Dimensions/weight

All Rigging will be signed out by the end user.

NCSG is not responsible for misuse of rigging once it leaves the NCSG control. Damaged rigging will be removed from service and where applicable be returned to the supplier for repair. Rigging that meets the manufacturer’s rejection criteria that cannot be repaired must be destroyed prior to disposal.

All rigging will be inspected by the end user before each use.

All rigging will be inspected after use by a qualified person and signed in prior to being placed back into storage.

All slings will comply with ASME B30-9 and/or WSTDA-WS-1 and WSTDA-RS-1 and be visually inspected by a qualified person prior for use on site.

All BTH lifting devices including but not limited to; spreader bars, equalizer bars, material baskets, personnel baskets, must meet appropriate standards (ASME BTH1, B30-20, CSA Z150, etc.) and will receive annual NDT testing.

All rigging hardware will be used and inspected according to ASME B30-26

All rigging hooks will be used and inspected according to ASME B30-10

Rigging hardware capacity must always be equal to or greater than the SVL capacity of the sling.

All new or repaired slings will be pull tested to 200% of WLL, load test certificates will be provided by the supplier.

NCSG will provide a process for signing rigging in and out.

Inspection and certification documentation will remain on site/branch for the life of the rigging and must follow the rigging to a known site/branch

Rigging will receive a documented inspection by a qualified person every three months of use and colour coded according to applicable client colour coding standard.

Gantry, Overhead Cranes and Jack and Slide load supporting components must receive an annual inspection including NDT for all jacks, sliding beams, headers, lifting links, etc.

Mechanical Lifting Devices and Chain Slings must be returned to the supplier on an annual basis for inspection and recertification. (Including but not limited to: beam trolleys, beam clamps, plate clamps, snatch blocks, tifors, lever and chain hoists, etc.)

5. LIFT ASSESSMENTS AND PLANNING

5.1 Standards and Critical Specifications for Lift Assessments and Planning

The minimum Standards and Critical Specifications for Lift Assessments and Planning will include the following:

• Lift Assessment Processes
5.2. Multi-Crane Lift Planning Summary

Because of the complexity of multi-crane lifts, it is not possible to list all of the planning requirements. The following list represents a solid groundwork for lift planning:

- If possible, use one crane.
- Know the exact weight and center of gravity location of the item to be lifted.
- Develop a formal lift plan, which should consider:
  - Boom clearances to the load, rigging, site obstacles and each other.
  - A step by step lift plan with the load changes considered.
  - Operations and engineering should develop this plan together, in order to draw from each other’s experiences.
- Use only very experienced people; engineers, operators, riggers, foremen, supervisors, and signalmen should all be well seasoned in this type of lift.
- Use cranes that have adequate excess capacity:
  - A rule of thumb is that all cranes in a multi-crane lift should be limited to not lifting in excess of 75% of their chart capacity. This may be safely exceeded on a single main lift crane with proper planning by experienced engineering and operations personnel. The 75% rule should never be exceeded on the tail crane, due to overloads that can occur during the lift due to signaling. Any deviation from this would be grounds for an engineered lift plan.
  - De-rating of all components is just good practice.
- Use proper ground preparation and matting; the travel path must be properly designed and prepared.
- Designate signalmen; usually one person is the rule, but if more are required, (ground crew and an erection crew), two-way radios with a dedicated frequency are recommended. Signal person must be readily identifiable by some means (high visibility gauntlet etc.)
- Monitor the load lines for out of plumb conditions, and correct as the lift proceeds.
- Only use cranes equipped with properly functioning (accurate and calibrated) load moment indicators.
- Check everything before the lift begins: All those involved in the lift should take part. This check should also include wind and temperature.
- Hold a pre-lift meeting. Any and all hazards should be discussed in detail, as this is to minimize risks. Ensure everyone is aware.
- Follow the lift plan; if conditions change and you must vary from the plan, stop the lift and discuss what will be changed. CONSIDER THE IMPACT OF CHANGE.
- Where possible, perform only one crane function at a time.
- Coordinate the cranes; if two cranes are hoisting in tandem, make sure the load stays LEVEL and the two load blocks move as one.
- Be prepared to stop; if anyone involved in the lift feels, at any time during the lift, that something isn’t right – STOP IMMEDIATELY!!
- Stay calm and cool; if you are not the type of person that can do this, have your lift responsibilities designated to someone else.
  - Many major crane accidents can be traced back to someone who made a wrong decision because they got excited or could not think clearly under pressure.
  - Your next decision doesn’t have to be quick, but it does have to be the right decision.
  - Know what you are doing;
- Watch for signs of stress and pressure on the crew members;
  - Yelling and shouting is often an indicator of someone who is unsuitable for the task at hand.
  - If there have been any disagreements, take a break before making the lift and make sure they are settled.
- Make sure the lift area is cleared of all non-essential personnel. Only those directly involved with the lift need to be there.

5.3. Multi-Crane Lifts Involving Third Party Contractor Cranes

- All multi-crane lifts involving third party cranes must have the NCSG Release Waiver for Multi Crane Lifts signed by the person having signing authority for the third party crane owner prior to any work being performed.
- Copies of all certifications for cranes and operators must be acquired prior to the lift taking place.
• Third party crane Log books must be made available to NCSG personnel prior to the lift to ensure inspections are up to date
• Third party lift plans must be acquired and verified by NCSG personnel prior to the lift being performed.
• NCSG Hoisting Policy and Practice and addendums apply regardless of client or site requirements. (i.e. a critical lift by our standard requires the same controls regardless of third party rules or requirements to the contrary)
• NCSG operators must have a copy of third party lift calculations attached to their FLRA prior to the lift being performed
• NCSG personnel will not perform multi crane lifts with third party crane until all documentation has been received and verified

5.4. Classification of Crane Lifts

Overview

The personnel involved in the Lift will apply the appropriate controls and coordination to ensure the safe and effective execution of the Lift (see following sections for recommended controls).

Many types of lifts are possible, however to ensure common terminology and consistency, all lifts will be defined using the following classifications;
• Critical Lift
• Non-Standard Lift
• Standard Lift

As per NCSG SWP015 Lift Evaluation Criteria (Available upon request)

5.5. Critical Lift

Criteria

• Lifts involving two cranes, where any of the cranes involved will be lifting above 75% of capacity of the respective crane chart.
  • All lifts involving three or more cranes, regardless of capacity, require engineering oversight and approval. Stamped drawings may be required if deemed necessary by NCSG Engineering Manager
  • All lifts exceeding 90% of rated chart capacity of the crane.
  • All lifts on a floating platform that exceed 80% of the combined crane and platform charts as determined by an engineer (see floating crane Policy and Practice)
  • Any lift where failure of the lift could endanger existing facilities or one-of-a-kind equipment or processes
  • All lifts where the crane is working on a frozen body of water

Controls

Engineered Lift Drawing

Any Variance from this Policy and Practice requires a Safety Variance Request form be filled out and signed by VP of Operations and VP of HS&E and Training

5.6. Non-Standard Lift

Criteria

• Any lift where the crane involved is lifting between 75% and 90% of the respective crane chart.
• All two crane lifts where both of the cranes are lifting below 75% of the rated chart capacity
• All lifts where ground conditions are questionable.
• All Lifts involving a Man Basket.
• All lifts where the weight of the object is not known.
• Any lift where the cranes is setup over manholes, catch basins, sewers, sinkholes or other known surface or sub-surface interferences such as firewater lines etc.
• All lifts near excavations, ditches, slopes or drop offs
• All Lifts being made over people or building(s)
• All lifts that are within 7 meters of an energized power source
• Any lift in a confined space or restricted area where the load or any part of the crane structure could come within 24 inches (600 mm) of any existing structures.
• All set ups where the outrigger stance is reduced.
• All lifts on a floating platform below 80% of the combined crane and platform chart as determined by an engineer.

Controls

Lift Evaluation forms (i.e. lift calculation on FLRA) are to be used for all lifts 75% of capacity or higher or for the highest percentage of capacity for Standard Crane Lifts and all Non-Standard Lifts whichever is greater.

All lifts on a floating platform must have a lift calculation.

Personnel involved in a non-standard lift will be in communication, prior to the lift, with a NCSG Crane Supervisor, Manager, or Safety Representative to discuss the lift, the hazards present, and the mitigation controls to be implemented prior to the lift.

All personnel (operators, riggers, supervisors, etc.) involved in the non-standard lift will be informed of the lift and the procedures to be followed in a Pre-Lift meeting.

The Hazard assessment will determine if a lift study, prepared and stamped by a professional Engineer, is required.
6. INCIDENT REPORTING
As per NCSG Incident Management Process, ALL crane incidents are to be reported and investigated to determine the root cause of the incident. Typical examples of incidents that must be reported are as follows:
- Shock loading
- Boom Contact
- Boom side loading
- Personal injuries
- Equipment damage
- Rigging damage
- Load shifting or Dropping
- Engineered lifts that do not work as planned
- Near misses
- Environmental incidents
- Equipment Upset (Crane tipping over)

7. BASIC CRANE SAFETY RULES
7.1. Basic Crane Safety Rules
- Know the equipment you are working with
- Know your load and the radius
- Understand and interpret load charts
- Always use proper rigging practices
- Inspect and monitor all critical equipment regularly
- Look up and LIVE
- Be aware of all surrounding area hazards and obstructions
- Never walk under a raised load
- Secure and restrict access to the lift area
- If you are unsure or don’t know – STOP and ASK
- Ensure all personnel associated with lifting operations are competent and qualified to perform their work.
- Never leave a load suspended with the crane unattended.
- While performing the following work where staying in the cab of the crane could be immediately dangerous to life, wireline, coil tubing, fracking etc.; the operator may remain in control of the crane via remote control providing the method provides the operator with access to boom angle, radius and load weight information from the LMI and a method of controlling the crane functions while not in the cab. (e.g Bluetooth remote from Liebherr) The operator must remain in sight of the crane during the operation and must have the remote controls at hand at all times when not physically in the seat of the crane. Operation of the crane via remote must be kept to a minimum and the operator must have a line of sight with the crane and the load while utilizing the remote control.

It will always be the first choice to remain in the cab at the controls unless there is imminent danger to the operator.
- All work within 7 metres of an overhead energized power source requires permission from the service provider. (See NCSG SWP014 Working Near Power Lines, available upon request)
- Cold Weather Operation shall comply with the manufacturer’s recommendations and/or NCSG SWP019 Crane Cold Weather Conditions
- Working near lightning. NCSG follows the 30/30 rule. If there is less than 30 seconds between the Lightning and the Thunder all operations will cease until 30 minutes after the last lightning strike. As per NCSG SJP015 Working in Lightning Conditions
- Set up; all cranes with outriggers must use them to level the crane, fully extended and pinned (if required by the manufacturer) unless there is a compelling reason to do otherwise. Any hoisting on 50% reduced outriggers requires Supervisor authorization, any hoisting on 0% outriggers or rubber (other than pick and carry for RT locked over the front) requires a Variance form be filled out) wooden mats must be used any time the crane is set up that are at a minimum 3 times the surface area of the float for ideal conditions. Steel mats may be required if ground conditions warrant it. See NCSG Crane Mat Policy and Practice
- The operator must be aware of ground conditions and all underground utilities or vaults prior to set up. No 360° hoisting on rubber is allowed. Pick and carry is limited to over the front locked on R/T cranes and all applicable load charts must be strictly adhered to with the load tied back to prevent any increase in radius while traveling. Crawler crane pick and carry must follow manufacturer’s guidelines.
- Demolition; NCSG will not perform any demolition using a wrecking ball or free fall on any of its cranes. Deconstruction must be planned with known weights and not exceed 75% of single crane operation.
- Free fall; NCSG will not utilize free fall operations on any of its cranes, including drop hammer.
- Pile driving operations (including vibra-hammer, diesel hammer, air hammer etc.) must be approved by NCSG Engineering prior to operation.
- All loads must be landed safely on an adequate surface capable of supporting the load. Care must be taken when landing loads on frozen surfaces that may sit for a while, that the load is still stable after the frost has left the ground.
7.2. Set Up Near a Slope or Excavation

1) If the ground is undisturbed or well compacted solid ground the crane must be at least as far from the bottom edge of the ditch as the ditch is deep. (e.g. T is 10 feet then A must 10 feet) However regardless of the slope of the ditch the crane should not be closer than 2 meters to the edge. (6.5 feet)

2) If the Ground is disturbed or soft, then the crane must be twice as far from the bottom edge of the ditch as the ditch is deep. (e.g. T is 10 feet, then A is 20 feet) once again however the crane should be no closer to the edge than 2 meters. (6.5 feet)

7.3. NCSG Override Policy

- Limit switch bypass systems (including LMI, A2B, hoist limit switches etc.) shall be secured against use of the override during all lifting operations. Such bypass systems shall not be used except in an emergency or during non-load handling operations such as stowing /erecting or assembly and disassembly of cranes or performing repairs as per the manufacturer’s written operating/maintenance procedures.
- Any time a bypass system is used; it shall be done only when identified as a hazard with strict controls on the FLRA and signed off by all parties.
- Use of the override system is limited to the momentary bypass key not the master override key. The master override key must only be used with direct supervision of a qualified person with clear understanding of the hazards involved.
- During crane movement of RT cranes where override of the A2B system is required to avoid over head or ground level obstacles, the momentary A2B switch must be used. The crane must never be permitted to travel with the override engaged
- During stowing or erecting operations a qualified spotter must be used to verify clearances to prevent damage. At no time shall the bypass system be used to exceed the crane’s manufacturer’s capacity chart during load handling.
- The only permissible exceptions to the NCSG Override Policy are as follows: (Branch Manager must be notified of all exceptions!)
  - During an emergency, and only to decrease the radius thereby increasing the crane’s stability(e.g. demolitions work*, where the load on the hook exceeds the expected load), note that emergency override use requires an incident report be submitted since an overload of the crane is considered a loss incident and must be treated as such, or
  - Annual inspection of the crane for overload testing, or
  - After a repair requiring overload to manufacturer’s specifications and only under strictly controlled conditions, or
  - Under the direction of a certified engineer and supervised by a qualified Crane and Rigging Supervisor.
  - All variances to this policy are only with a Variance Form signed by the VP of Operations or the VP of HS&E.
- Manufacturer’s LMI monitoring systems memory bank will be reviewed during annual inspections and unreported non-compliance to this policy may be investigated as a Cardinal Safety Rule violation.
- *Any work where there is a possibility of a variance in the expected weight of the load, or where it is determined that there is a need to operate outside the manufacturers written procedures and guidelines , the JH&A process with a signed Variance Form must be used to determine what controls are required to ensure a safe lift/assembly disassembly.

7.4 Leaving the Crane Unattended

If a crane is in an erect mode and the jobsite conditions do not permit the boom and/or jib of the crane to be fully lowered to the ground, the configuration in which the crane shall be left while unattended shll be:
- Preferably in the upright parking position as stipulated by the crane manufacturer in the operator’s manual
- Determined by a qualified person familiar with the crane, the jobsite configuration, conditions and limitations, safety regualtions and expected weather conditions.

**Short Term (less than one hour) if not possible the crane should be manned**

- When leaving the crane for a short term for lunch or breaks, always leave the crane in the smallest most stable valid operational conditions possible (i.e. scope in)
- Engine switched off
- No significant load on the hook
- Doors locked and keys safely stowed
- Lattice booms or jib/luffers left at a suitable angle with the prevailing wind to the rear of the crane

**Extended Term**

- When leaving the crane for an extended term for overnight or between shifts, always leave the crane in the smallest most stable valid operational conditions possible (i.e. scope in)
• Engine switched off
• No significant load on the hook
• Doors locked and keys safely stowed
• Lattice booms or jib/luffers left at a suitable angle (as per manufacturer’s specifications) with the prevailing wind to the rear of the crane, touch down luffer on booms supported by a hydraulic cylinder, preferably with room for the luffer to roll out in the event of a cylinder failure.

**Long Term**
As per manufacturer’s operating manual.

8. **Rigging and Signalling**

8.1. **Slings**
- All slings must be manufactured, maintained and inspected as per OSHA, Provincial OH&S, WSTDA (RS-1 and WS-1) and ASME B30-9 standards.
- All slings must have a legible tag as per ASME B30-9 and WSTDA
- Always select the best type of sling and hitch for the lift
- Angles and choke configuration must be considered and de-rated appropriately
- Slings and loads must be protected from damage using appropriate softeners where applicable.
- On multi leg bridals of 2 or more slings the capacity must be based on 2 slings sharing the load only, unless some method of equalization is used as approved by the engineering department.
- Rigging hardware must match the capacity of the slings. No sling should be used with smaller hardware than is required to match the capacity as damage may occur to the sling.
- Polyester slings must not be used on any hardware that has a rating that is less than the capacity of the sling/s in the configuration used. All rigging hardware for polyester rounds must have rounded edges with appropriate stock diameters as per WSTDA RS-1

- Slings must not be used on the end of forks or other devices that are not intended for their use.

8.2. **Rigging Hardware**
- All rigging hardware must be manufactured, maintained and inspected as per OH&S and ASME B30-26 standards.
- All Rigging Hardware must have the manufacturers name and WLL on them.
- Shackles must be used in accordance with ASME B30-26
- Never have the running line of a sling over the pin of a Screw Type shackle.
- Shackles used on a hook the pin may need to be shimmed to centered the pin on the hook
- Shackle pins must be fully seated as per manufacturers' specifications and ASME B30-26
- All Rigging Hardware must be used in accordance with ASME B30-26

8.3. **Below the Hook Lifting Devices**
- All below the hook lifting devices such as spreader bars, equalizer bars, transfer beams, material baskets, etc. must be manufactured, used, inspected and maintained as per ASME B30-20 and ASME BTH-1-2011
- All such devices must receive NDT (Non-Destructive Testing) testing annually or as required by use or client requirements.
- All such devices must have the name of the manufacturer, the WLL and weight of the device along with a sticker for current certification clearly visible on the device. Operators must be aware of the capacity of the device in the configuration used.

8.4. **Manually Operated Overhead Hoist**
(Chain Falls, Come Alongs)
- All Manually operated lifting devices must be manufactured, maintained and inspected as per Manufacturers’ specifications.
- Always know the load you are imposing on such a device
- Never use a cheater to increase the loading on such a device
- Never use as a stand-alone piece of rigging when attached to a crane hook
- Never use the crane to apply the load to the lifting device. Load must always be applied by hand!
- Always use a safety sling of slightly longer length in case the device fails when used in Crane rigging applications.
- When transferring a load from crane to a lifting device or the reverse always allow the device to do the transfer, not the crane.
- Never use the chain to wrap around the load for hoisting.
- Since these devices have a design factor or 3:1 you should only use 60% of their capacity when used on the hook of a crane.

8.5. **Tag Lines**
Tag and hoisting lines OH&S Code, OSHA
- If workers are in danger because of the movement of a load being lifted, lowered or moved by a lifting device, an NCSG will ensure that
  - a worker uses a tag line of sufficient length to control the load,
  - the tag line is used in a way that prevents the load from striking the worker controlling the tag line, and
• a tag line is used when it allows worker separation from the load.
• NCSG must ensure that tag lines of non-conductive synthetic rope are used when there is a danger of contact with energized electrical equipment.
• NCSG must ensure that tag lines are not used in situations where their use could increase the danger to workers.

8.6 Sea Containers
Sea Containers must be lifted using one of the following approved methods;
• Empty Containers
  • Top sling method, sling angles must not be lower than 60 degrees to the horizontal
• Full containers or empty containers
  • Bottom sling method with locking lift hardware and spreader bar, sling angles must not be lower than 60 degrees to the horizontal; center of gravity must remain centred between the slings, slings must not contact the side of the container.
  • Top lift method with spreader system, sling angles must be between 80 and 90 degrees to the horizontal
• Forklift Pockets, forks must reach completely through to the other side of the container and the forklift must have capacity to handle the load at the center of gravity of the container.

Always read the warnings on sea container, always determine where the center of gravity is prior to performing any lift.

8.7 Signaling
Designated signalmen; usually one person is the rule, but if more are required, (ground crew and an erection crew), two-way radios with a dedicated frequency are required whenever the signal man is not able to maintain full view of the load while in full view of the operator. The ability to transmit signals between the operator and the signal person must be maintained. If the ability to transmit signals is interrupted at any time, the operator must safely stop operations until communication is re-established and a proper signal is given and understood.

Signal person must be trained in the use of the Standard Crane and Hoist Signals. Operators will only take signals from a designated signaler (identified with a gauntlet or by some other readily identifiable method) with the exception of a stop signal which can be given by anyone.

8.8 Softeners
Softeners must be a consideration on any load with any type of sling but especially with synthetic slings.

Chain slings attached to a load with 90 degree corners must be reduced in capacity by 50% for the configuration used.

Wire rope slings the arc of contact on softeners should be equal to one rope lay or approximately 7 times the diameter of the rope or appropriate deductions must be made to allow for the smaller D:d ratio.

We will not use the following for softeners to provide cut resistance against sharp edges for slings on NCSG equipment.
• Soft flexible material of any kind, including but not limited to;
• Rubber hose, non-reinforced rubber belting, gloves, leather products, fire blankets, clothing, foam rubber, insulation, cardboard, paper products of any kind

Any other products used such as pipe or wood must be set as to prevent the possibility of contact between the sling and the load edge. Slings and softeners must not be allowed to move under load causing a cutting motion between the sling and the contact point.

Sling protection must be installed and evaluated for suitability by raising the load slightly and then lowering the load for an inspection of the sling and the protection devices. Several “test” lifts, inspections and evaluations may be necessary to determine the proper form of protection for a successful lift. Damaged or misused sling protection can result in sling failure. Inspect the sling protection before each use and remove if damaged. Be sure sling protection is the correct type and size to protect the sling. The length of the sleeve or protection material(s) must not interfere with the sling closing to the full gripping position on the load. Sling protection may not prevent cutting or other forms of damage. To avoid severe personal injury or death, personnel should be kept away from the load and never be under or near the load, while it is being lifted or suspended. Personnel should never be next to rigging that is under tension.

The ideal choice for cut resistance is a rounded surface that changes the d:D ratio at the contact point. Cut protection depends on the weight of the load, the surface exposed, the potential for a shift during rendering of a load, the type of sling being used, the hitch being used, sling angles, etc., there is no one scenario as we know. Ultimately it is pounds per square inch of contact and the strength of the protector and its ability to resist cutting during the expected loading application.

8.9 Rigging Absolutes
• Never used damaged rigging
• Always rig from an engineered lift point designed for use with rigging (i.e. hooks etc. do not rig off forks or buckets)
• Always inspect rigging prior to any use
• Always know the weight of the load
• Always know where the center of gravity of the load is
• Never over load the rigging
• Always know the capacity of the rigging in the configuration you are using,
• Always account for sling angles, chokes and any other capacity reducing factors
• Always line the boom up properly and account for deflection
• Never stand in the bight!!

9. VARIANCES
9.1. Overview
The NCSG Hoisting Policy and Practice is a minimum standard and where exceeded by Governmental Safety Regulations, the Governmental Safety Regulations will govern. This program and/or any part thereof cannot be changed, modified or deleted, unless as identified as below.

Variances are job specific and for a one time use only on dates specified on the Variance Form. Employee requesting the variance must be present during the procedure.

9.2. Variance to NCSG Lift Classification
Any variance from the NCSG controls required for a Critical Lift would require a risk assessment in the form of a JHA with specific steps, hazards and controls identified for the variance developed by the NCSG Supervisor and NCSG Safety Advisor and be signed off by the VP of Operations for the area and the VP of HS&E and Training. Any changes to the section on Crane Setup (specifically out rigger stance 0% or on rubber) would also require a variance form. Operating in override for emergency recovery of the load and crane would also require a Variance.

JHA must be reviewed in detail with the crew prior to the work progressing. JHA, Variance form and the FLRA must all be submitted to safety upon completion of the task.

9.3. Variance to Governmental Safety Regulations
Any and all variances to Federal, Provincial, State or local regulations pertaining to Health and Safety SHALL be obtained by the Contractor. The Contractor shall provide the Regional Safety Coordinator with a copy of the variance that shall contain the name and phone number of the office that issued the variance. Upon receipt of the variance and verification of the change, the safety requirement (if) supported by the Company, may be changed.

10. APPENDICES
10.1 NCSG MATTING Policy and Practice
1.0 Purpose
Cranes must be equipped with outrigger mats to distribute the outrigger loads and reduce ground bearing pressure.

2.0 Standard
The following are the minimum requirements for crane matting for mobile cranes set up on firm level ground.

This standard is not to supersede any manufacturers’ specifications or any requirements of any governmental regulating body.

The Crane Operator, Crane and Rigging Supervisor and Branch Manager have the responsibility to ensure larger mats are used when required to match the actual conditions of the site. Variances from this minimum standard require review by a qualified person and Branch Manager Authorization.

Wafers must be used under floats on steel mats or concrete floors to protect outrigger floats and to prevent freezing or lateral movement.

3.0 Procedure
Set up is strictly to allow the crane to boom up and place its own outrigger mats; counterweights must not be placed on the crane until it is supported by steel mats.
<table>
<thead>
<tr>
<th>Vehicle Size</th>
<th>Minimum Wood Mat Size During Operation</th>
<th>Minimum Wood Mat Thickness</th>
<th>Minimum Steel Mat Size (Steel Mats must be approved by NCSG Engineering)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carry Deck and Boom Trucks</td>
<td>3 times the surface area of the float</td>
<td>3¾&quot; using ¾&quot; plywood glue laminated together</td>
<td></td>
</tr>
<tr>
<td>All Cranes up to 60 tons</td>
<td>3 times the surface area of the float but no less than 36&quot; in diameter</td>
<td>3¾&quot; using ¾&quot; plywood glue laminated together</td>
<td></td>
</tr>
<tr>
<td>All Cranes over 60 up to 80 tons</td>
<td>42&quot; in diameter</td>
<td>4½&quot; using ¾&quot; plywood glue laminated together</td>
<td></td>
</tr>
<tr>
<td>RTs over 80 up to 120 tons</td>
<td>48&quot; in diameter</td>
<td>4 ½&quot; using ¾&quot; plywood glue laminated together</td>
<td>5’x6’ under plywood wafers</td>
</tr>
<tr>
<td>All other outrigger style cranes over 80 up to 120 tons</td>
<td>48” in diameter during set up</td>
<td>4 ½” using ¾” plywood glue laminated together</td>
<td>5'x7' under plywood wafers</td>
</tr>
<tr>
<td>All Cranes over 120 up to 160 tons</td>
<td>48” in diameter during set up</td>
<td>4 ½” using ¾” plywood glue laminated together</td>
<td>6’x7’ under plywood wafers</td>
</tr>
<tr>
<td>All Cranes over 160 up to 200 tons</td>
<td>48” in diameter during set up</td>
<td>4 ½” using ¾” plywood glue laminated together</td>
<td></td>
</tr>
<tr>
<td>All Cranes over 200 up to 275 tons</td>
<td>48” in diameter during set up</td>
<td>4 ½” using ¾” plywood glue laminated together</td>
<td>8’x7’ under plywood wafers</td>
</tr>
<tr>
<td>All Cranes over 275 up to 500 tons</td>
<td>48” in diameter during set up</td>
<td>4 ½” using ¾” plywood glue laminated together</td>
<td>8’x12’ under plywood wafers must be used as a minimum. NCSG Engineering will determine that actual mat size to be used for the job based on ground conditions.</td>
</tr>
<tr>
<td>All Cranes over 500 tons</td>
<td>Determined in consultation with NCSG Engineering</td>
<td>Determined in consultation with NCSG Engineering</td>
<td>Determined in consultation with NCSG Engineering</td>
</tr>
</tbody>
</table>

10.1.1 EOT Cranes (Shop Cranes) Canada Standards to Follow:

- NCSG Hoisting Procedures:
  - Section 2—Rigger/ Signal Person (Loads over work areas)
  - Section 3—Training, Competency and Certifications
  - Section 4—Standards for Inspections, Performance Monitoring
  - Section 5—Lift Assessments and Planning
  - Section 6—Incident Reporting
  - Section 7 (7.1) (7.3) —Basic Crane Safety Rules
  - Section 8—Rigging and Signaling
  - Standards to Follow
- NCSG Hoisting Policy

10.1.2 Pendant Controls

The buttons must be of the dead man type, which means they will pop back to the off position when finger pressure is released.

Crane

At the start of each shift the crane must be inspected as per manufactures requirements and tested for functioning Limit Switches, Load Brakes, Traveling and proper function of pendant controls and marked in the Daily Log Book. Any deficiencies must be marked in the Log Book as well and reported immediately to the shift Supervisor.

- A preventive maintenance program based upon the crane manufacturer’s recommendations shall be established.
- Placement of Warning or "Out of Order" signs on the crane before any work is completed on the crane.
- Employers must make monthly inspection & keep a record of all hooks with deformation or cracks. The certification records must include;
  - Date of inspection.
  - Signature of person performing inspection.
• The serial number of other identifier of hook inspected.
• Employers must make a monthly inspection & keep a record of hoist chains (including end connections) for
  • excessive wear,
  • twist,
  • distorted links interfering with proper function, and
  • stretch beyond manufacturer’s recommendation. The certification records must include;
    • Date of inspection,
    • Signature of person performing inspection
    • Identifier of chain inspected.
• Employer shall keep & maintain certification record(s) which include the date(s) of inspection & the
  signature of person(s) who performed inspection. The same records must be kept on inspections of
  all other ropes.

Safe movement
NCSG will ensure that a crane operating on rails, tracks or trolleys
• has a positive stop or limiting device on the crane or on the rails, tracks or trolleys to prevent it from
  overrunning safe limits or contacting other equipment that is on the same rail, track or trolley,
• is equipped with an over speed limiting device,
• has positive means of ensuring that the rails, tracks or trolleys cannot be spread or misalign,
• has sweep guards installed to prevent material on the rail, track or trolley from dislodging the crane, and
• has a bed designed to carry all anticipated loads.

Up-travel limit
• A bridge, gantry or other overhead travelling crane must have a device which will prevent hook travel
  beyond the safe upper limit at all design hoist speeds.
• The device must be tested at the beginning of each shift.

Direction markings
A bridge, gantry, or overhead travelling crane operated by a pendant or remote control must have markings
on the crane structure or building, visible to the operator, clearly indicating the direction of hook, bridge and
  trolley motions compatible with those marked on the controls.

Crane Operation
Prior to starting any crane activity the operator shall honk the crane horn twice to notify floor personal that
movement of the crane is starting.
• Only designated employees shall be permitted to operate Overhead Cranes (Shop) and only after
  having proper training and signed off.
• Overhead Cranes shall not be operated by any persons who cannot read and understand the applicable
  signs, notices and operating instructions.
• Operators shall only perform hoisting operations if the pathway is clear and must ensure the load is not
  carried over floor personal.
• The operator’s sole purpose is to operate the crane. The operator of an overhead crane must have full
  control of the equipment controls whenever the hoisting equipment is in use, and engage in no other
  duties while operating the equipment, such as using a tagline.
• Operators must complete an EOT/FLRA and proper Load Calculation prior to doing any hoisting
  activities.

10.2. NCSG HOISTING POLICY AND PRACTICE FOR FLOATING CRANES

All work on barges or docks near or on the water shall conform to provincial/state legislation and NCSG policies,
standards and practices. General rigging and hoisting practices are covered under NCSG Hoisting Standard

10.2.1 Third party requirements:
Barge Owner Requirements
• Must provide list and trim characteristics of the barge
• Must provide structural drawing indicating crane position, bulkheads and tie down points (maximum
  deck load for driving and point loading)
• Must provide certification of sea worthiness for barge
• Must provide adequate tie down points for the crane
• Must provide a clean and structurally sound surface for employees and equipment that is free of
  tripping hazards and holes
• Must provide a secure platform to work on by ensuring the barge is adequately prevented from
  moving while loading/unloading or during hoisting operations (anchors, spuds, mooring)
• Must provide emergency procedures including but not limited to:
  • Inclement weather
  • Tidal wave action (excessive wave action, wakes)
  • Barge collisions either land or other vessels
  • Emergency Evacuation
  • Fire (adequate fire suppression equipment)
• Must provide loading procedures for roll on roll off (RORO)
  • Important information
    • Quay height above water
      • At Low tide
      • At High tide
    • Water depth
    • Quay strength (in ton/m2 or psi)
    • Barge deck load (in ton/m2 or psi)
    • Barge dimensions
    • Barge strong points (frames/bulkheads)
    • Ballast tank plan and tank cap.
    • Ballast pump capacity
    • Mooring bollards on quay and barge
    • Adequate hold back to prevent barge movement during loading and unloading

10.2.2 RORO ramps must:
• Be engineered and strong enough to support the loads on them and must be secured to prevent movement during loading and unloading
• Be constructed to prevent vehicles from running off the edge

10.2.3 Access and Egress
• When an employee cannot step safely to or from a wharf and a float, barge or other vessel a gangway shall be used.
  • Gangways must:
    • Be at least 20 inches in width
    • Be well maintained
    • Be strong enough to support the load imposed on them
    • Be equipped with a railing 33 inches high if the slope is more than 20 degrees or if employees could fall more than 4 feet
    • Be equipped with a slip resistant surface
    • Be properly secured
  • Straight ladders must:
    • Meet the requirements of CSA CAN3-Z11-M81 and have a reach of at least 36 inches above the highest edge and tied off to prevent movement

10.2.4 Travel/Towing
• Crane must be secured during towing operations
• Load blocks and balls must be restrained during towing operations
• Lattice booms must be lowered and tied off to prevent excessive movement during towing operations
• Positive house lock must be used

10.2.5 Sub-contractor/Client Requirements
• Must provide: Job specific hazard assessment for the work being done
• Accurate load weights must be made available to operator
• Load weights must include buoyancy and potential water retention characteristics when working in the water
• Must provide or work with NCSG Engineering to provide diagrams indicating reach and elevation of lifts to be performed
• Must provide safe access and egress to the barge for workers and equipment
• Must provide information on currents and tides in the area that could affect the load if hoisting from under water
• Must provide accurate weather reports
• Must provide ‘wave/weather watch’
• If providing signaling to the crane must provide a worker competent in the use of hand and/or radio signals and be well experienced working with cranes and the work being performed
• If this person cannot be provided by the client then NCSG reserves the right to provide a competent person.

10.2.6 Hoisting In and On the Water
Pre-job Hazard Assessment
• A pre-job hazard assessment must be completed prior to loading crane onto barge
• Crane application must be determined prior to set up (lift crane, drag line, clamshell, pile driving etc.)

10.2.7 Crane Set Up
• Crane must be set up on mats that spread the weight to the internal structure of the barge
• Matting must account for the maximum possible outrigger or track forces to not exceed the maximum allowable deck pressure
• Crawlers must be on wooden mats to increase the friction between the tracks and the deck
• Outriggers must not be set steel on steel, use wood to increase friction.
Health, Safety & Environment Manual

- Crane selection must be based on NCSG Hoist Policy and Practice and marine charts.
- Avoid long boom combinations when working on water as this increases the overturning effect
- Useful radius is based on the cranes position on the barge and its reach
- Actual working radius is based on the cranes rated capacity chart for marine applications
- Supervisor must be present during the loading and unloading of crane on a barge or other floating platform.

10.2.8 Tie down
- Cranes set up for hoisting on floating surfaces must be prevented from lateral movements on the deck either by the use of beams, cleats or tie downs capable of preventing lateral movement during pitch and yaw of the platform.
- Aggregate WLL of the tie downs must be equal to half the weight of the crane and its intended load and must be attached to lugs that have a breaking strength of at least 2 times the WLL of the tie downs.

10.2.9 Charts
- Crane charts must meet the requirements of WorkSafe BC regulation 14.66 or ASME B30.8-2004
- Rate loads shall be the maximum working loads at various radii as determined by the manufacturer or qualified person considering the list and trim for each installation.
- List and trim conditions shall be mounted within clear view of the operator at all times
- Cranes must have a device within the crane that is capable of determining the list and trim in either degrees or percentage as determined by the engineered charts
- Maximum allowable list or trim shall be the lesser of 5 degrees or the maximum recommended by the manufacturer
- All deck surfaces of the barge shall be above water
- Tie downs shall be provided for securing cranes to the barge
- Cranes shall be blocked and secured to prevent shifting
- Aggregate WLL of the tie downs must be equal to half the weight of the crane and its intended load and must be attached to lugs that have a breaking strength of at least 2 times the WLL of the tie downs.
- Tie downs must be taut during towing and slack during hoisting

10.2.10 Dynamic Loading
- Operator must make allowances for buoyancy of loads being removed from or added to the water.
- 62.4 pounds per cubic foot of displacement for fresh water
- 64 pounds per cubic foot of displacement for sea water
- Operator must allow the load to ease slowly out of the water to allow water to drain and determine actual weight prior to hoisting clear. Always boom up as much as possible to increase stability. The percentage of capacity is always based on the load being free and clear of the water.
- Operators must allow time for the buoyancy of the load to settle when hoisting into the water to avoid a slack rope condition and to prevent the possibility of the load over turning
- Operators must hoist slowly off the bottom in case the load is stuck in the mud, never exceed the known weight of the load (buoyancy effect calculated) beyond 10%.
- Allow the load to slowly come free of the mud, be aware of swells that could increase loading beyond allowable limits on a stuck load.
- Always hoist slowly in the water as drag can have a significant effect on the load by either creating more load (potential overload) or less load. (potential slack rope condition)
- Be aware of the currents in the area where hoisting is taking place, drag on the load may be significant and could cause an increase in loading or side loading of the crane.

10.2.11 Hoisting from dock to vessel
- Allow for swells and changes in water level

10.2.12 Hoisting from barge to dock
- Be aware of changes in radius and elevation due to list or trim

10.2.13 Hoisting from barge to vessel
- Be aware of changes in radius and elevation due to list or trim
- Be aware when both support surfaces are floating changes in orientation between objects can become magnified.

10.2.14 Divers
- When working with divers the crane must not perform any other work while the divers are still in the water
- Operator must remain at the controls at all times.
- Man basket work must adhere to WorkSafe BC regs 13.2/3
- Manbasket work must not exceed 50% of the marine chart
- As per NCSG Hoist Policy and Practice a test lift with weights must be performed to determine stability
- Operational two way communication must be used when divers are in the water
- Secondary means of communication must be available when divers are in the water
• All work and hoisting must cease when communications are interrupted and must not be restarted until communication can be reinstated.
• Except in the event of an emergency, all directions to the operator of the crane or other hoisting device are given, throughout the dive, by the diver, the diver's tender or the diving supervisor
• Employees must use land based accommodations that meet with the applicable codes and regulations regarding acceptable living standards for workers.

Client must ensure that appropriate travel to and from landing is available at the start and end of each shift

10.3. WAIVER OF LIABILITY

10.4. VARIANCE FORM
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
9.2 Training Policy

1.0 PURPOSE
The purpose of this policy is to provide for general and specialized safety and related training throughout all levels of the organization and to provide competent workers to safely perform the work assigned. A competent worker is a worker who is adequately qualified, suitable trained, and has sufficient experience to safely perform work with little to no supervision.

2.0 SCOPE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG, in conjunction with its clients, government and safety groups, manufacturers and suppliers, unions, and other appropriate organizations, will provide training to ensure the necessary skills, aptitudes, attitudes, and competencies to minimize or eliminate all injuries to personnel and protect the assets of the company.

Training courses may be provided “in house” or by independent consulting firms and/or training institutions. NCSG will, from time to time, evaluate the content of each course to determine the effectiveness of the course material. Additional “on-the-job” training may be required to complete the training requirements. A training record will be maintained for all personnel.

3.0 EXPECTATIONS
All employees will be expected to participate in the identified training for their required duties and responsibilities, the safe operation of equipment, and the requirements for particular work sites and specific work conditions.

Basic training requirements will include, but not be limited to:
• New Hire Safety Orientations (Company and Client Specific) which include company policies and procedures
• Appropriate government licensing (task and trade-specific training and certification) where required such as:
  • Appropriate Driver’s License
  • Crane and Hoisting Certification
  • Heavy Duty Technician
  • Airbrake Training Course
  • Pilot Vehicle Drivers
  • Hazard Assessment
  • C.S.T.S. training (including specific WHMIS when required) [●●]
  • Applicable training on specific equipment

Training requirement for all employees when and where required:
• T.D.G. (Transportation of Dangerous Goods)
• H2S Alive
• Fall Protection
• Awareness of Modified Duty Program.
• Plant/job site specific orientations.
• Rigging and Signalling

Training for supervisors and management:
• Leadership for Safety Excellence (ACSA) [●●]
• Practical Loss Control (DNV)
• Incident Investigation (DNV)
• Systematic Causal Analysis Tool – SCAT (DNV)
• Better Supervision (CLR) [●●]
• First – Aid with CPR
• NCSG Orientation for Supervisors and Managers

All workers will be trained until deemed competent for their job.
9.3 Qualification Verification Policy

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG will comply with all local and federal regulatory bodies pertaining to the verification of qualification and competency of Operators of powered mobile equipment. NCSG will ensure that a system is in place that evaluates and tracks competencies based on training, testing and evaluation by a person deemed competent for the task being performed. The company will make certain that only employees signed off as competent, at the required operational level, are assigned to and operate NCSG equipment. Finally, the company will ensure that only an employee signed off as an evaluator may sign off an Operator and only at the level that the evaluator is signed off at.

2.0 SCOPE AND APPLICATION
This policy applies to all NCSG employees who supervise or operate any type of NCSG Powered Mobile Equipment. It is NCSG management’s responsibility to ensure that Supervision, Dispatch and Operators of powered mobile equipment understand and comply with this Qualification Verification Policy.

3.0 DEFINITIONS
Sign Off means that an Operator, through training, testing and evaluation, has been deemed competent to a specific level of operation on specific equipment, and Evaluator has signed off the Crane Specific Evaluation Form (CSEF) and Checklist and ensured the Operator is familiar with the Operator’s manual and safe operation of the equipment.

Evaluator is an employee determined by NCSG management to be competent to train, observe, test, evaluate and sign off on the competency of the Operator only at the level that they themselves have been deemed competent. An Evaluator may be a Vice President, Branch Manager, Supervisor, or another individual deemed competent by NCSG management.

Trainer is any employee who has been signed off as competent on a specific piece of equipment, at a specified level, to train another worker and only to the level that they themselves have been deemed competent. Trainers may not sign off employees unless they have received Evaluator status for the level of training they are performing.

4.0 ROLES AND RESPONSIBILITIES

4.1 Dispatch
• The Dispatcher must verify with an Operator that he/she has been signed off on a specific piece of equipment before dispatching him/her to Operator the specified equipment.
• If the Operator has not been signed off on the piece of equipment, the Dispatcher must alert the Site Supervisor to arrange to have an evaluator sign off the Operator.
• If the Site Supervisor is not qualified to sign off the Operator on the piece of equipment, then the Supervisor must arrange to have the Operator trained, supervised, or signed off by an Evaluator.
• Under no circumstance should a Dispatcher assign an Operator to operate a piece of equipment before he/she has been signed off on that specific piece of equipment or arrangements are made for direct supervision by a person competent for the model and operations to be performed.

4.2 Site Supervisor
• Site supervisors must also verify with the Operator that they have been signed off on the assigned piece of equipment.
• If the Operator has not been signed off, the Site Supervisor, if qualified to do so, may sign off the Operator on the piece of equipment or assign a Trainer to either train or supervise.
• If the Site Supervisor is not qualified to sign off the Operator, then he/she must arrange for an Evaluator to sign off the Operator before the Operator is assigned to the piece of equipment.
• Under no circumstance should a Supervisor, or any management member, allow an Operator to operate a piece of equipment unsupervised before they have been signed off at the required level of competency on that piece of equipment.

4.3 Process
• If the Operator has not been signed off for the equipment, then an Evaluator will use the applicable Specific Evaluation Form and Checklist in conjunction with the Sign Off Guide Book to verify whether or not the Operator is competent for the tasks they are required to perform.
• If the Operator has been deemed competent by an Evaluator then the applicable Specific Evaluation Form will be filled out according to the level the Operator is competent for and signed by both the Operator and the Evaluator.
• If the Operator has not been deemed competent then the applicable Specific Evaluation Form must be filled out as a training document and the Operator must be directly supervised by a competent worker until such time as he can be deemed competent.
• Once the applicable Specific Evaluation Form has been filled out and signed, the Operator’s Experience Log Book must be filled out for recording purposes for the Operator.
• Ensure all documentation is sent to either the HS&E Department or the Training Department for enter into the Virtual Training Assistant (VTA) and filed in the Operator’s training file. All files must end up with the Training Department.
9.4 Orientation Process

9.4.1 Orientation Process

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed an Orientation Process to introduce NCSG Workers to worksite policies and procedures. The main objective of Orientation is to familiarize employees with the new work site and to protect the health and safety of its workers, the public, and the environment.

2.0 SCOPE AND APPLICATION
All employees shall receive a new hire orientation from their applicable Supervisor or delegate on their first day worked as well as a site orientation before accessing any field site or project that NCSG works on. Every project or site shall have a unique orientation customized by on-site HSE Advisors or applicable persons. This document is meant as a guideline to ensure that all necessary areas are reviewed to ensure the familiarity with the work location and its policies and processes.

This Process applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Orientation Process.

4.0 EXPECTATIONS
The Orientation Process shall provide required and adequate guidelines to ensure knowledge of responsibilities to all employees, contractors, visitors and general public. The Orientation Process will be reviewed at a minimum of every three years.

This process shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management System is updated a revision record will be posted to all employees notifying them of the update.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Attend new hire orientation and applicable site orientations.
• Be familiar with the hazards and emergency procedures.
• Know where to access available documentation including MSDS, Emergency Response Plans and Legislation.
• Report and refuse unsafe work.

5.2 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that all workers attend new hire orientation and applicable site orientations.
• Ensure workers are familiar with the rules, regulations, policies, and procedures of the site.
• Ensure employees have access to applicable documents.
• Investigate any reports of unsafe work or refusal to work unsafely.

5.3 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this process, at all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequately train and monitor for compliance through the use of the Health, Safety and Environment team.

5.4 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this process to ensure current compliance with all regulatory legislation and company practices.
• To assist Supervision with new hire and site orientations.
• Amend and maintain this process within the defined review period.

6.0 METHOD
All employees at NCSG will be indoctrinated to the standard and the supporting processes, codes, procedures and documents that go along with it. Orientation is designed as a general work location introduction to the hazards, response plans and expectations to be complied with.

Orientation is mandatory for all employees of NCSG and its affiliated companies.

6.1 Introduction
• Introduce facilitator, the company, and applicable clients contracted too.
6.2 HSE Overview
- Responsibility/Ownership pyramid.
- Employee/Employer Responsibility

6.3 Plan
- Policy
- Legislative Requirements
- Applicable OH&S legislation
- Employee 3 Rights
- Hazard and Risk Analysis
  - FLRA
  - Task Hazard Assessment
  - Project Hazard Assessment

6.4 Do
- Training
- Emergency Preparedness and Response
- Communication
- HS&E Committee Meetings
- Monthly Safety Meetings
- Toolbox Meetings
- Cardinal Rules
- Codes
- Standard Operating Procedures

6.5 Check
- Incident Management
- 1 – 10 – 30 – 600 Pyramid
- Modified Work
- Alcohol and Drug
- Corrective and Preventive Actions

6.6 Act
- Management Review
- Committee, Council and Network

7.0 TRAINING REQUIREMENTS AND MATERIALS
- CSTS Training is mandatory for workers on-site. (Version 9.0)
- OSSA Regional Orientation (as required for Ft McMurray)
- WHMIS Training is mandatory for workers on-site (usually covered in CSTS training).
- VTA Alcohol and Drug Training for employees
- First Aid / CPR Training is preferred but not mandatory.
- NCSG shall ensure workers and supervisors are trained in all matters that are necessary to protect the health and safety of the themselves and their co-workers when the employee begins work at a place of employment or is moved from one work activity or worksite to another that differs with respect to hazards, facilities or procedures.
- All certificates and the expiry dates shall be photocopied and kept on file with VTA.

8.0 RESOURCES
Contact Regional Team Lead HS&E for more information regarding this Process.

9.0 SUPPORTING DOCUMENTS
- Health, Safety and Environment Policy
- Health, Safety and Environment Processes
- Health, Safety and Environment Codes
- Health, Safety and Environment SOP’s
10.1 Inspection Policy

1.0 PURPOSE
The purpose of this policy is to control the loss of human and material resources by identifying and correcting unsafe acts and conditions prior to failure.

2.0 POLICY
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG will maintain a comprehensive program of safety inspections at all facilities and jobs.

There is an extensive Inspection process within the Quality Control and Maintenance program. This includes Annual Inspections, Maintenance Inspections, Vehicle Inspections, Crane Inspections, etc.

This policy will deal with inspections that are not a part of the Equipment Maintenance program. These types of inspections will be similar to and enhance the Hazard Assessment process. Such inspections will include, but not restricted to such inspections as:

- Office Facilities
- Shop Facilities
- Yard Inspections
- Site Inspections
- Equipment Inspections

3.0 RESPONSIBILITIES
Senior Management is responsible for the overall implementation of the program.

Managers are responsible for directing formal inspections on jobs that they control, and for involving workers in such inspections.

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

Workers are responsible for participating in and contributing to the inspection program, and reporting any unsafe conditions immediately to their supervisor.

The HS&E department is responsible to monitor, support, advise, and direct inspections and correct actions that may need to be taken

Schedule

<table>
<thead>
<tr>
<th>Position</th>
<th>Type of Inspection</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP's and above</td>
<td>Planned Inspection</td>
<td>1 per Quarter</td>
</tr>
<tr>
<td></td>
<td>Focused Inspection</td>
<td>1 per Quarter</td>
</tr>
<tr>
<td>Managers</td>
<td>Planned Inspection</td>
<td>1 per Month</td>
</tr>
<tr>
<td></td>
<td>Focused Inspection</td>
<td>1 per Month</td>
</tr>
<tr>
<td>Supervision</td>
<td>Planned Inspection</td>
<td>1 per Month</td>
</tr>
<tr>
<td></td>
<td>Focused Inspection</td>
<td>2 per Month</td>
</tr>
<tr>
<td>HS&amp;E Advisor</td>
<td>Planned Inspection</td>
<td>1 per Month</td>
</tr>
<tr>
<td></td>
<td>Focused Inspection</td>
<td>2 per Month</td>
</tr>
</tbody>
</table>
10.2 Focused Inspection Process

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Focused Inspection Process to provide a systematic compliance measurement process in order to measure Health, Safety and Environment Management System within the company.

2.0 SCOPE AND APPLICATION
NCSG has implemented the Focused Inspection Process to provide a system to identify process hazards which measure compliance to health and safety standards and legislation. The data obtained from these inspections will be used to implement improvements that are required on the identified processes that are non-compliant.

3.0 DEFINITIONS
- **Cycle** A schedule; of consecutive work days or shifts that is repeated.
- **Focus Inspection** An inspection which; focuses on a particular task or process to identify opportunities for improvement.
- **Finding** A health or safety hazard, a substandard condition, a substandard practice, or negative environmental impacts.
- **Hazard** A condition with the potential for human injury or illness, damage to property, damage to the environment, or any combination of these.
- **Inspection Team** Employees, Operators, Supervisors, Site/Project/Branch Managers and HS&E Advisors.

4.0 EXPECTATIONS
Focused Inspections will be performed by Supervisors, Managers and HSE Advisors. Active participation in the program is an occupational requirement which promotes health and safety awareness and reduces workplace incidents.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
Employees are responsible to:
- Cooperate with the inspection team during a focus inspection;
- Participate in focus inspections when requested.

5.2 HS&E Advisors
It is the responsibility of HS&E Advisor’s to:
- Select the Focus Observation teams;
- Select the Focused Inspection categories which apply to the site;
- Compile the inspection data;
- Provide recommendations for improvement;
- Provide Focused Inspection training;
- Monitor program effectiveness.

5.3 Focused Inspection Team
It is the Inspector’s responsibility to:
- Perform focused inspections as per the Focused Inspection Schedule;
- Document inspection findings;
- Report inspection findings, both compliant and non-compliant, to site Supervisor;
- Provide feedback to employees on inspection findings;
- Provide Inspection to HS&E Lead for review.

6.0 METHOD

6.1 Schedule
Each inspection team member shall complete at least two focused inspections per month. The designated HS&E Advisor will review the inspections for efficiency and thorough completion.

6.2 Categories
- 100% Safe
- Barricades
- FLRA/JSA
- Fall Protection
- Housekeeping
- Cranes and Equipment
- FLRA Card
- Equipment Blocking
- Power and Hand Tools
- Environment Care
- Permit Compliance
- Personal protective Equipment
- WHMIS – Chemical Inventory
- Mechanical Isolation
6.3 Process
Focused inspection forms are designed to be generic in order to be applicable at different sites.

When conducting a focused inspection, observe the area or task to be inspected and check off each identified item as compliant or non-compliant on the applicable checklist. Tally the total compliant items and divide it by the total number of items on the focus inspection checklist itself. This will provide you a percentage of total compliance with the inspection conducted. (i.e. the total number of items on the checklist is 45 and 37 of these were compliant. 37 ÷ 45 = 0.82. Compliance is 82%). A compliance score of 80% or greater is an acceptable focus inspection score.

The score is not the primary focus, although it gives a generality of the compliance on that particular area. The focus is on the actions put in place to correct the non-compliant items.

Non-compliant items will be tracked in the Focused Inspection Tracking Tool (Appendix A) and through graphical, bar chart representation for weekly, monthly/quarterly trending of cumulative data. Corrective actions must be determined for each item checked as non-compliant to ensure a method is in place to reduce the risk to employees.

7.0 TRAINING REQUIREMENTS AND MATERIAL
• Focused Inspection Training
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
10.3 Planned General Workplace Inspection Process

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Planned General Workplace Inspection Process to help prevent work-related injuries and illnesses. Inspections identify and record hazards for corrective actions to be determined and put forth to ensure a healthy and safety workplace. Inspections also ensure that existing health and safety standards, procedures and controls remain effective.

Planned General Workplace Inspections are a critical element in the overall Health, Safety and Environment Management System which requires regular examinations throughout NCSG from all levels of the company’s hierarchy.

2.0 SCOPE AND APPLICATION
NCSG has implemented a Planned General Workplace Inspection Process which examines the; who, what, when, where and how of the workplace. Substandard conditions and acts identified are recorded and an action plan developed to prevent reoccurrence.

This document establishes the expectation and standard method for conducting planned general workplace inspections throughout NCSG. It is designed to incorporate all NCSG sites, offices and facilities to identify health, safety and environment areas which require corrective actions.

Recognizing the focus of identifying hazards and correcting them in order to prevent workplace incidents, subjects this program to ongoing review and revisions. Necessary modifications will be made to this document as required to meet applicable legislation and standards.

3.0 DEFINITIONS
Finding A health or safety hazard, a substandard condition, a substandard practice, negative environmental impacts.

Hazard A condition with the potential for: human injury or illness, damage to property, damage to the environment, or any combination of these. Hazards can be classified as:
- Physical – such as inadequate lighting on stairs or slippery floors
- Chemical – such as insecticides or petroleum
- Biological – such as fungi or Infections
- Mechanical or electrical – such as bared electrical wires
- Psychological – such as violence and interpersonal conflict.

Project Site A location which; requires NCSG employees and sub-contractors to provide a service under a contract or service agreement.

Office Site A fixed facility location which; requires NCSG employees and sub-contractors to provide a service, including office, shop and warehouse environments.

Inspection Checklist A document identifying the main items the inspection team is checking and includes information on the location, date and inspection team.

Planned Inspection Type of inspection that is a planned walkthrough or examination of a workplace, selected work area, or particular hazards, machinery, tools, equipment and work practices. Planned inspections must include an inspection of work processes and procedures.

Internal Responsibility System The system of internal audit for: occupational health, safety and quality that is shared by all parties in the workplace.

Inspection Team Can include the safety advisor, supervisor, worker, and in some instances human resource personnel, OH&S committee members, external agencies such as governmental, emergency responders, suppliers, manufacturers.

4.0 EXPECTATIONS
Planned general inspections will take place on a regular basis by all levels of employees within NCSG.
- Executives will perform site inspections at least once per year.
- Branch Managers will perform site inspections at least twice per year.
- Site, Shop, and Department Managers will perform site inspections at least once each quarter.
- HS&E Advisors will perform site inspections at least once each month.
- Employees will perform site inspections as required.
- It is the responsibility of the individual to ensure the expectations are being met in order to identify areas which require corrective actions in an effort to maintain a healthy and safe workplace.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
- Participate in planned general workplace inspections when required.

5.2 Supervisors
- Ensure the Planned Workplace Inspection Program is scheduled and implemented in their areas;
- Provide Employees with equipment and resources in order to comply with the Program;
- Monitor Inspection Deficiency Reports to ensure they are compliant with the Program; and
• Take action to prevent accident and injury.

5.3 HS&E Advisors
• Educate Supervisors with respect to the Program;
• Provide assistance to Supervisors in applying the Program;
• Provide resolution of any questions of interpretation;
• Support supervisors in meeting their responsibilities;
• Participate as indicated on the Inspection Schedule.

5.4 Inspection Team
• Conduct regular inspections of their assigned areas and document all findings;
• Identify and categorize hazards;
• Ensure proper reporting towards ensuring correcting any workplace hazards or deficiencies;
• Undertake the necessary research and investigation to define the hazard; and
• Continually monitor the status of the inspection process and its ability to remain effective.

6.0 METHOD
6.1 Identify Planned Inspection Schedule
Annually, Regional Team Lead’s – HS&E in conjunction with the applicable Manager(s) will identify all locations that require inspection in the calendar year, based on the following minimum criteria:
• Project Sites shall be inspected once per week.
• Office Sites shall be inspected once per month.
• Records shall be kept of the history of the sites inspected as well as any corrective actions taken.

The Planned General Workplace Inspection schedule will include:
• Executives will perform site inspections at least once per year.
• Branch Managers will perform site inspections at least twice per year.
• Site, Shop and Department Managers will perform site inspections at least once each quarter.
• HS&E Advisors will perform site inspections at least once each month.
• Employees will perform site inspections as required.

Note: The intent of this requirement is to provide a fresh perspective and/or share area specific information and best practices.

6.2 Perform Planned Inspections
• The inspection team should familiarize themselves with the Planned Workplace Inspection Program.
• Review the inspection report from previous inspections with the inspection team prior to the inspection taking place.
• Identify the appropriate Planned Workplace Inspection Form to be completed during the inspection. (i.e. project site or office site)
• Assign an individual on the team to complete the appropriate form.
• Visually inspect the site for hazards, physical, health, safety and environmental findings.
• Review all pertinent documentation and conduct interviews as needed.
• Document all findings on the Planned Inspection Form. These forms outline the minimum criteria for sites (i.e. project sites and office safety) as well as help to ensure consistent physical conditions.
• Forward completed Planned Workplace Inspection records to the HS&E Administrator for filing and to be retained for three years.

6.3 Types of workplace hazards to look for in the workplace
• Safety hazards; e.g., inadequate machine guards, unsafe workplace conditions, unsafe work practices.
• Biological hazards caused by organisms such as viruses, bacteria, fungi and parasites.
• Chemical hazards caused by a solid, liquid, vapor, gas, dust, fume or mist.
• Ergonomic hazards caused by anatomical, physiological, and psychological demands on the worker, such as repetitive and forceful movements, vibration, temperature extremes, and awkward postures arising from improper work methods and improperly designed workstations, tools, and equipment.
• Physical hazards caused by noise, vibration, energy, weather, heat, cold, electricity, radiation and pressure

6.4 Reporting
Completed Planned Inspection records shall be forwarded to the Regional Team Lead HS&E.
• Those findings with a category “A” Hazard classification will have immediate arrangements made to manage the hazard to an acceptable level (awaiting final resolution, if applicable).
• When findings have been assigned a “B” or “C” hazard classification, priority will be given to have them corrected within 14 days.
• Findings classified as a “D” Hazard, will be corrected within 30 days.
• Any decision made to provide no corrective action shall be documented and is to include the name of the authorized employee.
• Local site considerations will be assessed and resolved by the Site Supervisor.

6.5 Classification
“A” Hazard
• A condition or practice likely to cause permanent disability, loss of life, extensive damage or negative environmental impact.
• Must be corrected immediately.

“B” Hazard
• A condition or practice likely to cause temporary disability or disruption to property or environmental damage.
• Must be corrected within 14 days.

“C” Hazard
• A condition or practice likely to cause minor injury or damage.
• Must be corrected within 14 days.

“D” Hazard
• Housekeeping issues.
• Must be corrected within 30 days.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• Planned General Workplace Inspection Training

8.0 RESOURCES
Please direct any questions that you may have regarding the Process to the Regional Team Lead HS&E.

9.0 APPENDICIES
• Appendix A – Project Site Inspection Form
• Appendix B – Office Inspection Form

10.0 REFERENCES
• Occupational Health and Safety Legislation
• Health, Safety and Environment Management System Standard
10.4 HS&E Assigned Tasks

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG have developed an HS&E Assigned Task’s Process to ensure active involvement and participation in our Health and Safety Management System. NCSG has a responsibility to promote encourage and create a process to which all levels of supervision and management have an active role in the success of our health and safety commitment.

Although tracked individually, the specific actions within this process should be done when feasible jointly amongst teams of Management, Workers and HS&E. Credit for the tracked tasks would then be shared amongst all involved team members.

Being our highest Core value, it is our expectation that this Process is fully implemented and led by example.

2.0 SCOPE AND APPLICATION
The scope of this process is to provide direction and define the expectation of HS&E Assigned Task’s or activities. Each level of supervision and management has a defined frequency and established tasks to achieve throughout the calendar year. This Process applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
Assigned Task’s Specific HS&E tasks or activities to be performed

Branch Management Inclusive of Branch Manager, Site Manager, Project Manager, Shop Manager, Assistant Branch Manager, Assistant Site Manager, Assistant Project Manager, and Operations Manager.

Supervisor Inclusive of Crane and Rigging Supervisor, Supervisor, Foreman, Dispatcher.

Executive Inclusive of President/CEO, CFO, VPs and Directors.

General Administration Inclusive of all general positions not previously listed including Engineering, Manager of Maintenance, Purchasing Manager, VP Aboriginal Affairs, VP Sales and Marketing, and Controllers.

Other Manager Inclusive of all general manager positions not covered under Branch Management or General Administration.

Examples; Manager of Training, Manager of Transportation Safety & Compliance, Business development Managers.

4.0 EXPECTATIONS
The HS&E Assigned Task’s Process shall provide required and adequate guidelines to ensure the expectations active involvement in our Health and Safety Management System are fully understood. This process will be reviewed at a minimum of every three years.

5.0 ROLES AND RESPONSIBILITIES

5.1 Executive
- Review the Assigned Task’s annually and amend as needed.
- Formally approve the Assigned Task’s as a tracked performance measure.
- Assign a weighted factor on all performance management documentation for the successful completion of Assigned Task’s.

5.4 HS&E Manager
- Coordinate the annual review of the Assigned Task’s and make recommendations for revisions.
- Develop and annually update training materials required for this Process.
- Audit the quality and effectiveness of this Process.
- Provide an overall report on the ongoing progress tracked monthly to Senior Managers and Executive.

5.5 Vice President(s), General Manager
- Ensures communication to all staff as a part of performance management annually.
- Tracks all positions under area of responsibility monthly and encourages active involvement.
- Report annually to the Executive on the measured performance of the Assigned Task’s for areas of responsibility.
- Visibly supports this Process.

5.6 Branch Management
- Provides training and guidance to all applicable staff under area of responsibility on the implementation of this Process.
- Reviews at a minimum of bi-monthly the region’s tracking report generated from the locale HS&E Advisor/Administrator.
- Provides regular reporting on Assigned Task’s achieved per position under area of responsibility to applicable Vice President/General Manager and HS&E Manager.
- Tracks all positions under area of responsibility and encourages active involvement.
- Visibly leads this Process and encourages active involvement.

5.7 HS&E Team
- Assists Branch Management in interpreting this Process.
- Assists Branch Management with training specific form use, completion and quality assurance.
• Provides any assistance in entering required documents into S2 Web.
• Provides active assistance and coaching on how to complete each Assigned KPI.
• Weekly updates a region specific tracking report by specific employee and makes this report readily available to Branch Management and HS&E Manager.

6.0 METHOD

6.1 Defining HS&E Assigned KPI’s
Starting in December each year the Executive will meet and review the current status of the overall Health, Safety and Environment Management System. This review will look at our statistical performance, trends, exposed and perceived risks, lagging indicators and leading indicators.

Recommendations brought forth by all levels of management, industry best practice and outside stakeholder influence will form the basis to review and establish annual HS&E Assigned Task’s.

The Executive will formally endorse the annual Assigned Task’s and establish a weighted average to be applied on all Performance Management documents with Human Resources.

Example of annual Assigned Task’s;

<table>
<thead>
<tr>
<th>Role</th>
<th>Task</th>
<th>Frequency per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSO/CM</td>
<td>Corrective Action/incident Review</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>Buddy/Client tour</td>
<td>1 per month</td>
</tr>
<tr>
<td></td>
<td>HSE Committee Meeting</td>
<td>0.5 per month</td>
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<tr>
<td></td>
<td>Tool box talks</td>
<td>4 per month</td>
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<tr>
<td></td>
<td>Monthly Safety Meetings</td>
<td>1 per month</td>
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<tr>
<td></td>
<td>Client Safety/Progress Meetings</td>
<td>1 per month</td>
</tr>
<tr>
<td></td>
<td>Regional Safety Call</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>Monthly Safety Call</td>
<td>1 per month</td>
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</tbody>
</table>

6.2 Performance Reviews
Each year in January, all staff participates in performance reviews, this includes measuring the previous year and establishing targets for the present year underway. All staff must apply the weighted factor against their specific tracked performance of the HS&E Assigned Task’s.

Human Resources and the HS&E Manager can assist with any interpretation questions or clarity needed.

6.3 Awareness
Annually the HS&E Manager will update & provide training material to support this Process. The current training and reference material will be available on the Hub, through your Manager and from the HS&E Manager.

Each leader (Manager, General Manager, and Vice President) is expected to make themselves informed on this Process and to take the time to ensure all staff under their area of responsibility is informed on the expectations, methods, etc. of this Process.

6.4 Tracking Progress
All levels as defined within this process will be required to submit their respective completed inspections, observations, evaluations, etc. to their locale HS&E Advisor / Administrator. Weekly the HS&E Advisor/ Administrator will update the tracking report applicable to the region and make it readily available for the Branch Management to review.

Branch Management will be responsible to ensure continuous progress and to report on the applicable region progress to their respective Vice President/General Manager.
Tracking example form;

<table>
<thead>
<tr>
<th>2013</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
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</thead>
<tbody>
<tr>
<td>CSO/CM</td>
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<tr>
<td>FLRA Eval</td>
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<tr>
<td>Focus Inspection</td>
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<tr>
<td>Shop Inspection</td>
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<tr>
<td>Yard Inspection</td>
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<tr>
<td>Office Inspection</td>
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<tr>
<td>Worksite Inspection</td>
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<tr>
<td>Behaviour Observation</td>
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<tr>
<td>Driver Evaluation</td>
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<tr>
<td>Tool box talks</td>
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<tr>
<td>Client tour</td>
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<tr>
<td>HSE Committee Meeting</td>
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</tbody>
</table>

The HS&E Manager will monthly produce a corporate roll up report for all Branches for the Executive and Vice President/General Manager to review and discuss.

6.5 Quality Control
On a regular basis, the HS&E Manager and his staff of resources will conduct regular reviews of the Assigned KPI’s completed (inspection forms, observations, etc.). The focus will be on continuous improvement through active coaching with the applicable Leader.

Each Leader will actively engage their staff to facilitate appropriate feedback and coaching as required to improve the quality and effectiveness of this Process.

7.0 Forms and Documents
The following are sample documents referenced in the Assigned KPI’s;

Appendix
1. CSO/CM
2. FLRA Evaluation
3. Shop/Yard/Worksite Inspection
4. Office Inspection
5. Behaviour Observation
6. Corrective Action Report
7. Driver Evaluation
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
### 10.4.1.11 Electrical And Power Tool Focused Inspection

**Inspector:** ___________________  
**Date of Inspection:** ________________  
**Branch:** ______  
**Location:** _____________

**Supervisor:** ___________________  
**Manager:** ___________________  
**HS&E Advisor:** ___________________

<table>
<thead>
<tr>
<th>Items to be Inspected</th>
<th>Compliance</th>
<th>Non Compliance</th>
<th>Imminent Danger</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Cords</strong></td>
<td></td>
<td></td>
<td>-20% Each</td>
<td></td>
</tr>
<tr>
<td>• Free of exposed wires, burns, cracks, splices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• No bent connections / prongs</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Grounding prong is intact</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Positioned to avoid damages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Positioned to avoid creating tripping hazards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Unwound and free of kinks when in use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• No cords near water or combustible sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• UL rating meets the requirement of the job</td>
<td></td>
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</tr>
<tr>
<td><strong>Outlets</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• GFCI tested and functioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Plugs are fully inserted</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Three pronged plug are in three pronged outlets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Circuits are kept from overloading (1 cord / outlet)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Breaker Panels</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Labeled</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Accessible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power tools and equipment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Clean and damage free</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Protected from getting wet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Inspected prior to use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

<table>
<thead>
<tr>
<th>Sub-Totals</th>
<th>Imminent Danger = -20% off total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Values (Combined)</td>
<td></td>
</tr>
</tbody>
</table>

% Compliance = (In Compliance X 100) / Total

% Compliance This Week: ___________________
## APPENDIX A – Compliance Monitoring

### Compliance Monitoring

<table>
<thead>
<tr>
<th>Date:</th>
<th>Location:</th>
<th>Companies:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observers:</th>
<th></th>
<th>Unit #:</th>
<th>Task Observed:</th>
<th>Operator Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Hazards Observed

<table>
<thead>
<tr>
<th>Category</th>
<th>Hazard</th>
<th>Safe</th>
<th>At Risk</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Above Ground Work</strong></td>
<td>- Fall protection being used properly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ladders (proper 3-point contact being used)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- No one in the “line of fire”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Rigging – Weight of load being communicated to operator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Rigging – Riggers know center of gravity and lifting configuration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Rigging – Arm gaitet worn by designated signal person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Rigging – Rigging inspected</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Hoisting &amp; rigging practiced understood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Crane lift classified</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Crane FLRA completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Daily crane log book completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Crane operator has copy of lift plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Deck free of oil and debris</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Outriggers fully extended, pinned and proper pads used</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mobile Cranes – Unattended crane secured properly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FLRA</strong></td>
<td>- Crew FLRA completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Scope of assigned task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Communicated specific hazards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Describe mitigation of hazards and implemented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flagging &amp; Tags</strong></td>
<td>- Appropriate flagging/signs used</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Flagging identified by flagging tags</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Housekeeping</strong></td>
<td>- Adequate lighting for work task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Tools and materials stored properly when not in use</td>
<td></td>
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</tr>
<tr>
<td>Task Location</td>
<td>Emergency Meeting Point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Identify & Prioritize the Steps & Hazards below, then identify the plan to eliminate or control the hazards.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Hazards</th>
<th>Plans to Eliminate or Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reviewed 1st Break: YES □ NO □
Is a lockout required? YES □ NO □
Reviewed 2nd Break: YES □ NO □
Warning or Caution tape? YES □ NO □
Reviewed 3rd Break: YES □ NO □

Please print name & sign below (all members on this task) prior to commencing work & initial when task is completed or at the end of the shift.

Worker Name & Signature (below):

Supervision Name & Signature (below):

All names & signatures must be legible.

 Reviewed by (name & signature): Date: __________

FIELD LEVEL RISK ASSESSMENT

Review the following and check the items which apply to the job.

Permits

<table>
<thead>
<tr>
<th>Required</th>
<th>Reviewed</th>
<th>Reviewed w/crew</th>
<th>All permit conditions met</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
<td>N/A</td>
<td>Y</td>
<td>N/A</td>
</tr>
</tbody>
</table>

PPE

<table>
<thead>
<tr>
<th>RPE</th>
<th>Trained in use / Fit Tested</th>
<th>Inspected / Good condition</th>
<th>Gloves</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Tools / Equipment

<table>
<thead>
<tr>
<th>Proper tools for the job</th>
<th>Inspection prior to use</th>
<th>Qualifications (if appropriate)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Access / Egress

<table>
<thead>
<tr>
<th>Confined Space Entry</th>
<th>Scaffold (Properly Inspected &amp; Tagged)</th>
<th>Ladder (Properly Inspected &amp; Tagged)</th>
<th>Aerial lift (UL, Scissorlift, etc.)</th>
<th>Personnel basket (Inspected &amp; Approved)</th>
<th>Hoisting of tools</th>
<th>Special Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>Y</td>
<td>N/A</td>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Overhead Work

<table>
<thead>
<tr>
<th>Barricades</th>
<th>Signs</th>
<th>Hole Cover</th>
<th>Fire Blanket</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>Y</td>
<td>Y</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Ergonomics

<table>
<thead>
<tr>
<th>Awkward body position</th>
<th>Overexertion</th>
<th>Sustained position</th>
<th>Repetitive motion</th>
<th>Twisting motion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Rigging & Hoisting Hazards

<table>
<thead>
<tr>
<th>Lift Study required</th>
<th>Proper tools used</th>
<th>Loads inspected</th>
<th>Stings inspected</th>
<th>Critical lift permit</th>
<th>Others working overhead or below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>Y/A</td>
<td>Y/A</td>
<td>Y/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Housekeeping

<table>
<thead>
<tr>
<th>Area clear &amp; free</th>
<th>Trash containers</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>Y/A</td>
</tr>
</tbody>
</table>

Hazard

<table>
<thead>
<tr>
<th>Proper tool and material placement</th>
<th>Hot / Cold surfaces or material</th>
<th>Adequate lighting</th>
<th>Fall potential</th>
<th>Pinch points</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
<td>Y/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Lifting

<table>
<thead>
<tr>
<th>Manual Lifting (body position)</th>
<th>Proper rigging practice</th>
<th>Mechanical, i.e., crane, chainfall, come-along</th>
<th>Condition of equipment (All involved with)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y/A</td>
<td>Y/A</td>
<td>N/A</td>
<td>Y/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Process Hazards - Client

<table>
<thead>
<tr>
<th>Process Equipment - hot or cold</th>
<th>Fumes or fumes</th>
<th>Hydrocarbon leaks</th>
<th>Steam leaks</th>
<th>Protruding values or instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y/A</td>
<td>Y/A</td>
<td>Y/A</td>
<td>Y/A</td>
<td>Y/A</td>
</tr>
</tbody>
</table>

Read and know the safety rules for your job. Expect the unexpected and plan ahead. Audit for hazard continuously. Communicate any problems or concerns. Think safe first always.
## APPENDIX C – Worksite Inspection

### Planned Workplace Inspection

<table>
<thead>
<tr>
<th>Item</th>
<th>Location</th>
<th>Hazard Class</th>
<th>Repeat Item?</th>
<th>Action</th>
<th>Action By Whom</th>
<th>Action By When</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fire Extinguisher</td>
<td>Smoke Pit</td>
<td>D</td>
<td>N</td>
<td>Out of Date, Updated on Monthly Fire Extinguisher January</td>
<td>Kevin Smith</td>
<td>12-Jan-13</td>
</tr>
<tr>
<td>2</td>
<td>Fire Extinguisher</td>
<td>Lunchroom Stairs</td>
<td>D</td>
<td>N</td>
<td>Out of Date, Updated on Monthly Fire Extinguisher January</td>
<td>Kevin Smith</td>
<td>12-Jan-13</td>
</tr>
<tr>
<td>3</td>
<td>Fire Extinguisher</td>
<td>Office Stairs</td>
<td>D</td>
<td>N</td>
<td>Out of Date, Updated on Monthly Fire Extinguisher January</td>
<td>Kevin Smith</td>
<td>12-Jan-13</td>
</tr>
<tr>
<td>4</td>
<td>Glass Window Crack</td>
<td>Office Trailer Hallway</td>
<td>D</td>
<td>N</td>
<td>Taped and Marked until replacement arrives</td>
<td>Lisa Myers</td>
<td>21-Jan-13</td>
</tr>
<tr>
<td>4</td>
<td>Housekeeping</td>
<td>Red Ribbon protruding from under frozen snow</td>
<td>C</td>
<td>N</td>
<td>Cleaned up during inspection</td>
<td>Kevin Smith</td>
<td>12-Jan-13</td>
</tr>
<tr>
<td>4</td>
<td>Housekeeping</td>
<td>Garbage left behind in yard</td>
<td>D</td>
<td>N</td>
<td>Cleaned up during inspection</td>
<td>Kevin Smith</td>
<td>12-Jan-13</td>
</tr>
</tbody>
</table>

### Hazard Class

- **A**
  - A condition or practice likely to cause permanent disability, loss of life, extensive damage or negative environmental impact.
  - Must be corrected immediately.
- **B**
  - A condition or practice likely to cause temporary disability or destructive property or environmental damage.
  - Must be corrected within 14 days.
- **C**
  - A condition or practice likely to cause minor injury or damage.
  - Must be corrected within 14 days.
- **D**
  - Housekeeping issues.
  - Must be corrected within 30 days.
# APPENDIX D – Office Inspection

## Planned Workplace Inspection Office Checklist

### Location:

### Area:

<table>
<thead>
<tr>
<th>INSPECTORS:</th>
<th>HAZARD CLASS (A, B, C, D)</th>
<th>DATE:</th>
<th>HAZARD CLASS (A, B, C, D)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## HALLWAYS, ENTRANCES & STAIRWAYS

- Are they clean and unblocked?  
- Are they well lighted?  
- Are handrails, handholds in place?  
- Is emergency lighting available?

## COMMENTS:

### RECEPTION AREA

<table>
<thead>
<tr>
<th>FLOORS:</th>
<th>Are electrical or telephone cords exposed in areas where employees walk?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Are the floors slippery, oily or wet?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIGHTING</th>
<th>Are the areas well lighted?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Are bulbs missing?</td>
</tr>
<tr>
<td></td>
<td>Are any areas dark?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>Are the furniture/equipment safe?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- poor designed chairs</td>
</tr>
<tr>
<td></td>
<td>- sharp edges on desks and cabinets</td>
</tr>
<tr>
<td></td>
<td>- poor ergonomics (keyboard elevation, chair adjustment)</td>
</tr>
<tr>
<td></td>
<td>- overcrowding</td>
</tr>
<tr>
<td></td>
<td>Are extension cords used extensively?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATERIAL STORAGE</th>
<th>Are materials neatly and safely piled?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Are large and heavy objects stored on lower shelves?</td>
</tr>
<tr>
<td></td>
<td>Are passageways and work areas clear of obstructions?</td>
</tr>
<tr>
<td></td>
<td>Are desk and file drawers kept closed when not in use?</td>
</tr>
<tr>
<td></td>
<td>Are filing stools or waste baskets placed where they might be</td>
</tr>
<tr>
<td></td>
<td>tipping hazards?</td>
</tr>
<tr>
<td></td>
<td>Are paper and waste properly disposed?</td>
</tr>
</tbody>
</table>

|          | Are office accessories in secure places?                               |
|          | Are materials stacked on shelves or cabinets?                         |
|          | Are file cabinet drawers overloaded?                                  |
|          | Are file cabinets loaded with the heaviest items in the bottom         |
|          | drawers?                                                               |

|          | Is First Aid Kit clearly marked and accessible?                        |

### COMMENTS:

---

NCSG Crane & Heavy Haul Services

Health, Safety & Environment Manual

10-19
APPENDIX E – Behaviour Observation (S2Web)

[36] Job Observation, 11/26/2012, Soda Spr 31, workers were slackin

**Job Observation**

- **Print:** Email
- **Date (m/dd/yyyy):** 11/26/2012
- **Yard:** Soda Spr
- **Potential Severity:** Select one
- **Location:** crane yard
- **Reported By:** Hulse, Mike

**Observation Type**
- **Observation Behaviour:** Positive
- **Observation Type:** Working Conditions
- **Observation Identified:** Following Safety Standards

**What Was Observed**

workers were stacking trailers up in the yard for transport to a job site. The crane was set up well, and all the paper work was done prior to work being done. The crew used taglines and did the job safely. Body position was acceptable, and everyone was informed about the hazards.

**Action(s) Assigned or Taken Add**

There are no Actions to Display

**Supporting Documents Add**

There are no Documents to Display

Sign Off Date

Sign Off By

Signed Off By: Select one

APPENDIX F – Corrective Action Report (S2Web)

<table>
<thead>
<tr>
<th>Issue</th>
<th>Noted</th>
<th>Date</th>
<th>Worked By</th>
<th>Category</th>
<th>Issue</th>
<th>Action, Time</th>
<th>Recommended Action</th>
<th>Action Taken</th>
<th>Date</th>
<th>Date Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>55</td>
<td>1/26/2013</td>
<td>Billee, 32</td>
<td>Safety</td>
<td>Post holes in bed of truck</td>
<td>Ensure that post holes are drilled of fluid after use. Ensure to use approved method. Test to prevent missing post to fall into body.</td>
<td>Hulse to all branch managers, field service managers, mechanics and office.</td>
<td>Hulse</td>
<td>1/26/2013</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>113</td>
<td>1/31/2013</td>
<td>Ralph, Dan</td>
<td>Line</td>
<td>Reflector not aligned with equipment</td>
<td>Review of OHS legislation regarding the recording of maintenance work. Visit same site.</td>
<td>Hulse to review legislation with maintenance staff.</td>
<td>Hulse</td>
<td>1/31/2013</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>122</td>
<td>1/31/2013</td>
<td>Ralph, Dan</td>
<td>Line</td>
<td>Reflector not aligned with equipment</td>
<td>Review of OHS legislation regarding the recording of maintenance work. Visit same site.</td>
<td>Hulse to review legislation with maintenance staff.</td>
<td>Hulse</td>
<td>1/31/2013</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>222</td>
<td>1/31/2013</td>
<td>Lomax, Ken</td>
<td>Maintenance</td>
<td>Check and document time and work</td>
<td>Review of OHS legislation regarding the recording of maintenance work. Visit same site.</td>
<td>Hulse to review legislation with maintenance staff.</td>
<td>Hulse</td>
<td>1/31/2013</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>221</td>
<td>1/31/2013</td>
<td>Lomax, Ken</td>
<td>Maintenance</td>
<td>Check and document time and work</td>
<td>Review of OHS legislation regarding the recording of maintenance work. Visit same site.</td>
<td>Hulse to review legislation with maintenance staff.</td>
<td>Hulse</td>
<td>1/31/2013</td>
<td></td>
</tr>
</tbody>
</table>
11.1 Incident Management Process

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed an Incident Management Process to ensure that all incidents that cause, or have the potential to cause, injury or illness, damage to equipment or property or regulatory non-compliance will be reported and investigated.

Investigating the facts and circumstances of incidents and near misses to determine root causes and develop action plans prevents recurrence. It is also essential to ensure all incidents are communicated appropriately and in an effective manner.

2.0 SCOPE AND APPLICATION
The Incident Management Process was designed and developed to ensure employees are capable of recognizing and acknowledging when an incident has occurred and reporting the incident so that a proper investigation can be conducted to identify the facts and not place blame.

Notification and investigation of incidents determines root causes and allows for corrective and preventive measures, controls and actions to be developed to prevent recurrence. All incidents that occur as a result of or during NCSG or its affiliated companies business will be investigated.

3.0 DEFINITIONS

Cause Analysis A process to identify the immediate/direct, and or, basic/root causes that result in an incident.

Emergency A present or imminent event that; requires prompt coordination of actions or special regulation of persons or property to protect the health, safety, or welfare of people or public, or to limit damage to property and the environment.

First Aid (FA) A minor injury: requiring usually a one-time treatment, regardless of the professional status of the person providing the treatment.

Incident An incident is an unintended occurrence that did, or could have, resulted in injury, damage or loss. This includes all occupational injuries / illness, damage to property, damage to the environment and loss to processes.

Investigation Analysis of all incidents with the intent of establishing a root cause and determining corrective/preventive measures to prevent recurrence

Lost Time Injury or Days Away (DA) An injury that required medical attention and days are lost following the day of the injury or illness.

Medical Aid (MA) An injury that requires medical attention in accordance with NCSG Classification Standard, but no days are lost beyond the date of injury or illness.

Modified Duty or Restricted Work (MW/RW) May consist of, but is not limited to, the employee's normal work that has been changed, redesigned, or physically modified, including reductions in time or volume. It may also encompass a training opportunity, work which is normally performed by others, or work which has been specifically designed or designated as a modified work program. The goal of modified work is to provide the injured employee with the opportunity to utilize the work site as part of their treatment program. The work acts as a bridge, enabling an employee to work toward a return to their normal job and the normal activities of their life. The work will be appropriate, meaningful and productive. All work will be performed safely and without undue risk of re-injury and without undue risk to others or NCSG property.

Near Miss (NM) An incident that: could have, but did not result in unintended harm or damage.

4.0 EXPECTATIONS
All incidents shall be communicated within the timelines identified in the Incident Notification Standard - Reporting Chart

Incident investigation shall determine the facts of the incident identify root causes and make recommendations to prevent recurrence. Recommendations shall be tracked in S2web. This shall include identifying who is responsible for the corrective actions, due dates and resources required.

Incidents shall be reported to your Supervisor and applicable HS&E Advisors. Incident reports and corrective/preventive actions shall be monitored through S2web by the applicable Branch Manager and the respective HS&E Advisor.

Incidents and corrective/preventive actions shall be shared and openly discussed/reviewed with applicable staff via toolbox talks, safety meetings, operational discussions and HS&E Committees.

5.0 ROLES AND RESPONSIBILITIES

5.1 Executive (CEO, CFO, VP HS&E)
- Be accountable for monitoring compliance with the IMP.
- Be responsible for handling Media, Legal and Public affairs.
- Monitor incidents and investigation results within S2web
- Challenge the trends, incident findings and Management at all layers to ensure appropriate actions are
taken to prevent reoccurrence.  
• Support Operations with the sufficient resources to protect our workers from harm.  
• Monitor updates from the applicable Operations VP, Branch Manager and the Corporate Manager HS&E when the media is involved.  
• Review the details of incidents with legal counsel to determine the need for privileged and confidential handling of reports and documentation, when necessary.

5.2 Operations – Vice President  
For the purpose of this process, the Operations VP will;  
• Be accountable for the implementation of the IMP.  
• Ensure incidents are reported properly and investigated as per the IMP.  
• Oversee all Corrective and Preventive actions as assigned in S2web and ensure completion of all actions.  
• Notify Executive (CEO/VP HS&E) of incident  
• Review all the details of incidents with applicable Managers to ensure an effective investigation has taken place and is properly entered into S2web.  
• In absence of Manager, take the active lead role for both Operations and Management.  
• Direct media inquiries and responses to the Executive.

5.3 Managers  
For the purpose of this process, a Manager will be defined as; Branch Manager, Department Manager, Site Manager, Office Manager, Manager of Training or Project Manager.  
• Be accountable for the implementation of the IMP.  
• Immediately notify respective Operations – Vice President.  
• With respect to A&D testing, a request for variance must go through the Operations – Vice President for approval at the Executive level.  
• Ensure incidents are reported timely, accurate and investigated as per the IMP.  
• Provide adequate resources required to mitigate loss, protect the scene, care for any injured, investigate cause and remediate loss.  
• Determine causation for each near miss, incident and observation reported within your area of responsibility  
• Assign appropriate corrective actions and follow up until completion for every near miss, incident and observation entered into S2web.  
• Ensure all incidents, near misses and observations are entered into S2web. Managers are accountable for the quality of the data entered into S2web.  
• Direct media inquiries and responses to the Executive.  
• In absence of Supervisor, Manager will assume Investigator role.

5.4 Supervisors  
For the purpose of this process, a Supervisor will be defined as Supervisor, Team Lead, Superintendent, General Foreman or Foreman.  
• Lead the investigation.  
• Notify HS&E Advisor.  
• Brief Manager on incident as per Notification matrix.  
• Ensure all incidents, near misses and observations are investigated with corrective action taken. Supervisors are the Investigators and in their absence the Manager will assume this role.  
• Ensure Alcohol & Drug program is followed.  
• Ensure notifications are completed as per the Incident Notification Standard – Reporting Chart.  
• Secure the scene to protect evidence  
• Protect the scene, public and environment from further harm  
• Gather necessary information and complete all required documentation.  
• Involve HS&E where necessary to assist in the completion of a detailed investigation and analysis of incidents.  
• Ensure the proper assistance and treatment is provided to injured employees. 

5.4 Employees  
• Ensure all incidents are immediately reported to a Supervisor  
• Provide factual information regarding incidents.  
• Assist in the incident investigation process when required.

5.5 HS&E Advisors and HS&E Lead’s  
• Assist in determining the incident category.  
• Advise Supervisors and Managers on necessary documentation and reporting requirements.  
• Provide assistance to management in organization or administration of investigation activities.  
• Provide support to management in the completion of investigation, cause analysis and determination of recommendations.  
• Provide recovery and remediation assistance.  
• Liaison with client as required.  
• Lead and participate in the IMP.  
• Provide training and support in S2web entry and maintenance.
6.0 INVESTIGATION METHOD

6.1 General

The Responsible Investigator will gather information that will answer:
WHO – Who was involved in the incident.
WHERE – The location that the incident occurred.
WHEN – The date and time of the incident.
WHAT - Provide a description of the incident.

Before the incident:
• What happened before the incident?
• What events lead up to the incident?
• What was the person doing right before the incident occurred?

At the time of the incident:
• What happened at the time of the incident?
• What was the employee doing at the time of the incident?
• What was the last event before the incident occurred?

After the incident:
• What happened after the incident?
• Who was involved?
• What treatment, if any, was given to the person?

Other information:
• Additional observations?
• Additional related information?

WHY – Incident causes and contributing factors:

From the WHAT, you should be able to identify hazards that the employee was exposed to and thus WHY the incident occurred. To determine the most probable cause and contributing factors, consider details of the investigation and, where possible, the employees incident statement. Determine if the incident was due to an ACT of an individual, a CONDITION of the working environment, or a PERSONAL factor inherent in an individual at the time of the incident.

HOW – Corrective measures

Once you know WHY the incident occurred, you can now determine HOW to prevent recurrence of this and similar incidents.

Following DNV SCAT analysis chart, identify the applicable corrective actions listed with the identified causes. Ensure to assign the corrective actions to appropriate individuals and dates at which the corrective actions should be in place.

The incident, near miss or observation must be entered into S2web ASAP (within 4 hrs) of the incident being reported. (Client’s may have specific reporting times as well)

6.2 Response

Recognize that an incident has occurred.

Supervisors will complete an initial assessment of the incident to determine the following:
• What has occurred?
• Who was involved?
• What is required to control the scene?
Determine if emergency response is required.

If the incident is an Emergency Situation follow the Site Emergency Response Plan for the type of incident. If the incident is not classified as an Emergency Situation continue following the Incident Management Process. (Absence of an Emergency Response Plan, do you have adequate resources to handle the situation? If not call Manager and HS&E immediately)

Prevent further loss by determining and implementing immediate corrective action.

Do not disturb the incident scene more than is necessary to safely remove injured personnel and shut down equipment still in operation.

Secure the incident scene to:
• Protect the public
• Protect the environment
• Prevent further incidents.
• Locate and preserve evidence.
• Meet legislative requirements.

6.3 Notification and Initial Reporting
Use the Incident Notification Standard - Reporting Chart to define the incident type and determine who needs to be notified. Verbally notify the appropriate individuals of the incident occurrence based on incident type. Regardless of incident severity, employee must still notify their Supervisor immediately.

The Supervisor shall notify support departments as necessary.

Following verbal notification of the incident occurrence, an initial summary will be entered into S2web.

6.4 Investigations
The loss causation model outlines an incident from the loss to the direct cause. Following this model during investigations will assist in determining incident cause and corrective actions.

6.4.1 Investigation tools and Equipment
Investigation kits shall be assembled, maintained and made accessible to all Supervisors and HS&E Advisors.

Investigation kits shall contain the following:
• Incident Notification Standard - Reporting Chart
• Incident Management Process
• Blank Witness statements
• Applicable Emergency Response Plans
• Personal Protective Equipment
• Digital Camera
• Clipboard, Paper, Pencils, Pens
• Graph Paper
• Tape Measure
• High Visibility Tape or barricade tape
6.4.2 Conduct Initial Assessment of Incident

Gather evidence to assist in determining causes of the incident such as the following:
- Diagrams
- Maps
- Photographs
- Measurements
- Videos
- Site plans

All evidence and incident investigation information (i.e. photos, videos, etc.) shall be dated and referenced as an attachment.

Record details immediately as the incident site may be subject to rapid change or evidence destroyed. Include details such as:
- Witnesses (i.e. contact information)
- RCMP/Police Officers
- Position of Injured (i.e. worker, public)
- Position of Equipment (i.e. hoist, vehicle)
- Position of Materials (i.e. chemicals, loads)
- Preventive Devices in use (i.e. guards)
- Ergonomic Conditions (i.e. lighting, machinery controls)
- Environmental Conditions (i.e. weather, temperature)
- Housekeeping (i.e. debris)

6.4.3 Determine Investigation Resources and Establish Investigation Team

The supervisor accountable for the incident selects resources required for the investigation based on the incident category and type of event. Keep the investigation team to a manageable size and include those personnel who will add value to the process.

The designated HS&E Advisor will sit as a member of the investigation team for all incidents. Incident summary reviews for all incidents shall reside as a standing agenda item for all recurring management and safety meetings.

Assign roles/tasks to each person involved in the team (i.e. contact person, leader, etc.) Designate a lead investigator to co-ordinate the investigation.

Provide the investigation team with the appropriate tools as outlined in 6.4.1.

6.4.4 Obtain and Evaluate Data

Put all those involved at ease
- Discuss with the individuals involved that the intent of the investigation is to prevent recurrence of similar incidents by determining cause(s) and that the investigation focuses on the facts to determine corrective and preventive actions.

Review the preliminary documentation
- Ensure the initial incident assessment details are recorded (i.e. positions of injured workers, where objects are in relation to each other, the angle something came from or the force behind an object).

Interview witnesses
- Talk with everyone who was in the area at the time of the incident, or just before, or just after it happened. This includes eyewitnesses, individuals involved, or others such as individuals familiar with the work practices, procedures or work area.

Evaluate historical data
- Obtain relevant information from analysis of the conditions at the time of the incident, or from prior records such as technical data sheets, maintenance reports, past incident reports, training reports, work schedules, planning schedules, work practices and procedures, etc.

Define sequence of events
- Determine the chronological order of the events. Include relevant events that occurred 48 hours prior to the incident and following the incident.

6.4.5 Complete Cause Analysis

Identify the conditions that describe the circumstances relative to each event. Follow the DNV SCAT Chart to complete a thorough analysis.
Describe the incident and categorize it as:
- Personal Incident
- Motor Vehicle Incident
- Property/Equipment Damage
- Environmental Incident
- Regulatory/Non-Compliance
- Security Incident
- Public/Media Incident

Evaluate the loss potential
- Low
- Moderate
- Serious
- Critical

**Determine the Immediate/Direct Cause**
Causes are often described as the substandard acts and conditions that precede the event. Classify the immediate or direct cause using the following table:

<table>
<thead>
<tr>
<th>Substandard Acts</th>
<th>Substandard Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Operating equipment without authority</td>
<td>21. Inadequate guards or barriers</td>
</tr>
<tr>
<td>2. Failure to warn</td>
<td>22. Inadequate or improper protective equipment</td>
</tr>
<tr>
<td>3. Failure to Secure</td>
<td>23. Defective tools, equipment or materials</td>
</tr>
<tr>
<td>4. Operating at improper speed</td>
<td>24. Congestion or restricted action</td>
</tr>
<tr>
<td>5. Making safety devices inoperative</td>
<td>25. Inadequate warning system</td>
</tr>
<tr>
<td>6. Using defective equipment</td>
<td>26. Fire and explosion hazards</td>
</tr>
<tr>
<td>7. Failing to use PPE properly</td>
<td>27. Poor housekeeping/disorder</td>
</tr>
<tr>
<td>8. Improper loading</td>
<td>28. Noise exposure</td>
</tr>
<tr>
<td>9. Improper placement</td>
<td>29. Radiation exposure</td>
</tr>
<tr>
<td>10. Improper lifting</td>
<td>30. Temperature extremes</td>
</tr>
<tr>
<td>11. Improper position for task</td>
<td>31. Inadequate or excess illumination</td>
</tr>
<tr>
<td>12. Servicing equipment in operation</td>
<td>32. Inadequate ventilation</td>
</tr>
<tr>
<td>13. Horseplay</td>
<td>33. Presence of harmful materials</td>
</tr>
<tr>
<td>14. Under the influence of alcohol and/or other drugs</td>
<td>34. Inadequate instructions/procedures</td>
</tr>
<tr>
<td>15. Using equipment improperly</td>
<td>35. Inadequate information/data</td>
</tr>
<tr>
<td>17. Failure to identify hazard/risk</td>
<td>37. Inadequate support/assistance</td>
</tr>
<tr>
<td>18. Failure to check/monitor</td>
<td>38. Inadequate communications hardware/software/process</td>
</tr>
<tr>
<td>19. Failure to react/correct</td>
<td>39. Road conditions</td>
</tr>
<tr>
<td>20. Failure to communicate/coordinate</td>
<td>40. Weather conditions</td>
</tr>
</tbody>
</table>

**Determine the Basic/Root Cause**
Once the Immediate/Direct cause is determined, possible Basic/Root causes can be identified. Basic/Root causes will be described under Personal Factors and Job/System Factors. Basic/Root causes may include:

<table>
<thead>
<tr>
<th>Personal Factors</th>
<th>Job/System Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inadequate physical/physiological capability</td>
<td>9. Inadequate leadership and/or supervision</td>
</tr>
<tr>
<td>2. Inadequate mental/physiological capability</td>
<td>10. Inadequate engineering</td>
</tr>
<tr>
<td>3. Physical or physiological stress</td>
<td>11. Inadequate purchasing</td>
</tr>
<tr>
<td>4. Mental or physical stress</td>
<td>12. Inadequate maintenance</td>
</tr>
<tr>
<td>5. Lack of Knowledge</td>
<td>13. Inadequate tools and equipment</td>
</tr>
<tr>
<td>7. Improper motivation</td>
<td>15. Excessive wear and tear</td>
</tr>
<tr>
<td>8. Abuse or misuse</td>
<td>16. Inadequate communications</td>
</tr>
</tbody>
</table>

6.4.6 Develop Recommendations for Corrective Action Plans

Once causes have been determined, appropriate corrective and preventive actions can be identified and implemented so similar incidents do not recur. Areas for corrective action may include:
**Areas for Corrective Action**

1. General Commitment, Leadership and Participation  
2. Management Commitment and Leadership  
3. Worker Participation  
4. Health, Safety and Environment Policy  
5. Planning  
6. Review  
7. Legal and Other Requirements  
8. Hazard and Risk Identification and Assessment  
9. Health, Safety and Environmental Objectives and Targets  
10. Implementation  
11. Hazard and Risk Control Measures  
12. Emergency Preparedness and Response  
13. Competence and Training  
14. Communication and Awareness  
15. Procurement and Contracting  
16. Management of Change  
17. Documentation  
18. Evaluation and Corrective Action  
19. Monitoring and Measurement  
20. Incident Investigation and Analysis  
21. Internal Audits  
22. Preventive and Corrective Action  
23. Management Review and Continual Improvement

Recommendations should address each cause and can be of two types:

- Interim Actions are ones that should be taken immediately to reduce the hazards. These “stop gap” measures are usually ones that have been recommended and implemented at the time the incident occurred. They are extremely important because they reduce the hazard potential immediately.

- Corrective and preventive actions are permanent solutions and may require more time to accomplish. Corrective and preventive actions must address each cause. Implementation and follow up of these permanent measures are essential and may require input and consultation from other groups such as Senior Management, Legal, etc.

Ensure each recommendation specifically describes the action to be taken, and is defined in clear and measurable terms. Recommendations should be practical and achievable and eliminate or decrease risk or consequences.

Recommendations must be assigned to a person, by name not position, for completion by an identified date. The corrective action plan must be reviewed with those they are assigned to.

Recommendations for control generally fall into the following four categories:

- Substitution;  
- Engineering controls;  
- Administrative controls, and/or  
- Personal protective equipment.

To complete further analysis consult with the appropriate technical experts (i.e. Engineer, experienced equipment operator, etc.)

6.4.7 Corrective / Preventive Action

All corrective actions will be tracked using S2web. An entry for each corrective action will be created for each branch and site (if applicable) and be maintained by the Manager or designate. The report will be updated on a weekly basis by the Manager until closed out in S2web.

6.4.8 Assess Actual Costs and Confirm Incident Classification

Extensive analysis of incidental property damage costs around the world has led experts to conclude that property damage costs are 5 to 50 times the medical and compensation costs of occupational injuries. Other uninsured costs constitute an additional 1 to 3 times more than these costs.

Costs are to be maintained in as accurate a manner as possible and entered into S2web. The recording of cost is to be performed in accordance with the following cost guidelines:
Structural / Equipment Damage
• Work request costs;
• Purchase costs;
• Work request labor costs;
• Rental costs;

Service work should be tracked by hourly estimate from those performing the work when direct costs are not available.

Injury / Illness Costs
• Overtime / replacement employee costs = # of hours X $50 hr.
• Retraining injured employee for alternate work. Include costs until trained and reassignment is complete. (Include course tuition and injured Employees time). Training costs for replacement employee would also be included ($50/hr.)
• Injury costs are reflected in insurance premiums paid to W.C.B. For estimating purposes use:
  • $2,000 Medical Aid injury with no work restrictions
  • $10,000 for Medical Aid injury with work restrictions (MA/Mod)
  • $15,000 for Lost Time Injuries

Legal Costs
• Fines and / or penalties levied by regulatory agencies or the courts.
• Court fees as a result of legal action/defense.
• Cost associated with obtaining legal services (case preparation, presentation, hearings, etc.).

Other Costs
• Time spent gathering data for investigation. Actual Investigation time and time spent in follow-up meeting. Total man-hours x $50.
• Time spent writing, typing report. Use $50 per incident.

Utilize the cost data to assist in confirming and finalizing the incident severity classification and to assist in the prioritization of implementing corrective and preventive action.

6.5 Reporting
Once all the information has been collected and interpreted, it must be updated in S2web by the Supervisor or Manager. Corrective Actions will be tracked to completion to ensure:
• Identify and notify individuals accountable for corrective/preventive action implementation;
• Assign responsibility to individuals to action specific items;
• Track implementation progress by providing status updates on targeted completion dates; and
• Confirm the incident has been managed until all actions are completed.

6.6 Communication
Information identified and documented throughout the management of the incident may assist others (internal or external) in preventing similar incidents from recurring.

NCSG or its affiliated company’s employees, contractors and external parties may learn from incidents and prevent recurrence in the future. HS&E Advisors are accountable for sharing the appropriate incident findings and corrective action.

Notification and reporting to the applicable regulatory agency (OSHA, State, Provincial, and Federal) may be necessary. Corporate Manager HS&E would be responsible for such.

The overall goal of incident investigation is to identify all root causes and implement corrective actions necessary to prevent recurrence. Equally valuable is distribution of the key findings in the investigations and sharing them with all employees and contractors, increasing awareness and promoting dialogue to prevent incident recurrence at other locations.

Incident bulletins, alerts, notices and reports will be sent out by the HS&E Advisor as well as other applicable information.

6.7 Incident Review
Incident bulletins will be sent out by HS&E Advisors based on severity, or potential for, and involves lessons learned that may benefit other company sites or groups to prevent recurrence.

These bulletins will be reviewed at tailgate meetings, weekly safety meetings, HS&E Committee meetings, posted on boards, at all operational meetings and other effective means.

6.8 Evaluation
Incident Investigation Reports will be evaluated based on completion and quality of the investigation and the investigator by the Operations – Vice President. Completion and quality are relative to overall compliance with the IMP.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• IMP Supervisor Training Package
• Employee Orientation
8.0 RESOURCES
Contact Corporate Health, Safety and Environment for more information regarding this Process.

9.0 SUPPORTING DOCUMENTS
- Federal and Provincial Occupational Health and Safety Legislation
- Provincial Worker’s Compensation Board Legislation
- Corrective and Preventive Action Process
- NCSG Incident Classification Guide
- NCSG Incident Reporting Chart
### 11.2 Incident Notification Standard - Reporting

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>LOW</th>
<th>MODERATE</th>
<th>SERIOUS</th>
<th>CRITICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personal Incident:</td>
<td>Personal Incident:</td>
<td>Personal Incident:</td>
<td>Personal Incident:</td>
</tr>
<tr>
<td></td>
<td>- Near Miss</td>
<td>- Medical Aid</td>
<td>- Modified work</td>
<td>- Lost time Incident</td>
</tr>
<tr>
<td></td>
<td>- Results in damage less than $1,000</td>
<td></td>
<td>- Threatened violence</td>
<td>- Fatality</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Occupational exposure with the potential of long-term effects</td>
<td>- Permanent disabling injury</td>
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<td></td>
<td></td>
<td>- Actual violence</td>
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<tr>
<td></td>
<td>Motor Vehicle Incident:</td>
<td>Motor Vehicle Incident:</td>
<td>Motor Vehicle Incident:</td>
<td>Motor Vehicle Incident:</td>
</tr>
<tr>
<td></td>
<td>- Near Miss</td>
<td>- Results in personal injuries - not third party</td>
<td>- Third party injuries</td>
<td>- Results in damage in excess of $100,000</td>
</tr>
<tr>
<td></td>
<td>- Results in damage $1,000 to $10,000</td>
<td></td>
<td>- Results in damage $10,001 to $100,000</td>
<td>- Potential litigation</td>
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<td></td>
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<tr>
<td></td>
<td>Property / Equipment Damage:</td>
<td>Property / Equipment Damage:</td>
<td>Property / Equipment Damage:</td>
<td>Property / Equipment Damage:</td>
</tr>
<tr>
<td></td>
<td>- Near Miss</td>
<td>- Results in damage $1,000 to $10,000</td>
<td>- Line contact</td>
<td>- Failure or collapse of crane</td>
</tr>
<tr>
<td></td>
<td>- Results in damage less than $1,000</td>
<td></td>
<td>- Results in damage $10,001 to $100,000</td>
<td>- Results in damage in excess of $100,000</td>
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<td></td>
<td>Environmental Incident:</td>
<td>Environmental Incident:</td>
<td>Environmental Incident:</td>
<td>Environmental Incident:</td>
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<tr>
<td></td>
<td>- Near Miss</td>
<td></td>
<td></td>
<td>- Spill or release that requires clean up or remediation</td>
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<td></td>
<td></td>
<td></td>
<td>- Regulatory reportable spill or release</td>
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<tr>
<td></td>
<td>Regulatory Involvement:</td>
<td>Regulatory Involvement:</td>
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</tr>
<tr>
<td></td>
<td>- Correspondence or requests</td>
<td>- Speeding ticket includes photo radar</td>
<td>- Fine or charges laid</td>
<td>- Regulatory reportable incident</td>
</tr>
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<td></td>
<td></td>
<td>- Regulatory notice or warning</td>
<td>- Regulatory inspection or audit</td>
<td>- Stop work order</td>
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<td></td>
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<td></td>
<td></td>
<td>- Open regulatory investigation</td>
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<tr>
<td></td>
<td>Non-Compliance:</td>
<td>Non-Compliance:</td>
<td>Non-Compliance:</td>
<td>Non-Compliance:</td>
</tr>
<tr>
<td></td>
<td>- Procedure violation</td>
<td>- Violation to company policy, standard or SOP</td>
<td>- Caution Safety Rule violation</td>
<td>- Breach of trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Client Safety Rule violation</td>
<td>- Violation Code of Conduct</td>
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<tr>
<td></td>
<td>Security Incident:</td>
<td>Security Incident:</td>
<td>Security Incident:</td>
<td>Security Incident:</td>
</tr>
<tr>
<td></td>
<td>- Not Applicable</td>
<td>- Theft, vandalism and/or fraud less than $2,500</td>
<td>- Theft, vandalism and/or fraud $2,500 to $100,000</td>
<td>- Theft, vandalism and/or fraud exceeding $25,000</td>
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<tr>
<td></td>
<td>Public / Media Incident:</td>
<td>Public / Media Incident:</td>
<td>Public / Media Incident:</td>
<td>Public / Media Incident:</td>
</tr>
<tr>
<td></td>
<td>- Not applicable</td>
<td>- Localized media attention:</td>
<td>- Third Party injury</td>
<td>- Violent act committed by employee to a member of the public</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Community complaint attributed to our operations</td>
<td>- Adverse media attention impacting reputation</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Notification</td>
<td>Supervisor:</td>
<td>Supervisor:</td>
<td>Supervisor &amp; Regional Team Lead</td>
<td>Supervisor &amp; Regional Team Lead</td>
</tr>
<tr>
<td>Immediate Call</td>
<td>HS&amp;E Advisor</td>
<td>HS&amp;E Advisor</td>
<td>H&amp;S&amp;E Branch Manager &amp; VP Ops</td>
<td>H&amp;S&amp;E Branch Manager &amp; VP Ops</td>
</tr>
<tr>
<td></td>
<td>Team Lead HS&amp;E</td>
<td>Team Lead HS&amp;E</td>
<td>VP Operations</td>
<td>VP HS&amp;E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- VP Operations</td>
<td>CEO</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- VP HS&amp;E</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- CEO / CFO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within 4 hours</td>
<td>Branch Manager</td>
<td>Branch Manager</td>
<td>Branch Manager</td>
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<tr>
<td></td>
<td>Branch Manager</td>
<td>Corp Manager</td>
<td>Corp Manager</td>
<td>VP Operations</td>
</tr>
<tr>
<td></td>
<td>Team Lead HS&amp;E</td>
<td>H&amp;S&amp;E Branch Manager</td>
<td>H&amp;S&amp;E Branch Manager</td>
<td>VP HS&amp;E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Team Lead HS&amp;E</td>
<td>Team Lead HS&amp;E</td>
<td>CEO</td>
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<tr>
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<tr>
<td></td>
<td>Within 8 hours</td>
<td>VP Operations</td>
<td>VP Operations</td>
<td>VP HS&amp;E</td>
</tr>
<tr>
<td></td>
<td>Client if applicable</td>
<td>Human Resources</td>
<td>- VP Operations</td>
<td>CEO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- CEO</td>
<td>- CEO</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 11**
11.3 Classification Standard

1.0 PURPOSE
To ensure standardized recording, classification and reporting of injuries, illnesses, damage and other applicable events, throughout NCSG Crane & Heavy Haul and its affiliated companies.

2.0 SCOPE
This standard applies to all companies, employees and contractors injured in the course of employment at NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG. This standard provides direction for the classification of injuries, illnesses, damage and other applicable events.

3.0 CLASSIFICATION
An event as described herein shall be classified according to its most serious consequence. For example, if there are multiple injuries as a result of an accident, the most severe consequence shall determine its classification.

The Corporate Manager of HS&E will be the adjudicator for the interpretation of the policy. All appeals will be directed to VP of HS&E.

4.0 RECORDABLE
Recordable deals with the allocation of whether the event as described herein is classified as work related or not and how it will be applied against the company/division’s monthly Loss Management statistics.

The Corporate Manager of HS&E will determine the recordable frequency by reviewing the following:

Events will be reviewed to determine whether they occurred in the work environment and arose out of and in the course of employment while acting in the interests of the company. If there is a question as to whether the event is work related, the case will revert to work related until such time as there has been a review to necessitate a change to non-work related. (Examples are noted in Appendix II)

All injuries/illnesses will be reviewed to determine whether or not the employee actually received medical treatment as opposed to simple first aid, diagnostic or precautionary measures for injuries/illnesses. Injury classification shall be completed using the definitions defined in this standard. This standard is based on OSHA-Bureau of Labour Statistics (BLS) - Injury Classification Guideline.

The Corporate Manager of HS&E will identify any changes to the injury/illness classification with the management in the appropriate company/division, advising them of the rationale for change.

5.0 CLASSIFICATION APPEAL PROCESS
All appeals against the classification of an event will be made in writing to the VP of HS&E, with any new information to support the stated appeal. The VP of HS&E will review the case with the Corporate Manager of HS&E. Any changes to the classification will be made after the review and consultation.

Fatality (FAT): Any death as a resulting from a work related or on the job event.

Days Away (DA): Any work-related injury or illness that prevents the worker from reporting to work on the next scheduled work day.

Observation Period, if a worker is injured on the job and the physician places them in a hospital (or at home) for observation only and the worker misses a scheduled work day, it is classed as a Days Away incident.

Medical treatment, when a worker loses part or all of a work day following the day of injury due to medical treatment, it is classed as a Days Away incident.

Fatalities of workers resulting from occupational injury or illness are Days Away regardless of the time between the injury or illness and the expiration.

Medical Aid (MA) Any work related injury or illness that requires treatment outside of the definitions defined below under the First Aid, by a physician or by registered professional personnel under the standing orders of a physician. (Defined as; Physician's Assistants, RN, Paramedic, Chiropractors, and Physio-therapists)

All diagnosed occupational illnesses are considered at least Medical Aid (MA) cases; no illnesses are considered First Aid (FA). Loss of consciousness due to an injury or exposure in the work environment is a MA and must be recorded as such until it meets the requirements of Days Away (DA).

Modified Work (MW) Any work related injury or illness that prevents a worker’s ability to perform their regularly assigned duties, but are medically able to perform alternate, modified or restricted work.

First Aid (FA) Minor injury requiring usually a one-time treatment, regardless of the professional status of the person providing the treatment. Even when a physician or other registered medical professional provides these treatments.

First Aid includes the following;

• Using an over-the-counter (OTC) medication at non-prescription strength.
• Administering tetanus immunizations (other immunizations, such as hepatitis B Vaccine or Rabies Vaccine, are considered Medical Aid (MA))
• Cleaning, flushing, or soaking wounds on the surface of the skin
• Using hot or cold therapy
• Using wound coverings such as bandages, Band-Aids, gauze pads, etc. or using butterfly closures or steri-
6.0 DEFINITIONS

**Occupational Injury** Any injury such as a: cut, fracture, sprain, amputation etc., which arises from an accident or from a single instantaneous exposure in the work environment (i.e. insect bites, one-time exposure to chemicals).

**Occupational Illness** Any abnormal condition or disorder of an employee, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. These illnesses or diseases may be caused by inhalation, absorption, ingestion or direct contact with contaminants.

The following are some typical examples of recordable occupational illnesses and disorders:

- **Occupational skin diseases and disorders** – such as contact dermatitis, eczema, or rash caused by primary irritants and sensitizers or poisonous materials, chemical burns or inflammation, etc.
- **Dust diseases of the lungs (pneumoconiosis)** – such as silicosis, asbestosis, byssinosis, etc.
- **Respiratory conditions due to toxic agents** – such as pneumonitis, pharyngitis, rhinitis, acute congestion due to chemicals, dust, gases, exhalants, mists, fumes, etc.
- **Poisoning** – such as acute and chronic toxic effects from lead, mercury, arsenic and other metals, hydrogen sulfide, sulfur dioxide, etc., solvents and pesticides, etc.
- **Disorders due to physical agents** – such as heat stroke, sun stroke, heat exhaustion, frost bite, welding flash, ultraviolet rays and effects of ionizing radiation.
- **Other occupational illnesses** – such as diseases caused by infectious substances, food poisoning, malignant and benign tumors, etc.

**On-Site Occupational Injury/Illness** Any injury/illness occurring on a NCSG work site, arising out of and in the course of employment and while acting in the interests of NCSG will be considered work-related and therefore occupational.

**Off-Site Occupational Injury/Illness** Illnesses/Injuries which occur during off-site training programs, schools, conventions or meetings while acting in the interests of NCSG or its affiliated companies, during the employee's normal hours of work or after hours at the request of the company will be considered occupational. All off-site occupational illnesses/injuries will be considered non-recordable.
Non Occupational Injury/Illness Non occupational injuries/illnesses do not arise as a direct result of employment, but rather have their origins outside of the workplace. Non occupational injuries are neither recordable nor non-recordable.

Work Environment The work environment is defined as all physical locations, equipment and materials processed or used and the operations performed by employees in the course of their assigned duties, irrespective of location.

7.0 CLARIFICATION, EXCEPTIONS AND SPECIAL CASES

- Injuries/Illnesses which occur while making “reasonable use” of a site cafeteria or eating area shall be considered occupational, but not recordable.
- Injuries/illnesses which occur as a result of employer provided equipment such as knives, forks, etc., or food or drink provided by or purchased by an employee are occupational, but not recordable. However, injuries/illnesses arising from food, equipment or other hazards introduced by the worker are non-occupational.
- If an injury occurs while boarding or exiting a bus on a worksite property, while walking from a designated on-site bus drop off point or while making reasonable and permitted use of the company parking lot, it shall be considered occupational but not recordable.
- Injuries sustained during employment regardless of the area or duty, inflicted by or arising out of horseplay while in the work environment are considered occupational.
- Injuries occurring to employees driving to and from work on a special assignment or as a result of being called out for an emergency situation are occupational and non-recordable.
- Injuries occurring to employees traveling to and from their regular place of employment during routine travel in their own transportation, including travel at irregular hours due to late shifts or overtime are not considered occupational as workers are not in the course of employment while commuting. This includes injuries occurring while driving private or company vehicles to and from work on a regular basis.
- Injuries occurring to employees going to/from their house from/to a designated bus stop where employees board buses are not considered occupational.
- Employees injured during a specifically defined off-duty period in such areas as cafeterias or camp facilities, or while using any such facilities or their buildings or equipment therein in an off duty period will not be considered occupational. If, however, at such time, an injury should occur arising out of a hazard of the facility in question, it would be considered occupational, but not recordable.
- In the event that an illness/injury occurred solely because of a pre-existing physical deficiency with no distinct accident involved (an employee falls down because of his “trick knee” giving out although the ground was smooth and level) it would not be considered occupational. However, should the ground be icy or wet and the employee was to fall, spraining their “trick knee” this would be considered occupational.
- Aggravation at work of symptoms resulting from non-occupational injury may be considered recordable only if a new accident or unusual occurrence at work has transpired.

8.0 EXAMPLES OF MEDICAL AID

In the event that x-ray examination for fractures is required, this procedure would be considered a diagnostic procedure and as such not considered medical aid or first aid.

- Common Medical Aid Treatments
  All cases involving loss of consciousness, caused by the industrial injury or illness unless more severe consequences dictate another classification.
  - Butterfly or steri-strip sutures, only if used in lieu of standard sutures.
  - Sutures and closures, by or on the advice of a physician.
  - Compress, hot or cold, multiple soakings and drainage of collected blood on a second or subsequent visit if prescribed by a physician.
  - Administration of prescription only medicines, if exceeding one single dose. (See definition of Medical Aid).
  - Cutting away of dead tissue. (Surgical debridement).
  - Aspiration (draining) of blood or fluids from damaged areas using suction or temporary implants.
  - Application of non-temporary casts, splints or other immobilizing procedures following need diagnosis by a physician or registered professional.
  - Diathermy treatment on second or subsequent visit if prescribed by a physician.
  - Removal of EMBEDDED foreign objects, if removal from wound requires surgical means, including the use of prescription medication to treat the condition.
  - Removal of EMBEDDED foreign bodies from the eye, if removal requires surgical means.
  - Treatment of 2nd degree burns. The determining factor in classifying 2nd degree burns as medical aid will be primarily based on the actual size of the burn (2.5 cm x 2.5 cm or larger). In addition, if the injury requires a series of treatments including soaks, use of whirlpool and surgical debridement, the injury should also be considered a medical aid.
  - Treatment of 3rd degree burns including multiple treatments (dressing changes, soakings, whirlpool treatments and surgical debridement).
  - Treatment of fractures, other than hairline.
  - Treatment of infections.
  - Treatment of secondary infections.
  - Ultrasound treatment, on the second or subsequent visit if prescribed by a physician.
  - Whirlpool or similar physical therapy treatment, on the second or subsequent visit if prescribed by a physician.
  - Application of Skin Glue in lieu of sutures, if the wound have required sutures due to the location and severity of the affected area.
  - Dental injury requiring dentistry and/or oral surgery.
11.4 Federal Reporting and Notification

1.0 POLICY
The purpose of this process is to ensure a formal standard that must be used for all involvement with Regulatory agencies, bodies, boards, etc., regardless of local, Municipal, County, State/Provincial or Federal. Exception to this process is financial filings, requests for Tax or remittance, which will be handled independently by the finance group.

NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG are required to follow this process.

2.0 PROCESS
All visits, calls, notices, inspections, investigations, or requests for information from a Regulatory agency/officer/body/board regardless of local, Municipal, County, State/Provincial or Federal jurisdiction must follow the notification process detailed below.

- **Notification of intended visit or inspection.** The applicable Branch Manager and Corporate Manager of HS&E must be notified immediately. It is expected that within 24 hrs that the Applicable Senior Leadership (VP Ops, VP HS&E, and/or CEO) is advised of visit, and pertinent details.
- **Regulatory unplanned or unannounced visit or inspection.** Orientate and have the party sign in. Place an immediate call to the applicable HS&E Advisor and Branch Manager. Forward all requests, paperwork, forms, etc to the applicable HS&E Advisor. Both the HS&E Advisor and Branch Manager must brief the Applicable Senior Leadership within 4 hours (VP Ops, VP HS&E and/or CEO).
- **Regulatory Investigation.** This is an immediate call to VP Ops and VP HS&E. Fully co-operate with the regulator, channel all requests to produce, etc to the VP HS&E. All documents, pictures, forms etc provided or obtained by the regulator must be documented and signed for by the requesting regulator. It is essential to get Senior Leadership immediately involved.
- **Served notice (Mail or in Person).** The notice must be immediately scanned and emailed to the Corporate Manager HS&E and the applicable Branch Manager. The original to be interoffice couriered to the Corporate Manager HS&E. Follow up is a phone call same day to both the Corporate Manager of HS&E and applicable Branch Manager
- **Notification to the Regulatory.** All notifications, responses, document submittal shall be reviewed by Senior Leadership (VP Ops, VP HS&E and/or CEO) prior to release.

3.0 FEDERAL REGULATORY REPORTING/NOTIFICATION GUIDANCE
As per the Incident Notification Standard – Reporting Chart, all notifications, regardless of company or operation, to any regulatory agency will be handled by the NCSG Corporate HS&E (Manager HS&E or VP HS&E).

Specifically;

- **US Operations – OSHA Recordkeeping Rule (2014).** In accordance with the OSHA reporting requirements, US Operations Management must immediately notify within 2 hours the Corporate Manager HS&E or VP HS&E and the Applicable Operations VP;
  - All work related fatalities
  - All work related inpatient hospitalizations of one or more employees
  - All work related amputations
  - All work related losses of an eye

- **Canadian Operations.** In accordance with Federal and Provincial reporting requirements, Canadian Operations Management must immediately notify within 2 hours the Corporate Manager HS&E or VP HS&E and the Applicable Operations VP;
  - All work related fatalities
  - All work related disabling injuries of two or more employees
  - Any work related loss, partial loss or loss of use of any body part

- For all Operations regardless of region, must immediately notify within 2 hours the Corporate Manager of HS&E or VP HS&E and the Applicable Operations VP;
  - Any unplanned fire, flood, explosion, building collapse, crane upset, free fall of an elevating device

- Corporate HS&E (Corporate Manager HS&E or VP HS&E) working with the Applicable Operations VP will then notify the applicable regulatory agency as per the reporting requirements and follow up without delay any required paperwork/forms or requests for further information. Operations Management will provide any and all necessary support in fulfilling this notification and reporting requirement.
11.5 Near Miss Reporting Process

1.0 PURPOSE
NCSG Crane & Heavy Haul and its affiliated companies (referred to as NCSG) have developed a Near Miss Reporting Process to ensure early identification or detection of potential incidents and associated hazards. NCSG has a responsibility to promote, encourage and create a process to which all levels of our organization can report and prevent potential incidents before they have an impact on our workers, infrastructure, clients and environment.

2.0 SCOPE AND APPLICATION
The scope of this process is to provide direction and define the expectation of Near Miss Reporting. This Process applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
Near Miss: an unplanned event that did not result in injury, illness, or damage – but had the potential to do so. Only a fortunate break in the chain of events prevented an injury, fatality or damage; in other words, a miss that was nonetheless very near.

4.0 EXPECTATIONS
The Near Miss Reporting Process shall provide required and adequate guidelines to ensure the expectations are fully understood. This process will be reviewed at a minimum of every three years.

5.0 ROLES AND RESPONSIBILITIES
5.1 Executive
- Review the trends from the captured near miss reporting.
- Ensure the process is free of punishment or discipline.
- Ensure that appropriate resources are available in the prevention of incidents and accidents.

5.4 HS&E Manager
- Coordinate the ongoing trending and analysis of near miss reporting.
- Audit the content and provide feedback to the respective branch management on the audit.
- Ensure the awareness and training of near miss reporting is in place.
- Support Operations in the implementation of this Process.

5.6 Branch Management
- Provides training and guidance to all applicable staff under area of responsibility on the implementation of this Process.
- Reviews each near miss report with the locale HS&E Advisor to identify areas of improvement or prevention.
- Visibly leads this Process and encourages active involvement.
- Provides feedback to frontline crews for actions to be taken.

5.7 HS&E Team
- Assists Branch Management in interpreting this Process.
- Assists Branch Management with training specific form use, completion and quality assurance.
- Provides trending breakdown of all near misses within region and larger company wide on a regular basis.
- Provides assistance in entering required documents into S2 Web.
- Pro-actively researches and networks to find solutions or preventative strategies to implement relative to the identified cause or trend.

6.0 METHOD
6.1 Awareness
On a regular basis all levels of Management are required to review the contents of this Process with all employee’s and contractors at safety meetings, toolbox talks and general gatherings.

Posting of the process and Near Miss Reporting forms should be available in all common areas as well as on the Hub. All Supervision and HS&E are required to have Near Miss Reporting forms readily available at all worksites.

6.2 Collection and Review
Completed Near Miss Reporting forms are to be turned in to your immediate Supervisor or HS&E Advisor. Supervisors are required to review the content as soon as possible to identify any hazards or risks that must be immediately addressed and should share the contents of such with the applicable staff. (Client reporting forms can be utilized for recording of Near Misses, the same process will be followed regardless of the document)

Daily, Supervision will forward any completed Near Miss Reporting forms along with a summary of any corrective actions taken to their HS&E Advisor. The HS&E Advisor will review and prioritize any immediate actions outstanding and provide such to the Branch Manager immediately.

6.3 Tracking, Trending and Quality Control
The HS&E Advisor will trend the collected Near Miss Reporting cards, enter the cards into S2 Web and forward the completed cards and trend summary to the applicable Branch Manager and HSE Manager.

Branch Managers will review the trend summary, review any outstanding corrective actions and have open discussion with supervision regarding follow up on actions taken. The focus will be to ensure corrective actions are completed and documented, quality of the information, and process intergerty.
Each Leader will actively engage their staff to facilitate appropriate feedback and coaching as required to improve the quality and effectiveness of this process.

The HS&E Manager will produce a monthly roll up for discussion with the Executives and Senior Management Team.

7.0 FORMS AND DOCUMENTS
The following are sample documents referenced in the Near Miss Reporting Process;

8.0 APPENDICES
• Appendix A – Near Miss Report / Hazard / Behaviour Observation Form
APPENDIX A – Near Miss Report / Hazard / Behaviour Observation Form

NEAR MISS REPORT
Revision 4 HSE November 2015

Reported By: ___________________________ Date: ___________________________

Company: ___________________________ Location: ___________________________

Description of Near Miss:

___________________________________________________________________________

___________________________________________________________________________

Immediate Action:  ☐ Yes  ☐ No  If Yes, what action was taken? (describe) ____________________________________________________________________________

Additional corrective action required?  ☐ Yes  ☐ No  If Yes, please describe: ____________________________________________________________________________

Is a complete investigation required?  ☐ Yes  ☐ No  If Yes, please describe: ____________________________________________________________________________

ACKNOWLEDGED BY: ___________________________ DATE: ___________________________

Completed NEAR MISS REPORT form MUST be turned in to your immediate Supervisor or HS&E Advisor.

HAZARD / BEHAVIOUR OBSERVATION CARD

Date: ___________________________ Client: ___________________________ Time: AM PM

NCSG Division: ___________________________ Location of occurrence: ___________________________

<table>
<thead>
<tr>
<th>SAFE</th>
<th>AT-RISK</th>
<th>NOT APPLICABLE / NOT DISCUSSED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Initial Action

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Procedures &amp; Standards</th>
<th>Tools &amp; Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Line-Of-Fire

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Body Mechanics (ergonomics)</th>
<th>Safe / Unsafe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Briefly describe the observation: ____________________________________________________________________________

What discussion did you have with the worker involved? ____________________________________________________________________________

Additional corrective action necessary?  ☐ Yes  ☐ No  If Yes, please define: ____________________________________________________________________________

Branch: ___________________________ Submitted by: ___________________________ Supervisor: ___________________________

Safety: ___________________________ Branch Manager: ___________________________

Completed follow up?  ☐ Yes  ☐ No  If Yes, describe follow up: ____________________________________________________________________________

By Who? ___________________________ Date: ___________________________

ADMIN USE ONLY: ___________________________ Audited By: ___________________________ Date: ___________________________

NCSG Crane & Heavy Haul Services  11-17  Health, Safety & Environment Manual
12.1 Emergency Preparedness Policy

1. PURPOSE
To ensure NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG personnel are prepared and ready to react in an appropriate and efficient manner to the possible emergency scenarios that may be encountered in the course of operations.

2. DEFINITIONS
The scenarios most likely to happen, that will require immediate and swift reaction can be classified as the following:

Class 1:
- Major Fire—A fire that will or could potentially:
  - Cause equipment or property damage
  - Affect company operations
  - Threaten adjoining property
  - Not be controllable by the use of an appropriate fire extinguisher

Class 2:
- Explosion—an actual or potential explosion, at any company operated facility, which could:
  - Result in equipment or property damage
  - Affect company operations
  - Threaten adjoining property

Class 3:
- Personnel Injury or Fatality—any event that results in:
  - Injury requiring more than first aid treatment
  - Missing personnel
  - The potential for or actual loss of life

Class 4:
- Adverse Operating Conditions—included in this area are:
  - Life threatening telephone calls, messages and/or any other form of threatening communication
  - Inclement weather (snow storm, flood, freezing rain, etc.)
  - Any other operational emergencies

Class 5:
- Hazardous Materials Spill—potential or actual spill or leak of hazardous material or a reaction with other materials that generate emissions which may create a hazard to life, health, property or the environment.

Class 6:
- Infectious Diseases/Pandemics—usually results from a virus, bacteria, or parasite. Transmission from one person to another can occur through the sharing of liquids, food, bodily fluid, and contaminated objects. They can also be spread through airborne inhalation.

3. EXPECTATIONS
Personnel need to be trained for emergencies, and have the opportunity to simulate a reaction to an emergency situation. Specific response training will include but not limited to; First Aid training, Fire Extinguisher Use and Practical training, Spill response and mitigation control, Harness Use, H2S Alive (where applicable), SCBA donning and rescue practical training(where applicable). This training is refreshed annually and monitored in our VTA program.

At sites under the direction of NCSG, the following criteria will be implemented:
- An Emergency Response Plan that is posted at various locations for all personnel to see, along with the locations and phone numbers of all emergency facilities in the area;
- Personnel to be informed of the Emergency Response Plan for the site at time of orientation;
- Personnel to be informed of what roles and responsibilities they may have during the emergency;
- Scheduled on-site emergency response simulations (e.g. fire drills) will be conducted under the supervision of the HS&E Advisor responsible for the particular site.

The Emergency Response Plan and Procedures will be reviewed on a regular base by employees and management to ensure that it meets the needs and expectations of on-site personnel.

Levels of Emergencies
For convenience and quick reference, the level of severity possible with each type of emergency is as follows:
- Level 1—No potential or actual danger outside company property; the situation can be controlled by company personnel
- Level 2—No immediate danger; sufficient potential does exist to justify contacting outside services (police, fire, medical, etc.)
- Level 3—The ability to operate safely is seriously jeopardized thus creating and/or potentially creating an immediate damage to personnel, the general public or the environment.
4. ROLES AND RESPONSIBILITIES

Responder Role
Upon notification of an emergency situation, the person receiving the call is required to record the following information:

- Time of call;
- Name and telephone number of person calling;
- Type of emergency;
- Injuries or fatalities, if any;
- Potential danger to the general public, if any;
- Name(s) of authorities contacted, if applicable.

With this information, the contact person must then establish:

- The serious nature (class and level) of the situation
- How much of a factor time may be
- Whether or not a company representative is required at the scene
- Whether or not it may be necessary to contact other personnel (police, fire, ambulance, etc.)
- When applicable, equipment required (if any) to assist with recovery

Where company personnel (management or other designate) will attend the scene as “On-Site coordinator”, their responsibilities will be to:

- Assess the situation;
- Co-ordinate manpower and equipment required for recovery;
- Co-operate and co-ordinate procedures with all authorities attending the scene;
- Arrange for the movement of damaged equipment to an appropriate location, usually a company operated facility;
- Ensure all required reports have been completed and sent to the appropriate personnel and/or agencies.

5. METHOD

5.1 Emergency Response Procedures

Class 1: Major Fire
- sound an alarm and notify the appropriate personnel, including the company
- evacuate the area of all non-essential personnel
- proceed with firefighting procedures but only if there is no risk to the life or health of yourself and other personnel in the area

Class 2: Explosion
- sound an alarm and notify the appropriate personnel, including the company
- evacuate the area of all non-essential personnel
- only attempt firefighting procedures if there is no risk to the life or health of yourself or other personnel in the area

Class 3: Personal Injury or Fatality
- remain calm and take charge of the situation
- ensure the safety of any other person(s)
- assess the hazards
- notify appropriate personnel, including the company
- administer appropriate first aid, keeping the following priorities in mind: stopped breathing, severe bleeding and unconsciousness
- move the injured to a safe area before administering first aid, whenever fire or explosion are a concern
- keep the injured warm
- where a fatality is involved, do not disturb the scene
- cover the fatality and watch over the body
- do not talk to anyone about the incident
- provide complete cooperation to the authorities at the at the scene

Class 4: Adverse Operating Conditions
- treat all conditions as serious
- immediately suspend operations
- contact appropriate company personnel for further instructions
- keep all non-essential personnel out of the area

Class 5: Hazardous Materials Incident
- notify and provide appropriate company personnel with as many details as possible
- attempt to control or reduce the extent of the spill, without endangering your life or health
- keep all non-essential personnel away from the affected area
- if you are in no danger and the situation has been controlled, take whatever steps are necessary to start the clean-up process

In keeping with the requirements of the Transportation of Dangerous Goods Act and Regulations, where regulated dangerous goods are involved, the following order of notification must be followed:

- Local authorities
- Employer
• Owner of the shipment
• Owner of the property and/or vehicle, if not the employer

In addition to reporting to the local authorities, “certain quantities” of regulated dangerous goods involved in any given situation may require a written report to be submitted to Transport Canada. The following table outlines the “certain quantities” where immediate reporting is required.

<table>
<thead>
<tr>
<th>Class &amp; Division</th>
<th>Quantities or Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All</td>
</tr>
<tr>
<td>2.1</td>
<td>At least 100 liters*</td>
</tr>
<tr>
<td>2.2</td>
<td>At least 100 liters*</td>
</tr>
<tr>
<td>2.3</td>
<td>All</td>
</tr>
<tr>
<td>2.4</td>
<td>All</td>
</tr>
<tr>
<td>3</td>
<td>At least 200 liters</td>
</tr>
<tr>
<td>4</td>
<td>At least 25 kilograms</td>
</tr>
<tr>
<td>5.1</td>
<td>At least 50 kilograms or 50 liters</td>
</tr>
<tr>
<td>5.2</td>
<td>At least 1 kilogram or 1 liter</td>
</tr>
<tr>
<td>6.1</td>
<td>At least 5 kilograms or 5 liters</td>
</tr>
<tr>
<td>6.2</td>
<td>All</td>
</tr>
<tr>
<td>7</td>
<td>Any discharge or radiation level exceeding 10mSv/h at the package surface and 200 uSv/h at 1 meter from the package surface</td>
</tr>
<tr>
<td>8</td>
<td>At least 5 kilograms or 5 liters</td>
</tr>
<tr>
<td>9.1</td>
<td>At least 50 kilograms</td>
</tr>
<tr>
<td>9.2</td>
<td>At least 1 kilogram</td>
</tr>
<tr>
<td>9.3</td>
<td>At least 5 kilograms or 5 liters</td>
</tr>
</tbody>
</table>

*Container Capacity

Please refer to State Reportability Standards

**On-Site Personnel Role—Spill Response**

In the event of a release of a material to the environment, the person(s) at the scene (usually the driver) can, in the first few moments after the incident, take the following action(s) to reduce injury or damage to the environment:

1. Determine the existing fire and safety hazards

If there is no immediate danger of fire and/or explosion, then:

2. Stop the release

3. Eliminate all sources of ignition

4. Secure the scene; evacuate the injured and warn the public

5. Report the incident; call or have someone call the fire department, police and dispatch with information concerning:
   • Location of the incident
   • Material and volume spilled
   • Injuries
   • Potential contamination

6. Wherever possible, assist the police, fire department and other agencies that may be involved.

Once the danger of fire or explosion is removed, proceed with the following action(s):

7. If the authorities have not yet arrived, secure the immediate area

8. Contain the spill using the materials supplied in the company “Spill Kit”; prevent the spilled material from entering drains, manholes, culverts, dykes, ditches, etc.
   
   Note: Straw bales, peat moss, sand, gravel or earth are also effective absorbent materials. Any materials used as absorbents must be removed to a safe disposal area

9. Assist the authorities in cleanup and reporting procedures

**Class 6: Infectious Diseases/Pandemics**

Because of the ease at which most infectious diseases can spread from person to person, it is important to be aware of the ways in which we can prevent getting them, and which precautions we must take to avoid spreading them.

The following are ways in which to help prevent getting most infectious diseases:
- Ensure that your workplace is clean and there is adequate space between you and your coworker’s station;
- Make sure there is suitable ventilation in your work space;
- Wash your hands as often as possible;
- Get an influenza immunization.

In relation to a very common infectious disease—flu, it is important to identify the symptoms to be better prepared. Flu symptoms will usually include sudden fever, chills, headache, aching muscles, dry cough, extreme exhaustion, and poor appetite. If you notice flu symptoms in yourself or a coworker, you should take immediate precautions. Precautions to take to prevent spreading of the flu would be:
- Washing your hands (the flu can be spread through coughing or sneezing);
- Avoid contact with others if experiencing flu symptoms.

There is a proper way in which to wash your hands to prevent the spread of the infection:
1. Use warm running water and soap;
2. Lather and rub hands together well, scrub for at least 15 seconds;
3. Use the friction to get rid of the germs on the surface of the hands as well as the back of the hands, the wrist, in-between the fingers, and under the fingernails;
4. Rinse hands under running water;
5. Dry with a clean or disposable towel;
6. If using a waterless hand cleanser, use a dime-sized amount and rub hands together until dry (about 15 seconds) making sure you cover all surfaces.

NCSG is committed to preventing the spread of infectious disease/pandemic in the workplace. Therefore, NCSG will recommend that all employees:
- Notify their supervisor or manager if they notice any symptoms related to the influenza, as described above, and remove themselves from the workplace. This will help to prevent the spread of the flu; because the flu is infectious still 3-5 days after symptoms occur.
- Help in areas or jobs where workers are missing due to the flu. During a pandemic there could be a loss of 20% – 50% of the workforce.

### 5.2 Emergency Equipment

#### 5.2.1 Fire Extinguishers–Classification

Fire authorities have established four classes of fire, referred to as “A”, “B”, “C”, and “D”. In relation, portable fire extinguishers are also rated using the same classification; the most common being the “AB C” rated multi-use extinguisher. Portable fire extinguishers having this rating are recommended for use in all three classes of fires.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class “A” fire involves ordinary combustible materials such as cloth, wood, paper, rubber, etc.</td>
<td>Class “B” fires involve flammable liquids, gases and greases.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class “C” fires involve live electrical equipment or wiring</td>
<td>Class “D” fires involve combustible metals</td>
</tr>
</tbody>
</table>

#### 5.2.2 Fire Extinguishers–Location, Care, and Maintenance

Each company vehicle will be supplied with at least one appropriately sized fire extinguisher with the multi-purpose classification “AB C”. Equipment operators are responsible to inspect the fire extinguisher during each pre-use inspection to ensure the pressure gauge indicates a fully charged extinguisher and the safety pin is securely in place.

Fire extinguishers are also located on site throughout all the shops and offices. The locations of these fire extinguishers are shown on the Emergency Map for each site. These fire extinguishers will be checked monthly by a company appointed worker.
Fire extinguishers are only effective when they are operating properly. Since the extinguishing media inside is a very fine powder, it tends to “pack down” into a solid mass when the extinguisher is left in one position for long periods. Once a month operators are required to:
1. remove the fire extinguisher from its bracket;
2. turn it upside down;
3. tap it with a rubber hammer to loosen the powder;
4. vigorously shake the extinguisher to ensure the powder will discharge when the extinguisher is used.

All fire extinguishers will also be inspected monthly by internal staff and serviced annually by a certified technician in order to be in compliance with all applicable fire-related regulations, codes and standards.

5.2.3 Fire Extinguisher—Use
In the event that a fire should occur, the following procedures are recommended in ensuring effective and efficient use of a fire extinguisher:
1. Remove the fire extinguisher from its bracket;
2. Approach the fire from an upwind position and with a “buddy”, whenever possible;
3. Hold the fire extinguisher in an upright position and pull the safety pin to break the seal;
4. Aim the discharge apparatus (hose, horn, nozzle) toward the fire;
5. Squeeze the handle to determine the discharge range of the extinguisher (do not attempt to fight the fire from a distance closer than necessary);
6. Aim the discharge apparatus at the base of the fire and, using a sweeping motion, proceed to extinguish the fire;
7. After the fire is extinguished or the extinguisher is fully discharged, replace the safety pin;
8. Ensure the fire extinguisher is recharged before being put back into service.

5.2.4 Traffic Warning Devices—Reflective Triangles, Flags, Flares
Emergency situations requiring a company vehicle to be stopped on a public roadway, outside populated areas, during the period between sunset and sunrise or at any time when there is not adequate light to clearly see persons or vehicles on the roadway, from a distance of 150 meters (500 feet), the driver must:
• Activate the lighting equipment, including flashing emergency hazard warning lights (four-way flashers), when the vehicle lighting equipment can be used
• Place approved warning devices (reflective triangles, flags, flares, etc.) on the roadway, in line with the vehicle, at a distance of no less than 30 meters (100 feet) in front of and to the rear of the vehicle, and when parked on a hill or at a curve, approximately 75 meters (250 feet) or more, depending on the situation.

Drivers are responsible to ensure these warning devices are in place, even if the vehicle lighting equipment, including emergency hazard warning lights, can be used. The warning devices must be in place immediately (within 10 minutes) after the vehicle is stopped.

5.2.5 Spill Response Kit
Occasionally, NCSG handles cargo that may contain quantities, or residual of materials, regulated by HazCom, WHMIS or Transportation of Dangerous Goods requirements. These materials, as well as other non-regulated materials, can potentially create a hazard to people or the environment if not controlled. The regulated (HazCom or WHMIS) material of primary concern within the company is hydraulic fluid used in the operation of cranes and specialized trailers. If there is an accidental release of hydraulic fluid while operating this equipment, whether at a location or while enroute, the fluid must be immediately controlled. In addition to the “Emergency Response Procedure” previously discussed in this section, each piece of equipment using hydraulic fluid will be equipped with a “Spill Kit” as follows:
- 15 40 cm x 50 cm Absorbent Pads (for hydrocarbon-based material)
- 3 7.5 cm x 90 cm Absorbent Socks (for hydrocarbon-based material)
- 1 Shovel (non-ferrous)
- 4 Ties (for sealing plastic bags)
- 1 500 ml container of granular sealant (for repairing tank ruptures)
- Heavy Gauge Plastic Bags (for damming and recovery of used absorbents)
- 1 Containment and Recovery Guidelines (laminated)
- 1 List of Contents (laminated)

Each “Spill Kit” will be sealed. Whenever any contents of the kit are used or the seal is removed, the condition must be reported. This is to ensure the kit contains the above noted items, at all times.

5.3 Rescue and Evacuation
If an alarm is sounded (air horn, bells, etc.) at any company facility or yard, all personnel must evacuate to the muster points that are posted for each facility/branch. The proper authorities must be notified of the emergency, these numbers are posted at each facility/branch.

If there is an emergency on a remote site, you must follow their evacuation procedures which should be given to you before work begins. You must not commence work if you are not given these procedures. You should also obtain emergency numbers for first aid and rescue on remote sites.
5.4 Communication / Alarm System

The communication system that is available to workers to summon first aid or emergency services would be the cell phones or two-way radios that are located in every company vehicle, and the phones that are located in the shop and offices. Emergency contact numbers are available at every phone in the offices.

The alarm systems that will be used are air horns which are located at every facility (marked on the emergency maps) as well as in every piece of yard equipment and crane. The person who is sounding the alarm will blow two long blasts. This should indicate to all personnel that they must immediately evacuate the facility/shop/yard and proceed to designated muster points.
12.2 Fire Suppression Code

1.0 PURPOSE
NCSG Crane and Heavy Haul and its affiliated companies referred to as NCSG have developed a Fire Suppression Code to identify the proper level and type of protection against a potential injury/damage to employees, contractors, and the public/property regarding the use of fire extinguishers/suppression systems operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct selection/identification of fire extinguisher is crucial in the suppression of a fire and the ability to control and maintain a safe work environment. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Fire Suppression Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Fire Tetrahedron The four elements of a fire, originally named the fire triangle (Oxygen, Fuel, and Ignition) the fourth element has been added and is defined as the chain reaction required between the other three elements to create fire. Dry chemical fire extinguishers do not remove any of these 3 elements in sufficient quantity to extinguish fire. Some agents, like dry chemical and clean agents, interfere with the chemistry of fire of by breaking the chemical chain reaction.

P.A.S.S. Acronym for: Pull, Aim, Squeeze, Sweep—Primary action used with portable fire extinguishers

Inspection An inspection is a “quick check” to give reasonable assurance that a fire extinguisher is available, fully charged and operable.

Maintenance Maintenance is a “thorough check” of the extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair, recharging or replacement.

Saponification A process which takes place when alkaline mixtures such as potassium acetate, potassium citrate or potassium carbonate are applied to burning cooking oil or fat.

4.0 EXPECTATIONS
The Fire Suppression Code provides required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors and the general public within NCSG areas of responsibility. The Fire Protection Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial/State/Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received;
• Inspect personal protective equipment before using it;
• Not use personal protective equipment that is unable to perform the function for which it is designed;
• Be aware of the location/type of fire extinguishers and suppression systems within the employee’s workplace;
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments, which may be prone to fire, and explosion resulting in fire.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to immediately inform their Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors or the general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment as required in accordance with the training and instruction received;
• Ensure, appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites;
• Ensure adequate and appropriate firefighting equipment is available on site;
• Ensure firefighting equipment is not obstructed (see General Housekeeping Code)
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or the
5.3 PPE

It is important that all employees working in the area wear appropriate PPE at all times. The PPE should meet all applicable health and safety standards and should be checked regularly to ensure that it is in good working order. PPE should be provided by the company where possible, and employees should be trained in the proper use of the equipment.

5.4 Management

In addition to 5.1, it is the management responsibility to:

- Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within the area;
- Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.5 Health, Safety and Environment Team

It is the Health, Safety and Environment team responsibility to:

- Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices;
- Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 Ingredients of a Fire

The existence of fire requires four elements:

- Oxygen
- Source of Fuel
- Source of Ignition
- Chain Reaction

6.2 Types of Fire Extinguishers

Fire extinguishers are divided into categories, based on different types of fires. Each fire extinguisher also has a numerical rating that serves as a guide for the amount of fire the extinguisher can handle; the higher the number the more fire-fighting power.

6.2.1 Fire Classification

There are five main types of fires based on their combustible materials:

- A Class—used for ordinary combustibles, such as wood, paper, some plastics and textiles;
- B Class—used for flammable liquid and gas fires such as oil, gasoline, etc.;
- C Class—used on fires that involve live electrical equipment which require the use of electrically nonconductive extinguishing agents;
- D Class—used on combustible metals such as magnesium, titanium, sodium, etc., which require an extinguishing medium that does not react with the burning metal;
- K Class—used on fires involving cooking media (fats, grease, and oils) in commercial cooking such as restaurants.

6.2.2 Fire Extinguisher Types

Water extinguishers or APW extinguishers (air-pressurized water) are suitable for Class A fires only.

Dry chemical extinguishers come in a variety of types and are suitable for a combination of Class A, B and C fires; these are filled with foam or powder and pressurized with nitrogen.

- BC: this is the regular type of dry chemical extinguisher. It is filled with sodium bicarbonate or potassium bicarbonate. The BC variety leaves a mildly corrosive residue, which must be cleaned immediately to prevent any damage to materials.
- ABC: this is the multipurpose dry chemical extinguisher. The ABC type is filled with monoammonium phosphate, a yellow powder that leaves a sticky residue that may be damaging to electrical appliances such as a computer.

Carbon Dioxide (CO2) extinguishers are used for class B and C fires. CO2 extinguishers contain carbon dioxide, a non-flammable gas, and are highly pressurized. The pressure is so great that it is not uncommon for bits of dry ice to shoot out the nozzle. They do not work very well on Class A fires because they may not be able to displace enough oxygen to put the fire out, causing it to re-ignite.

The following is a list of commonly used fire extinguishing systems and their corresponding classes of fire (The classes are indicated in parentheses such as (A, B, C)):

- Multi-Purpose Dry Chemical (A, B, C) is a dry chemical agent called monoammonium phosphate. The chemical is non-conductive and can be mildly corrosive if moisture is present. In order to avoid corrosion, it is necessary to scrub and thoroughly clean up the contacted area once the fire is out.
- A dry chemical fire extinguisher is usually used in schools, general offices, hospitals, homes, etc.
- Regular Dry Chemical (B, C) is a dry chemical agent called sodium bicarbonate. It is non-toxic, non-conductive and non-corrosive. It is easy to clean up, requiring only vacuuming, sweeping or flushing with water. Extinguishers with sodium bicarbonate are usually used in residential kitchens, laboratories, garages, etc.
- Carbon Dioxide (B, C) is a fire extinguisher with Carbon Dioxide, which removes oxygen to stop a fire but has limited range. It is environmentally friendly and leaves no residue, so cleanup is unnecessary. Extinguishers with carbon dioxide are usually used in contamination-sensitive places.
such as computer rooms, labs, food storage areas, processing plants, etc.

- Halotron (A, B, C) is a vaporizing liquid that is ozone friendly and leaves no residue. Because it requires no cleanup, fire extinguishers with halotron are ideal for computer rooms, telecommunication areas, theatres, etc.
- Foam (A, B) foam floats on flammable liquids to tame the fire and helps prevent re-ignition. To clean up the affected area, it must be washed away and left to evaporate. Fire extinguishers with foam are usually used in garages, homes, vehicles, workshops, etc.
- Purple K Dry Chemical (B, C) is a dry chemical called potassium bicarbonate. It is non-conductive and non-corrosive. Clean up requires vacuuming, sweeping or flushing with water. Extinguishers with potassium bicarbonate are usually used in military facilities, oil companies, vehicles, etc.
- Water (A) is the most common agent is water; however, it cannot be used for class B or C fires because it is conductive. Water-based fire extinguishers are usually used in stockrooms, schools, offices, etc.

6.3 Inspections

- NCSG shall ensure that designated competent, employees/contractors at minimum once per month, or when the work site changes significantly, inspect all fire extinguishers and suppression systems.
- NCSG Fire Extinguisher Inspections must be completed in a formal manner with signature and date of inspection / corrective action taken or needed for all extinguishers.
- NCSG inspections include but are not limited to:
  - The extinguisher is not blocked by equipment, coats or other objects that could interfere with access in an emergency;
  - The pressure is at the recommended level. On extinguishers equipped with a gauge the needle should be in the green zone—not too high and not too low;
  - The nozzle or other parts are not hindered in any way;
  - The pin and tamper seal (if it has one) are intact;
  - There are no dents, leaks, rust, chemical deposits and/or other signs of abuse/wear;
  - Wipe off any corrosive chemicals, oil, gunk etc. that may have deposited on the extinguisher;
  - Invert and gently shake the dry chemical extinguishers once a month to prevent the powder from settling/packing;
  - Hydrostatic testing shall be verified as required for applicable extinguishers.

6.4 Minimum Emergency Response

- In the event of an unplanned fire, NCSG employees and contractors must consider the preservation of life as the first priority.
- In conjunction with site specific Emergency Response Plans, use the REACT acronym as outlined in Appendix B
- Fire Extinguisher must be used with the PASS acronym.
- IMPORTANT: Recharge all extinguishers immediately after use regardless of how much they were used.

6.5 Suppression Systems

- Suppression systems shall be checked as per NFPA and Building/Fire Code Requirements as per applicable legislation.

6.6 Vehicle Fires

- NCSG employees must take immediate action in the event of a vehicle fire and ensure the safety of the occupants and the general public is the first priority.
- Stop—if possible, pull to the side of the road and turn off the ignition.
- The driver is responsible to ensure everyone gets out of the vehicle safely.
- Turn off the ignition to shut off the electric current and stop the flow of gasoline.
- Put the vehicle in park or set the emergency brake to prevent the vehicle from moving after occupants have left the vehicle.
- Keep the hood closed because more oxygen can make the fire larger.
- All occupants are to muster at least 100 feet away and out of the flow of traffic to prevent being hit.
- Call for Help—Call 9-1-1 or the emergency contact number as applicable to the Emergency Response Plan.
- NCSG employees, contractors, visitors, and the general public must not return to the vehicle to attempt to fight the fire.

7.0 TRAINING REQUIREMENTS AND MATERIALS

- PPE Equipment specific training
- Fire Extinguisher familiarization training
- NCSG orientation

8.0 RESOURCES

- Alberta OH&S Code Part 10
- BC OH&S Code Part 4
- Saskatchewan OH&S Regulations XXV
- Manitoba OH&S Regulations Part 19
- Ontario Fire Protection and Prevention Act, Reg. 213/07
9.0 APPENDICES
- Appendix A – Classification Table
- Appendix B – REACT Emergency Response Table

10.0 SUPPORTING DOCUMENTS
- None

APPENDIX A – Classification Table
The type of fire that they will extinguish classifies fire extinguishers.

<table>
<thead>
<tr>
<th>Fire Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A COMBUSTIBLES</td>
<td>A Class A fire extinguisher is used for ordinary combustibles, such as wood, paper, some plastics and textiles. This class of fire requires the heat-absorbing effects of water or the coating effects of certain dry chemicals. Extinguishers that are suitable for Class A fires should be identified by a triangle containing the letter &quot;A.&quot; If in color, the triangle should be green.</td>
</tr>
<tr>
<td>B LIQUIDS</td>
<td>A Class B fire extinguisher is used for flammable liquid and gas fires such as oil, gasoline, etc. These fire extinguishers deprive the fire of oxygen and interrupt the fire chain by inhibiting the release of combustible vapors. If in color, the square should be red.</td>
</tr>
<tr>
<td>C ELECTRICAL</td>
<td>A Class C fire extinguisher is used on fires that involve live electrical equipment which require the use of electrically nonconductive extinguishing agents. (Once the electrical equipment is de-energized, extinguishers for Class A or B fires may be used.) Extinguishers that are suitable for Class C fires should be identified by a circle containing the letter &quot;C.&quot; If in color, the circle should be blue.</td>
</tr>
<tr>
<td>D METALS</td>
<td>A Class D fire extinguisher is used on combustible metals such as magnesium, titanium, sodium, etc., which require an extinguishing medium that does not react with the burning metal. Extinguishers that are suitable for Class D fires should be identified by a five-point painted star containing the letter &quot;D.&quot; If in color, the star should be yellow.</td>
</tr>
<tr>
<td>K</td>
<td>A Class K fire extinguisher is used on fires involving cooking media (fats, grease, and oils) in commercial cooking such as restaurants. These fire extinguishers work on the principal of saponification. The alkaline mixture combined with the fatty acid creates a soapy foam on the surface, which holds in the vapors and steam and extinguishes the fire. These extinguishers are identified by the letter K.</td>
</tr>
</tbody>
</table>

APPENDIX B – REACT Emergency Response Table

REACT Acronym for Emergency Response in the event of a fire.
To be used in conjunction with NCSG Emergency Response Plans.

R Remove those in immediate danger
E Ensure doors are closed (Particularly those in immediate fire area)
A Activate the fire alarm
C Call the Fire department (Dial 9 -1 - 1 ) or applicable Emergency Number as designated
T Try to extinguish (if small and trained to do so)
12.3 Fire and Explosion Code

1.0 PURPOSE
NCSG Crane and Heavy Haul and its affiliated companies referred to as NCSG have developed a Fire and Explosion Code to identify the proper level of protection when working with flammable and combustible materials while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct use, handling and storage of flammable and combustible materials is essential in maintaining a safe work environment and will enable employees to ensure adequate protection from potential injury / property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Fire and Explosion Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Hazardous Space (Also referred to as Confined Space) An enclosed or partially enclosed space that is not designed or intended for continuous human occupancy with a restricted means of entry or exit and may become hazardous to a worker entering it because:
• Of its design, construction, location or atmosphere;
• Of the work activities, materials or substances in it;
• The provision of first aid, evacuation, rescue or other emergency response service is compromised; or
• Of other hazards relating to it.

Flammable Material 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. Some examples of flammable materials include:
• Gases
  • propane
  • butane
  • methane
  • acetylene
  • carbon monoxide
  • hydrogen sulphide

Flammable gases are usually gases with a Lower Explosive Limit (LEL) of less than 13% in air, or have a flammable range in air of at least 12%.
• Liquids
  • gasoline
  • acetone
  • alcohols and toluene
  • paint and paint thinners
  • adhesives
  • degreasers
  • cleaners
  • waxes
  • polishes
• Solids
  • some types of coal
  • pyrophoric metals (metals that burn in contact with air or water, such as sodium and potassium)
  • solid wastes, which are soaked in flammable liquids (breaks, paper, spill clean-up products)

Compressed Gas One or more gases in a container having an absolute pressure that exceeds 40 pounds per square inch (PSI) at 37.8°C

4.0 EXPECTATIONS
The Fire and Explosion Code shall provide required and adequate guidelines to ensure knowledge of potential hazards are available to all employees, contractors, visitors and general public within NCSG areas of responsibility. The Fire and Explosion Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This Code shall supplement, but not supersede any regulatory Provincial/State/Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.
5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
It is the employee’s responsibility to:
• Use and wear properly the appropriate personal protective equipment specified for use in accordance with the training and instruction received;
• Ensure storage and handling of flammable materials and compressed gases is in accordance with the training received and the code requirements outlined herein;
• Ensure that all flammable materials and compressed gases are used in accordance with manufacturer’s specifications and only used for the intended purpose;
• If assigned in the role of Fire Watch, must be trained in the use of fire extinguishers and the fire suppression code.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received;
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites;
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area;
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure that supervisors are adequately trained to ensure any worker entering a confined space is competent and certified to enter a confined space;
• Ensure that NCSG employees, contractors who are selected to conduct hazard assessments on confined space are qualified;
• Ensure that all confined space hazards are as reasonably and practicably possible eliminated or minimized to ensure work is performed a safe manner;
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites;
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Ensure that responsibility for administration of the Fire and Explosion Code is performed by adequately trained employees or if outsourced, the contractor is adequately trained;
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices;
• Amend and maintain this code within the defined review period.

6.0 METHOD

6.1 General
6.1.1 Storage and Handling

NCSG must not store the flammable materials near exits, ignition sources, electrical equipment or heating equipment.

NCSG must make all reasonable effort to store flammable combustibles in separate, well ventilated storage areas, 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. All flammable liquids shall be stored in reasonable quantities and in approved safety vented containers.

Only containers approved for portable storage of a flammable liquid shall be used when a flammable liquid has been transferred from the original container (one they were purchased in), or from bulk storage such as a drum or tank. During transfer with metallic or conductive containers, flammable substances must be electrically bonded to each other. 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 relief valves or spring closing lives with spout covers

All portable containers used by NCSG employees, contractors, visitors and general public on NCSG
worksites shall meet one of the following standards:
• Underwriter’s Laboratories of Canada, ULC/ORD-C30-1995, Safety Containers
• CSA, B376-M1980-R2003, Portable Containers for Gasoline and Other Petroleum Fuels
• NFPA Standard 30, Flammable and Combustible Liquids Code, 2003 Edition

Employees must ensure all flammable liquids which are not in use, and are stored inside a building are stored inside certified storage cabinets that meet the requirements of Standard ULC-C1275-1984, Guide for the Investigation of Storage Cabinets for Flammable Liquid Containers. Do not store more than 500 L of flammable and combustible liquids in each cabinet and in addition ensure that no more than half of the total volume (up to 250 L) shall be flammable liquid.

When storing compressed gases or liquids:
• Store cylinders in a clearly identified, dry, well-ventilated storage area away from doorways, aisles, elevators, and stairs;
• Store cylinders away from ignition sources (flames, heat, sparks, hot work);
• Post "no smoking" signs in the area;
• Store cylinders in the upright position and secure with an insulated chain or non-conductive belt;
• Secure the protective caps;
• Ensure that the area is well ventilated. With outside storage, place on a fireproof surface and enclose in a tamper-proof enclosure;
• Protect cylinders from contact with ground, ice, snow, water, salt, corrosion, and high temperatures;
• The control valve of a storage cylinder for compressed gas, other than a cylinder connected to a regulator, supply line or hose, shall be covered by a protective cap that is secured in its proper position;
• Store oxygen and fuel gases separately. Indoors, separate oxygen from fuel gas cylinders by at least 6 metres (20 feet), or by a wall at least 1.5 m (5 ft.) high with a minimum 0.5 hour fire resistance;
• A spent storage cylinder shall not be stored inside a building;
• No storage cylinder for propane shall be placed closer than three metres to a source of ignition or fire;
• The valve on a compressed gas cylinder must be kept closed when the cylinder is empty or not in use;
• Any valve, regulator or fitting connected to a compressed gas cylinder must be a standard fitting, designed and manufactured for the type of cylinder and compressed gas for which it will be used, and must include provisions for flashback arresters where necessary;

6.1.2 Contamination

If a worker’s clothing or skin is contaminated with a flammable or combustible liquid, the worker must:
• Avoid any activity where a spark or open flame may be created or exists;
• Remove the clothing; and
• Ensure the clothing is decontaminated before it is used again;
• If a workers skin is contaminated the worker must wash the skin at the earliest possible time.

Decontamination stations include:
• Emergency showers
• Eyewash stations
• Contaminated material receptacles

6.1.3 Fire Safety Plan

Where there is potential for an outbreak of a fire, a fire safety plan must be developed to include:
• The emergency procedures to be used in case of fire, including:
  • Sounding the fire alarm;
  • Notifying the fire department;
  • Evacuating endangered workers, with special provisions for workers with disabilities.
• The quantities, locations and storage methods of all flammable substances present at the place of employment;
• The designation of persons to carry out the fire safety plan and the duties of the designated persons;
• The training of designated persons and workers in their responsibilities for fire safety;
• The holding of fire drills; and
• The control of fire hazards.

6.2 Hot Work

Welding equipment must be installed, assembled, started, operated, used, handled, stored, stopped, inspected, serviced, tested, cleaned, adjusted, carried, maintained, repaired and dismantled in accordance with the manufacturer's specifications.

Welders and Supervisors must be adequately trained and competent in the care, use and limitations of equipment specific to hot work, in addition to the hazards and relative controls required for the welding, cutting or hot work activity.
6.2.1 Prior to the Start of Hot Work

Employees must ensure that prior to the commencement of any Hot Work activity:

- The area surrounding the operation is inspected and all combustible, flammable or explosive material, dust, gas or vapour is removed, or alternate methods of rendering the area safe are implemented;
- Work location shall be clearly or suitably isolated from combustible materials;
- Where it is not possible to isolate the Hot Work Activity from combustible material, guards should be used to confine the heat, sparks slag and to protect the immovable fire hazards;
- No welding or cutting of metal that has been cleaned with a flammable or combustible liquid until the metal has thoroughly dried;
- Ensure that approved flashback devices are installed on both hoses at the regulator end and acetylene and liquefied gas containers are used and stored in an upright position;
- Procedures shall be implemented to ensure continuous safe performance of a hot work activity;
- Adequate testing shows that the atmosphere does not contain:
  - A flammable substance in a mixture with air, in an amount exceeding 10% of that substances lower explosive limit for gas or vapours, or
  - The minimum permissible concentration for dust.
- Employees must ensure, in accordance with legislation, any flammable substances that are stored, handled, processed or present at a work site will not ignite unintentionally during a Hot Work activity;
- Where necessary, a vessel, tank or piping system, previously containing hydrocarbons must be made safe for workers by purging or inerting prior to work beginning. Caution must be used when purging to prevent or decrease the risk of explosion due to the medium used;
- Where welding is being performed above an area where a worker may be present, adequate means must be taken to protect the worker below the operation from sparks debris and other falling hazards;
- A regulator and its flexible connecting hose must be tested immediately after connections to a gas cylinder to ensure that there is no leak of the gas supply;
- Supervisors are responsible to establish if a fire watch is required, as detailed by Field Level Risk Assessments and NCSG Standard Operating Procedures;
- If welding or cutting cannot be conducted safely, then said work must not be performed.

6.2.2 During Hot Work Activities:

- Signage must be posted identifying the Hot Work Area;
- Apply and maintain proper grounding methods to prevent electrical shock when touching the two points during welding;
- If a leak of the gas supply develops during gas welding, the supply of gas must be immediately shut off by the worker performing the welding or allied process, and the work is not resumed until the leak is repaired;
- Appropriate and adequate fire suppression and extinguishing equipment shall be readily available in the event it is required and must not be part of the buildings existing fire suppression system;
- Welding equipment must never be left unattended without removing the electrode;
- All Welding Equipment must be free of oils, gas, grease and or any other debris around the cylinder, valve and regulator during a welding process;
- Welders will ensure that Oxygen is never used as a substitute for compressed air. At no time will workers allow oxygen to come into contact with any petroleum product, natural fibre or metal powder that has the property of being able to oxidize quickly. Oxygen must not be used to run pneumatic equipment, clean tools, start a motor or create pressure in a container;
- Electrode stubs must be disposed of in provided receptacles;
- When welding from a service truck, compressed gas cylinders must be handled according to the SDS, and TDG or Hazardous Materials regulations, and storage compartments for compressed gas cylinders must meet legislative requirements;
- If identified during the Field Level Risk Assessment and Standard Operating Procedures, a fire watch shall be in place. Consideration shall be given to the following:
  - welding
  - cutting
  - grinding
  - other similar hot work tasks
- EXCEPTION: if the FLRA Establishes the Hot Work of a minor task such as brazing or soldering and when the following conditions exist:
  - Non-combustible building constructions;
  - All combustibles (contents or equipment) are separated by non-combustible building construction including wall, floor, or ceiling openings; and
  - There are no combustible materials adjacent to or on opposite side of partition, walls, ceiling or roof likely to be ignited by conduction or radiation.
- When performing hot work in confined spaces, employees shall comply with the Confined Space Entry

6.2.3 Completion of Hot Work Activities
On completion of the hot work task, if a fire watch was used, NCSG employees, contractors must ensure the following:

- A fire watch remains or themselves remain in the area for any minimum of 30 minutes or longer if necessary, to inspect the area to which sparks and heat may have spread and determine the area fire safe.
- After determining the area fire safe, the fire watch shall:
  - Notify the NCSG / Client supervisor that the fire watch is leaving the fire area;
  - The fire watch shall for a proof of not less than one (1) hour after leaving the permit area will periodically (not less than every 30 minutes) return and monitor the area as deemed needed to ensure the area remains fire safe
- All empty compressed gas cylinders shall be identified and stored in a secure manner separated from full or in service cylinders.

6.2.5 Service Vehicles

Procedures for handling cylinders and horizontal cylinder storage:

- Storage compartments for compressed gas cylinders must meet legislative requirements;
- Employees must also be trained in WHMIS or GHS and TDG or Hazardous Materials for proper handling and transporting procedures.

6.2.6 Internal Combustion Engines

An internal combustion engine is any engine that operates by burning its fuel inside the engine. This includes include those fuelled by diesel, hydrogen, methane, propane, etc.

This requires an air intake and exhaust system with a flame arresting device to be in place to release to hazardous fumes and prevent fire or explosion. When possible, work with internal combustion engines should be done outside of the hazardous location.

6.3 Hot Taps

Hot tapping is a method of employing an under pressure drilling machine to cut a hole in an operating pipeline or storage vessel which allows for a new branch connection from the existing pipe or vessel without any interruption to the flow.

Virtually every hot tapping job is different. A detailed, written, job-specific hot tap plan must be available before starting each job to help ensure that appropriate measures are addressed.

6.4 Flares

Flares are continuously purged with a gaseous fluid to prevent air from entering the exit port and migrating which can present dangerous mixtures of air and unburned hydrocarbons. This purging usually consists of flowing a purge gas through the flare system at a rate sufficient to prevent backflow of air down the stack. The purge gas serves to keep air out of the stack, thus preventing formation of certain mixtures of air and gas which, when ignited, can result in explosions within the flare stack.

Because there is a high risk of fire or explosion with flares, a thorough hazard assessment must be conducted and ensure that open flames from flare pits, flare stacks or flares are not less than 25 meters beyond the boundary of a hazardous location.

6.5 Flammable Gas and Vapours

In the event proactive protection measure are insufficient to keep the concentration of flammable gases or vapours under the applicable exposure limits NCSG shall ensure that:

- Only the minimal amount of workers necessary to complete the work are exposed.
- Every worker exposed must be adequately trained and equipped to work safely.
- The concentration of gases will not exceed 20% of LEL.
- In life threatening situations only emergency response workers will be allowed to enter the area if the LEL exceeds 20%.

6.6 Flammable or Combustible Liquids

Under no circumstance will an NCSG employee or a contractor working on an NCSG location use gasoline or any other combustible fluid to start a fire nor shall an NCSG employee or contractor working on a NCSG location use gasoline as a cleaning agent.

No mobile equipment shall be refilled while that equipment is in operation or is hot enough to ignite a flammable fluid.

Employees must not undertake any maintenance or service of a vehicle while flammable liquids, gasoline or any other explosive substance is loaded or unloaded from the vehicle, other than the fluid normally stored in the vehicle fuel tank.

6.7 Piping Work

NCSG must ensure that before any hot tapping, blinding or support welding on a section or piece of piping occurs that all personnel involved in the process receive specific training regarding that piping and pipe work in general.
7.0 TRAINING REQUIREMENTS AND MATERIALS
NCSG must conduct an effective training program which ensures that everyone understands the hazards and safe work procedures related to their work. Training shall be provided for those who supervise workers, those who perform the work, tending workers and rescue personnel. NCSG training documentation shall include:

Requirements for worker competency identifying that workers must be “competent” and have a thorough working knowledge of:
- Transportation of Dangerous Goods;
- Workplace hazardous Materials Information Systems or HAZCOMM;
- Company Standard Operating Procedures;
- Hazardous Space Entry;
- Safety equipment required for workers;
- First aid requirements;
- Emergency response and rescue including required equipment; and
- The NCSG orientation.

8.0 RESOURCES
- Alberta OH&S Code Part 10, section 162 - 171
- BC OHS Regulations Part 5, Sec 5.31
- BC OHS Regulations Part 5, Sec 5.43
- BC OHS Regulations Part 5, Sec 5.36
- Saskatchewan OHS Regulation Part XXV, Sec 366(1)
- Saskatchewan OHS Regulation Part XXV, Sec 368(1)
- Saskatchewan OHS Regulation Part XXV, Sec 366(2)
- Saskatchewan OHS Regulation Part XXV, Sec 372
- Saskatchewan OHS Regulation Part XXV, Sec 374(3)
- Manitoba OH&S Regulations Part 19 Sec 19.3(1)(a)
- National Fire Code
- NFPA
- OSHA 1926

9.0 SUPPORTING DOCUMENTS
- NCSG Code—Flammable and Combustible Storage and Handling
- NCSG Code—Personal Protective Equipment—Eye and Face Protection
- NCSG Code—Personal Protective Equipment—Respiratory Protection
12.4 First Aid Code

1.0 PURPOSE
NCSG Crane and Heavy Haul and its affiliated companies referred to as NCSG have developed a First Aid Code to identify the proper level of protection required on work sites for First Aid and Medical Response for employees, contractors, and the public while operating within NCSG areas of responsibility. This code will aid employees in ensuring that adequate and satisfactory first aid materials, equipment and trained personnel are in place.

2.0 SCOPE AND APPLICATION
The correct identification of applicable quantity and type of first aid materials will enable properly trained NCSG employees to respond to first aid incidents within operational environments. Additional use of the training provided may also assist in minimizing the potential for time loss incidents due to off-site activities involving NCSG employees. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to the First Aid Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

First Aid Immediate and temporary care given to an injured or ill person at a work site using available equipment, supplies, facilities or services, including treatment to sustain life, to prevent a condition from becoming worse or to promote recovery.

First Aider An emergency first aider, standard first aider or more advanced first aider designated by an employer to provide first aid to workers at work site.

First Aid Attendant See First Aider.

High Hazard Work Work, which involves construction or demolition, operation and maintenance, woodland operations, gas and oil well drilling and service operations, seismic operations, or detonation of explosives.

Low Hazard Work Low Hazard Work is performed at administrative sites, which are clerical or administrative in nature. Low hazard may also be a dispersal site where a worker is based, required to report for instruction or from which a worker is transported to a work site, where work is to be performed.

Medium Hazard Work Work, which; is defined neither as low hazard nor as high hazard.

Musculoskeletal Injuries Musculoskeletal injuries must be treated in the same manner as any first aid emergency. This includes immediate response, treatment of the injured worker, investigation of the events leading up to the injury and implementation of necessary corrective actions.

4.0 EXPECTATIONS
The First Aid Code shall provide required and adequate criteria to ensure the correct number of trained personnel and equipment is located on all NCSG work sites as required to meet or exceed the legislation. The First Aid Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial/State/Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management System are updated, a revision record will be posted to all employees notifying them of the update.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
  • Be aware of the location of all first aid kits and stations within the work site area in use;
  • After treatment or first aid provided, make record of the nature of first aid received and provide to your immediate Supervisor;
  • Report any work related physical injury or sudden occurrence of illness experienced while at work;
  • Render all reasonable assistance as trained to do so without putting yourself at risk.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
  • Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or the general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
  • Ensure adequate first aid services, equipment, supplies that are required or defined by legislation are:
    • Readily available and accessible;
• Located at or near the worksite;
• Maintained in a clean, dry and serviceable condition;
• Clearly identified as first aid equipment, supplies and services (if applicable);
• Known by all workers.
• Ensure that a means to summon or request first aid is in place and communicated to all workers;
• Ensure that workers are made aware of their responsibility to report any work related physical injury or sudden occurrence of illness experienced while at work;
• Ensure that any work related physical injuries are recorded in a manner that will create and maintain an accurate written record on behalf of NCSG;
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or the general public within the area;
• Provide in accordance with NCSG programs any corrective action or discipline required ensuring compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code and all relevant legislation, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites;
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Compliance with Minimum Requirements—On-Site First Aiders
NCSG shall make available at all work sites, at a minimum, the required number of first aiders identified in the applicable legislation.
First Aiders must be readily identified by a means, which is readily accessible to all employees who operate within the work environment.
NCSG shall be responsible to ensure the first aiders are:
• Over the age of 16;
• Current and certified in the applicable First Aid training;
• Aware of their designation to act as a First Aider on the work site;
• Equipped with or have access to the adequate supplies to perform the duties required.

6.2 Compliance with Minimum Requirements—First Aid Kits
NCSG shall ensure that all first aid kits on work sites or situated within company vehicles are located in readily accessible and identified locations. These kits shall meet or exceed all regulatory legislation.
NCSG (where applicable) shall be responsible to ensure the first aid kits are:
• Maintained in good working order;
• Inspected on a scheduled routine;
• Kept clean and sanitary;
• Equipped with adequate supplies and re-stocked if required;
• Clearly labeled and identified.

In compliance with the applicable OH&S Regulations, First Aiders are not allowed to diagnose, prescribe or administer any medication. First aiders are allowed to assist individuals with their own prescribed medications if the casualty identifies the medication on his own and is unable to take it without assistance.

The inclusion of symptom relief medication falls outside of the scope of first aiders and must be left to individual choice and access. As a result, no NCSG first aid kits shall include any over-the-counter medication designed for symptom relief (e.g. Aspirin, ASA, and Tylenol).

6.3 First Aid Review
NCSG shall ensure that there is a review of work scope to ensure that the legislative requirements are in place. Information to be reviewed or considered should include:
• Type of work that is done;
• Hazards to which workers are exposed (hazard assessment);
• How close medical treatment services are to the work site;
• Medical transportation and accompanying injured workers;
• The type of first aid treatment will be administered.

Reviews will be done prior to work commencing or when significant changes occur.
6.4 Transportation of Injured Workers
NCSG will ensure that before a worker is sent to a worksite, there is a way to transport an injured or ill worker from the work site to a health care facility. This will be either via ambulance, or a Supervisor, or designated representative on-site who is able to provide transportation and is certified in first aid. Workers are given company cell phones, which they will be able to use to contact an ambulance or the designated driver to the health care facility.

6.5 Records
- NCSG will record every acute illness or injury that occurs at the work site in a record kept for the purpose as soon as practicable after the illness or injury is reported to the employer.
- A record must include the following:
  - The name of the worker;
  - The name and qualifications of the person giving first aid or the name of the treating facility;
  - A description of the injury or illness;
  - The first aid given to the worker;
  - The date and time the illness or injury was reported;
  - Where at the worksite the incident occurred;
  - The work-related cause of the incident, if any.
- The employer must retain the records kept under this section for 3 years from the date the incident is recorded.
- All records of First aid must be secured and kept confidential so that no person other than the worker has access to the worker’s records unless:
  - The record is in a form that does not identify the worker;
  - The worker has given written permission to the person; or
  - Access, use and disclosure of the information are in accordance with privacy laws or the requirements defined under the applicable legislation.
- Workers have the right to request a copy of their records.
12.5 Bloodbourne Pathogens Code

1.0 PURPOSE
NCSG Crane and Heavy Haul and its affiliated companies referred to as NCSG have developed a Bloodborne Pathogens Code to identify the proper level of protection against a potential exposure to employees, contractors, visitors, and the public while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct Standard Operating Procedures and education of Bloodborne pathogens will enable employees to ensure adequate protection from activities involving potential exposure to these hazards during operational environments. First Aid Responders and Emergency personnel are more likely to be exposed to bloodborne pathogens and shall be trained in the recognition and handling of bloodborne pathogens. In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG Companies.

3.0 DEFINITIONS
The following definitions are specific to Bloodborne Pathogens Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company Standard Operating Procedures.

Bloodborne Pathogen Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Contaminated Sharp Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Occupational Exposure Occupational Exposure is any reasonably anticipated skin, eye, mucous membrane, or potential contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties. The response of a company assigned first aider may be considered occupational exposure.

Other Potentially Infectious Materials (OPIM)
- The following human body fluids:
  - human waste
  - saliva
  - any body fluid that is visibly contaminated with blood
  - all body fluids in situations where it is difficult or impossible to differentiate between body fluids
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead);
- HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues.

Universal Precautions Universal precautions is an approach to infection control to treat all human blood and certain human body fluids are treated as if they were known to be infectious for HIV, HBV, and other bloodborne pathogens.

4.0 EXPECTATIONS
The Bloodborne Pathogens Code shall provide required and adequate guidelines to ensure knowledge of potential hazards to all employees, contractors, visitors, and general public within NCSG areas of responsibility is minimized. The Bloodborne Pathogens Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial/State/Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
- Use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received;
- Inspect personal protective equipment before using it, and do not use personal protective equipment that is unable to perform the function for which it is designed;
- Immediately notify, to the next level of authority, the improper handling, staging or disposal of potentially infectious and/or sharps materials;
- Be responsive, through adequate training, to minimize the risk of exposure to potential work environments which may be prone to bloodborne pathogens.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• NCSG employees, contractors shall utilize standard precautions whenever working with potentially infectious materials. Under standard precautions all blood products, human/animal tissues and other potentially infectious materials are considered infectious regardless of the perceived status of the source animal/individual, and work practices are chosen appropriately under these assumptions;
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment specified in this code in accordance with the training and instruction received;
• Ensure appropriate PPE as specified in this code is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites;
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area;
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this Code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites;
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Personal Protective Equipment
NCSG employees, contractors, and visitors shall use personal protective equipment (PPE) whenever engineering controls and company Standard Operating Procedures (administrative) alone do not provide ample exposure protection. Selection of PPE shall be based on the anticipated level of exposure to potential bloodborne pathogens. Appropriately selected PPE shall protect the employee from contact with potential bloodborne pathogens via contact with skin, eyes, and mucus membranes and/or through aerosol inhalation under normal conditions throughout the period of exposure risk. Effective PPE should also prevent the clothing of NCSG employees, contractors, and visitors from coming into contact with blood or other potentially infectious materials.
The following PPE items shall be considered the minimum acceptable level of protection and shall be worn during all activities involving potentially infectious agents:
• Gloves (latex, nitrile or other approved impervious material);
• Eye Protection (CSA or ANSI approved safety goggles or glasses equipped with splash guards).

In conjunction with NCSG Code compliance for PPE–Footwear, the wearing of clothing which exposes skin on the legs (shorts, short skirts etc.) and feet (sandals, flip-flops, etc.) is strictly prohibited and shall not be worn when the potential for handling infectious materials exists.

Procedures which pose exposure risks that cannot be suitably managed by engineering controls and minimum level PPE (gloves and eye protection) shall require the implementation of a higher level of PPE.

Disposable clothing: procedures involving high potential for splashing/spattering of blood or other potentially infectious materials may also necessitate protection beyond standard work site clothing. Disposable clothing composed of impervious fabric shall be available if the Field Level Risk Assessment / Emergency Response Procedures identify the need.

6.2 Procedures during Contact
NCSG employees, contractors must be familiarized with the location and operation of eye-wash stations and safety showers in anticipation of an exposure incident. All exposure incidents (i.e. needle sticks) must be reported to Health, Safety and Environment Team.

All needles, scalpels, blades, scissors and other items which pose laceration hazards shall be considered infectious "sharps" materials. Sharps materials shall be disposed of in the following manner:
• Sharps materials shall be placed in an approved "sharps" container which shall have the following properties:
• All containers used for sharps disposal shall be rigid and puncture resistant;
• Sharps containers shall be leak resistant;
• Sharps containers shall be capable of being readily (without coming into contact with sharps materials) and securely sealed prior to disposal;
• Sharps containers shall be clearly marked with the following labeling; "BIOHAZARD: INFECTIONOUS SHARPS".
Fingers/hands shall never be placed inside of sharps container. In the unlikely event that an item would have to be retrieved or dislodged from a sharps container, forceps or another mechanical device must be utilized.

Sharps containers shall not be overfilled: sharps materials must fit completely into container - portions of sharps materials must not be allowed to protrude from the top of the vessel. When containers approach being full, seal them securely, arrange for disposal and replace with new (empty) sharps containers. Note: full, properly sealed sharps containers shall be isolated for disposal in compliance with company and legislative directions.

Suitable sharps containers shall either be purchased from laboratory supply catalogues or be manufactured from sturdy plastic containers such as milk jugs. Improvised containers shall meet the labeling and handling requirements listed above.

Non-infectious broken glass shall include all broken glassware which has not come into contact with potentially infectious agents. These materials may include such items as: glassware broken during or after cleaning, glassware broken while containing non-infectious materials (water, buffers, etc.), broken coffee cups, broken soda bottles etc. NCSG employees, contractors, visitors who dispose of non-infectious broken glass shall take the following precautions:
- Place all non-infectious broken glass items into puncture resistant containers (a sturdy cardboard box is preferred);
- Do not fill above the top of the box, when approaching full, seal box and wrap box with several strips of packing or duct tape
- Clearly label box "NONINFECTIONOUS BROKEN GLASS" (indelible black marker preferred).
- Dispose of non-infectious broken glass box through standard NCSG housekeeping (or place in regular "domestic" trash dumpster).

6.3 Clean Up of Infectious Material / Spills
Response to spills involving materials suspected to be of a Bio-Hazardous Material shall only be conducted by specially trained and protected personnel. Any level of contamination outside of the scope of a first aid responder shall be outsourced to the appropriate personnel for disposal and containment.

Any on-site Emergency Response Procedures shall be detailed to contain and minimize risk of exposure. The following shall be considered the minimum procedures to contain a spill on site:
- NCSG employees, contractors shall use a 10:1 water to bleach solution (10% bleach solution) for the clean-up of contaminated surfaces.
- The use of an Emergency Response Kit (for use by First Aid Responders / Spill Response Personnel) and shall contain:
  - one gallon of premixed 10% bleach solution
  - Absorbent materials, such as absorbent pads, vermiculite or disposable towels, for containing and treating spills
  - Spray/mist bottles for bleach solution application
  - A cache of unused "red bags" for receiving waste generated during spill response or for over packing leaking containers
  - Rigid containers for receiving contaminated broken glass and other sharps materials
  - Liquid impermeable disposable coveralls, gloves, boots, caps and protective breathing devices such as N-95 respirators
  - Eye protection gear, including splash resistant safety glasses
  - Access to: A broom, heavy duty brush and dustpan (for spills involving sharps materials);
  - Extra clothing to replace contaminated items (disposable coveralls).

The above listed material shall be maintained and checked regularly as part of NCSG Emergency Response Equipment. Quantity of kits and placement shall be established by the Regional Team Lead—Health, Safety and Environment Team in conjunction with Field Level Risk Assessments and Company standard Operating Procedures.

6.4 Post Exposure Follow-Up
NCSG employees, contractors involved in a potential exposure to bloodborne pathogens shall thoroughly wash hands with soap and water immediately upon the removal of gloves following the performance of tasks involving potentially infectious materials.

If required, all laboratory tests required in association to the exposure incident shall be conducted by accredited laboratories at no cost to affected employee(s). Employees shall receive a copy of the attending healthcare professional's written opinion within an acceptable timeframe of days of the completion of the exposure evaluation.

6.5 Recordkeeping
All exposure incidents must be reported, investigated, and documented using the applicable NCSG employee incident investigation forms. Employees must report exposure incidents to their supervisor immediately.

7.0 TRAINING REQUIREMENTS AND MATERIALS
- All employees who have the potential for coming into contact with blood borne pathogens or other infectious materials shall be provided with training to eliminate/minimize the risk of exposure. This training may be part of the Standard First Aid Training provided through NCSG Training Programs.
Follow up refresher training shall be conducted on (at minimum) an annual basis after the initial training session.

Training programs shall include the following elements:
- explanation of NCSG’s Bloodborne Pathogens Code and its contents discussion of the modes for the transmission of bloodborne pathogens and other infectious materials;
- discussion of methods for identifying tasks which involve the potential for exposure to blood products and other infectious materials;
- information regarding the use and limitations of engineering controls for reducing exposure risks;
- detailed information regarding the use and limitations of personal protective equipment (PPE) for reducing exposure risk;
- Hands-on training detailing types, applications, and proper use.
- Standard First Aid / First Responder training
- PPE Equipment specific training
  - N95 Respirator
  - Disposable Rubber or Latex gloves
  - Disposable Coveralls
  - Eye / Face Protection to prevent infectious materials from coming in contact with eye membrane
- NCSG orientation

8.0 RESOURCES
- Alberta OH&S Code Part 18
- BC OH&S Regulation Part 8
- BC OH&S Regulation Part 5
- BC OH&S Guidance Part 5
- Saskatchewan OH&S Regulation Part VII
- Manitoba OH&S Regulations Part 5
- Ontario OH&S Reg. 851, Part 1
- Canadian Centre for Occupational Health & Safety
- OSHA Bloodborne Pathogen Regulations (29 CFR 1910.1030)

May all be used to reference additional information pertaining to bloodborne pathogens and control methods for minimizing potential exposure and risk.

9.0 SUPPORTING DOCUMENTS
- NCSG Code–Personal Protective Equipment—Eye and Face Protection
- NCSG Code–Personal Protective Equipment–Respiratory Protection
12.6 Flammable Combustibles and Storage Handling Code

1.0 PURPOSE
NCSG Crane and Heavy Haul and its affiliated companies referred to as NCSG have developed a Flammable, Combustibles—Storage and Handling Code to identify the proper level of protection against a potential injury/damage to employees, contractors, and the public/property regarding the storage and handling of flammable combustibles while operating within NCSG areas of responsibility.

2.0 SCOPE AND APPLICATION
The correct storage of flammables is essential in maintaining a safe work environment and understanding of non-compatible material storage will enable employees to ensure adequate protection from potential injury/property damage during operational environments. In conjunction with referenced legislation, clear and concise direction drives the standards, which are to be viewed as the minimum requirements identified by NCSG.

This Code applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
The following definitions are specific to Flammable, Combustibles—Storage and Handling Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Flammable Material 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. Some examples of flammable materials include:
- Gases
  - Propane
  - Butane
  - Methane
  - Acetylene
  - Carbon Monoxide
  - Hydrogen Sulphide

Flammable gases are usually gases with a lower explosive limit (LEL) of less than 13% in air, or have a flammable range in air of at least 12%.
- Liquids:
  - gasoline
  - acetone
  - alcohols and toluene
  - paint and paint thinners
  - adhesives
  - degreasers
  - cleaners
  - waxes
  - polishes

Flammable liquids have a flashpoint low of 37.8°C Celsius
- Solids:
  - Some types of coal;
  - Pyrophoric metals (metals that burn in contact with air or water, such as sodium and potassium);
  - Solid wastes, which are soaked in flammable liquids (breaks, paper, spill clean-up products);
  - Gunpowder;
  - Matches.

Lower Explosive Limit The lower explosive limit is the lower value of the range of concentrations of the substance, in a mixture with air, at which the substance may ignite. All work shall cease and workers leave the work area when 10% of the LEL is identified.

Auto Ignition Temperature The lowest temperature at which a flammable material will ignite on its own and burn without the introduction of an ignition source

BLEVE (Boiling Liquid Expanding Vapour Explosion) A pressure release explosion occurring when liquid containers fail due to fire.

Explosion A very rapid build-up and release of pressure resulting from decommissioned a flammable gases or flammable liquid vapours in an enclosed container or space.

Flammable Range The minimum and maximum concentration range of a flammable vapour in the air that can ignite on contact with an ignition source

Flashpoint Lowest temperature at which a flammable or combustible liquid gives off enough vapor to form any night table mixture with air, which burns

Ignition Point The minimum temperature at which; a flammable or combustible liquid gives off enough vapour to form a sustained ignitable mixture with air.

Upper Explosive Limit The maximum concentration of: a flammable vapor in the air that will burn.
4.0 EXPECTATIONS
The Flammable Combustibles—Storage and Handling Code shall provide required adequate process to ensure knowledge of flammable combustibles and the safe storage and handling of these materials at an NCSG worksite. The Flammable Combustibles—Storage and Handling Code will be reviewed at a minimum of every three years as outlined in the Health, Safety and Environment review schedule.

This code shall supplement, but not supersede any regulatory Provincial/State/Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:
• Ensure storage and handling of combustible materials is in accordance with the training received and the code requirements outlined within this document;
• Ensure that all flammable combustibles are used in accordance with manufacturer’s specifications and only used for the intended purpose;
• Ensure the appropriate personal protective equipment required in the handling of flammable combustibles in accordance with the training and instruction received is used;
• Be responsive, through adequate training, to minimize the risk of exposure to potential work environments due to the use of flammable combustibles.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers use and wear properly the appropriate personal protective equipment required in the handling of flammable combustibles in accordance with the training and instruction received;
• Ensure appropriate PPE, as specified in this code, is readily available for all employees, contractors, visitors within NCSG areas of operation or active worksites;
• Immediately correct any violations or infractions of this code, which have been brought to the attention of the supervisor that did, or could, result in an incident or injury to the worker, employees, contractors, or the general public within the area.
• Provide in accordance, with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Ensure adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.

5.5 Health, Safety and Environment Team
It is the Health, Safety and Environment team responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Development of Flammable Combustibles - Storage and Handling Code
NCSG shall ensure that in addition to the Flammable Combustibles—Storage and Handling Code, site specific Standard Operating Procedures and Field Level Risk Assessment shall if required expand on and address:
• Storage;
• Dispensing;
• Spill cleanup;
• Incompatible Storage and Materials;
• Primary Use of Engineering Controls;
• PPE, specific for flammable product handling;
• Emergency Response and Fire Protection/Prevention;
• Cross-reference to any site-specific NCSG codes (e.g. Hot Work, Confined Space, etc.).

6.2 Storage, Handling and Disposal of Flammable Combustibles
NCSG shall not store the flammable materials near exits, electrical equipment or heating equipment or any potential ignition sources.

NCSG shall make all reasonable efforts to store flammable combustibles in separate, well-ventilated storage areas,
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. All flammable liquids shall be stored in reasonable quantities and in approved safety vented containers.

Disposal of waste products or flammable contaminated materials shall be in self closing closed receptacles that are emptied regularly.

6.2.1 Portable storage containers for flammable liquids

Only containers Approved for portable storage of a flammable liquid shall be used when a flammable liquid has been transferred from the original container (one they were purchased in), or from bulk storage such as a drum or tank. 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 relief valves or spring closing lives with spout covers.

All portable containers used by NCSG employees, contractors, visitors and the general public on NCSG worksites must meet one of the following standards:

- Underwriter’s Laboratories of Canada, ULC/ORD-C30-1995, Safety Containers
- CSA, B376-M1980-R2003, Portable Containers for Gasoline and Other Petroleum Fuels

6.3 Use of Storage Cabinets

NCSG must ensure all flammable liquids, which are not in use, and are stored inside a building are stored inside certified storage cabinets that meet the requirements of Standard ULC-C1275-1984, Guide for the Investigation of Storage Cabinets for Flammable Liquid Containers. NCSG must not store in excess of 500 L of flammable and combustible liquids in each cabinet and in addition must ensure that no more than half of the total volume (up to 250 L) shall be flammable liquid.

6.4 Use of Storage Tanks/Roofms

If site-specific storage tanks or rooms are used, NCSG shall ensure other types of chemicals, which are not compatible, are not stored near bulk containers of flammable materials and combustibles. Adequate space and distance must be maintained of any bulk storage containers from potential sources of ignition, such as heat, sparks or open flames, and compressed gases must not be stored beside flammable containers.

Bulk storage areas must be equipped with adequate spill protection and shall be marked with appropriate signage indicating the contents and the restriction of smoking within the designated area. Adequate ventilation systems shall be designed and maintained in a regular schedule.

6.5 Bonding and Grounding

Bonding and grounding must be used to prevent sparks from being created when liquids are transferred between containers.

6.6 Incompatible Storage Restrictions

- NCSG must ensure that incompatible materials are not stored in a manner that may create a hazardous environment.
- Oxidizing agents (chlorine, oxygen, acids, etc.) shall be stored separately from combustible products. Refer to SDS information on specific storage requirements.
- SDS information must be used to ensure proper storage of flammable combustibles.
- All oily and flammable waste shall be disposed of in approved containers with lids.

6.7 Emergency Response Procedures

NCSG shall ensure that in addition to emergency response procedures as required by legislation. All employees, contractors, visitors are made familiar with site-specific hazards pertaining to flammable combustibles as applicable. NCSG Standard Operating Procedures must ensure the following assessment information is compiled prior to any work beginning:

- Limit the amounts of flammable and combustible materials:
  - Keep only what is required on site;
  - Do not purchase excess volumes;
  - Ensure only task related flammable combustibles that are needed at the work site are exposed;
  - Minimize accumulation of hazardous wastes at worksites;
  - Store products in appropriate and certified containers;
  - Isolate flammable combustibles from other processes and storage areas.
- Provide proper ventilation to ensure flammable vapours do not accumulate:
  - Ensure properly designed ventilation and storage areas;
  - Ensure processes, which use or make flammable materials do not exhaust back into the work site;
  - Ensure equipment exhaust and ventilation systems exhaust to the outside of the building and away from air intakes;
  - All ventilation systems are properly maintained and comply with applicable building codes.
• Control ignition sources:
  • Ensure grounding and bonding as required;
  • Ensure compliance with No Smoking restrictions;
  • Ensure flammable combustibles are not stored near hot equipment, open flames, or other ignition sources;
  • Use non-sparking tools when required.
• While working with flammable materials and liquids a 20 lbs. ABC fire extinguisher shall be readily available and indicated on the FLRA.

7.0 TRAINING REQUIREMENTS AND MATERIALS
All employees are expected to complete the basic training on safe handling of products and flammable storage during the initial orientation and to maintain annual updates on VTA. Additional training on Chemical handling, Fire extinguishers and WHMIS 2015/ GHS is to be completed in conjunction with this training.
  • Fire Extinguisher Familiarization and Training
  • PPE Equipment specific training for Flammable Combustibles
  • WHMIS 2015/ GHS
  • NCSG orientation

8.0 RESOURCES
  • Alberta Employment and Immigration – Workplace Health & Safety Bulletins – FEX002 Self Fire and Explosives
  • Alberta OH&S Code Part 10
  • BC OH&S Code Part 5
  • Manitoba OH&S Regulations Part 19
  • Ontario Fire Protection and Prevention Act, Division B, Part 4, Section 4.2
  • Saskatchewan OH&S Regulations Part XXV
  • National Fire Code
  • Underwriter’s Limited of Canada Standard ULC-C1275-1984, Guide for the Investigation of Storage Cabinets for Flammable Liquid Containers
  • Underwriter’s Laboratories of Canada, ULC/ORD-C30-1995, Safety Containers
  • CSA, B376-M1980-R2003, Portable Containers for Gasoline and Other Petroleum Fuels
  • NFPA Standard 30, Flammable and Combustible Liquids Code, 2003 Edition
  • OSHA Flammable and Combustible Liquids Standard 29 CFR 1910.106
13.1 HSE Statistics and Recordkeeping

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG is committed to becoming an industry leader in providing productive, quality crane lifts and heavy haul solutions to its customers, in the most safe and efficient manner possible.

To achieve this, NCSG has established HSE Statistics and Recordkeeping process’s that maintain and present historical information. Supervision shall ensure that all record keeping is carried out according to established schedules and that records are maintained in both written and electronic formats were required.

2.0 SCOPE AND APPLICATION
All HSE records created on behalf of NCSG shall be properly maintained so as to reduce the risk of loss, damage or unintentional release. This Program applies to all HSE, Technical Training and Transportation Compliance information and documentation that is created, supplied by or to NCSG in both written and electronic format.

3.0 ROLES AND RESPONSIBILITIES
All employees / lease operators / subcontractors shall provide required information and documentation to NCSG as required by individual policies, processes or as assigned by Supervision and Management. Individual responsibilities for storage, assessment and securing of information and documents are defined in separate policies and job descriptions.

4.0 DATABASE MANAGEMENT
NCSG uses various databases to maintain and provide records and statistics for the HSE, Technical Training and Transportation Safety and Compliance (TSC) Departments. The following sections identify the individual databases that are used by each department.

4.1 HSE- S2Web Incident Software
S2Web is an online independent web based software program that is used to store and provide reports for HSE related activities and documents such as;
- Incident investigations, incident trends and statistics reports
- Safety meetings,
- Inspections;
- Action item tracking;
- Safety compliance observations;
- Exposure hours;
- Employee information for TSC requirements;
- Subcontractor management documents;
- Quality systems non-compliance reports.

S2Web is administrated at a corporate level with authorized user throughout all aspect of the company. Access to the system is controlled through a corporate administrator by assigning individual usernames and passwords using established security permission levels.

4.2 HSE- Safety Prequalification Databases
Various HSE databases are used by NCSG and our customers to evaluate information related to safety and compliance. These databases; ISN, Can Qual, Browz, PICS, PECs, continuously monitor data that is requested by the owner clients requiring daily interaction for all accounts. Subscriptions to the different databases vary for the regions and companies that NCSG provides services to. Accounts are the responsibility of the Corporate HSE Manager and are maintained by the Corporate HSE Administrator. Reports from the various databases can be provided by the Corporate HSE Administrator.

4.3 TRAINING - VTA- Virtual training Assistant Software
VTA is used to deliver and track CBT (computer based training) training programs, track individual training certifications and provides authorized users customizable reports. All NCSG employees are tracked in VTA. Tracking includes the date of training, completion date, instructor, the score and expire dates. In house training has assigned priorities based on a Priority 1 to Priority 3 scales to assist users in completing mandatory training and the timeframes for completion. Reports can be provided by VTA administrators or by contacting the NCSG training department.

Additional training records and competency sign offs are maintained on the shared drive for each branch. Access to the individual files is granted through the authorized branch administrators or by contacting the NCSG Training department.

4.4 Transportation Safety Compliance (TSC)
The TSC group uses several different databases and software programs to manage transportation related files. Drivers’ files are maintained using the S2 Web system, the NexGen Database is used for information on equipment, vehicles and maintenance and a 3rd party system called OTS that gathers and reports on the drivers “Hours of Service” and violations. Various reports are available through the systems by request through the TSC Manager.
4.5 Preventative maintenance- NexGen
NexGen database is a multi-functional system that encompasses; inventory management, purchasing, maintenance and Business Development information. The software is supported internally with NCSG IT and a full time database administrator. Access is controlled through individual accounts that are authorized by the System Administrator and the employees’ functional manager. Permissions and access profiles in the system are controlled through the approved NexGen approval matrix which is established by the NexGen Committee. HSE and TSC use NexGen for preventative and reactive maintenance, historical information on all equipment and vehicles and for purchasing.

4.6 Corporate Shared Drive
Various files are stored on the NCSG Corporate Shared drive commonly referred to as “S drive”. This drive can be used as a common access and storage point for all branches and users to access. Individual permission to files is established through the NCSG IT department and senior Managers responsible for the functional information.

4.7 NCSG - HUB (Intranet)
The NCSG HUB is an internal server based website that provides authorized users access to internal policies, processes, information, and provides links to externally based programs such as S2web and VTA. Employees are set up with user accounts and passwords through an IT request form. The Hub is the preferred point of contact for the current HSE manual, Training and Transportation Policies and Programs.

4.8 NCSG Website (Internet)
The NCSG Website http://www.ncsg.com is an internet based open site that is available to our employees, customers and the public. The website provides access to our current HSE, Training and Transportation programs as well as other departments including Engineering and the Business Development groups. The site provides links to the various branches and affiliated companies that make up NCSG. Records are not available through the site.

5.0 High Security and Confidential Files
Materials that require high levels of security or are of confidential nature, such as individual medical files, are maintained in locked cabinets that are controlled by authorized users. Access to these files is controlled through the individuals in charge of the file requiring the person in charge to unlock and supervise the use of the information.

5.1 Archiving High Security and Confidential Files
High security and confidential files that require long term archiving are archived in locked cabinet or room separate of other store rooms to ensure controlled access.

5.2 Disposal High Security and Confidential Files
Confidential and high security documents that have expired are to be shredded or discarded in secured disposal bins for third party shredding.

6.0 Common Reports and Statistics
HSE Administration typically provides the following reports;

• Corporate roll up HSE statistics and trending on a monthly, quarterly, annual and rolling 12 month reports
• Branch level trends
• Monthly open action item and open investigation reports
• Quarterly VTA compliance reports
• Traffic violation and trending by region
• Board presentations quarterly

Additional reports can be requested through the HSE, TSC and Training departments.
13.2 USA Record Keeping Rule

As of January 1, 2015 there are new requirements for the OSHA Recordkeeping Rule.

What must be reported?
- All work-related fatalities
- All work-related inpatient hospitalizations of one or more employees
  - Defined as a formal admission to the inpatient service of a hospital or clinic for care or treatment
- All work-related amputations
  - An amputation is defined at the traumatic loss of a limb or other external body part. This includes a limb or appendage that has been severed, cut off, amputated (either completely or partially); fingertip amputations with or without bone loss; medical amputations resulting from irreversible damage; and amputations of body parts that have since been reattached.
  - All work-related losses of an eye

How soon must it be reported?
- Work related fatalities must be reported within 8 hours of finding out about them if the fatality happened within 30 days of a work related incident
- Hospitalizations, amputations, or eye loss must report the incident within 24 hours of learning about it if the inpatient hospitalization, amputation or eye loss occurs within 24 hours of a workplace incident.

What information is required?
- Company Name
- Location of the work-related incident
- Time of the work-related incident
- Type of reportable event
- Number of employees who suffered the event
- Names of the employees who suffered the event
- Contact person and his or her phone number
- Brief description of the work-related incident

How to report:
- Follow the NCSG Federal Regulatory Reporting and Notification Process – IMP
- Refer to the NCSG Regulatory Involvement Notification Process

More information about this Rule, the Reporting Process and Regulatory Involvement Process are available on the Hub. Alternatively the Recordkeeping Rule is available at www.osha.gov/recordkeeping2014
13.3 Access to Exposure & Medical Records Process (USA)

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG are committed to providing and maintaining a safe and healthy workplace for all its employees. The purpose of this Process is to provide employees and their designated representatives a right of access to relevant exposure and medical records; and to provide representatives of the Assistant Secretary a right of access to these records in order to fulfill responsibilities under the Occupational Safety and Health Act.

2.0 SCOPE AND APPLICATION
This Process requires the Employee Medical Record, a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel, or technician is kept on file during the course of employment and for 30 years following. In addition to the Employee Medical Record, the employee exposure record must equally be filed and maintained during the course of employment and for 30 years following. This Process applies to all Operations across USA and is mandatory.

3.0 DEFINITIONS
Access Access means the right and opportunity to examine and copy.

Analysis using exposure or medical records Analysis using exposure or medical records means any compilation of data or any statistical study based at least in part on information collected from individual employee exposure or medical records or information collected from health insurance claims records, provided that either the analysis has been reported to the employer or no further work is currently being done by the person responsible for preparing the analysis.

Designated Representative Designated Representative means any individual or organization to whom the employee gives written authorization to exercise a right of access. For the purposes of access to employee exposure records and analysis using exposure or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Employee Employee means a current employee, a former employee, or an employee being assigned or transferred to work where there will be exposure to toxic substances or harmful physical agents. In the case of a deceased or legally incapacitated employee, the employee’s legal representative may directly exercise all the employee’s rights under this process.

Employee Exposure Record Employee Exposure Record means a record containing any of the following kinds of information;

- Environmental (workplace) monitoring or measuring of a toxic substance or harmful physical agent, including personal/area/grab/wipe or other form sampling, as well as related collection and analytical methodologies, calculations and other background data;
- Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (level of chemical in urine, hair, blood, breath, fingernails) but not including results which assess the biological effect of a substance or agent or which assess an employee’s use of alcohol or drugs;
- Material safety data sheets indicating that the material may pose a hazard to human health or in absence of an MSDS, a chemical inventory or any other record which reveals where and when used and the identity of a toxic substance or harmful physical agent.

Employee Medical Record Employee Medical Record means a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel or technician, including;

- Medical and employment questionnaires or histories
- Results of medical examinations (pre-employment, pre-assignment, periodic) and laboratory tests
- Medical opinions, diagnoses, progress notes, and recommendations
- First Aid records
- Descriptions of treatments and prescriptions, and
- Employee medical complaints

Employer Employer means a current employer, a former employer, or a successor employer.

Exposure or Exposed Exposure or Exposed means that an employee is subjected to a toxic substance or harmful physical agent in the course of employment through any route of entry, and includes past exposure and potential exposure, but does not include situations where the employer can demonstrate that the toxic substance or harmful physical agent is not used, handled, stored, generated, or present in the workplace in any manner different from typical non-occupational situations.

Health Professional Health Professional means a physician, nurse, industrial hygienist, toxicologist, or epidemiologist, providing medical or other occupational health services to exposed employees.

Specific Written Consent Specific Written Consent means a written authorization containing the following;

- The name and signature of the employee authorizing the release of medical information,
- The date of written authorization,
- The name of the individual or organization that is authorized to release the medical information,
The name of the designated representative that is authorized to receive the released information,
- A general description of the medical information that is authorized to be released,
- A general description of the purpose for the release of the medical information, and
- A date or condition upon which the written authorization will expire

**Toxic Substance or Harmful Physical Agent** Toxic Substance or Harmful Physical Agent means any chemical substance, biological agent (bacteria, virus, fungus, etc), or physical stress (noise, heat, cold, vibration, repetitive motion, ionizing and non-ionizing radiation) which:

- Is listed in the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS) which is incorporated by reference as specified; or
- Has yielded positive evidence of an acute or chronic health hazard in testing conducted by, or known to, the employer; or
- Is the subject of a MSDS kept by or known to the employer indicating that the material may pose a hazard to human health

**4.0 PRESERVATION OF RECORDS**

Unless a specific occupational safety and health standard provides a different period of time, the preservation of records is as follows;

**4.1 Employee Medical Records**

The medical record for each employee shall be preserved and maintained for at least the duration of employment plus thirty (30) years, except:

- Health insurance claims records maintained separately from the employer’s medical program and its records
- First Aid records of one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and the like which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job, if made on-site by a non-physician and if maintained separately from the employer’s medical program and its records
- The medical records of employees who have worked for less than one (1) year for the employer need not be retained beyond the term of employment if they are provided to the employee upon the termination of employment

**4.2 Employee Exposure Records**

Each employee exposed record shall be preserved and maintained for at least thirty (30) years, except:

- Background data to environmental monitoring or measuring, such as laboratory reports and worksheets, need only be retained for one (1) year so long as the sampling results, the collection methodology (sampling plan), a description of the analytical and mathematical methods used, and a summary of other background data relevant to interpretation of the results obtained, are retained for at least thirty (30) years; and
- MSDS’s and chemical inventory records concerning the identity of a substance or agent used need not be retained for any specified period as long as some record of the identity of the substance or agent, where it was used, and when it was used is retained for at least thirty (30) years; and
- Biological monitoring results designated as exposure records by specific occupational safety and health standards shall be preserved and maintained as required by the specific standard

**4.3 Analyses Using Exposure or Medical Records**

Each analysis using exposure or medical records shall be preserved and maintained for at least thirty (30) years.

**5.0 ACCESS TO RECORDS**

**5.1** Whenever an employee or designated representative requests access to a record, NCSG shall ensure that access is provided in a reasonable time, place and manner. All requests for access must go through our Corporate Head Office for processing, attention of Vice President of HS&E.

The request will be reviewed along with any pertinent information accompanying the request. Typical timelines will be 10 working days but not longer than 15 working days. Should there be a delay longer than 15 days, the Vice President of HS&E will apprise the employee or designated representative requesting the record of the reason for delay and the earliest date when the record can be made available.

All record requests by employee or designated representatives are provided at no cost for the initial copy. Additional copies will be subject to an administrative charge to cover the cost and time to prepare except where new information has been added to the records that was not available in the initial copy.

Copies requested by certified or recognized bargaining agents will be provided at no cost for the initial copy.

Copies of the records done by NCSG will be done at no cost to the employee or designated representative.

Original x-ray access is restricted to on-site examination, arrangements for x-ray loan may be made at the discretion of NCSG.

Medical records access is subject to employer physician recommendations but not limited to;
- Consultation with the physician for the purposes of reviewing and discussing the records requested
• Accept a summary of material facts and opinions in lieu of the records requested, or
• Accept a release of the requested records only to a physician or other designated representative
* Whenever an employee requests access to his or her employee medical records, and a physician believes that direct employee access to information contained in the records regarding specific diagnosis of a terminal illness or a psychiatric condition could be detrimental to the employee’s health, the employer may inform the employee that access will only be provided to a designated representative of the employee having specific written consent, and deny the employee’s request for direct access to this information only.

5.2 OSHA Access. NCSG shall, upon request, provide prompt access of representatives of the Assistant Secretary of Labor for Occupational Safety and Health to employee exposure and medical records and to analyses using exposure or medical records.

OSHA must present their request in writing compliant to 29 CFR 1913.10(d). This request must be immediately forwarded to the Vice President of HS&E and a copy of written access order and cover letter must be posted for fifteen (15) working days.

5.3 All records to which access is provided shall have personal identifiers removed, this includes but not limited to; name, address, social security number, payroll number, age, height, weight, race, sex, date of initial employment, job title, etc.

5.4 Cessation of business, should NCSG cease operations and no successor employer exists, NCSG will notify affected current employees of their rights of access for three (3) months prior to the cessation of operations.

6.0 ROLES AND RESPONSIBILITIES

6.1 Management and Supervisors
It is Management and Supervisor’s responsibility to:
• Immediately notify the Vice President of HS&E or in their absence the Vice President of Human Resources, of any request for access to records.
• Unless under direction from the Corporate Executive (CEO, VP HS&E, VP HR), protect access to all records and ensure confidentiality.
• Cooperate fully with OSHA as requested in writing.
• Ensure all employees are informed of the provision for recordkeeping upon initial hire and on an annual basis thereafter.

6.2 Corporate Executive (CEO, VP HS&E, VP HR)
It is the Corporate Executive responsibility to:
• Ensure support for the Process,
• Ensure confidentiality of records,
• Review and process requests for access
• Cooperate with OSHA as requested in writing
• Liaison with NCSG physician representatives as required
• Manage Labour Relations issues.
• Ensure the confidentiality of the employee’s medical information is maintained

7.0 TRAINING
All Employees will receive awareness training on this process at time of initial hire and annually thereafter by their applicable manager or supervisor.
14.0 LEGISLATION UPDATES AND MANAGEMENT OF CHANGE

14.1 Health and Safety Management Systems Review Process

1.0 PURPOSE
The purpose of this Health and Safety Management System Review Process is to ensure senior management regularly reviews and evaluates the effectiveness of the NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG Health and Safety Management System.

2.0 SCOPE AND APPLICATION
This Process applies to all HS&E policies, practices, processes, codes and standards for all NCSG companies.

3.0 DEFINITIONS
There are no definitions for the Health and Safety Management System Review Process.

4.0 EXPECTATIONS
This Process outlines the method employed by senior management to conduct reviews and assign the responsibility for scheduling, performing and documenting the management review activities.

5.0 ROLES AND RESPONSIBILITIES
5.1 HS&E Council
- Council comprises of; CEO, VP HS&E, Director HR, at least 1 VP of Operations, Corporate Manager – HS&E
- Conduct the Management Review;
- Communicate the results of the Management Review; and
- Ensure corrective action is implemented to address areas of concern.

5.2 Corporate Manager - HS&E
- Assemble and provide, to all participants, information relevant to the review process.

6.0 METHOD
6.1 Frequency
The Health and Safety Management System Review will be conducted on an annual basis in Q1.

6.2 Relevant Information
Information considered during the Health and Safety Management System Review Process shall include, but not be limited to:
- Health and Safety Management Process Audits (internal or external);
- Current Objectives;
- Performance Vs. Targets;
- Summary of monitoring and measurement information complete with data trending reports;
- Updated Health and Safety Continuous Improvement Plan within S2web.

6.3 Evaluation
An evaluation is performed to ensure the continuing suitability, adequacy and effectiveness of the Health and Safety Management System (HSMS). This review shall consist of an evaluation including but not limited to the following:
- Conformance to the NCSG HS&E Processes;
- Compliance with federal, provincial and municipal requirements;
- Compliance with industry recognized practice;
- Control of HS&E hazards and risks;
- Status of continuous improvement plans based on objectives and targets;
- Effectiveness of corrective and preventive actions being taken;
- Evaluation of changes that have occurred within the organization and/or within the HSMS; and
- Currency of HSMS documentation.

6.3 Documentation
Results of the Health and Safety Management System Review shall be documented in S2Web. The Record shall be acknowledged and approved by the VP of HS&E and the Corporate Manager – HS&E.

6.4 Continuous Improvement
Results of the Health and Safety Management System Review shall be used to consider continuous improvement opportunities within the HSMS. This may include, but is not limited to, potential changes to the Health and Safety Policy, Processes, Codes and/or Procedures.

6.5 Communication
Results of the Management Review shall be communicated to all relevant stakeholders.

7.0 TRAINING MATERIAL
- None

8.0 RESOURCES
- None
9.0 APPENDICIES
• S2Web

10.0 SUPPORTING DOCUMENTS
• Health, Safety and Environment Management System
• Goals and Objectives
• Divisional Safety Statistics
14.2 Legislation Program Updating and Tracking

1.0 PURPOSE
The purpose of this Process is to define a method to ensure NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG Policies, Processes, Codes and Standards are reviewed on a regular interval to remain current with applicable legislation and proposed changes or amendments.

2.0 SCOPE AND APPLICATION
All changes in applicable legislation will be identified and reviewed to determine their potential impact on NCSG operations. Any changes in operational processes, codes and standards required to conform to the change in legislation, customer requirements, and industry best practices will be developed, implemented and communicated to all interested or affected parties such as onsite contractors or senior management.

This process applies to all employees who are engaged in NCSG company business, including contractors.

3.0 DEFINITIONS
Applicable Legislation  Legislation which is in place at a provincial, state, or federal level which sets a standard or establishes a requirement for how NCSG will conduct operations.

Consensus Standards  Technical specification or other document drawn up with the cooperation and consensus of all interests affected by it. Aimed at the promotion of optimum community benefits and approved by a standardizing body. Often referenced in legislation as a standard which must be met in order to be compliant.

Industry Recognized Standard of Practice  Present practices of those organizations which are recognized practices thought to have the most effective safety programs. Often those practices exceed legislated requirements.

Group  A number of persons who congregate under the same: crew, site, job, supervisor, division, business unit, company or any combination of these.

Diligence  Legally, environmentally, and ethically correct, as well as timely and economical.

4.0 EXPECTATIONS
This process will identify health and safety compliance deficiencies within NCSG. As well, it will compare current NCSG processes, codes and standards against Industry Standards to identify shortcomings.

It must lead to the planning, implementation and subsequent verification of actions necessary to correct and prevent each deficiency or shortcoming identified. Each corrective and preventive action must be executed diligently.

5.0 ROLES AND RESPONSIBILITIES
5.1 Corporate Manager - HS&E
- Provide leadership and support in the implementation and management of this Process.
- Monitor changes and/or additions to the Regulations under which NCSG conducts business and make recommendations to the Vice President of HS&E for amendment of policy or practice.
- Monitor Industry Recognized Standard Practices for processes or procedures which NCSG utilizes and make recommendations to the Vice President of HS&E for amendment of policy or practice.
- Monitor changes and/or additions to the various Standards under which NCSG conducts processes and make recommendations to the Vice President of HS&E for amendment of policy or practice.
- Identify Regulatory nonconformance’s and/or Industry Standard shortcomings and make recommendations to the Vice President of HS&E for amendment of policy or practice.
- Determine, along with the applicable Group or Groups, resulting corrective/preventive actions in a consistent manner.
- Track the required corrective action(s) to ensure that they are completed and that they resolve the Regulatory requirement and meet or exceed Industry Standards.

5.2 HS&E Advisors
- Assist Corporate Manager - HS&E to identify changes in Regulations, Industry Standards and/or other Consensus Standards which they may become aware of.
- Forward copies of the proposed changes or additions to Corporate Manager - HS&E for review.
- Where an identified change or addition to a Regulation, Industry Standard or other Consensus Standard applies to only one Group, that Group along with the applicable HS&E Advisor shall determine what changes in process are required to comply with the change or addition.
- Where an identified change or addition to a Regulation, Industry Standard or other Consensus Standard applies and or will apply to more than one Group, the affected Groups along with the applicable HS&E Advisor will work jointly to determine changes in process that are required by the Groups or NCSG as a whole to comply with the change or addition.

6.0 METHOD
6.1 Identify Applicable Requirements
Corporate Manager – HS&E will annually establish which OH&S Act, Codes, Regulations and Standards are applicable to NCSG facilities and operations, both existing and proposed.

Identify Legal Requirement
Corporate Manager – HS&E will annually identify;
- All Provincial, State, and Federal legislative requirements which would apply to NCSG operations.
• Information will also be derived from subsequent compliance audits.

Identify Other Requirement
Corporate Manager – HS&E will annually;
• Identify any external standard which may apply to NCSG operations which would be required under registration in external associations or programs such as Certificate of Recognition (COR) or CSA Z1000.
• Gather information will also be derived from subsequent compliance audits.

6.2 Obtain Specifics Regarding the Requirement
Corporate Manager – HS&E will annually obtain electronic or hard copies of regulations or standards by best available means for review.

6.3 Identify Compliance Tasks
Corporate Manager – HS&E will annually identify actions required to meet the Regulatory or other requirements and determine what actions are necessary to ensure compliance.

6.4 Identify and Track Changes in the Requirements

Regulatory Changes
HS&E Advisors will annually track using a system of Legislation Monitoring software and electronic committees:
• Canadian Centre for Occupational Health and Safety (CCOHS) Canadian Enviro OSH Legislation, as well as Enviro-log
• OH&S Legislation web site for the applicable jurisdictions;
• Professional Associations – American Society of Safety Engineers and Canadian Society of Safety Engineering, Canadian Standards Association and ASME.
• Audits;
• Notices by associations or like groups; and
• Health and Safety Newsletters or general mail outs.

Changes in Other Requirements
Using a system of Networking and/or Association memberships, annually HS&E Advisors will track:
• Notices by associations or like groups;
• Health and Safety Newsletters or general mail outs;
• Networking; and
• Attendance at Health and Safety focused conferences.

Internal Process Changes
Using a system of Networking and/or Association memberships, annually HS&E Advisors will track:
• Change management process;
• Authorization for the introduction of new chemicals into the workplace;
• Acquisitions; and
• Additions to existing facilities.

6.5 Implementation of Requirement Changes
To implement required changes, the HS&E Advisor team will annually:
• Review the proposed requirement change for impact on NCSG operations; and
• Determine if it impacts a single group or multiple groups or all of NCSG.
• Collectively amend the process, practices, policy and or develop new where applicable
• Forward all collective changes to the Corporate Manager – HSE to compile and approve.
• Corporate Manager – HS&E will present all changes to the Corporate Policy committee to endorse.
• All changes endorsed must be posted on the hub, posted in open accessible areas and reviewed at all meetings (Sr Mgmt, Operations Mgmt, toolbox, HS&E committee). Corporate Manager – HS&E is responsible to ensure this is done.
• Corporate Manager – HS&E will ensure a tracked change log is kept with the revision date and policy/process/code or standard changed and made readily available for reference.

Single group impact
• Work with affected group to assist in determining required change(s) to meet change in Requirement
• In a collaborative manner determine procedural changes that are required.

Multiple group impact
• Work with affected groups to assist in determining required change(s) to meet change in Requirement
• In a collaborative manner determine procedural changes that are required.
• Develop a Corporate direction to ensure consistent and appropriate change in procedures.

All of NCSG
• Work with HS&E Advisor Team in determining required change(s) to meet change in Requirement
• In a collaborative manner determine procedural changes that are required.
• Develop a Corporate direction to ensure consistent and appropriate change in procedures.

7.0 TRAINING REQUIREMENTS AND MATERIALS
• Legislation Tracking and Updating Process
• Canadian Centre for Occupational Health and Safety (CCOHS) Canadian Enviro OSH Legislation database
8.0 RESOURCES
• None

9.0 APPENDICIES
• Appendix A – Applicable Regulations

10.0 SUPPORTING DOCUMENTS
• CSA Z1000 Standard
• Health, Safety and Environment Management System Standard

APPENDIX A – Applicable Regulations
• British Columbia Occupational Health and Safety Regulations - July 30, 2004
• B.C. Workers Compensation Act
• B.C. Power Engineers and Boilers, and Pressure Vessels Safety Act and Regulations -
• Alberta Workers Compensation Act
• Alberta Regulation 292/95 Mine Safety
• Alberta Boiler Safety Association
• Ontario Occupational Health and Safety Act and Regulations – Jan 7, 2006
• Ontario Workplace Safety and Insurance Act – 1997
• Ontario Fire Protection and Prevention Act – 1997
• Ontario Building Code Act – 1992
• Ontario Regulation 220/01 Boilers and Pressure Vessels - 2001
• Hazardous Material Information Review Act
• Pest Control Products Act and Regulations
• Atomic Energy Control Act –
• General Nuclear Safety and Control Regulations
• Transportation of Dangerous Goods Act – 1992
• Highway Traffic Act –
• Vehicle Administration Act –
• Motor Carriers Act –
• Canadian Electrical Code – 2002
• National Plumbing Code of Canada - 1995
• Canadian Electrical Code Part I - 2002
• Alberta Building Code – 1997
• Alberta Electrical Utility Code
• Alberta Fire Code – 1997
• British Columbia Fire Code
• British Columbia Building Code – 2006
• American Council of Government and Industrial Hygienists (ACGIH ) - various
• American National Safety Institute (ANSI) Standards – various
• American Society of Mechanical Engineers (ASME) Standards – various
• American Society for Testing and Materials (ASTM) Standards – various
• European Committee for Standardization (CEN) Standards – various
• Canadian Standards Association (CSA) Standards – various
• International Standards Organization (ISO) – various
• National Resources Canada – various
• National Standards of Canada Standard - various
• National Fire Protection Standards (NFPA) Standards – various
• Society of Automotive Engineers (SAE) – various
• Underwriters Laboratories of Canada (ULC) Standards – various
• American Society of Heating, Refrigeration, and Air conditioning Engineers (ASHRE) – various
14.3 Management of Change

1.0 POLICY
The purpose of this policy is to ensure a formal process must be used for all changes, deviations, and amendments to existing or in place rules, practices, regulations, standards or processes.

NCSG and its affiliated Companies programs, rules, practices, standards and processes are considered a minimum standard and where exceeded by Government or Regulatory laws, the Government or Regulatory laws will govern. Our programs, rules, practices, regulations, standards and processes and/or any part thereof cannot be changed, modified or deleted, unless as identified as below.

2.0 PROCESS
Change – General: would require an assessment and review involving stakeholders with subject matter knowledge in proposed change. The assessment would be documented on the variance form with the appropriate management sign off.

Change – impacting Operations: would require a risk assessment developed by a joint team of stakeholders from Operations with subject matter knowledge in the current process or practice. The assessment would be documented on the variance form with the appropriate management sign off.

Variance: Post the assessment and review, all changes must be completed on a variance form. The variance form forms the basis for future reviews, revisions and discussion on policy/program/procedural revisions. As a part of risk management, appropriate approvals completed on the variance form must be in place prior to the change taking place.

Careful considerations must be in place to look risk, specifically; Health, Safety, Environment, Financial, Insurance, Reputation and Regulatory compliance. Before any changes or variances to process, equipment or practices can be put into service/practice a pre-start up review must be completed to ensure that all requirements outlined in the pre-planning have been addressed and that no new hazards have been created.

The Management of Change (MOC) must be used for all permanent and temporary changes, deviations and amendments as described above. All impacted workers must be informed of any approved variance and have input into risk considerations prior to undertaking the task at hand.

Prior to the Variance being considered a completed Variance Form must be completed. This document must be kept on file with the Corporate Policy Committee.
15.0 HS&E MEETINGS AND COMMITTEES 3/10/2016

15.1 Safety Meeting Code

1.0 PURPOSE

NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG has developed a Safety Meeting Code to define the role, responsibility and outline the expectations of Safety Meetings. Safety meetings are an integral part of NCSG’s Health, Safety & Environmental Program. The meetings afford effective ways to communicate hazards and suggest solutions to the hazards employees may encounter while performing their job duties. This Policy provides the mandatory requirements for conducting regularly scheduled safety meetings.

2.0 RESPONSIBILITY

It is the supervisor’s responsibility to communicate to employees all safety information that is necessary to complete their job duties in a safe manner. To accomplish this, the supervisor shall:

- Do everything within their control to assure a safe workplace for their employees;
- Ensure that employees are aware of and comply with NCSG’s Health & Safety Policies, Safe Work Practices and Safe Job Procedures;
- Discuss health and safety matters, NCSG’s goal to provide a safe work place, and encourage open discussions of employee concerns, including a safe and secure work environment;
- Discuss Safe Work Practices and Safe Job Procedures anytime it appears that an employee is not following safety policies, practices and procedures;
- Discuss health and safety issues at least annually at the time of issuing Individual Development Plans/Performance and Appraisals or probation evaluations.

To encourage a free-flow of ideas regarding improving employee safety, the supervisor should take every opportunity to exchange ideas on safety and incident prevention with employees, commend them for their efforts to perform their job safely, and invite employees to discuss safety suggestions. Supervisors should review and consider all employee suggestions and implement or arrange to implement them whenever possible. If a safety suggestion is beyond the authority of the front-line supervisor, he should arrange to have the suggestion reviewed by a higher level for consideration and implementation.

The supervisor shall have a discussion with employees, prior to beginning work, when a new job duty or process is introduced. They will instruct employees on how to recognize hazards, discuss specific procedures for avoiding injury or damage and discuss the reporting procedure and incident investigation policy in the event of injury or damage. Supervisor shall document these discussions as part of the regularly scheduled safety meeting.

It is the front-line supervisor’s responsibility to conduct safety meetings. HS&E Advisors can be utilized as a resource (i.e. preparing the meeting).

3.0 METHOD

3.1 Toolbox Talks for Field Personnel

Toolbox talks will be held prior to the commencement of work at the beginning of the job and for any new, unfamiliar, non-routine or potentially hazardous task. All employees involved in the work shall attend a toolbox talk daily. The contents of this meeting shall include, but not limited to:

- Method of performing the task;
- General safety requirements (PPE);
- Hazards likely to be encountered (determined from hazard assessment);
- Procedures to control the hazards;
- Contents and type of work permit required;
- Emergency response procedures;
- Incident investigation and reporting procedures;
- Communications and equipment requirements.

During these meetings, employees should be encouraged to discuss health and safety issues and inform the supervisor of any concerns that are perceived as a workplace hazard and/or potential workplace hazard.

Employees should be encouraged to discuss “near miss” incidents. It should be understood that near miss incidents are incidents that did not result in contact, injury, or damage. Near miss incidents are indicators that the operation or activity being performed/conducted may require a change or adjustment to prevent or eliminate the likelihood of injury or damage.

3.2 Tailgate Meetings for Transportation Personnel

Tailgate meetings are to be held and a recorded daily or as the task or trip changes.

The company supervisor, or in the absence of a supervisor, the Lead Pilot Car Operator designated by dispatch will direct this meeting, as well as ensure minutes of the meeting are completed and forwarded to management. Topics to be discussed in “tailgate” meetings include:

- Description of the job, including any possible interference.
- Expected time duration of the job.
- Specific responsibilities of personnel on site during normal operations.
- Availability and location of personal protective equipment on site.
- Specific responsibilities of personnel during an emergency.
- Location of a “Safe Assembly Area”.

NCSG Crane & Heavy Haul Services 15-1 Health, Safety & Environment Manual
3.3 **Weekly/Monthly Safety Meetings**
Attendance records must be completed for all safety meetings and this record must be signed by the attendees and kept on file along with the minutes of the meeting. The agenda for the meetings conform to the following outline:

- **Safety Topic** – Safe Work Practice, Safe Job Procedure, Company Policy, or value added subject material pertinent to our business operation.
- **Review of weekly (or monthly) incidents and/or near misses within the region, and any other significant incidents or learners from other regions within NCSG or other companies.**
- **Discussion of Old Business, i.e. review of outstanding issues from previous meeting**
- **New Business** – any comments, concerns, suggestions from supervision and/or employees

3.4 **Attendance**
It is mandatory for all field supervision and employees to attend safety meetings. All managers, including senior management (when available), shall attend a scheduled safety meeting at least once per month.

3.5 **How to Document Safety Meetings**
The safety meeting form satisfies the requirement of documenting safety meetings. The form includes space to record the date, location, names of employees in attendance, and topics discussed. Additionally, there is space to record information about suggestions for correcting unsafe conditions, and/or work practices, other health and safety concerns, and comments.

3.6 **Monitoring the Safety Meeting Process**
Management is responsible to monitor safety meetings conducted by their front-line supervision. Monitoring procedures shall include a review of previous safety meeting minutes, and ensure that appropriate actions are taken to correct any alleged unsafe conditions or acts in a timely manner. To ensure that safety meeting reports are monitored:

- The HS&E Advisor is responsible to ensure that the supervisor has signed off on the safety meeting minutes;
- The Branch Manager is responsible to review the safety meeting minutes for content, scope, and corrective actions, then sign the original report and return to the HS&E Advisor;
- The HS&E Advisor shall record “open” action items on the Corrective & Preventative Action form and file the minutes in the appropriate area.

4.0 **CORRECTIVE ACTIONS**
All alleged unsafe conditions and/or acts that are reported shall be investigated and corrected in a timely manner. The supervisor shall determine if the situation can be handled routinely or if the condition is crucial and requires immediate action.

If the recommended corrective action is beyond the ability of the front-line supervisor, the Branch Manager shall be consulted and an appropriate action plan shall be jointly developed to ensure that alleged or actual unsafe condition(s) are corrected in a timely manner. If the problems and/or deficiencies identified are beyond the ability or scope of responsibility of the front-line supervisor or Branch Manager, he shall take necessary action to inform appropriate levels of management to correct the problem.

4.1 **Responsibilities of the Workplace Health and Safety Committee**
NCSG will ensure that the following responsibilities of the Workplace Health and Safety Committee will be met:

- Receiving, considering and addressing, in a timely manner, complaints related to the health and safety of all personnel.
- Maintaining records relevant to the nature of complaints related to the health and safety of all personnel.
- Cooperating with any Occupational Health Service established to serve the work place.
- Establishing and promoting health and safety programs for the education of personnel represented by the committee.
- Participating in all inquiries and investigation pertaining to Occupational Health and Safety, including consulting, as necessary, with professional and/or technical people who are qualified to advise the committee on those matters.
15.2 Policy Committee

1.0 POLICY
The Executive Officers have established a formal committee charter and mandate specifically tasked to oversee the development, ongoing review and approval of Policies for NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG.

The Policy Committee will have a Chair appointed by the President/CEO. The Chair will seek endorsement from the Executive Officers on all Policies prior to official implementation.

2.0 PURPOSE
The purpose of the Policy Committee is:

1. Address enterprise risk by ensuring appropriate policies, practices, procedures, processes and guidelines are in place.
2. Review existing policies, practices, procedures, processes and guidelines on a regular basis (no greater than 3 years from last revision) to ensure content is current and consistent.
3. Ensure consistency in development, template, format and retention of all policies, practices, procedures, processes and guidelines.
4. Research and bring forward new and leading edge policies, practices, procedures, processes and guidelines to ensure NCSG is compliant with all laws, statutes and regulations.
5. Ensure that all policies, practices, procedures, processes and guidelines support and align with our strategy direction and vision, and incorporate best in class or best in practice approach.

3.0 MEMBERSHIP
The Policy Committee with be comprised of:

a. Chairperson appointed by the President/CEO.
b. Representatives of:
   i. Human Resources
   ii. Purchasing
   iii. Finance
   iv. Fleet
   v. Engineering
   vi. IT
   vii. HS&E, Technical Training & Compliance
   viii. Operations (2 or 3 people representing a cross-section of NCSG operations)

4.0 RESPONSIBILITY
Chair, It is the responsibility of the Chair – Policy Committee to:

a. Determine the agenda, the frequency and the length of the meetings
b. Schedule adequately in advance, the meetings of the Policy Committee
c. Manage, maintain and circulate the action item list to committee members immediately concluding a meeting of the committee and a minimum of one week in advance of the next meeting. Identify the accountable person(s) for action items identified along with time lines of commitment.
d. Direct the meeting flow to ensure adequate input and participation is afforded. Maintain decorum fitting of cooperative, collaborative and professional conduct.
e. Brief the President/CEO on any issues, challenges or recommendations with direct or potential enterprise risk impact.
f. Ensure applicable policy, practice, procedure, process and or guideline owner, upon approval of same from the Policy Committee, posts – replaces – and distributes the approved material. (not limited to HUB, Email notification, VTA and Bulletin Board posting)

Members, It is the responsibility of the Members – Policy Committee to;

a. Attend scheduled policy committee meetings or provide adequate notice to the Chair of absence.
b. Review the action item list prior to and immediately concluding all meetings of the committee for assigned items, general awareness and quality control for accuracy.
c. Ensure updates are provided to the Chair on all action items assigned at least 2 days in advance of scheduled meetings.
d. Submit to the Chair at least 10 days in advance of scheduled meetings any items for inclusion on the upcoming agenda for adequate committee circulation.
e. Actively review, internally consult and seek input from workers/management and peers, on new or revised policies, practices, procedures, processes and guidelines, bringing back feedback to the committee.
f. Acts within a decorum fitting of cooperative, collaborative and professional conduct.
16.1 Environmental Policy

NCSG Crane & Heavy Haul Services and its affiliated companies (NCSG), regards Environmental Protection as a vital component in the conduct of day to day business.

The company policy is to:

- Comply with all applicable environmental laws, regulations and/or standards
- Ensure that hazards to the public and damage to the environment, created by our company activities, are minimized
- Repair and remediate environmental damage created by our company activities
- Provide leadership in the reduction of waste generated by the company and/or industry by continuously becoming involved in researching alternative methods and/or materials
- Hold management and all employees including contractors, accountable for preserving the environment to which we conduct our business activities in.
- We will not tolerate actions or business activities that knowingly cause damage or unreasonable impact to the environment.

All personnel are encouraged to continuously be aware of the impact to their workplace and/or social activities may have on the environment and join the company in a determined effort to create a healthier, safer environment now and for the future.

NCSG takes all reasonable and practical steps to prevent any damage to the natural environment, with regards for all forms of wildlife and their habitat.

Management and employees support the reduction of hazardous waste through reuse, recovery, recycling or reclamation. This includes removal of refuse/debris on work sites and immediate clean up of all spills regardless of type and quantity.

Activities performed by our employees or contractors for business purposes shall endeavor to meet or exceed applicable Provincial/State/Federal Regulations together with Industry Best Practices.
16.2 Environmental Code

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed an Environmental Code to identify the proper level of protection that will assist employees and contractors in performing their tasks effectively and efficiently on project work sites.

2.0 SCOPE AND APPLICATION
The guidelines and recommendations are provided to increase awareness of control measures to be used by NCSG employees and contractors where there may be potential to address such issues as environmental hazard assessments, spill containment and response, waste identification and management via recycling and disposal, environmental incident response, controlled products management.

In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG companies and subcontractors.

3.0 DEFINITIONS
The following definitions are specific to the Environment Code. This list is not to be considered exclusive and additional definitions may be required for specific application as outlined in company standard operating procedures.

Air Quality The composition of air with respect to quantities of contaminants and is routinely compared with acceptable levels of maximum exposure.

Dewatering The removal of water from solid material or soil.

Documentation Records that are maintained and available for review. These include:

- Waste Records including manifests and recycle docket
- Water Quality and Volume Records
- Soil Assessment and Handling Records
- Product Approval Applications
- Environmental Focus Inspection Reports
- Environmental Action Items List

Energy Conservation The practice of decreasing the quantity of energy used. This may be achieved through efficient energy use, in which case energy use is decreased while achieving a similar outcome, or by reduced consumption of energy services.

Hydro Test Water Water used in the pressure test of piping, pressure vessels, or pressure-containing parts; performed by pressurizing the internal volume with water at a pressure determined by the applicable code or to test the integrity of a process system.

Noise Unwanted sound.

Regulatory Compliance Systems or departments at corporations and public agencies to ensure that personnel are aware of and take steps to comply with relevant laws and regulations.

Soil Management Operations, practices and treatments used to protect soil from contamination.

Spill prevention and Control A plan that outlines how to prevent chemical spills, as well as how it plans to control and contain a spill.

Storm Water A term used to describe water that originates during precipitation events.

Waste Management The techniques and methods of waste prevention, reduction, recovery and disposal.

Water Management The practices of planning, developing, distribution and optimum utilizing of water resources under defined water polices and regulations

WHMIS?GHS Controlled Products Products, materials, and substances that are regulated by WHMIS/GHS legislation.

4.0 EXPECTATIONS
The Environment Code will be reviewed at a minimum of every three years.

This code shall supplement, but not supersede any regulatory Provincial / State / Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by HS&E as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

5.0 ROLES AND RESPONSIBILITIES
5.1 Employees
It is the employee’s responsibility to:

- Ensure a safe and hazard free work site is maintained throughout the entire shift.
- Abide by the Environment code requirements.
- If a hazardous condition is identified, all employees have a responsibility to correct the condition or have it identified to a person responsible to correct the condition.
• Be responsive, through adequate training and understanding, to minimize the risk of loss, damage of injury through keeping the work site safe, clean and free from materials or equipment that could cause workers to slip, trip, or come into unplanned contact with a body resulting in an undesired exposure.

5.2 Workers
In addition to 5.1, it is the worker’s responsibility to:
• Immediately inform the Supervisor of any violations or infractions of this code, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.

5.3 Supervisors
In addition to 5.1, it is the supervisor’s responsibility to:
• Ensure that workers understand and comply with the Environment code as specified in this code in accordance with the training and instruction received.
• Immediately correct any violations or infractions of this code which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, contractors, or general public within the area.
• Provide in accordance with NCSG programs any corrective action or discipline required to ensure compliance with this code and document said action appropriately.

5.4 Management
In addition to 5.1, it is the management responsibility to:
• Ensure compliance with this code, by all levels of the company including contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the HS&E Advisors.

5.5 HSE Advisors
It is the responsibility of HSE Advisors to:
• Take inventory of each delivery of waste to the approved hazardous waste storage area.
• Maintain documentation related to this code.

5.6 Regional Team Lead – HS&E
It is the Regional Team Lead – HS&E responsibility to:
• Develop and review as outlined in Health, Safety and Environment program this code to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this code within the defined review period.

6.0 METHOD
6.1 Waste Management
Recycling or disposal of project waste streams shall be via the client’s onsite approved management system and or offsite approved location as per Provincial / State / Federal guidelines. Exceptions or more specific disposal or recycling locations for waste materials are defined in Appendix A.

Hazardous waste generated by NCSG and NCSG subcontractors activities shall be stored in the existing client hazardous waste storage area and or a proper temporary approved waste storage location. The hazardous waste shall be labeled, handled and stored.

Non-hazardous waste shall be collected and disposed as per standard methods. Segregation of the waste into the appropriate containers shall be the responsibility of NCSG and subcontractor line supervision. The non-hazardous waste containers will be labeled with the waste they are to contain.

NCSG and subcontractors shall dispose of their non-hazardous waste into the designated project waste containers on site. Subcontractors shall notify the applicable Superintendent of planned work that will involve large volumes of non-hazardous waste. The Superintendent will then arrange for additional non-hazardous waste bins for the work activity. All subcontractors must provide a detailed waste management identification plan for their hazardous waste management prior to mobilizing to site. The plan must include the subcontractor’s hazardous waste generator identification number issued by Environment Agency if applicable. The proposed recycling facility or final disposal location shall be identified with all hazardous waste streams that will be generated by the subcontractor. An estimated monthly waste volume for each waste type shall also be included in the plan.

The Regional Team Lead - HSE shall review the plan to ensure all proposed recycling or disposal facilities are acceptable to NCSG and the client. NCSG and subcontractors shall be advised of any waste management facilities not acceptable for disposal or recycling of project wastes.

All contractors shall be responsible to update the waste management plan for any new wastes generated during project construction activities. Offsite disposal of any hazardous waste not identified in the subcontractor plan is not permitted.

Storage of hazardous wastes must be in accordance with the applicable Environment Hazardous Waste Storage Guidelines, and or Provincial / State / Federal guidelines as applicable.

Regular compliance audits will be completed by the HSE department to verify compliance to site waste management processes/practices.
Waste Collection and Handling
The key issue related to hazardous waste generated is the handling of the material on site. The waste must be handled correctly to minimize the health and safety risks to those involved. The following outlines the standard procedures for handling generated hazardous waste:

- Line supervision shall identify, during the task review, toolbox talk and FLRA, any hazardous or potentially hazardous wastes that may be generated during the task.
- Line supervision and workers shall review the SDS for product or products that make up the hazardous waste to identify hazards associated with handling and storing the product(s).
- The crew foreman shall obtain storage containers for the waste. Designated 205 L (45 gallon) steel drums or bulk bags can be made available from several waste management suppliers for the purpose of storing hazardous waste. Contact NCSG HSE Advisor in order to make arrangements.
- Workers shall place the waste into storage containers as soon as possible after the waste is generated.
- The crews responsible for generating the waste must apply a project specific label and a WHMIS worksite label to the outside of the drum. Ensure the label is completed to identify the name of the waste, the Area or Unit where the waste was generated and the date that the waste was generated or contained. The Transportation of Dangerous Goods information shall be filled out if this information is available from the product SDS.
- The WHMIS worksite label shall identify the name of the product (or waste) and the appropriate safety icons applicable to the waste (refer to SDS) shall be highlighted.
- A copy of the SDS for the product or products that make up the waste shall be made in preparation of transferring the waste out of the work area. The waste will not be transferred out of the work area without the proper SDS included (unless there is no SDS applicable to the waste).
- The foreman shall contact the HSE dept to ensure all waste handling and/or disposals are inventoried and performed as per local regulations.
- The Area Manager or Supervisor will notify the HS&E Advisor of any proposed waste transfer to the client hazardous waste storage area so that proper notification may be given to the client.
- The person requesting the waste removal shall complete the ‘Waste Removal Log’, attached to this procedure. This form must be completed prior to pick-up and attached to the SDS (if available).
- A copy of the Waste Removal Log must be provided to the HS&E Advisor for waste tracking purposes.

6.2 Spill Prevention and Containment
All reasonable means shall be used to prevent spills or leaks. However, accidental spills may still occur on the construction site as a result of a number of activities including:

- The transfer of fuel from tank trucks to storage tanks or construction vehicles/equipment.
- Collection and transport of sanitary sewage by vacuum truck.
- Use of hazardous liquid products, including concrete additives, hydraulic fluids, solvents and lubricating oils.
- Release of operating fluids from construction equipment.

Every worker associated with construction activities, shall be responsible for taking action as required to prevent or mitigate spills and accidents.

Prevention
All reasonable means shall be taken to prevent spills or leaks.

Line supervision shall include appropriate spill containment and protective measures for activities that have the potential to release foreign substances into either the clean storm sewer system or the potentially contaminated water sewer.

This shall include temporary sealing of catch basins or manholes or provision of absorbents booms or socks to prevent spilled material from impacting the sewer systems. Under no condition shall oil or contaminants be discharged into drainage ditches or site sewer systems.

Drip pans shall be used under portable equipment where there is potential for leaks or spills during fueling operations. Drip pans shall be suitably sized for the equipment, constructed of impermeable material and not be allowed to overflow.

Drip pans containing rain water or water from snow melt may be emptied to the ground surface only after visual inspection confirms there is no presence of hydrocarbons, i.e. oily sheen on the water surface.

Other spill prevention measures include:

- Leaking drums, hoses or equipment will be repaired or removed from the work area to prevent spills of hydrocarbons, chemicals or other materials.
- Oily equipment or materials shall not be stored in or near drainage areas where storm water runoff could become contaminated.
- Vehicle and equipment maintenance shall be confined to designated areas - fluids will not be dischared or spilled to land or drainage ditches.
- Drip pans shall be used under equipment where there is high use and/or a potential for leaks, including temporary generators and transformers, sampling lines, stop cocks, dispensing areas, etc.
Fueling
Fuel release can be a major source of ground or water contamination.
- Whenever possible vehicle fuelling shall occur in designated areas where the potential for contamination is minimized (e.g. on clay areas).
- As project activities progresses, permanent or semi-permanent fuelling areas that are bermed and paved, or impermeably lined areas shall be constructed.
- As equipment such as piling rigs and cranes will remain stationary in use for considerable periods of time, fuelling of this equipment must often occur at the location of use. In such cases, strict fuelling procedures shall be adhered to and appropriate spill containment devices shall be used.

Spill Kits
Spill kits complete with soaker pads; oil-absorbing materials and containment booms shall be required of all subcontractors. Absorbent mats, sand, clay or other absorbent materials shall be readily available for deployment to control or contain spilled material. For activities with a potential for a spill of a larger magnitude, vacuum trucks shall be readily available for immediate response to a spill event.

Spill Containment Kits for work activities will be located in designated areas and available by communicating with NCSG site management for use with specific work activities.

6.3 Soil Management
A specific action plan for contaminated soil management might be required in relation to uncovering potentially impacted soils and or handling soils contaminated due to equipments spills.
- In certain instances geotechnical programs will be carried out for specific work scopes, in certain instances an environmental soil assessment might be conducted within the specific work areas. The overall purpose will be to characterize the soil quality and determine the soil’s end-use prior to the excavation of the soil.
- The Environmental Soil Assessment will include field measurement of hydrocarbon vapor and laboratory analysis of soil samples for specific soil parameters to allow comparison against the CCME Soil Quality Guidelines for an Industrial Land Use.
- Additional boreholes, soil sampling and analytical work will be completed on planned excavation areas that exhibit definite soil contamination in an effort to properly delineate the extent of the contamination.
- Client historical soil assessment information within the proposed areas of development will also be reviewed and utilized to establish an accurate soil map.
- Based on the Environmental Soil Assessment, the soil in the excavation areas will be classified into Re-useable Fill; Contaminated Fill or Unsuitable Fill.
- Any construction debris or rubble encountered during excavation shall be segregated from the soil. Non-contaminated debris shall be disposed in the appropriate non-hazardous waste bin. Consult the HSE advisor for disposal of contaminated debris. All contaminated debris to be placed in proper containers, labeled and stored in client approved hazardous waste storage area and as per direction/approval of client.

Unexpected Contaminated Fill Sampling and Disposal (Spill Response)
- The Area Manager or Supervisor will notify the HS&E Advisor when a particular contaminated fill stockpile (from same point of origin) is available for sampling. The Area Manager or Supervisor will liaise with the HS&E Advisor to determine when the piles from various points of origin have accumulated to volumes that would constitute an efficient load-out and haul exercise. This must be coordinated with the responsible client representative.
- The HS&E Advisor will confirm the source location of material placed in a stockpile. This shall be supported by a log report accounting for all loads placed in the management area from a specified location.
- The stockpile will be staked/flagged off by the HS&E Advisor to prevent removal of material or further addition of material after sampling. The staked area will be tagged to indicate the point of origin of the material.
- HS&E Advisor will collect 1 composite sample per 100 m3 of soil in the stockpile. Each composite sample will consist of 5 sub-samples collected randomly within the area represented by the composite sample.
- The composite samples will be submitted to an offsite laboratory for the following parameters: basic salinity; flash point; CCME F1-F4 fractions including BTEX; ICP total metals; Leachable BTEX; and Leachable metals.
- HS&E Advisor will consult with the client representative to determine if additional parameters are required based on any previous known contamination in the source area of the soil.
- The HS&E Advisor will review the analytical results and develop a recommendation for the appropriate disposition of the stockpiled material. The recommendation will be sent to the client representative for approval.
- If the soil is deemed Re-useable Fill, the client representative will identify the appropriate stockpile location and the HS&E Advisor will advise the Area Superintendent of the soil disposition plan
  - If the soil is classified Contaminated Fill, the client representative will confirm the destination for the soil (landfill or landfarm) based on the analytical results.
  - The client will arrange the necessary documentation for transfer of the Contaminated Fill off site.
  - The applicable client Designate will sign off the waste manifests/bills of lading prior to any material leaving the project site.
  - The removal of the Contaminated Fill from the site to the designated disposal/treatment location will be by client and or by client subcontracted contractor.
6.4 Controlled Products

NCSG and its subcontractors are required to identify all controlled products anticipated for use within the project prior to site mobilization and provide a list to NCSG HS&E Advisor in order to ensure client approval and proper management.

Workplace Hazardous Materials Information System (WHMIS)/Global Harmonized Systems (GHS)

WHMIS/GHS is designed to protect employees and the environment. A current Safety Data Sheet (SDS) must accompany any controlled product brought on site or through the site warehouse. All WHMIS/GHS documentation, in particular SDS, shall be readily available as follows:

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SDS FORMAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area in which the controlled material is being used</td>
<td>Hardcopy</td>
</tr>
<tr>
<td>Medical/first aid facilities</td>
<td>Electronic/hardcopy</td>
</tr>
<tr>
<td>HSE Department</td>
<td>Electronic</td>
</tr>
</tbody>
</table>

NCSG will maintain a site database of controlled products, including SDS preparation information to ensure the site WHMIS documentation is current.

Subcontractor Documents

Subcontractors shall provide, at the site kick-off meeting, the list of controlled products that will be used during their construction activities. The list shall include controlled products used with their equipment, during maintenance activities and any products that will be permanently installed during their work. The associated SDS for the identified products shall be provided to the HS&E Advisor prior to the commencement of work. The subcontractor shall be responsible for providing product SDS at the location of the use of the product.

The HS&E Advisor will conduct spot checks to ensure that these SDS are readily available.

Controlled Product Approval Process

In many instances a WHMIS-regulated product must be approved prior to use on a client’s site. The HS&E Advisor will review all controlled products, including subcontractor products, against the client approved products list if applicable. If the product is not on the client-approved list, the product will be submitted for approval to the client.

The approval process:
  • Facilitates the provision of product health and safety risks summarized in plain language.
  • Ensures that recommendations for handling and storage are documented.
  • Ensures requirements for containment and disposal are established.
  • Identifies regulatory reporting limits for spills.

6.5 Noise and Energy Management

High noise construction activities shall be limited to normal work-shift hours. Extended periods of high noise project activities shall be communicated to the Regional Team Lead – HS&E who will notify the client in order to ensure compliance to local by-laws.

Noise Energy and Monitoring

If you lose your hearing that is a Physiological effect, Pain and nausea sometimes accompany noise exposure.

Proper use of Hearing protection is crucial, ensure the ear plugs are properly inserted, and also ensure the muffs are sealing properly, while working or chewing, your earplugs can work loose, requiring them to be re-inserted from time to time. A properly designed, well fitted and clean ear protection device is no more difficult to wear than a pair of safety glasses.

Determining Noise Levels in the workplace

If you need to shout into the ear of a person to be understood, it is likely that the noise limit for exposure is being exceeded.

If you have head noises and ringing noises in your ears at the end of the workday, you are most likely being exposed to too much noise.

If normal speech or music sounds muffled to you after leaving work, but sounds fairly clear in the morning upon returning to work, you are being exposed to noise levels that can eventually cause a partial loss of hearing that can be permanent.

Noise monitoring

Noise surveys are conducted only with a properly calibrated and approved noise survey monitoring equipment and by a properly qualified or trained individual as per provincial regulations.

Noise surveys are performed at different distances in relation to varying types of noise types in order to assess the exposure and ensure current hearing protection measures are adequate.

Following the site mandatory hearing protection policy will result in zero hearing loss.
6.7 Storm Water Contamination Prevention

Significant Inventory

Pollutants that result from clearing, grading, excavation, and building materials and have the potential to be present in storm water runoff are listed below. This table includes information regarding material type, chemical and physical description, and the specific regulated storm water pollutants associated with each material.

<table>
<thead>
<tr>
<th>Trade Name Material</th>
<th>Chemical/Physical Description(1)</th>
<th>Storm Water Pollutants(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticides (insecticides, fungicides, herbicides, rodenticides)</td>
<td>Various colored to colorless liquid, powder, pellets, or grains</td>
<td>Chlorinated hydrocarbons, organophosphates, carbamates, arsenic</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>Liquid or solid grains</td>
<td>Nitrogen, phosphorous</td>
</tr>
<tr>
<td>Plaster</td>
<td>White granules or powder</td>
<td>Calcium sulphate, calcium carbonate, sulfuric acid</td>
</tr>
<tr>
<td>Cleaning solvents</td>
<td>Colorless, blue, or yellow-green liquid</td>
<td>Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates</td>
</tr>
<tr>
<td>Asphalt</td>
<td>Black solid</td>
<td>Oil, petroleum distillates</td>
</tr>
<tr>
<td>Concrete</td>
<td>White solid</td>
<td>Limestone, sand</td>
</tr>
<tr>
<td>Glue, adhesives</td>
<td>White or yellow liquid</td>
<td>Polymers, epoxies</td>
</tr>
<tr>
<td>Paints</td>
<td>Various colored liquid</td>
<td>Metal oxides, stoddard solvent, talc, calcium carbonate, arsenic</td>
</tr>
<tr>
<td>Curing compounds</td>
<td>Creamy white liquid</td>
<td>Naphtha</td>
</tr>
<tr>
<td>Wastewater from construction equipment washing</td>
<td>Water</td>
<td>Soil, oil &amp; grease, solids</td>
</tr>
<tr>
<td>Wood preservatives</td>
<td>Clear amber or dark brown liquid</td>
<td>Stoddard solvent, petroleum distillates, arsenic, copper, chromium</td>
</tr>
<tr>
<td>Hydraulic oil/fluids</td>
<td>Brown oily petroleum hydrocarbon</td>
<td>Mineral oil</td>
</tr>
<tr>
<td>Gasoline</td>
<td>Colorless, pale brown or pink petroleum hydrocarbon</td>
<td>Benzene, ethyl benzene, toluene, xylene, MTBE</td>
</tr>
<tr>
<td>Diesel Fuel</td>
<td>Clear, blue-green to yellow liquid</td>
<td>Petroleum distillate, oil &amp; grease, naphthalene, xylenes</td>
</tr>
<tr>
<td>Kerosene</td>
<td>Pale yellow liquid petroleum hydrocarbon</td>
<td>Coal oil, petroleum distillates</td>
</tr>
<tr>
<td>Antifreeze/coolant</td>
<td>Clear green/yellow liquid</td>
<td>Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)</td>
</tr>
<tr>
<td>Erosion</td>
<td>Solid Particles</td>
<td>Soil, Sediment</td>
</tr>
</tbody>
</table>

Areas for Potential Contamination

The following are potential source areas of storm water contamination:

- Cleared and graded areas;
- Asphalt loading dock construction and building construction;
- Construction site entrance and asphalt parking area construction;
- Tree removal area; and
- All undisturbed areas.

Storm Water Contamination Controls

- Keep excavation and soil disturbing activities such as grading to a minimum.
- Install silt fence around all clay and topsoil stockpiles.
- Retain existing vegetation when possible.
- Silt fences need to be cleaned, replaced or supplemented when they reach 1/3 capacity (height of fence). These actions must occur within 24 hours of discovery or as soon as field conditions allow access to the site.
- Maintain construction entrances so that sediments are not tracked onto streets. Sweep any sediment tracked onto streets within 24 hours of discovery. This includes construction entrances to individual lots where home building is underway. Sweepers that “fling” material into the air rather picking up material will not be allowed.
- Have materials on-site to contain and cleanup any contaminants leaked onto the ground during construction.
- Cover or store materials (particularly fuels) so that they are not at risk to contaminate the project area during rainfall or storm water flow.
- Water will be used for dust control on this project.
- Good housekeeping measures are to be implemented to eliminate materials, materials packaging and other litter from leaving the project area. This is especially important during home construction.
• Inlet protection will remain in place until 70 percent of the lots are built upon and stabilized. Care will be taken to avoid disturbing protected inlets.
• Grass filter strips will be maintained adjacent to the curb line on all undeveloped lots.
• Care will be taken to avoid disturbing BMPs in place such as silt fence or grass filter strips along curb lines during home construction. A single rocked or gravel construction entrance will be designated and maintained into each lot under construction.
• De-watering of trenches or basins must be done in a manner that does not cause erosion, scour or deposit sediment in curbs, gutters, storm system inlets and temporary or permanent ditches that are directly connected to a “Water of the State”. The discharge must be dispersed over rock riprap, sand bags, plastic sheeting or other accepted energy dissipating measures. Use of a temporary sediment basin is preferred.

7.0 TRAINING REQUIREMENTS AND MATERIALS
All workers will be provided environmental education and awareness through the NCSG site orientation program. Subjects covered will include spill prevention, mitigation and containment. Personnel assigned to spill clean-up activities will receive spill response training.

• NCSG orientation
• Understanding for completion of FLRA
• WHMIS Compliance standards for storage of waste products and materials
• Consultation of applicable environmental work procedures

8.0 RESOURCES
• Alberta OH&S Code Part 12, Section 185
• Alberta OH&S Code Part 16, Section 216 – 221
• Alberta OH&S Code Part 29, Section 395 – 414
• Alberta OH&S Guidance Part 29
• Alberta Environmental Protection and Enhancement Act AR 192/96
• BC OH&S Code Part 7, Section 7.1 – 7.9
• BC OH&S Code Part 5, Section 5.3 – 5.19
• BC OH&S Guideline Part 5, Section 3.1
• Manitoba OH&S Regulations Part 12, section 12.1 – 12.12
• Manitoba OH&S Regulations Part 35, section 35.1 – 35.25
• Saskatchewan OH&S Regulations Part VIII, Section 109 – 114
• Saskatchewan OH&S Regulations Part XXII, Section 315 - 329

9.0 APPENDICIES
• Appendix A – Site Specific Waste Management
• Appendix B – Monthly/Yearly Waste Summary and Removal Log
• Appendix C – Activities for spill to land
• Appendix D – Activities for spill to water
• Appendix E – Soil management by soil type
### APPENDIX A – Site Specific Waste Management

<table>
<thead>
<tr>
<th>WASTE / SOURCE OF WASTE</th>
<th>HANDLING AND DISPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated Soil</td>
<td>Soil resulting from spill clean-up</td>
</tr>
<tr>
<td>Aerosol Cans</td>
<td>Spray paints; lubricants; adhesives</td>
</tr>
<tr>
<td>Plastic, Beverage</td>
<td>Lunchrooms, offices ,trailers</td>
</tr>
<tr>
<td>General Refuse; Office</td>
<td>Lunch room waste; general garbage</td>
</tr>
<tr>
<td>Paper</td>
<td>Printing; copying; document mgmt</td>
</tr>
<tr>
<td>Cardboard</td>
<td>Shipping boxes; packaging, etc.</td>
</tr>
<tr>
<td>Scrap Metal</td>
<td>Structural steel; shoring; cladding; insulation jacketing</td>
</tr>
<tr>
<td>Used Oil Filters</td>
<td>NCSG Equipment Maintenance, Subcontractor etc.</td>
</tr>
<tr>
<td>Used Oil</td>
<td>NCSG Equipment Maintenance, Subcontractor etc.</td>
</tr>
<tr>
<td>Wood</td>
<td>Shipping crates; formwork; decking; dunnage</td>
</tr>
<tr>
<td>Chemically treated wood</td>
<td>Sign posts, lumber for fencing</td>
</tr>
</tbody>
</table>
## Monthly/Yearly Waste Summary and Removal Log

<table>
<thead>
<tr>
<th>DESCRIPTION OF WASTE MATERIAL</th>
<th>PROCESS THAT GENERATED WASTE</th>
<th>QUANTITY GENERATED (L or m³)</th>
<th>CONTAINER TYPE</th>
<th>AREA / UNIT</th>
<th>EQUIP. UNIT NO.</th>
<th>CONTAINER NO.</th>
<th>DESTINATION (Codes Below)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Picked Up From: ________________________________
Print Name: ________________________________
Signature: ________________________________

Received By: ________________________________
Print Name: ________________________________
Signature: ________________________________

NOTES:

# APPENDIX C – Activities For Spill To Land

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take immediate action to stop or reduce the spill and contain it, without endangering the health and safety of the workers or local population (e.g. right tipped or fallen containers, plug holes or leaks, replace stoppers or lids, etc.).</td>
<td>Workers and/or supervisor</td>
</tr>
<tr>
<td>Immediately notify supervisor.</td>
<td>Workers</td>
</tr>
<tr>
<td>Notify HS&amp;E Advisor</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Notify client, and or regulatory authority as per site specific requirements</td>
<td>Regional Team Lead – HS&amp;E</td>
</tr>
<tr>
<td>Initiate chain of notification as per site, “Incident Management”.</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Take any actions necessary to prevent the spill from contaminating groundwater or offsite surface water (e.g. construct dirt berms) or from becoming airborne (e.g. cover with plastic sheeting).</td>
<td>Supervisor, after consultation with HS&amp;E Advisor and after checking MSDS</td>
</tr>
<tr>
<td>Barricade the area until corrective action is completed.</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Identify the spilled material.</td>
<td>Supervisor or HS&amp;E Advisor</td>
</tr>
<tr>
<td>Remove the spilled material, including any contaminated soil. Remove any free liquid through adsorption, baling, vacuuming, pumping, etc.</td>
<td>Supervisor, after consultation with HS&amp;E Advisor and client</td>
</tr>
<tr>
<td>Contain and dispose of the waste as described in the Waste Management Plan.</td>
<td>NCSG or Subcontractor after consultation with HS&amp;E Advisor and client</td>
</tr>
<tr>
<td>Within 24 hours, fill out a Loss control report Incident Investigation Report, following the</td>
<td>Supervisor with HS&amp;E Advisor assistance</td>
</tr>
</tbody>
</table>

Notes:
1. Specialized contractors or the client loss management team may be required in the event of a large spill.
2. Clean up of spills and disposal of the waste resulting from a spill due to a Subcontractor’s activities is the responsibility of that Subcontractor.
3. Spills less than one liter require immediate action to stop or reduce the spill and notification to supervision or the HS&E advisor but do not require further investigation.

# APPENDIX D – Activities For Spill To Water

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take immediate action to stop or reduce the spill and contain it, without endangering the health and safety of the workers or local population (e.g. right tipped or fallen containers, plug holes or leaks, replace stoppers or lids, etc.).</td>
<td>Workers and/or supervisor</td>
</tr>
<tr>
<td>Immediately notify supervisor.</td>
<td>Workers</td>
</tr>
<tr>
<td>Notify HS&amp;E Advisor</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Notify client, and or regulatory authority as per site specific requirements</td>
<td>Regional Team Lead - HS&amp;E</td>
</tr>
<tr>
<td>Initiate chain of notification as per site, “Incident Management”.</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Identify the spilled material.</td>
<td>Supervisor or HS&amp;E Advisor</td>
</tr>
<tr>
<td>Take actions necessary to prevent further contamination of onsite surface water (e.g. use booms, dikes, berms, skimmers, etc.).</td>
<td>Supervisor, after consultation with HS&amp;E Advisor and client</td>
</tr>
<tr>
<td>Take actions necessary to prevent contamination of offsite surface water (e.g. use booms, dikes, berms, skimmers, etc.).</td>
<td>Supervisor in consultation with the with HS&amp;E Advisor and client</td>
</tr>
<tr>
<td>Clean up the spill.</td>
<td>Supervisor, after consultation with HS&amp;E Advisor and client</td>
</tr>
<tr>
<td>Contain and dispose of waste as described in the Waste Management Plan.</td>
<td>NCSG or Subcontractor after consultation with HS&amp;E Advisor and client</td>
</tr>
<tr>
<td>Within 24 hours, fill out a Loss Control Report Incident Investigation Report, following the</td>
<td>Supervisor with HS&amp;E Advisor assistance</td>
</tr>
</tbody>
</table>

Notes:
1. Client operating plant or site personnel must be notified if the spill impacts existing plant drainage systems.
2. Specialized contractors or the client loss management team may be required in the event of a large spill.
3. Clean up of spills and disposal of the waste resulting from a spill due to a Subcontractor’s activities is the responsibility of that Subcontractor.
APPENDIX E – Soil Management By Soil Type

<table>
<thead>
<tr>
<th>SOIL TYPE</th>
<th>SOIL MANAGEMENT / DISPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-useable Fill</td>
<td>• Stockpiled in on-site area as designated by client</td>
</tr>
<tr>
<td></td>
<td>• Material excavated and hauled by NCSG or its subcontractor.</td>
</tr>
<tr>
<td>Contaminated Fill</td>
<td>• Client verifies location for soil disposition</td>
</tr>
<tr>
<td></td>
<td>• Material excavated and hauled directly off site by client contractor</td>
</tr>
<tr>
<td></td>
<td>• Client is responsible for securing applicable waste tracking documentation prior to removal of material from site</td>
</tr>
<tr>
<td>Unexpected Contaminated Fill</td>
<td>• Segregate piles from each source location</td>
</tr>
<tr>
<td></td>
<td>• Log and tag piles by point of origin</td>
</tr>
<tr>
<td></td>
<td>• Contact HS&amp;E Advisor to characterize and arrange disposal of material</td>
</tr>
<tr>
<td></td>
<td>• Re-useable Fill stockpiled in location designated by client</td>
</tr>
<tr>
<td></td>
<td>• Contaminated Fill managed as above</td>
</tr>
<tr>
<td>Unsuitable Fill</td>
<td>• Ensure fill is not contaminated – confirm by visual inspection for hydrocarbons or detection of hydrocarbon odors</td>
</tr>
<tr>
<td>&quot;Unsuitable&quot; in this case means extremely wet &quot;soupy&quot; material.</td>
<td>• Haul to pre-designated area</td>
</tr>
<tr>
<td></td>
<td>• Consult HS&amp;E Advisor if visual contamination is observed</td>
</tr>
</tbody>
</table>
16.3 Environmental Process

1.0 PURPOSE
Recognizing environmental concerns and potential hazards and taking the necessary steps to control them is an important aspect of our safety program. NCSG Crane & Heavy Haul Services and its affiliated companies NCSG believes it is imperative to implement safeguards that will assist in the protection of the environment. We are committed to the development and implementation of effective waste management. Our purpose is to create an environment as free of waste as possible within our daily operations. We strive to set ourselves as leaders in the reduction, recycling and proper disposal of our waste.

In fulfilling this commitment to protect the environment, management will ensure all waste material is disposed of in compliance with legislative requirements. Management will ensure all employees understand and adhere to the required disposal procedures for all waste materials.

All employees are responsible for adhering to the requirements of waste management and are encouraged to provide further suggestions for the reduction, reuse and recycling of such.

To be successful, this program requires full participation of all management, supervisors and workers. Each individual must act responsibly when disposing of waste products.

Waste poses a real threat to our environment; therefore, ensuring proper measures are in place will assist in the preservation of the environment.

2.0 SCOPE AND APPLICATION
Proper disposal of waste material will assist in the preservation of our environment. While performing our duties, we shall be conscious of the appropriate protection of humans, animals, plant life, air, water and soil. All materials must be stored, handled and disposed of in such a manner that will provide appropriate protection to the environment. Wherever possible, it is encouraged to recycle and utilize recycled products.

Hazardous goods must be handled safely in accordance with government regulations including, but not limited to Occupational Health and Safety, Transportation of Dangerous Goods and WHMIS.

This process applies to all employees who are engaged in NCSG company business, including contractors.

3.0 DEFINITIONS
There are no definitions for this process.

4.0 EXPECTATIONS
NCSG strongly committed to the protection of the environment and insists that all its employees and contractors working on any worksite conduct all work activities in an environmentally friendly way and responsible manner.

5.0 ROLES AND RESPONSIBILITIES

5.1 Management
- Records the time of the report, source of information and details on location, size, type of spill and any other information available on the Loss Control Report (LCR).
- Ensures that the spill is reported to the proper authorities.
- Oversees the cleanup operations until it is satisfactorily completed.
- Together with the Supervisor decides if additional equipment is required to contain and cleanup spills.
- Maintain contact with Supervisor to ensure final inspection and sign-off on spill site.
- Notifies internal company departments.
- Initiates Mutual Aid Agreements if so required.
- Oversees completion and distribution of Loss Control Report (LCR).
- Ensures investigation identifies measures to prevent similar spills.
- Provides cleanup advice to the Supervisor.
- Assists with preparation of press releases.
- Provides advice on storage and disposal options.
- Ensures that there are follow up reports prepared on the spill event, clean up and environmental impacts.
- Liaise with government agencies (as required)
- Notifies and Liaise with Project Client or Owners (as required)

5.2 Supervisor
- Assist in initial and ongoing response efforts.
- Supervise the spill response team.
- With work crew, take initial action to seal off the source and contain spill.
- Decide with Management if mobilization of additional equipment is required.
- Assess whether burning is a viable cleanup measure. Consult with Regulatory Agency.
- Ensure co-ordination of equipment and manpower as needed (company and contractors)
- Ensure expeditious response and clean up of spill site and impacted area.

5.3 Spill Response Team (composed of various personnel)
- Conduct the cleanup of spills under the direction of the Supervisor.
- Deploy booms, sorbent and other equipment and materials as required.
- Take appropriate response measures.
- Continue the cleanup as directed by the Supervisor or until relieved.
5.5 First Responders

- Assess and verify the initial severity of the spill and safety concerns.
- Gather, collect and confirm information on the spill-source, type, size, cause, etc.
- Notify the Site Supervisor.
- Conduct the initial containment and cleanup operations.

6.0 METHOD

6.1 WASTE MANAGEMENT

Reduce
Wherever possible materials will be purchased in bulk form. This will minimize additional packaging and unnecessary waste.

Recycle
All employees are encouraged to recycle wherever possible. Labelled containers have been provided for the collection of returnable beverage containers. When the confidentiality of material does not pose an issue, the use of waste paper is encouraged.

Reuse
All empty drums and pallets are to be stored in the designated areas or removed from site. Arrangements will be made with suppliers and waste management companies to have items gathered for reuse.

Vehicle and Equipment
Vehicles and equipment will be inspected for excessive omissions and leaks prior to being put into service. Should any piece of equipment be found to be non-compliant, all necessary repairs will be performed before the equipment is utilized.

Disposal
All materials must be disposed of in the designated, appropriately labelled containers. Do not discard hazardous materials in the garbage dumpster, in drains, in sewers or on the ground. Containers filled with waste material, hazardous and otherwise, will be disposed of by an external source, licensed for the proper disposal of such items.

All spills will be cleaned immediately and the supplies used (i.e. rags) must be disposed of in the appropriate manner.

A successful spill cleanup is one in which no one gets exposed or injured during the clean up.

*Remember to check the MSDS (Material Safety Data Sheet).

A Minor Spill is one in which ALL of the following conditions are met:
- the responsible party is at the scene; and
- the material spilled is known; and
- the material spilled is not highly toxic; and
- the quantity spilled is small; and
- there is no fire hazard present; and
- the spill is completely contained inside the work area; and
- available & appropriate personnel protective equipment is used (i.e., gloves, eye protection and a half-face respirator)

A Major Spill is one in which ANY of the following conditions apply:
- the responsible party is unknown (it’s an “orphan” spill); or
- the material spilled is unknown; or
- the material spilled is highly toxic; or
- a large (or undetermined) quantity was spilled; or
- a significant fire hazard may be present; or
- the spill is in a common area (e.g., hallway) or other area accessible to the general public; or
- advanced or unavailable personnel protective equipment (i.e. more than gloves, eye protection and a half-face respirator) is required to respond to the spill; or
- a responder is unsure whether the spill should be considered “Minor” or “Major”.

6.2 SPILLS

Chemical Spills
Consult the Safety Data Sheets (SDS) for the spilled material to determine the health effects and the requirement for PPE. Refer to the Spill Cleanup Procedures in section 6.3.

Medical Facilities
A medical facility is established at every project site.

Emergency response procedures may vary from one jurisdiction to the next. The site manager must ensure that the emergency response procedure is in place prior to the start of the project.

Containment
All bulk fuel storage areas will include double walled storage tanks or have lined secondary containment dikes surrounding them. These dikes are constructed of either concrete or compacted earth with liners and have at least 110% containment capacity of the largest tank contained within them.
Inspections
A weekly inspection program is established at each site to inspect all bulk storage tanks and containment dikes.

Weather Conditions
Weather conditions have a significant impact when determining which environmental controls are required when developing an emergency spill response strategy.

Sub-zero temperatures and a constantly blowing wind make it difficult for employees to control and cleanup a hazardous spill especially on the ice surface.

WHMIS/GHS
All employees are trained in the Workplace Hazardous Material Information System (WHMIS)/Global Harmonized Systems (GHS) and understand the hazards associated with the products used in the workplace or transported.

Fuel Spills
The possibility of a fuel spill on project sites will vary depending on a number of factors: human error, mechanical failure, road conditions, weather conditions, etc.

Spill Response
When responding to any spill, the safety of all employees is paramount, therefore the following steps are part of the procedures:

- Identify the spilled material and follow the appropriate procedure.
- Monitor the area for Explosive gases and Oxygen (O2) to ensure a safe atmosphere.
- Determine the potential for fire, and eliminate any hazards.
- Ensure that all personnel are equipped with the appropriate Personal Protective Equipment.

6.3 SPILL CLEANUP PROCEDURE
WARN personnel in the immediate area. If a volatile, flammable, or highly toxic material is spilled, have everybody extinguish flames (if trained to do so) and turn off spark-generating equipment and evacuate the area immediately.

If clothing is contaminated, remove it and use the emergency shower to rinse the affected areas. If contaminants are in your eyes rinse for at least 15 minutes at an eyewash station.

If there are medical emergencies contact controller on site for assistance and an ambulance if required. Provide the following information:

- Your name and phone extension.
- Exact location of spill.
- Name of material spilled.
- Quantity of material spilled.
- Information on injuries to personnel.

Obtain the required spill supplies, put on appropriate protective equipment.

Remove other materials from around the spill area to prevent cross contamination and tripping hazards.

Work in teams. One person cleans the spill; the other should remain outside of the contaminated area and hand supplies to person cleaning.

If non-toxic, non-volatile, non-flammable material is spilled, start to place absorbent materials at the edge of the spill.

Always pour the neutralizer or absorbent starting at the edges and moving toward the center of the spill site.

Neutralize any residue on the floor and work surfaces you are unable to pick up with appropriate absorbent.

Scoop up all absorbed material. Remember, if no neutralizer was used, the absorbed material is still hazardous.

Wash the affected area with an appropriate cleaning solution (soap and water).

Report the spill to your Supervisor.

Dispose of all cleanup materials as hazardous waste.

6.4 PRODUCT CATEGORIES
The materials in this Emergency Spill Response are generally divided into five categories:

- Flammable Immiscible Liquids
- Soluble Solids/Oxidizers
- Flammable Compressed Gases
- Soluble Liquids
- Toxic Solids

Flammable Immiscible Liquids
These substances are all hydrocarbon-based and will ignite under certain conditions.

Gasoline poses the greatest fire and safety hazard and is not recoverable when spilled on water.
**Action Plan Steps**

1. **Confirm that a spill has occurred.** It may not be obvious if a spill has occurred - look for:
   - pooled liquid.
   - damage to equipment/tanks.
   - smell of fuel or chemicals and
   - leaks from hatches, valves or other fixtures

2. **Assess The Situation.** Before initiating response actions, take the time to determine the nature of a spill and to collect some or all of the following facts:
   - potential risk of fire, explosion and environmental damage.
   - extent of injuries to co-workers or the public.
   - source and approximate size of the spill.
   - possible methods to stop the flow of product; and
   - proximity to water.

3. **Take Action**
   - Eliminate ignition source(s) if safe to do so.
   - Shut off spill source if safe to do so.
   - Attend to any injured persons.
   - Restrict personnel to the spill site using road barriers or marker tape.
   - Warn others in the area of the spill.
   - Use an explosion meter to monitor atmospheric gas concentrations.
   - Report spill to Advance Coating Solutions management.
   - Transport spill response kit to the spill site.
   - Control spreading and minimize impacts.

**Spill Containment and Recovery**

Special care should be taken to ensure that spilled material does not reach water bodies where recovery is more difficult.

**Waste Disposal**

- All combustibles are incinerated on a daily basis. This includes food scraps, office garbage etc.
- Non-hazardous solid "inert" waste generated (i.e. Scrap metal, pipe, wood, plastics, liners, Styrofoam) will be disposed of at approved landfills on site.
- All hazardous wastes and waste items that cannot be incinerated are securely packaged and disposed of in designated locations off-site.
- Prior to disposal, the hazardous waste will be properly packaged, labelled, stored and manifested in a Transportation of Dangerous Goods (TDG) approved shipping container.
- The container will have the appropriate hazardous waste labels.
- All Federal, State, Provincial and Territorial regulations will be adhered to.

**Used Container Disposal**

To ensure the proper disposal of used containers that have contacted, collected or contained a hazardous or regulated substance (e.g., paint cans, oil cans, acid containers, aerosol cans).

- Containers having contacted, collected or contained an acute hazardous material, corrosive or reactive substance must be triple washed with water prior to disposal.
- Metal containers can be disposed as scrap metal in the approved landfill after being triple washed and crushed.
- Any free liquid in the container must be disposed of properly, and the residual material allowed drying or solidifying.

**Used Drum Disposal**

During operations, drums will be used for storage of other "used" products (i.e. used glycol, used oil, cleaning of spills etc). These drums will have to be properly labelled and stored prior to acceptable removal and disposal usually off-site at an approved facility.

### 6.5 SPILL RESPONSE

**Response Resources**

A wide variety of spill control/recovery equipment and material exists for dealing with spills of petroleum products and chemical reagents. Heavy construction equipment is also available for use on demand.

**Response Equipment**

All equipment is stored in such a manner as to be readily available on short notice.

The Supervisor would immediately respond to a reported spill site by notifying his on-duty equipment operators to move equipment and material necessary to provide control and clean-up measures to the reported spill site.

Emergency spill containment and recovery materials and supplies are available for immediate mobilization at any time.

**Planning & Logistics**

The feasibility of containing and recovering a spill will largely be determined by its location and the rate of
release, spreading, transport and evaporation. These rates should be compared with the total time needed to deploy response equipment in order to evaluate whether or not containment, and/or sorbent and skimming operations can be effectively implemented. The pre-assembly of spill cleanup kits will expedite response and reduce the total deployment time needed, including:

- Equipment and support material mobilization time.
- Personnel Mobilization, transit and assembly at spill site time.
- Actual equipment set-up and deployment time.
- Determine Whether or not a spill has entered a waterway and whether or not access by land or water to control points is possible so that booms, sorbents and skimmers and vacuum trucks can be deployed. Check maps and consult with personnel familiar with the spill area.
- Establish priorities to optimize utilization of personnel and gear needed for all cleanup phases (containment, removal, storage, transfer and disposal) at selected sites.
- Allow additional time for adverse weather, flying or driving conditions.

**Monitoring Spills**
Monitor spills throughout the response to ensure safety and to direct cleanup efforts:
- Explosive gas concentrations in the atmosphere using an explosion meter.
- Spill movement and behaviour in order to properly direct response efforts.
- All threats to the safety of people, property and the environment.

**Spills On Land**
Spills on land should be contained as close to the source as possible, if safety allows.

Every effort should be made to ensure that a spill does not reach water, where its containment and recovery are much more difficult and the potential environmental impacts are much greater. Containment can be achieved using:

- A berm or dyke around the spill source
- A trench or ditch down slope of the spill source

**Earth Berm/Trench**
If possible, locate the berm/trench sufficiently down slope of the release point to complete its construction before the spill arrives. Dig the trench along a natural drainage contour.

It should be approximately 0.5 m deep with a relatively flat bottom. The excavated material can then be combined with other available material to build the berm.

**Sand Bag Berm/Trench**
Sand bags can be used where available and if the earth is too hard or frozen and cannot be excavated or compacted. A plastic liner can be used to seal the trench and bags should be anchored with gravel or rocks and be woven between layers of bags.

**Spills on Muskeg**
Muskeg is generally poorly drained, wet and spongy. Internal drainage is usually slow and the depth of peat over mineral soil varies greatly. Muskeg is also highly acidic and low in nutrients, making biodegradation very slow, even during the summer months.

It is recommended that small oil spills in muskeg be mixed with peat moss and allowed to degrade during the summer months since more damage can be done by attempting cleanup using mechanical removal methods.

In the event of a small spill, it is important to weigh the advantages of cleanup versus the potential negative impacts on the terrain. Both personnel and equipment on wet or sensitive areas can cause considerable damage. In many cases, the best solution may be to add nutrients to the contaminated area and monitor the site to ensure that the spill does not migrate to an adjacent sensitive area. In all cases appropriate environmental advisors and Regulatory Authorities should be consulted.

**Spills in Water**
Containing spills in water is often difficult because oil quickly spreads. In turbulent water, oil and chemicals are likely to mix into the water column, making recovery impractical. For these reasons, it is important that if the spill reaches water, that containment be attempted as close to the source as possible, and that the spill be prevented from reaching a flowing stream.

Spills in lakes should be contained, if possible, before reaching outlets where containment and recovery can be difficult and dangerous.

Efforts to contain spills in large streams should be limited to land based operations where the oil might pool in accessible back eddies. The recovery of water soluble chemicals is not possible.

In flowing streams, oil travels at the same speed as the surface current. On larger rivers or in open lake areas, slicks are also transported at 3.5% of the wind speed. Although a comparatively small effect, it can be an important factor if the wind is at right angles to the water flow and if the water surface is extensive. The wind can
force the spill to the sides of the river where flows are slower or the shore of a lake. Long reaches of the river may become contaminated although containment and recovery might also be possible.

In smaller streams, the wind will have less impact and the slick speed can be easily estimated. Placing a small stick in the middle of the stream and determine the length of time required to travel a given distance, (typically 10m). This information can be quickly be converted to speed \( \frac{36}{\text{time (sec)}} = \text{km/h} \) to determine the estimated travel time to a confluence or other sensitive area.

### 6.6 CONTAINMENT STRATEGIES

Determine the best possible strategy for containment will depend on a number of factors:

- Speed of slick travel
- Location of possible containment sites
- Availability of personnel and equipment
- Location of sensitive areas
- Safety of operations

Spills on water can be contained by using floating booms (sorbent or non-sorbent) or by constructing a temporary berm or inverted weir. The objective is to build a barrier against which the (normally floating) oil will pool while allowing the underflow of water.

**Booms**

Booming with either sorbent or non-sorbent booms can also be an effective means of containing spills on slow-moving waters and in lakes. Effective containment using conventional booming techniques will be very difficult in streams or rivers where currents exceed 0.7 knots or 0.4m/s. At these speeds, oil will become entrained in the water flowing under the boom resulting in significant losses. Some improvements can be achieved in waters flowing at 1-2 (0.5-1 m/s) if the boom is deployed at an angle of less than 90 degrees to the direction of the flow.

**Inverted Weir**

![Image of inverted weir](image)

**Filter Fence**

![Image of filter fence](image)

Sorbent booms or socks can also be used to provide a barrier to floating oil. These types of booms should be checked regularly to ensure that they do not become saturated with either water or oil since they will tend to float very low in the water or even sink and release oil downstream.

**Spills in Ice and Snow**

Oil can remain relatively fresh, in an un-weathered state, under snow and ice for several months or more after a spill.

Evaporation rates will still be high when oil is ultimately exposed to the atmosphere except in very low temperatures. Oil can also move up and down small hills (several metres high) due to the capillary action of the snow.

**Containment**

Snow and ice can be used to create berms to keep spills from spreading. In frozen rivers angled slots about 1 metre wide or holes can be cut in the ice, where safety permits, to allow possible spill recovery. The oil will rise up into the openings where it will concentrated, and be available for recovery using skimmers or pumps.

**Disposal**

Oil spills in snow and ice can sometimes be burned if the spill can be isolated from the source. Although there is generally a reduced fire hazard, due attention to safety of operations is still required. If burning is
not effective, recovered contaminated material will need to be collected and transported to a designated disposal/treatment facility.

**Burning Snow Cone**

Recovery
When large volumes of oil have been contained either through natural or mechanical containment, it will be necessary to remove or recover the accumulated oil. This will generally occur in excavated trenches or adjacent to berms or natural barriers and occasionally in slow running streams or quiet ponds.

Vacuum trucks are ideal at cleanup sites accessible by road and where a large volume of oil has pooled that is generally free of water. The truck must be positioned at a safe distance so that there is no possibility of fire or explosion.

Oleophillic devices, such as disc or drum skimmers, can selectively recover oil in water, and are better suited to applications where the oil has formed a distinct layer on top of quiet water.

Accumulations adjacent to an inverted weir are an example. A vacuum truck would be largely ineffective in this instance since it would recover large amounts of water, particularly in a thin layer of oil with water flowing through the pipe or culvert.

When using disc or drum skimmers, ensure that small items of debris are periodically removed from the scrapers to ensure their efficient operation.

**Disc Skimmer**

7.0 TRAINING REQUIREMENTS AND MATERIALS
- Workplace Hazardous Materials Information System Training
- Transportation of Dangerous Goods Training
- Emergency Response Training

8.0 APPENDICIES
- Appendix A – Risk Assessment and Preventive Measures
- Appendix B – Spill Response Actions
<table>
<thead>
<tr>
<th>POTENTIAL PROBLEM</th>
<th>IMPACT</th>
<th>PROBABILITY</th>
<th>PREVENTATIVE MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel or Oil Major leak from storage tanks</td>
<td>High</td>
<td>Low</td>
<td>Daily inspections and monitoring will take place. Remote emergency shutoffs. Maintain additional fuel storage for emergencies.</td>
</tr>
<tr>
<td>A spill from a valve left open or a break in a pipe at the transfer facilities or at a pumping station</td>
<td>High</td>
<td>Moderate</td>
<td>Ensure all major valves are locked when not in use. Fuel transfer hoses will have a double locking mechanism. Concrete catchments basin at each station. Markers around all above ground fuel transfer pipelines.</td>
</tr>
<tr>
<td>A hydraulic hose breaking on a piece of heavy equipment</td>
<td>Low</td>
<td>High</td>
<td>Mechanics check all hoses and a nozzle for wear and leaks. Operators are required to complete daily equipment checklists for the mechanics; mechanics to service immediately or schedule downtime.</td>
</tr>
<tr>
<td>Pump Failure</td>
<td>Low</td>
<td>Low</td>
<td>Pumps are to be inspected weekly and serviced monthly.</td>
</tr>
<tr>
<td>Power Outages</td>
<td>Low</td>
<td>Low</td>
<td>In case of long-term power outages, an emergency power supply.</td>
</tr>
<tr>
<td>Chemical Spills</td>
<td>Low – High</td>
<td>Low</td>
<td>Chemicals will be stored in drums, bottles, canisters or packages. Chemicals will be stored in such a way as to protect from the weather. Training in the handling of chemicals will take place to ensure safe handling. Regular inspections will take place of stored chemicals. Inventory controls in place. All chemicals used in explosive formulations are stored in designated areas.</td>
</tr>
<tr>
<td>Flammables (paints, thinners, acetones, etc.)</td>
<td>Low to High</td>
<td>Low</td>
<td>Stored in fireproof storage facilities. All containers to be labelled.</td>
</tr>
<tr>
<td>Devran 201 K</td>
<td>Low to high</td>
<td>Low</td>
<td>Stored in designated site areas.</td>
</tr>
</tbody>
</table>
### TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Straw-Yellow Liquid  
**Flash Point:** 215°C (Minimum)

**Odour:** Petroleum  
**Pour Point:** -25°C  
**Solubility:** Generally Insoluble  

**Viscosity:** Medium (265 x ST, 15°C)  
**Vapour Density:** Few Vapours Emitted

**Specific Gravity:** Floats on Water (0.9)

### SAFETY MEASURES

**Warning:** Vapours are heavier than air but are unlikely to form. Toxic gas can form in fire and at high temperatures. CO, CO2, and dense smoke are produced upon combustion. Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs.

**Personal Protection:** Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER). Use of organic vapour cartridge respirator is highly unlikely.

**Precautions:** Avoid excessive heat, which can cause formation of vapours. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.

### RESPONSE TO FIRES

**Consider Action Only If Safety Permits:** Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO2, dry chemical, alcohol foam or water fog. NOTE: water or foam may cause frothing. Use water to cool containers, exposed to fire.

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### Lube Oil

**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Amber Liquid  
**Flash Point:** 190°C to 2220°C

**Odour:** Petroleum  
**Pour Point:** -35°C to -40°C  
**Solubility:** Generally Insoluble  

**Viscosity:** Medium (255 x ST, 15°C)  
**Vapour Density:** Few Vapours Emitted

**Specific Gravity:** Floats on Water (0.9)

### SAFETY MEASURES

**Warning:** Vapours are heavier than air but are unlikely to form. Toxic gas can form in fire and at high temperatures. CO, CO2, and dense smoke are produced upon combustion. Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs.

**Personal Protection:** Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER). Use of organic vapour cartridge respirator is highly unlikely.

**Precautions:** Avoid excessive heat, which can cause formation of vapours. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.

### RESPONSE TO FIRES

**Consider Action Only If Safety Permits:** Wear SCBA and eye protection when responding to lube oil fires. Shut off fuel supply. Extinguish fire with CO2, dry chemical, alcohol foam or water fog. NOTE: water or foam may cause frothing. Use water to cool containers, exposed to fire.
<table>
<thead>
<tr>
<th><strong>SAFETY MEASURES</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ON LAND</strong></td>
<td>Prevent additional discharge of oil. Do not flush into ditch/drainage systems. Block entry into waterways. Contain spill by diking with earth, snow or other barrier. Remove minor spills with sorbent and/or peat moss. Remove large spills with pumps or vacuum equipment. Spill can also be mechanically removed if oil is too viscous to be pumped.</td>
</tr>
<tr>
<td><strong>ON WATER</strong></td>
<td>Use booms to contain and concentrate spill. Remove spill using sorbent, skimmer or vacuum truck. Protection booming can be considered for water intakes.</td>
</tr>
<tr>
<td><strong>STORAGE &amp; TRANSFER</strong></td>
<td>Store closed, labeled containers in cool, and ventilated areas away from incompatible materials.</td>
</tr>
<tr>
<td><strong>DISPOSAL</strong></td>
<td>Segregate waste types. Place contaminated materials into marked containers. Consult with environmental authorities during final disposal.</td>
</tr>
<tr>
<td><strong>FIRST AID</strong></td>
<td></td>
</tr>
<tr>
<td><strong>EYES</strong></td>
<td>Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention.</td>
</tr>
<tr>
<td><strong>SKIN</strong></td>
<td>Remove and launder contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention. Discard saturated leather articles.</td>
</tr>
<tr>
<td><strong>INHALATION</strong></td>
<td>Move victim to fresh air. Perform CPR if victim not breathing. Provide oxygen if victim is having difficulty breathing. Get prompt medical attention.</td>
</tr>
<tr>
<td><strong>INGESTION</strong></td>
<td>DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration. Get prompt medical attention.</td>
</tr>
</tbody>
</table>

### Waste Oil

| **ON LAND**         | Prevent additional discharge of oil. Do not flush into ditch/drainage systems. Block entry into waterways. Contain spill by diking with earth, snow or other barrier. Remove minor spills with sorbent pads and/or peat moss. Remove large spills with pumps or vacuum equipment. Spill can also be mechanically removed if oil is too viscous to be pumped. |
| **ON WATER**        | Use booms to contain and concentrate spill. Remove spill using sorbent, skimmer or vacuum truck. Protection booming can be considered for water intakes. |
| **STORAGE & TRANSFER** | Store closed, labeled containers in cool, ventilated areas away from incompatible materials. |
| **DISPOSAL**        | Segregate waste types. Place contaminated materials into marked containers. Consult with environmental authorities during final disposal. |
| **FIRST AID**       |  |
| **EYES**            | Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention. |
| **SKIN**            | Remove and launder contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention. Discard saturated leather articles. |
### INHALATION
Move victim to fresh air.
Perform CPR if victim not breathing.
Provide oxygen if victim is having difficulty breathing. Get prompt medical attention.

### INGESTION
DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
Get prompt medical attention.

## Gasoline

<table>
<thead>
<tr>
<th>TYPICAL PHYSICAL AND CHEMICAL PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE: Colorless Liquid</td>
</tr>
<tr>
<td>FLASH POINT: -50°C</td>
</tr>
<tr>
<td>ODOUR: Gasoline/Petroleum</td>
</tr>
<tr>
<td>POUR POINT: -60°C</td>
</tr>
<tr>
<td>SOLUBILITY: Generally Insoluble</td>
</tr>
<tr>
<td>VISCOSITY: Not Viscous (&lt;1 cSt)</td>
</tr>
<tr>
<td>VAPOUR DENSITY: Will Sink to Ground Level</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY: Floats on Water (0.7 - 0.8)</td>
</tr>
</tbody>
</table>

### SAFETY MEASURES

#### WARNING
Vapours form instantaneously, and are heavier than air. Empty containers can contain explosive vapours.
Vapours can travel to distant sources of ignition and flash back. Eye contact causes irritation.
Material can accumulate static charges.
Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.

#### PERSONAL PROTECTION
Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton and PVC are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE).
Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant.

#### PRECAUTIONS
Monitor for explosive atmosphere.
Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources.
Restrict access and work upwind of spill.

#### RESPONSE TO FIRES

**CONSIDER ACTION ONLY IF SAFETY PERMITS!**

Shut off fuel supply.
Extinguish fire with CO2, dry chemical, alcohol foam or water fog. Use water to cool containers, exposed to fire.

#### ON LAND
ELIMINATE IGNITION SOURCES.
Do not flush into ditch/drainage systems. Block entry into waterways.
Contain spill by diking with earth, snow or other barrier. Remove minor spills with peat moss and/or sorbent pads.
Cover pools with foam to prevent vapour evolution if gasoline presents a fire hazard; otherwise allow vapours to dissipate.

#### ON WATER
ELIMINATE IGNITION SOURCES.
DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS. Protection booming can be considered for water intakes.
Remove spill using sorbent, skimmer or vacuum truck. Protection booming can be considered for water intakes.

#### STORAGE & TRANSFER
Store closed, labeled container in cool, ventilated areas away from incompatible materials.
Electrically ground containers and vehicles during transfer.

#### DISPOSAL
Place contaminated materials into segregated marked containers. Consult with environmental authorities during final disposal.

## FIRST AID
### EYES
Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention.

### SKIN
Remove and launder contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention. Discard saturated leather articles.

### INHALATION
Move victim to fresh air. Perform CPR if victim not breathing. Provide oxygen if victim is having difficulty breathing. Get prompt medical attention.

### INGESTION
**DO NOT INDUCE VOMITING:** if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration. Get prompt medical attention.

### Propane
**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES**
- **APPEARANCE:** Colorless Gas
- **FLASH POINT:** -104°C
- **ODOUR:** Natural Gas Odour
- **POUR POINT:** -190°C
- **SOLUBILITY:** Generally Insoluble
- **VISCOSITY:** N/A
- **VAPOUR DENSITY:** Will Sink to Ground Level
- **SPECIFIC GRAVITY:** Liquid Floats on Water

### SAFETY MEASURES
**WARNING**
- Vapours form instantaneously, and are heavier than air. Vapours can travel to distant sources of ignition and flash back. Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.

**PERSONAL PROTECTION**
- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; Nitrile: and Viton are suitable protective materials (DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC).
- Avoid frostbite burn to skin and eyes from contact with propane. Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA.

**PRECAUTIONS**
- Monitor for explosive atmosphere.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

### RESPONSE TO FIRES
**CONSIDER ACTION ONLY IF SAFETY PERMITS!**
- **Wear SCBA in confined areas. Shut off fuel supply.**
- Extinguish fire with CO2, dry chemical, alcohol foam or water fog. Use water to cool containers, exposed to fire.

**On Land**
- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.**

**On Water**
- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.**

**Storage & Transfer**
- It is not possible to collect released material.

**Disposal**
- Consult with environmental authorities if the disposal of any contaminated materials is required.

### FIRST AID
**EYES**
Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention.
| **SKIN** | Remove and launder contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention. Discard saturated leather articles. |
| **INHALATION** | Move victim to fresh air. Perform CPR if victim not breathing. Provide oxygen if victim is having difficulty breathing. Get prompt medical attention. |
| **INGESTION** | DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim’s head below hips to prevent aspiration. Get prompt medical attention. |

**Antifreeze (Ethylene Glycol)**

**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE: Colorless Liquid  
FLASH POINT: 111°C  
ODOUR: Slight; Undetectable <25 ppm  
POUR POINT: -13°C (48% Solution)  
SOLUBILITY: Soluble in All Proportions  
VISCOSITY: Not Viscous (=22 cSt)  
VAPOUR DENSITY: Will Sink to Ground Level  
SPECIFIC GRAVITY: Same as Water (1.0)

**SAFETY MEASURES**

**WARNING**  
Vapours are heavier than air. Ingestion of significant quantities can be lethal. Eye contact causes irritation. Skin contact can cause intoxication due to absorption. Inhalation of vapours can cause intoxication, headache, vomiting, unconsciousness with convulsions, and even death Avoid inhaling vapours, particularly in enclosed places.

**PERSONAL PROTECTION**  
Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; neoprene, nitrile, PVC are suitable protective materials.

**PRECAUTIONS**  
Monitor empty containers for explosive atmosphere. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.

**RESPONSE TO FIRES**

**CONSIDER ACTION ONLY IF SAFETY PERMITS!**

Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO2, dry chemical, alcohol foam or water fog. (Note: Water or foam may cause frothing). Use water spray to cool containers exposed to fire.

On Land  
Block entry into waterways. Do not flush into ditch/drainage systems. Contain spill by diking with earth, snow or other barrier. Remove minor spills with universal type sorbent. Remove large spills with pumps or vacuum equipment.

On Water  
Ethylene glycol sinks and mixes with water; contain spill by isolating contaminated water through damming or diversion.

Storage & Transfer  
Store closed, labelled containers in cool, ventilated areas away from incompatible materials.

Disposal  
Segregate waste types. Place contaminated materials into marked containers. Consult with environmental authorities during final disposal.

**FIRST AID**

**EYES**  
Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention.
<table>
<thead>
<tr>
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<th>Description</th>
</tr>
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<tbody>
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17.1 Corporate Alcohol and Drug Policy

17.1.1 Alcohol & Drug Policy and Related Processes

1.0 FOREWORD

Our Alcohol & Drug Policy and Related Process follows the standards referenced in the COAA Canadian Model for Providing a Safe Workplace – Alcohol and Drug Guidelines and Work Rule – Version 5.0. This policy and process lays out our expectations, roles, responsibilities for all of the NCSG companies and affiliates across North America as endorsed by Executive Management.

___________________________  
Vice President – HSE, Technical Training & Compliance  
Dated  
January 1, 2016

2.0 PURPOSE

NCSG Crane & Heavy Haul Services and its affiliated companies (referred to as NCSG) are committed to being industry leaders in Health, Safety and Environmental practices, to maintaining a safe and healthy workplace, and to protecting the environment. Excellence in Health, Safety and Environmental practices is vital to the well being of all people everywhere and essential to all aspects of our business. All employees and sub-contractors share in the responsibility to ensure that our worksites are safe and environmentally responsible.

The use of illicit drugs and the inappropriate use of alcohol and medications can adversely affect job performance, productivity, the work environment and the well being of employees. It can also place the integrity and safety of company property and operations at risk, impacting the individual, co-workers, customers, contractors, suppliers, and the public.

Consistent with our Health, Safety and Environmental Policy, the Company has implemented this Alcohol and Drug Program to eliminate any negative effects of alcohol and other drug use in our workplace.

Note: NCSG’s Alcohol and Drug policy operates in the spirit of the Alcohol and Drug Guidelines and Work Rule of the Construction Owners Association of Alberta (COAA) and is subject to change based on amendments to the same.

3.0 SCOPE AND APPLICATION

The following provisions apply to all employees while they are engaged in company business, working on company premises or worksites, and operating company vehicles and equipment. All employees are responsible for their own and others’ health, safety and environmental performance and are expected to take appropriate action where they believe there is a safety risk or potential violation. Any violation of this Program will be considered a fundamental breach of the employment contract and employees will be subject to disciplinary action up to and including termination. Failure of supervisors to meet their additional responsibilities under this Program will be grounds for disciplinary action.

All contractors will be advised of the applicable provisions of this Alcohol and Drug Policy, and will be expected to enforce these requirements for their employees, sub-contractors and agents. Any contravention will be considered a breach of their contract.

Details on the expectations around alcohol and drug use and possession, the procedures for implementation, and definitions of terms are found in the following sections of the Program. Education, awareness and supervisor training programs support it. This Program is subject to ongoing review and evaluation, and modifications will be made as deemed necessary to respond to current circumstances and evolving needs.

4.0 DEFINITIONS

Company Business
Refers to all business activities undertaken by employees and contract workers in the course of the company’s operations, whether conducted on or off company premises or worksites. It includes those situations when an individual is representing, or could reasonably be perceived as representing the company in the performance of duties.

Company Premises
Includes but is not necessarily restricted to all land, facilities, mobile equipment and vehicles owned, leased or otherwise directly controlled by NCSG.

Company Worksite
Includes any site or location where an NCSG or NCSG employee has been assigned to work.

Contractor
Refers to any person or entity, including their employees, that has been contracted, sub-contracted, or otherwise engaged to provide services to the company on a fee for service basis.

Drug
Means any substance, including but not limited to alcohol, illicit drugs, medications or other substances, the use of which has the potential to change or adversely affect the way a person thinks, feels or acts. For purposes of this
Program, drugs of concern are those that inhibit a worker’s ability to perform his or her job safely and productively.

- Alcohol means the intoxicating agent in beverage alcohol, ethyl alcohol, or other low molecular weight alcohols including methyl and isopropyl.
- Beverage Alcohol refers to beer, wine and distilled spirits.
- Illicit drug means any drug or substance which is not legally obtainable and whose use, sale, possession, purchase or transfer is restricted or prohibited by law (e.g. street drugs such as marijuana, cocaine, and methamphetamine).
- Medication refers to a drug obtained legally, either over-the-counter or through a doctor’s prescription.

**Drug Paraphernalia**

Any personal property which is associated with the use of any drug, substance, chemical or agent, including any product or device that may be used to attempt to tamper with a testing sample.

**Employee**

Includes all regular full time, part time, temporary, and casual employees on the NCSG payroll or on the payroll of one of NCSG’s subsidiaries.

**Fitness for Work**

In the context of this Program means being able to safely and acceptably perform assigned duties without any limitations due to the use or after-effects of alcohol, illicit drugs, medications or other substances.

**Risk Sensitive Operating Location**

For purposes of this Policy, all NCSG operating locations are considered risk sensitive except the Corporate office (excluding the attached shop and yard). All client sites are to be considered risk sensitive, as is any driving operation on behalf of NCSG.

**Significant Incident**

Any incident that results in, or may reasonably have resulted in, any of the following:

- An injury that results in an employee or contract worker:
  - Fatality;
  - Lost-time injury; or
  - Medical aid injury (BLS Classification Guidelines).
- An injury to a customer, member of public or other 3rd party not directly associated with, but injured as a result of, company business;
- An incident that is reportable under Provincial, State or Federal legislation;
- Significant loss or damage to property, equipment or vehicles;
- Any other significant work-related incident or a near miss considered to have had significant potential for more serious consequences.

**Supervisor**

The person who directs the work of others and may, depending on the nature of NCSG’s structure, include but not limited to; foreman, general foreman, supervisor, superintendent and team leader.

**Hiring and Employment - Testing**

NCSG Crane & Heavy Haul Services and its affiliated companies (NCSG) maintain the following conditions for employment or hire with regards to Alcohol and Drug:

- In accordance with Section 4.8 of the COAA – Alcohol and Drug Guidelines and Work Rule, all new hires are required to submit to and test negative to an Alcohol and Drug Test prior to being hired with NCSG.
- In accordance with Section 3 of the COAA – Alcohol and Drug Guidelines and Work Rule, the concentration limits for said testing are defined and adopted in full. See appendix E of this policy.
- Appendix C of this Policy specifically outlines the Alcohol and Drug Testing process.
- All testing is conducted at a certified laboratory and testing procedures meet or exceed the requirements of the COAA – Alcohol and Drug Guidelines and Work Rule, in accordance where applicable with those parts of the United States Department of Transportation Workplace Drug and Alcohol Testing Programs and certified by the United States Department of Health and Human Services as an instrumented initial test facility.
- Continuity of Employment, any lapse in employment for any reason exceeding 30 days, submission to and test negative to an Alcohol and Drug Test prior to the employment relationship continuing is mandatory.
- Any individual who may have tested positive as described within and is allowed to return to work by arrangements as described within, must submit to and test negative to an Alcohol and Drug Test prior to the resumption of work.
- All person(s) who have violated this program will remain ineligible for rehire for a minimum of 365 days from the date of violation. Prior to consideration for rehire, the person(s) must show evidence of a an approved rehab program, agree in writing to a last chance agreement with enhanced testing and must have the approval of the Vice President of HS&E.

**5.0 EXPECTATIONS**

To minimize the risk of unsafe and unsatisfactory performance due to the use of alcohol or other drugs, employees are expected to comply with the following requirements, and to report fit for work and remain so throughout their workday or shift. The following requirements have been set for any activity undertaken while on Company business, premises or worksites or while operating a Company vehicle or equipment.
5.1 Illicit Drugs
The following are prohibited:
• The use, possession, cultivation, manufacture, distribution, offering or sale of illicit drugs or illicit drug paraphernalia;
• Reporting for or being at work under the influence of illicit drugs; and
• A positive test result for illicit drugs as determined through the testing program.

5.2 Alcohol
The use, possession, distribution, offering or sale of beverage alcohol is prohibited when on company premises and worksites with the exception noted below. In addition, employees covered by this Program are expected to use alcohol responsibly in those situations it is permitted and to report and remain fit for work in compliance with this Program. Employees cannot:
• Have an alcohol test result of .04 Blood Alcohol Concentration (“BAC”) or greater;
• Transport or store beverage alcohol in a vehicle owned, assigned, or contracted by NCSG for NCSG business purposes; and
• Consume alcohol after an incident until tested or advised by the Company that a test is not required.

Risk Sensitive Operating Locations: In addition, because of the higher risk involved in most of our operations, anyone assigned to work in a risk sensitive operating location, or who is temporarily working in the location (including business visits) must comply with the following. Employees:
• Must not report for work or remain at work under the influence of alcohol from any source;
• Can not consume any product containing alcohol (including beverage alcohol) when at work including during meals or breaks; and
• Will be removed from the workplace at least until their next shift if they have an alcohol test result of .02-.039 BAC.

Employees at these locations may consume alcohol after the work day, for example, when on travel status, at a training event or seminar, or in any other similar business-related situation provided the formal business is completed, they use alcohol responsibly in compliance with the requirements set out above, and that they are not reporting for or returning to work. Anyone who attends a NCSG social event and consumes alcohol must not be returning to or reporting for work after the event.

Exceptions to Rule on Possession: Possession of alcohol is strictly prohibited on company premises, with the exception of factory sealed containers which may be stored in personal vehicles parked on Company premises, provided the alcohol is locked in the trunk of the vehicle or otherwise appropriately secured.

Alcohol received as a gift may be temporarily stored on Company premises, including in a vehicle, but must remain sealed and be removed at the earliest opportunity.

5.3 Social Situations
In the case of any NCSG social event, appropriate regard will be taken for the safety and well being of the individuals present and the community. Responsible alcohol use is permitted at off-site social functions with the prior approval of the appropriate Vice President, provided the expectations around alcohol use are observed (e.g. no use by someone at a risk sensitive location if returning to work), that alcohol consumption is controlled so there is no inappropriate behavior at the function or potential for impaired driving afterwards, and alternative transportation arrangements are made available. Additional guidelines are attached in Appendix A.

Consistent with the above, if alcohol is made available to NCSG guests in the course of conducting business (e.g. restaurant meetings), employees are expected to use judgment and be responsible in hosting others.

5.4 Medications
It is expected that prescribed and over-the-counter medications will be used responsibly in accordance with the physician’s or pharmacist’s instructions. Medications of concern are those that may inhibit an employee’s ability to perform their job safely and productively. A guideline on medications is attached in Appendix B. The following are prohibited while on company business, premises and worksites:
• The intentional misuse of medications (e.g. using the medication not as it has been prescribed, using someone else’s prescription medication, combining medication and alcohol use against direction); and
• The unauthorized possession of prescribed medications without a legally obtained prescription, and unauthorized distribution, offering or sale of prescription medications (trafficking).

Employees are expected to:
• Investigate (through their doctor or pharmacist) whether a medication they are using will affect their ability to do their job safely; and
• Act responsibly and use a safe alternative medication choice when available (e.g. non-drowsy); however
• If the medication they are using will affect their ability to operate safely, advise their supervisor or designate of any need for modified duties.

In this situation, a medical work modification may be issued, and the employee may be assigned to alternate duties if available and at the discretion of the Company. The Company reserves the right through the Program Administrator to confirm the nature and duration of modified work requirements with the treating physician, without any breach in medical confidentiality.
5.5 Unscheduled Call in
If unexpected circumstances arise where an employee is requested to perform unscheduled services while under the influence of alcohol or medications that could impact safe operations, it is the responsibility of the employee to decline the call.

6.0 ROLES AND RESPONSIBILITIES

6.1 Employees
Employees are expected to perform their job in a safe manner and in all ways consistent with established company practices. In addition, it is expected that everyone will:
- Read and understand this Program and their responsibilities under it;
- Report fit for work for any and all scheduled work and remain fit for work while on company business, premises and worksites;
- Seek advice and follow appropriate treatment if they have a current or emerging problem, and follow recommended monitoring programs after attending treatment;
- Co-operate with any work modification related to safety concerns;
- Intervene as appropriate to encourage a co-worker to access assistance before an alcohol or drug problem impacts performance or safety; and
- Co-operate with an investigation into a violation of this Program, including any requirement for testing.

An employee or contractor shall not;

a) Use, possess or offer for sale alcohol and drugs or any product or device that may be used to attempt to tamper with any sample for a drug and alcohol test while on company property, workplace or while representing the company in any fashion,

b) Report to work or work
   a. With an alcohol level equal to or in excess of 0.040 grams per 210 litres of breath,
   b. With a drug level for the drugs set out Appendix E equal to or in excess of the concentrations indicated, or
   c. While unfit for work on account of the use of a prescription or non-prescription drug,

c) Refuse to
   a. Comply with a request made by a representative of the company who has reasonable grounds to believe an employee or contractor is in contravention of this Policy, or
   b. Comply with a request to submit to an Alcohol and Drug test as a result of observation of employee conduct that is believed that the employee is or may be unable to work in a safe manner because of the use of alcohol and drugs.
   c. Comply with a request to submit to an Alcohol and Drug test as a result of an incident or near miss, random testing (as defined in 4.6 of the COAA Canadian model), a condition or request of a client for Site Access testing, or where required by client/collective agreement or condition to provide oral fluid testing/urine sample and/or observed collection.

Because all individuals working for NCSG have a shared responsibility for workplace safety, employees are encouraged to look out for other employees, contractor workers or visitors in terms of fitness for work. They are expected to take appropriate action to ensure no individual remains in an unfit condition on Company premises or a worksite such that they may endanger themselves or others, by ensuring their supervisor, Health, Safety and Environment, Human Resources, their Union Representative or any other appropriate individual is advised of the situation.

6.2 Supervisors will be responsible for:

- Ongoing performance management to ensure safe operations and effectiveness of the policy;
- Guiding employees who seek assistance for a personal problem to appropriate resources (e.g. Human Resources, Corporate Health, Safety and Environment, or other community resources) while maintaining confidentiality under the circumstances;
- Making arrangements for a Substance Abuse Professional assessment through the Program Administrator if an employee says they have a problem with alcohol or other drugs;
- Taking appropriate steps to investigate any violation of this Program;
- Making referrals for an alcohol and drug test in a post incident or reasonable cause situation as and when required to do so under this Program;
- Monitoring and ensuring the compliance of contract workers.

6.3 Program Administrator (VP HR and VP HSE) will be responsible for:

- Consistent administration of this Program;
- Resolution of any questions of interpretation;
- Supporting supervisors in meeting their responsibilities;
- Coordinating delivery of employee education and supervisor training programs, including refreshers as required;
- Making arrangements for a Substance Abuse Professional assessment as required;
- Overseeing implementation of modified work, return to work agreements, or similar accommodation situations; and
• Ongoing management of the alcohol and drug testing program.

6.4 Management will be responsible for:
• Ensuring all employees and contractors have been trained on this policy prior to any work in the field. Ensuring Supervisors have completed additional training.
• In addition to the same responsibilities as Supervisors, ensuring Supervisors are implementing and maintaining the requirements of this policy.
• Actively involved in the review and content feedback of this program on an annual basis.

7.0 METHOD
7.1 Prevention, Assistance, Rehabilitation, Aftercare

Prevention
This Program stresses the importance of prevention and early identification of potential problem situations. The company will make information available on health and safety hazards, recognizing related performance problems, and the process to access assistance.

Employees are encouraged to access the company Employee Assistance Provider (EAP), their personal physician, or appropriate community services for help with an alcohol or drug problem, or any other problem that may be affecting work performance.

Assessment/Rehabilitation
NCSG recognizes that alcohol and drug dependencies are treatable illnesses and that early intervention greatly improves the probability of a lasting recovery. Individuals who suspect they have a substance dependency or emerging alcohol or drug problem are expected to seek advice and to follow appropriate treatment promptly before job performance is affected or violations of this Program occur.

Employees who come forward voluntarily for help with an alcohol or drug problem will be referred to a Substance Abuse Professional (SAP) for assessment and supported through a treatment and aftercare program consistent with the Substance Abuse Professional’s recommendations and the applicable benefit coverage. The company will work in conjunction with the employee and SAP to find an appropriate community based treatment program/facility. Employees should understand that accessing assistance or declaring a problem does not eliminate the requirement for maintenance of satisfactory performance levels. Discipline or testing cannot be avoided by a request for assistance with a problem or by disclosure that the individual is already involved in a treatment program.

Where a medical professional, substance abuse professional, or other counseling professional advises that there may be a risk that would prevent an employee from doing their job safely, a medical work modification may be issued, and the individual may be assigned to alternate duties if available and at the discretion of the company.

Aftercare
All employees who complete primary treatment (e.g. residential or out-patient treatment) for alcohol or drug problems as a result of a referral will be required to participate in an aftercare program recommended by the SAP or appropriate addictions professional when returning to work in order to help them maintain recovery. They will be expected to enter into a written agreement, which will outline the conditions governing their return to the job, and the consequences for failing to meet those conditions.

Confidentiality
Confidentiality will be maintained to the extent possible, except where limited disclosure is necessary for related health and safety concerns. (e.g. there is deemed to be a potential for risk to self, others or the company). That is, only the information strictly limited to the level of functionality of a worker (e.g. fitness for work and any restrictions that may apply) may be shared with management for purposes of determining fitness for work, appropriate work accommodation, and/or work re-entry initiatives. Records will be kept secured manner and only accessible by the Program Administrator and VP HS&E.

7.2 Investigative Procedures

Performance Management
The normal process of job performance management will continue to be emphasized. Through this process, individuals with apparent performance problems will be reminded that they should access assistance should a personal problem be affecting their job performance.

Unfit for Work Situations
In all situations when there are grounds to believe an employee is unfit to be on the worksite, responsible escort procedures will be followed. The employee will be escorted to a safe place and given an opportunity to explain why they appear to be in a condition unfit for work. If the supervisor conducting the interview still believes the employee is in a condition unfit for normal work, and after consultation and agreement of a second supervisor or one up whenever possible, they may take any of the following actions as appropriate:

• Referral for medical attention if there are immediate medical concerns (health center, local hospital or clinic); or
• Referral for an alcohol and drug test if there are grounds to believe alcohol or drug use may be a factor in the situation; or
• Any other action appropriate to the situation.
Transportation will be provided to the sample collection site, or hospital/clinic depending on the circumstances, and then to their place of residence or the care of another person. The employee may be temporarily held out of service or reassigned pending completion of an investigation.

### 7.3 Alcohol and Drug Testing

All employees will be subject to testing in the following circumstances. Procedures for testing are found in Appendix C.

#### 6.3.1 Reasonable Cause

Alcohol and drug testing will take place whenever the company has reasonable grounds to believe that the actions, appearance or conduct of an individual while at work are indicative of the use of drugs or alcohol. The decision to test shall be made by the supervisor, with concurrence of a second supervisor or one up wherever possible. The referral for a test will be based on specific, personal observations resulting from, but not limited to such indicators as:

- Observed use or evidence of use of a substance (e.g. smell of Liquor);
- Erratic or atypical behavior or changes in behavior of the employee;
- Changes in the physical appearance or speech patterns of the employee;

Individuals tested in this circumstance will be removed from work until the investigation is complete. Depending on the test result, a fitness for work assessment may also be required.

#### 6.3.2 Post Incident Testing

Alcohol and drug testing may be required after a significant work-related incident as part of an investigation into the circumstances. The supervisor or manager of an employee or contractor must request an employee to submit to an alcohol and drug test if the supervisor or manager and the next level of management present at the workplace, if any, have reasonable grounds to believe that an employee or contractor was involved in an incident or near miss. The supervisor or manager must provide the reason for the test to the employee or contractor investigating the incident, after consultation with another supervisor or one up whenever possible.

**Reporting of an incident:**

- Employees are expected to report a situation to their immediate Manager as soon as possible after the incident;
- Employees are expected to participate fully in any subsequent investigation; and
- Failure to report an incident is a violation of this Program.

The following procedures apply:

- A supervisor or manager of an employee must request an employee to submit to an alcohol and drug test if the supervisor or manager and the next level of management present at the workplace, if any, have reasonable grounds to believe that the employee was involved in an incident or near miss;
- A supervisor or manager of an employee must provide the employee the reason for the request for test;
- A supervisor or manager must make the request immediately following an incident or near miss unless it is not practicable or reasonable to do so until a later time (within 8 hrs max);
- A supervisor or manager of an employee need not request the employee to submit to an alcohol and drug test if the supervisor or manager in consultation with the Vice President of HS&E and/or CEO conclude that there is objective evidence to believe that the use of alcohol and drugs did not contribute to the cause of the incident or near miss;
- Arrangements for testing should be made as soon as possible unless this is impossible because medical attention is required;
- The need for a test must be documented as part of the preliminary investigation as soon as practical after the triggering event;
- A test will not be necessary if there is clear evidence that the acts or omissions of employees could not have been a contributing factor (e.g. structural or mechanical failure, or environmental factors) and must be authorized by the Vice President HSE and/or the CEO;
- Employees referred for a test will only be those who are identified, with reasonable grounds, as having been directly involved in the chain of acts or omissions leading up to the event;
- Employees must not use alcohol after an incident until tested or advised by the company that a test is not required.
- If there is any reason for delay the supervisor will stop attempting collection at 8 hours after the incident for alcohol testing and 32 hours for drug testing. In addition to the testing circumstances set out under this employee program, testing may also be required in additional circumstances as part of an investigation into an incident on a client site at that client’s direction. In the case of a less significant incident, if the supervisor concludes that alcohol or drug use may have been a factor, a reasonable cause test would be required.
Return to Work - Post Treatment
Unannounced testing may be used as a monitoring tool as determined on a case by case basis to support
the recovery of any individual returning to work after primary treatment for an alcohol or drug problem.

Return to Work – Post Violation
In those situations where employment is continued after a violation of this Program, individuals will be
required to pass a return to work test and may be subject to unannounced testing for a minimum of two
years.

Customer Sites
Site access or random testing of NCSG employees may be required as a contractual condition of doing
business with certain customers and/or as a condition of being allowed on certain sites or locations.

Failure to Test
Failure to report directly for a test, refusal to submit to a test, refusal to agree to disclosure of a test
result to the Program Administrator, a confirmed attempt to tamper with a test sample, or failure to report
involvement in an incident which may require testing, are a violation of this policy.

Possession of Alcohol or Drugs
NCSG reserves the right to investigate any situation when there are reasonable grounds to believe that
alcohol or illicit drugs are present on Company premises in violation of this Program. In addition while
on client worksites or locations, the clients have the right to conduct searches of personnel and property.
Refusal of such searches may result in that person being removed immediately from the client’s worksites
or locations.

Supervisors are responsible for identifying situations where an investigation is justified based on a
combination of indicators, which could include behavior, odour, or presence of drug related paraphernalia.
They will be responsible for advising the next level of management of the situation, who will make the
decision as to whether to initiate an investigation, and who will conduct it.

Loss of License/Impaired Driving Charge
All employees who regularly or periodically operate any motor vehicle on behalf of NCSG must maintain
a valid driver’s license. Any loss of license must be reported to their supervisor immediately and the
individual will no longer be qualified to drive on behalf of the company.

In addition, employees must inform their supervisor immediately if they have been charged with an impaired
driving offense when operating a Company vehicle or driving on behalf of NCSG. Impaired driving would
include but not be restricted to testing over the legal BAC in that jurisdiction, driving while impaired, or
refusal to blow into a breath analyzer or provide a sample for testing. Receipt of a charge will result in a full
investigation, and resulting disciplinary action appropriate to the situation. Failure to report the charge will
be grounds for discipline up to and including termination of employment.

7.4 Consequences
General Expectations
Any violations of the provisions of this Policy and Process are grounds for discipline up to and including
termination of employment. In all situations, an investigation will be conducted and documented to verify that a
violation has occurred before disciplinary action is taken.

Management has the authority and discretion to hold out of service any individual who is believed to be involved
in an incident that could lead to disciplinary action pending the results of the investigation. The appropriate
discipline in a particular case depends on the nature of the violation and the circumstances surrounding the
situation; the severity of the violation will warrant entering the discipline process at different levels.

Possession of illicit drugs on company premises or worksites, possession of any product which may be used
to tamper with the testing process and failure to complete the testing process are grounds for termination of
employment.

A positive drug test and an alcohol test result of .04 BAC or higher are considered a violation of this policy.
At a risk sensitive operating location, an alcohol test result of .02 to .039 BAC will result in removal from the
workplace until at least the next shift, and is grounds for progressive discipline.

Conditions of Continued Employment
Should the company determine that employment will be continued in a specific circumstance, the individual
shall be required to enter into an agreement governing their continued employment which may require any or
all of the following actions, or any other condition appropriate to the situation:
• Temporary removal from their position;
• Assessment by a Substance Abuse Professional (SAP) to determine the need for a structured treatment
  program;
• Adherence to any recommended treatment and aftercare program;
• Maintenance of sobriety and satisfactory performance on return to work;
• Successful completion of a return to work test;
• Ongoing unannounced testing for a period determined on a case by case basis; and
• No further violations of the Program.
Where applicable, the employee’s union will be involved in this process. The company will work in conjunction with the employee and SAP to find an appropriate community based treatment program/facility. Consequences for failure to meet the requirements of the agreement during the monitoring period will be set out in the individualized agreement.

8.0 TRAINING MATERIAL
- Employee Alcohol and Drug Program - Awareness Training Course / New Employee Orientation
- Supervisors Alcohol and Drug Program - Training Course

9.0 RESOURCES
Contact the Program Administrator or a representative of the Health, Safety and Environment team for more information regarding this Program.

10.0 APPENDICIES
- Appendix A – Guideline on Hosting Events
- Appendix B – Guideline on Medications
- Appendix C – Alcohol and Drug Testing Procedure
- Appendix D - Failure to Participate in Alcohol and Drug Testing
- Appendix E - Alcohol and Drug Testing Results
- Appendix F - USA Specific – Mullen Crane & Transport Process

11.0 SUPPORTING DOCUMENTS
11.1 General
- NCSG Alcohol and Drug Requirements for Contractors and Contract Workers
- Wallet Card

11.2 Procedures
- Performance Management Procedures
- Investigation Procedures
- Testing Procedures
- SAP Referral Procedures

APPENDIX A – Guideline on Hosting Events

Company Social Events: The use of alcohol in conjunction with any off site company social event is permitted with the prior approval of the appropriate Vice President and in accordance with the following guidelines:

1. Professional/trained servers will work at each event and/or will supervise the use of untrained servers.

2. Each event will have a designated “chief host/hostess” (with assistance from others) with responsibility for:
   - Obtaining appropriate permits;
   - Establishing the general tone of the event;
   - Acting as the sole contact with the servers during the function regarding opening and closing times, food and beverage arrangements, etc.;
   - Ensuring bars are attended at all times;
   - Ensuring alcohol is not served to individuals who appear to be intoxicated;
   - Taking steps to prevent abusive or unsafe behaviour;
   - Taking steps to prevent an apparently intoxicated attendee from driving after the function;
   - Providing alternate transportation or accommodation where necessary; and
   - Contacting the police if an incident occurs or an attendee disregards advice and attempts to drive in an intoxicated state.

3. In all situations, events will be managed in a way that avoids the potential for accidents, including identifying and eliminating potentially harmful situations.

4. Responsible serving practices will include providing food and non-alcoholic drinks throughout the event, as well as coffee and tea after the bar has closed, establishing a firm time to end the event, and stopping service of alcohol at least one hour prior to the event being over.

5. Any hosting situation that results in inappropriate behaviour or risk to health and safety of attendees or the community will result in a review of these guidelines and active steps to ensure the problems do not occur again.

Business Hosting: Consistent with the above standards, if alcohol is made available to NCSG guests in the course of conducting business (e.g. client lunch or dinner, conference/seminar situation) employees are expected to use judgment and be responsible in hosting others.

Note: additional information can be found at:
- http://www.camh.net/About_Addiction_Mental_Health/Drug_and_Addiction_Information/having_party.html

APPENDIX
All employees are expected to manage potential impairment during working hours due to the legitimate use of medications. The following drug categories have been associated with performance impairment and are provided as a guideline to employees in assessing their own situation. The list is not exhaustive; there are numerous other over-the-counter and prescription drugs which when taken may impact negatively on performance.

Therefore, employees are expected to consult with their physician or a pharmacist to determine if use of the medication will have any potential negative impact on job performance. If the medication they are using will affect their ability to operate safely, they are to advise their supervisor or designate of any need for modified duties.

NCSG reserves the right, through the Program Administrator, to confirm the nature and duration of modified work requirements with the treating physician, without any breach in medical confidentiality.

Medications that could negatively impact safety or work-performance include the following:

a. Antihistamines – are widely prescribed for hay fever and other allergies (e.g., Allegra, Dimetane). They are also found in many cold medications. These medications may cause drowsiness.

b. Motion Sickness Drugs – are used to prevent motion sickness and nausea (e.g., Gravol, Antivert). Side effects may include drowsiness.

c. Barbiturates, Sedatives, Hypnotics, Tranquilizers, Antidepressants – are used to treat sleep disorders and depression (e.g., Ativan, Imovane, Paxil). Potential side effects may include mild sedation, hypnotic state, dizziness or drowsiness.

d. Narcotics – (e.g., Demerol, Codeine, OxyCotyn, Percocet). Codeine is often found in combination drugs such as 222s or 292s or Tylenol 1,2,3s. Drowsiness, dizziness, and light-headedness may be side effects.

e. Stimulants – Medication used for central nervous system stimulation and for appetite suppression can produce sensations of well-being which may have an adverse effect on judgment, mood and behavior (e.g., amphetamines or medications sold as "diet pills").

f. Anticonvulsants – are used to control epileptic seizures and can cause drowsiness in some patients (e.g., Dilantin).

g. Muscle Relaxants – are used to treat musculoskeletal pain. Most common side effects are sedation and drowsiness (e.g., Flexeril, Robaximal).

h. Cold Tablets/Cough Mixtures – in particular, nighttime remedies can cause drowsiness (e.g., Sinutab, Contac, Triaminic, Tussionex and preparations containing dextromethorphan (DM) or codeine).

The foregoing list is not intended to be exhaustive.

APPENDIX C – Alcohol and Drug Testing Procedure

The procedures outlined within this appendix are specifically defined in the COAA - Canadian Model for Providing a Safe Workplace.

ALCOHOL TESTING

General

1. The donor is the person from whom a breath or saliva sample is collected

2. The donor is informed of the requirement to test in private and is directed to go to a collection site/lab for the purpose of providing a breath or saliva specimen. The donor must be escorted to the collection site if the test is for random, follow up, post incident or reasonable cause purposes.

3. The breath alcohol technician (BAT) or the screening test technician (STT) as appropriate establishes the identity of the donor. Government or employer issued photo identification is preferable. Positive identification by a company representative who holds a supervisory position is acceptable.

4. The BAT or STT as appropriate explains the testing procedure to the donor

5. The company must securely store information about alcohol test results to ensure that disclosure to unauthorized persons does not occur.

6. Breath testing and saliva testing devices are used to conduct alcohol screening tests, with breath evidentiary devices used to confirm the screening tests. These devices must be listed on the National Highway Traffic Safety Administrations (NHTSA) conforming products list – the list for screening devices or the list for evidentiary devices. These devices must also meet the function requirements outlined in the U.S. DOT rules and regulations.

Breath Testing

1. The BAT and the donor complete those parts of the alcohol testing form that are to be completed before the donor provides a breath sample.

2. The BAT opens an individually wrapped or a sealed mouthpiece in the presence of the donor and attaches it to the breath testing device in the prescribed manner.

3. The BAT explains to the donor how to provide a breath sample and asks the donor to provide a breath sample.

4. The BAT reads the test result and ensures that the test result is recorded on the alcohol testing form after showing the results to the donor.
5. The BAT completes the part of the alcohol testing form that is to be completed after the donor provides a breath sample and asks the donor to do so as well.

6. If the test result shows an alcohol level that is less than 0.020 grams/210 litres of breath, the BAT informs the donor that there is no need to conduct any further testing and reports the result in a confidential manner to the company’s designated representative. While the initial communication need not be in writing, the BAT must subsequently provide a written report of the test result to the company’s designated representative.

7. If the test result shows an alcohol level that is equal to or greater than 0.020 grams/210 litres of breath, the BAT informs the donor of the need to conduct a confirmation test.

Saliva Testing
1. The STT and the donor complete those parts of the alcohol testing form that are to be completed before the donor provides a sample.

2. The STT checks the expiration date of the saliva testing device, shows the date to the employee and uses a saliva testing device only if the expiration date has not passed.

3. The STT opens an individually wrapped or a sealed package containing the saliva testing device in the presence of the donor.

4. The STT invites the donor to insert the saliva testing device into the donor’s mouth for the time it takes to secure a proper specimen.

5. The STT reads the result the saliva testing device produces and records the test result on the alcohol testing form after showing the results to the donor.

6. The STT completes the part of the alcohol testing form that is to be completed after the donor provides a saliva sample and asks the donor to do so as well.

7. If the test result shows an alcohol level that is less than 0.020 grams of alcohol in 100 millimetres of saliva or an equivalent concentration in other units, the STT informs the donor that there is no need to conduct any further testing and reports the result in a confidential manner to the company’s designated representative. While the initial communication need not be in writing, the STT must subsequently provide a written report of the test results to the company’s designated representative.

8. If the test result shows an alcohol level that is equal to or greater than 0.020 grams of alcohol in 100 millilitres of saliva or an equivalent concentration in other units, the STT informs the donor of the need to conduct a confirmation test.

Confirmation Test – (completed as required)
1. If a breath alcohol testing device was used for the screening test, an evidential breath alcohol device must be used to conduct the alcohol confirmation test, should the test be required. If a saliva testing device was used for the screening test, the confirmation test will use an evidential breath alcohol testing device.

2. The BAT advises the donor not to eat, drink, put anything in their mouth or belch before the confirmation test is complete.

3. The confirmation test must start not less than fifteen minutes after the completion of the screening test and not more than thirty minutes after the completion of the screening test. If the confirmation test cannot begin with 30 minutes, the elapsed time and reason must be documented on the alcohol testing form.

4. The BAT and the donor complete those parts of the alcohol testing form that are to be completed before the donor provides a breath sample.

5. The BAT opens a new individually wrapped or sealed mouthpiece in the presence of the donor and inserts it into the breath testing device in the prescribed manner.

6. The BAT explains to the donor how to provide a breath sample and asks the donor to provide a breath sample.

7. The BAT reads the test result on the device and shows the donor the result displayed. If the confirmation test result is equal to or in excess of 0.040 grams per 210 litres of breath, the BAT will do an external calibration check (accuracy check) to ensure the device is in working order. The BAT ensures that the test result is recorded on the alcohol testing form. The BAT verifies the printed results with the donor.

8. The BAT completes the part of the alcohol testing form that is to be completed after the donor provides a breath sample and asks the donor to do so as well.

9. The BAT immediately reports in a confidential manner the test results to the company’s designated representative. While the initial communication need not be in writing, the BAT must subsequently provide a written report of the test result to the company’s designated representative.
DRUG TESTING

Urine Testing

1. The donor is the person from whom a urine specimen is collected.
2. The donor is informed of the requirement to test in private and is directed to go to a collection site. The donor must be escorted to the collection site if the test is for random, follow up, post incident or reasonable cause purposes.
3. The collection site person must establish the identity of the donor. Government or employer issued photo identification is preferable. Positive identification by a company representative who holds who holds a supervisory position is acceptable.
4. The donor must remove coveralls, jacket, coat, hat or any other outer clothing and leave these garments and any briefcase or purse with the collection site person.
5. The donor must remove any items from his or her pockets and allow the collection site person to inspect them to determine that no items are present which could be used to adulterate a specimen.
6. The donor must give up possession of any item which could be used to adulterate a specimen to the collection site person until the donor has completed the testing process. Clear evidence of an attempt to adulterate or substitute is a refusal to test and ends the collection process.
7. The collection site person may set a reasonable time limit for providing a urine specimen.
8. The collection site person selects or allows the donor to select an individually wrapped or sealed specimen container. Either the collection site person or the donor, in the presence of the other, must unwrap or break the seal of the specimen container.
9. The donor may provide his or her urine specimen in private, in most circumstances. The specimen must contain at least forty-five millilitres.
10. In respect of any collection that may be incomplete or determined to be a refusal, the collection site must promptly document all circumstances and details respecting the collection effort and the reasons it was incomplete.
11. The collection site person determines the volume and temperature of the urine in the specimen container.
12. The collection site person inspects the specimen and notes on the custody and control form any unusual findings.
13. If the temperature of the specimen is outside the acceptable range or there is evidence that the specimen has been tampered with, the donor must provide another specimen under direct observation in accordance with U.S. DOT rules and regulations by the collection site person or another person if the collection site person is not the same gender as the donor.
14. The collection site person splits the urine specimen into two specimen bottles. One bottle is the primary specimen and the other is the split specimen.
15. The collection site person places a tamper-evident bottle seal on each of the specimen bottles and writes the date on the tamper-evident seals.
16. The donor must initial the tamper evident bottle seals to certify that the bottles contain the urine specimen the donor provided.
17. The donor and the collection site person complete the custody and control form and seal the specimen bottles and the lab copy of the custody and control form in a plastic bag.
18. The collection site personnel arrange to ship the two specimen bottles to the lab as quickly as possible.
19. The lab must be the holder of a certificate issued by the Substance Abuse and Mental Health Administration of the United States Department of Health and Human Services under the National Laboratory Certification Program.
20. The lab must use chain of custody procedures to maintain control and accountability of urine specimens at all times.
21. Laboratory personnel inspect each package along with the enclosed specimens for evidence of possible tampering and note evidence of tampering on the specimen forms.
22. Laboratory personnel conduct validity testing to determine whether certain adulterants or foreign substances were added to the urine specimen.
23. Lab personnel conduct an initial screening test on the primary specimen for the drugs set out in 3.1 using established immunoassay procedures. No further testing is conducted if the initial screening test produces a negative test result.
24. Lab personnel conduct a confirmatory test on specimens identified as positive by the initial screening test. The confirmatory test uses approved mass spectrometry techniques.
25. A certifying scientist reviews the test results before certifying the results as an accurate report.
26. The lab reports the test results on the primary specimen to the company’s medical review officer (MRO) in confidence.
27. If the laboratory reports a positive, adulterated, substituted or invalid result, the certified MRO attempts to conduct a verification interview with the donor to allow the opportunity for the donor to discuss results and present legitimate medical explanation. Once the interview is complete, the MRO shall report to the employer whether the test result is
negative, negative with safety advisory, refusal to test and why, cancelled with or without further direction or positive. A safety advisory indicates a medical clearance is required prior to performing safety-sensitive duties in accordance with the job description.

28. An employee who has received notice from the MRO that he or she has tested positive may ask the MRO within 72 hours of receiving notice that he or she has tested positive to direct another lab to test the split specimen. The employer is permitted to seek reimbursement from the employee.

29. The laboratory reports the test results on the split specimen to the company’s MRO in confidence. Should the laboratory fail to reconfirm the split specimen results, the MRO will provide direction to the company’s designated representative.

**Oral Fluid Testing**

1. The donor is the person providing their oral fluid for the purposes of a drug test.

2. The donor is informed of the requirement to test in private and is directed to go to a collection site. The donor must be escorted to the collection site if the test is for random, follow up, post incident or reasonable cause purposes.

3. The collector must establish the identity of the donor. Government or employer issued photo identification is preferable. Positive identification by a company representative who holds a supervisory position is acceptable.

4. The donor must clear any foreign material from the mouth i.e.: food, gum, tobacco products, lozenges etc.

5. The collector observes donor for a minimum of ten (10) minutes prior to providing the specimen. Donor may not eat, drink smoke or put anything in their mouth during the observed waiting period.

6. The collector checks and records the lot number and expiration date of the device.

7. In the presence of the collector, the donor opens the sealed device and the specimen is collected according to the manufacturer’s specification.

8. The collected specimen should be kept in view of the donor and the collector at all times prior to it being sealed and labelled for shipment to the lab.

9. The collection site person places a tamper-evident seal on the specimen collection device.

10. The collector records the date, and has the donor initial the seal(s) on the specimen(s).

11. The donor and the collection site person complete the custody and control form and seal the specimen(s) and the copy of the custody and control form in a chain of custody bag. In respect of any collection that may be incomplete or determined to be a refusal, the collection site person must promptly document all circumstances and details respecting the collection effort and the reasons it was incomplete.

12. The collection site personnel arrange to ship the two specimen bottle to the laboratory as quickly as possible.

13. The lab must be the holder of a certificate issued by the Substance Abuse and Mental Health Services Administration of the United States Department of Health and Human Services under the National Laboratory Certification Program.

14. The lab must use chain of custody procedures to maintain control and accountability of specimens at all times.

15. Lab personnel inspect each package along with the enclosed specimen(s) for evidence of possible tampering and note evidence of tampering on the specimen forms.

16. Lab personnel conduct validity testing to determine the suitability of the specimens.

17. Lab personnel conduct an initial screening test on the specimen for the drugs set out in 3.1 using established immunoassay procedures. No further testing is conducted if the initial screening test produces a negative test result.

18. Lab personnel conduct a confirmatory test on specimens identified as positive by the initial screening test. The confirmatory test uses approved mass spectrometry techniques.

19. A certifying scientist reviews the test results before certifying the results as an accurate report.

20. The laboratory reports the test results on the primary specimen to the company’s medical review officer (MRO) in confidence.

21. If the laboratory reports a positive, adulterated, substituted or invalid result, the certified MRO attempts to conduct a verification interview with the donor to allow the opportunity for the donor to discuss the results and present legitimate medical explanation. Once the interview is complete, the MRO shall report to the employer whether the result is negative, negative with safety advisory, refusal to test and why, cancelled with or without further direction or positive. A safety advisory indicates a medical clearance is required prior to performing safety-sensitive duties in accordance with the job description.

22. An employee who has received notice from the MRO that he or she has tested positive may ask the MRO within 72 hours of receiving notice that he or she has tested positive to direct another lab to retest the specimen. The employer is permitted to seek reimbursement from the employee.

23. The lab reports the results of the retest to the company’s MRO in confidence. Should the laboratory fail to reconfirm the test result, the MRO will provide direction to the company’s designated representative.
APPENDIX D - Failure to Participate in Alcohol and Drug Testing

Refusal to Submit to Testing

- Failure to submit to Alcohol and Drug pre-screening for safety or risk sensitive work positions as a condition of the “New Hire” process or positions requiring Alcohol and Drug pre-screening (Pre-Access Testing) by customers to facilitate access to site, will result in the withdrawal of any and all offers of employment from NCSG Crane & Heavy Haul Services and its affiliated companies (NCSG), rendering the offers null and void.

- Should an employee refuse to submit to Alcohol and Drug testing when involved in an incident, accident or near miss situation as mandated by this policy and/or by customer site regulations;
  - HS&E, supervisor, or the branch manager as applicable will ensure that the employee refusing to submit to testing fully understands their requirements according to NCSG Alcohol and Drug Policy, as to why they are specifically being required to submit to testing and the potential ramifications of refusing the test.
  - Should the employee continue to refuse to submit, human resources and Vice President HSE shall be contacted immediately. An employee that refuses testing is to wait at the site to speak with senior management and is not under any circumstances to return to work. Should the employee leave the site, they are refusing a direct request to remain on site and the employee is to be made fully aware that their departure could be viewed as a formal resignation from employment.

- Should a manager, supervisor or member of the HS&E have reasonable cause to suspect an employee is “Unfit for Duty” and under the influence of Alcohol or Drugs; the employee will be required to submit to a Alcohol and Drug Test. In order to require a test for reasonable cause, at least two employees of NCSG, with one (1) employee in a minimum of a supervisory position with NCSG; must believe the employees’ behaviour, actions or speech are such that the employee is “Unfit for Duty”.
  - If the determination is made that “Reasonable Cause” exists to suspect the employee may be under the influence of Alcohol or Drugs; and the employee has refused to submit to a required Alcohol and Drug Test, the employee will not be allowed to return to work and;
  - HS&E, supervisor, or the branch manager as applicable will ensure that the employee refusing to submit to testing fully understands their requirements according to NCSG Alcohol and Drug Policy and why they are specifically being required to submit to testing and the potential ramifications of refusing the test.
  - Should the employee continue to refuse to submit to testing, human resources and the Vice President HSE shall be contacted immediately. Should the employee leave the site, they are refusing a direct request to remain on site and the employee is to be made fully aware that their departure could be viewed as a formal resignation from employment.

APPENDIX E - Alcohol and Drug Testing Results

Alcohol Testing Results

- Should an employee participate in Alcohol Testing as outlined in Appendix A – Alcohol and Drug Testing Procedures and receive a positive result for alcohol with a reading in the range of 20 – 40 milligrams in 100 millilitres of blood. NCSG will impose a 24 hour suspension without pay and a written warning will be placed in the employees file for the first infraction or positive result of this level. The written warning will remain in the employees file for a period of 24 months from the infraction date, due to the nature and severity of the violation.

- Should an employee receive a second offence or similar positive test result (between 0.02 and 0.04 mg/ml) the infraction will result in the employee’s immediate dismissal.

- An employee that tests positive for a blood alcohol level in excess of 40 milligrams per 100 millilitres of blood will be subject to immediate dismissal. Should an employee be dismissed for a positive blood alcohol level in excess of 0.04 mg/ml they will not be eligible to work with NCSG for a period of not less than 24 months.

- As NCSG is committed to safety; an employee that has been dismissed as a result of a Drug and Alcohol infraction will not be eligible for consideration re-hire for a minimum of 24 months and will be required to have completed a recognized and relevant rehabilitation program. Including an in-house rehabilitation program and successful completion of the out patient treatment or counselling services. Final decision to rehire will rest with the Vice President of HSE and/or the CEO and may rely upon a risk based decision.

- In the event the employee is allowed to return in addition to the conditions above, the employee will be required to sign NCSG’s Zero Tolerance Agreement. The Zero Tolerance Agreement outlines the employees agreement to participate in random or unannounced screening and their acceptance of immediate dismissal should they test positive for alcohol or drugs.

NCSG will support the efforts of any employee that may be aware they have an issue with alcohol should they request assistance in their endeavours to seek the appropriate medical and addiction counselling. NCSG will assist the employee in their efforts to meet with a qualified professional for an assessment of their alcohol use and will work with the employee to return them to gainful employment pending successful completion of a substance abuse program. NCSG further recognizes an employees’ right to privacy and any and all problems of this nature will be handled with discretion and confidentiality will be maintained.
Drug Testing Results

Should an employee participate in Drug Testing as outlined in Appendix A – Drug and Alcohol Testing Procedures and receive positive results equal to or in excess of the concentrations or drug levels itemized within the charts below; the employee will be subject to immediate dismissal:

**Urine Drug Concentration Limits:**  ***concentrations directly linked to COAA & subject to change***

<table>
<thead>
<tr>
<th>Drugs or Classes of Drugs</th>
<th>Screening Concentration Equal to or in excess of Ng/ml</th>
<th>Confirmation concentration Equal to or in excess of Ng/ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana metabolites</td>
<td>50</td>
<td>15</td>
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<tr>
<td>Cocaine metabolites</td>
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<td>100</td>
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<tr>
<td>Opiates</td>
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</tr>
<tr>
<td>• Codeine</td>
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<td>• Morphine</td>
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<td>6-Acetylmorphine</td>
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<tr>
<td>Phencyclidine</td>
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<td>25</td>
</tr>
<tr>
<td>Amphetamines/Methamphetamines</td>
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<td></td>
</tr>
<tr>
<td>• Amphetamine</td>
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<td>250</td>
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<tr>
<td>• Methamphetamine</td>
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<td>MDMA</td>
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<td>• MDEA</td>
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</tr>
</tbody>
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**Oral Fluid Drug Concentration Limits:**  ***concentrations directly linked to COAA & subject to change***

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<tr>
<th>Drugs or Classes of Drugs</th>
<th>Screening Concentration Equal to or in excess of Ng/ml</th>
<th>Confirmation concentration Equal to or in excess of Ng/ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana metabolites</td>
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<td>2</td>
</tr>
<tr>
<td>Cocaine metabolites</td>
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<td>• Cocaine or Benzoylegenine</td>
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<tr>
<td>Opiates</td>
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<td>• Morphine</td>
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<td>• Methamphetamine</td>
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</tbody>
</table>

NCSG Crane & Heavy Haul Services and its affiliated companies will support any employee that may be aware they have an issue with drugs should they request assistance in their effort to seek the appropriate medical and addiction counselling. NCSG will assist the employee in their efforts to meet with a qualified professional for an assessment of their drug use and will work with the employee to return them to gainful employment pending successful completion of a substance abuse program. NCSG further recognize an employees’ right to privacy and any and all problems of this nature will be handled with discretion and confidentiality will be maintained.
PROCEDURE INFORMATION:
This process in addition to the requirements detailed within the NCSG Crane & Heavy Haul, Alcohol & Drug Policy and Related Processes applies to all US based employees/subcontractors of NCSG Crane & Heavy Haul Services Inc.

This document contains processes in specific detail for the drug and alcohol testing for NCSG Crane & Heavy Haul Services Inc. Our policy prohibits the use of all illegal drugs, including legally regulated drugs, unless prescribed by a licensed physician. NCSG Crane & Heavy Haul Services Inc. also prohibits being under the influence or consuming alcoholic beverages during business hours.

PROHIBITIONS:
Unless specifically authorized in writing by your Branch Manager and/or Customers, NCSG Crane & Heavy Haul Services Inc.’s process shall prohibit all employees/subcontractors from the following:

1. Using, possessing, selling, manufacturing, distributing, concealing or transporting, on NCSG Crane & Heavy Haul Services Inc. and/or Client property any firearms, ammunition, explosives, weapons, and any of the following illegal substances, as defined by the Federal and State laws, including all prescription drugs that have not been prescribed by a licensed physician.

NCSG Crane & Heavy Haul Services Inc. retains a third-party administrator to perform all drug & alcohol testing and reporting procedures. Should an employee participate in Drug & Alcohol Testing and receive positive results equal to or in excess of the concentrations of drug levels itemized within the charts below; the employee will be subject to disciplinary action up to and including immediate dismissal:

<table>
<thead>
<tr>
<th>DRUGS</th>
<th>SCREEN LEVEL</th>
<th>CONFIRM LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>300 ng/mL</td>
<td>250 ng/mL</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>300 ng/mL</td>
<td>250 ng/mL</td>
</tr>
<tr>
<td>Methamphetamines</td>
<td>250 ng/mL</td>
<td>250 ng/mL</td>
</tr>
<tr>
<td>MDA Analogues</td>
<td>250 ng/mL</td>
<td>250 ng/mL</td>
</tr>
<tr>
<td>MDA</td>
<td>200 ng/mL</td>
<td>200 ng/mL</td>
</tr>
<tr>
<td>MDMA</td>
<td>200 ng/mL</td>
<td>200 ng/mL</td>
</tr>
<tr>
<td>MDEA</td>
<td>200 ng/mL</td>
<td>200 ng/mL</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>300 ng/mL</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>300 ng/mL</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Cocaine Metabolites</td>
<td>150 ng/mL</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Marijuana Metabolites</td>
<td>20 ng/mL</td>
<td>10 ng/mL</td>
</tr>
<tr>
<td>Methadone</td>
<td>300 ng/mL</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Methaqualone</td>
<td>300 ng/mL</td>
<td>200 ng/mL</td>
</tr>
<tr>
<td>Opiates</td>
<td>2000 ng/mL</td>
<td>2000 ng/mL</td>
</tr>
<tr>
<td>6-Acetylmorphine (6-AM)</td>
<td>10 ng/mL</td>
<td>10 ng/mL</td>
</tr>
<tr>
<td>Phencyclidine (PCP)</td>
<td>25 ng/mL</td>
<td>25 ng/mL</td>
</tr>
<tr>
<td>Propoxyphene</td>
<td>300 (ng/ml)</td>
<td>200 (ng/ml)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>0.02% (BAC)</td>
<td>0.04% (BAC)</td>
</tr>
</tbody>
</table>

NOTE:
Alcohol screening and confirmation methods are conducted according to DOT protocol.

Substances and levels may be modified when applicable.

JOB SITE SPECIFIC:
1. Searches and Inspections
   - All NCSG Crane & Heavy Haul Services Inc. employees/subcontractors are required to uphold not only NCSG Crane & Heavy Haul Services Inc.’s policies and procedures, but also those of our clientele. Some of our client’s may request all employees/subcontractors, on their job site, to submit to a search and inspection of all personal and business property.
• These searches and inspections may or may not be announced, and may include wallets, purses, lockers, 
  baggage, offices, desks, toolboxes, clothing, and vehicles.
• Clients may also use outside parties to assist in searches and inspections.
• Any employee/subcontract that refuses to participate in a job site search and inspection will be removed from 
  the client’s job site immediately.

2 Client Drug & Alcohol Requirements
• All NCSG Crane & Heavy Haul Services Inc. employees/subcontractors will be required to comply with our 
  clients’ drug & alcohol policies, and may need to furnish proof of a current drug & alcohol test.
• All employees/subcontractors working on certain job sites will need to have proof that they have been 
  tested with in the current year.

3 Any employee/subcontractor that refuses to submit to the requirements of job site specific processes will be 
  considered to be in violation and be removed from the job site permanently, and may be disciplined up to and 
  including termination.

PROCEDURES:
In accordance with the NCSG Crane & Heavy Haul Services, Alcohol & Drug Policy and Related Processes, a urine drug 
  test and alcohol breathalyzer shall be administered for the following circumstances.

1 New Employee/Subcontractors pre-screening.
• All new employees/subcontractors must submit to a urine drug test and alcohol breathalyzer. These tests will test 
  for illegal drugs, the illegal consumption of prescription drugs, and alcohol. If the new employee/subcontractor 
  refuses to the testing they will not be permitted to work for NCSG Crane & Heavy Haul Services Inc.
• If a former employee/subcontractor has provided a urine drug test & alcohol breathalyzer through DISA and 
  their account status is active, then they do not have to be tested again. However, if their DISA account is inactive 
  the returning employee/subcontractor will have to submit to testing.
  • An employee/subcontractor’s active status in the DISA database will be set depending on the reason for 
    separation of employment with Mullen Crane & Transport, Inc.
    • An employee/subcontractor will remain active in the database for 14 days if and only if they have a 
      status of lay off.
    • An employee/subcontractor will be removed immediately out of the database for voluntary or involuntary 
      termination.

2 Random testing:
• Employees/subcontractors will be randomly selected for unannounced drug & alcohol testing. Once DISA 
  supplies the random testing list employees/subcontractors, branch managers, and their administrative staff will 
  be notified and are provided 7 calendar days to complete all necessary testing.
• All employees/subcontractors must complete their random testing within an hour of notification.
  • Branch managers and administrative staff are not to inform the employee/subcontractor of their random 
    tests until they are able to complete it within an hour’s time, but should have them complete testing with in 
    the 24 hour window after initial notification.
  • NCSG Crane & Heavy Haul Services Inc.’s monthly random testing program shall yield a compliance of an 
    annualized rate of 50%.

3 Testing for Suspicion of Drug & Alcohol abuse:
• All employees/subcontractors may be tested for suspicion of consumption when reasonable belief exists that 
  the employee/subcontractor appears to be to be under the influence of illegal drugs, alcohol, or misuse of 
  prescription drugs.
• Suspicion of use can only be determined by Management, and all observations must be documented.
• All employees/subcontractors being test for reasonable cause will not be allowed to return to work until negative 
  test results have been processed and the Vice President HS&E authorizes their return.

4 Accident/Incident related testing:
• All employees/subcontractors who cause an accident or incident that results in property damage, a significant 
  near miss or requires medical treatment will be required to submit to a drug & alcohol test. Waiver of testing 
  can only be granted by the Vice President HS&E or CEO after a detailed review of the cause and contributing 
  factors.
  • All employees/subcontractors being test for post-accidents will not be allowed to return to work until negative 
    test results have been processed and confirmed.
  • These tests should be completed as soon as possible, but no than 8 hours after the accident.
TESTING PROCEDURES:

1. All employees/subcontractors and subcontractors must have a DISA membership or current drug & alcohol testing documents.
   - New employees/subcontractors and employees/subcontractors classified as inactive in the DISA database will need to fill out a membership application.
   - All membership applications need to be faxed, emailed, or mailed to the company’s Safety Admin or HR Coordinator.

2. The Safety Admin, HR Coordinator or HS&E Advisor(s) will instruct all employees/subcontractors on where they can have their DISA testing done.
   - All employee/subcontractor records are confidential.
   - All employee/subcontractor files will be housed at the United States headquarters located in Soda Springs, Idaho.
     - These records will be held for the federally determined time period.

3. Each applicant needs to read and sign a Drug & Alcohol testing consent form before submitting to testing.

4. All employees/subcontractors will need to fill out and present, at the testing site, a chain of custody form, and an alcohol test requisition form.
   - Analysis of urine tests will be performed by Quest Diagnostics Inc. This laboratory has Substance Abuse and Mental Health Services Administration (SAMHSA) certification, College of American Pathologists (CAP) and according to the requirements of such certification.

5. All new employees/subcontractors will be released from their probationary employment once all forms, training, and drug & alcohol testing results have been submitted.

6. All employees/subcontractors prescribed any medications or are taking any over the counter medications that may cause any form of impairment must notify their supervisor of this fact.
   - Please inform your supervisor or site supervisor before beginning your scheduled shift.

7. Any employee/subcontractor whose test results are positive for prohibited substances, including alcohol, will be subject to discipline up to and including termination.

8. If the employee/subcontractor feels that their tests results were inaccurate they may request to have their previously submitted specimen be retested. The Vice President HSE must be notified by Management immediately if this is requested.

9. Any switching or tampering with urine samples or any other testing samples will be viewed as a procedure violation, and the employee/subcontractor will be disciplined up to and including termination.

CONFIDENTIALITY STATEMENT:
All drug & alcohol tests, forms, and results will be strictly confidential, and will only be used for the purpose of validating an individual’s status for employment and job site specific access. For the release of all testing documentation, for the use of outside purposes; all employees/subcontractors must submit a signed request to their supervisor, branch manager, or the companies HR Coordinator.

EMPLOYEE ACKNOWLEDGEMENT:
All NCSG Crane & Heavy Haul Services Inc. employees are required to sign and return a copy of the back page of the NCSG Employee Handbook. It must be understood that signing this document denotes acknowledgment and acceptance of the obligations of the Drug and Alcohol Testing process for NCSG Crane & Heavy Haul Services Inc. and consent to abide by them.

A copy of the DISA DCC Policy is also available for review. A copy of this policy may be obtained by contacting the company’s Safety Admin or HR Coordinator.
18.1 Disability Management Process

1.0 PRACTICE

NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG have developed an Occupational Disability Management Program to ensure an expedient and safe recovery of employees who sustain a work-related injury or illness. Our approach will ensure employees are supported and treated fairly to provide an effective strategy for return to pre-injury level work.

It is important that all NCSG employees recognize that:

- Employment at NCSG includes a commitment to active participation in the Occupational Disability Management Program, should it be required;
- The efforts put forward by employees enables NCSG to successfully meet the high standard of service our employees expect and deserve as well as meeting our corporate objectives;
- Legitimate occupational injuries and illnesses may result in entitlement of benefits under the Workers’ Compensation Board; and
- The company will provide support and assistance to help employees overcome the effects of a workplace injury or illness.

The Occupational Disability Management Program at NCSG is a workplace strategy aimed at preventing injury, managing absence and reintegrating the injured employee into the workplace. The Occupational Disability Management Program provides a coordinated, cost-effective, caring approach to disability management and rehabilitation. It reflects our commitment to employee wellness by creating a supportive environment for employees with functional work limitations, believing that – when it is approved and supported by the injured employee’s Health Professionals – work is healthy.

The Occupational Disability Management Program involves the coordination of a number of different processes and programs. It could potentially involve the HS&E Team, Human Resources and Operations departments, the employee and their Health Professional(s) and external claims managers and adjudicators. In every instance the distinctive nature of the employee and the injury will be considered in the development of a customized approach to managing a specific injury.

Early intervention is critical when returning an employee to the workplace after an occupational injury or illness. NCSG’s Occupational Disability Management Program helps to identify and capitalize on opportunities to ensure the employees’ safe and early return to work.

The management of disabilities can incorporate two separate approaches. The medical approach focuses on the disability and the restrictions associated with the particular injury or illness. The functional approach recognizes the injury or illness and identifies the employee’s residual (i.e. remaining) abilities.

NCSG has adopted the functional approach to disability management. While recognizing the disability and its associated restrictions and rehabilitation requirements, NCSG focuses efforts on the employee’s abilities in an effort to facilitate a safe and early return to work.

NCSG’s Occupational Disability Management Program’s goal is to create a work environment where employees are motivated to return to work as soon as medically possible because of the support they have received and because they know that their skills and experience are valued.

Experience has proven that early intervention is highly effective in:

- Minimizing the impact of illness or injury;
- Reducing the length of absence;
- Encouraging the best possible recovery outcome;
- Preventing depression; and
- Maintaining self-esteem.

2.0 SCOPE AND APPLICATION

NCSG has implemented an Occupational Disability Management Program that is timely, consistent, effective and fair. Employees who become injured and/or ill during the course of work are required to actively participate in the program.

This document is not intended to modify, change and/or supersede Management/Union rights as detailed in Collective Agreements. The intention of this program is to meet or exceed any applicable Provincial / State / Federal legislation. Should a conflict with any legislation be identified, the applicable legislation will be the standard and will be followed.

Recognizing the focus of reducing the human and financial cost of a workplace injury or illness and further, recognizing that legislation changes, this Program is subject to ongoing review and evaluation. Modifications will be made as deemed necessary to respond to current circumstances and evolving needs. Formal reviews will be conducted at a minimum every three years.
3.0 DEFINITIONS

Accident Term used in the usual and ordinary sense, and means an unexpected mishap or event. The meaning of accident is satisfied when it can be shown that an employee’s job duties have contributed to personal injury, occupational disease, or death.

Accommodation Includes; assistive devices or equipment, modifications to the work environment, schedule, work space or job duties to enable employees to perform the essential duties.

Ad-hoc Committee Committee assembled for the specific purpose of addressing a program issue.

Adjudicator Employed by WCB or applicable insurance plan holder, refers to the employee who determines a claimant’s eligibility for disability benefits.

Aggravation An aggravation is the clinical effect of a compensable accident on a pre-existing condition, resulting in temporary or permanent clinical impairment and/or loss of earning capacity.

Assistive devices/technology Any special clothing, devices or equipment that modifies the limitations caused by physical impairments. For example, voice recognition technology for employees having challenges using their arms on the keyboard.

Case Manager Employed by WCB or applicable insurance plan holder, refers to the employee who determines a claimant’s eligibility for disability benefits and coordinates efforts to return an injured employee to work in a safe and timely manner.

Case Management A collaborative process for assessing, planning, implementing, coordinating, monitoring and evaluating the options and services available to promote cost effective outcomes. An insurance case manager and/or the Disability Management Team can complete elements of case management.

Claims Management A process of collecting the necessary documentation and information about a claim to determine if benefit eligibility requirements have been met. This responsibility lies with the WCB adjudicator or Case Manager.

Clinical Related to or based on observation or treatment of a patient.

Clinical Impairment The loss of use of, or derangement of any body part, system or function. The presence and extent of impairment is determined by medical (clinical) means.

Confidentiality Spoken to in confidence; entrusted with information. It is the right of employees to have all medical & personal information held in confidence and released only to those to whom they have consented.

Compensable Entitling an individual to compensation. Example: a compensable job-related injury.

Compensable Work Restrictions Compensable work restrictions are based on an assessment of medical conditions (physical and/or psychological) which resulted from the work-related injury. Work restrictions impair an employee’s ability to perform pre-injury work duties or to adapt to some other employment. For example, the employee’s compensable condition prevents a return to pre-injury or comparable employment, or the employee suffers from a disabling or potentially disabling occupational disease and continued exposure would be harmful. The Workers Compensation Board (WCB)/ insurance provider identifies work restrictions based on medical and vocational information about the employee. The restrictions may be temporary or permanent.

Course of Employment One of a number of criteria used by the Employees’ Compensation Board to establish whether a claim of injury or illness is attributable to the workplace and/or work duties.

Disability Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.

Disability Management Disability management refers to the use of available services, resources and processes to:
  • Minimize or prevent the impact and/or costs of workplace absence due to injury or illness; and
  • Encourage a safe and early return to work.

An effective disability management program uses resources in the most efficient manner and helps employees perform to their greatest potential and satisfaction. Simply put, disability management encourages a healthy workforce, offers protection from hardship, and promotes long-term corporate success.

Disability Management Team (DMT) The Disability Management Team is responsible to provide quality, proactive services to an employee who requires injury management. The objective is to attain a safe and early return to productive employment for the injured employee. The team is comprised of a: Lead HS&E Advisor and a Human Resources representative, who are jointly responsible for managing the disability claim and coordinating, with the employee’s supervisor, effective and timely return to work plans, including modified work if appropriate.

Duty to Accommodate Employers and unions have a duty to take all reasonable measures short of undue hardship to accommodate the particular needs of employees who are members of classes of persons protected under human rights legislation.

Early Rehabilitation Tailored for the treatment of injuries or conditions primarily in the early stages of recovery to minimize complications and to prevent secondary effects caused by the patient compensating for the injury (i.e. worker develops a sore hip from limping during recovery from a twisted ankle).
Early and Safe Return to Work Returning to employment in a capacity that assists in rehabilitating the employee back to the pre-injury level. This accommodation is temporary, however, permanent accommodation may be considered depending on the circumstances.

Employee The employee is one who experiences a work-related injury or illness that impacts their ability to perform job tasks.

Employee and Family Assistance Provider (EFAP) An external provider of professional services including clinical psychologists, psychiatrists, social employees and other providers to address the human aspect of change and challenges by offering employees the opportunity and expertise to effectively solve problems, whether work related or personal. The provider is usually contracted and paid by the employer and the services provided to employees are confidential.

Employment Hazard One of a number of criteria used by the Workers’ Compensation Board to establish whether a claim of injury or illness is attributable to the workplace and/or work duties. Refers to the fact that there must be something that caused a risk of injury. The hazard(s) may be directly related to the industry or occupation; for example, machinery, chemicals, and worksite ergonomics. The hazard(s) may also be incidental to the industry or occupation but, nevertheless, present a hazard in the workplace; for example, insect bites or weather conditions.

Ergonomics The study of the relationship between human beings and their work environment. It addresses work content and work context for both office and industrial settings. Organizational, personal, physical, psychosocial and environmental risk factors may be evaluated in an ergonomic assessment. Changes in pacing, technique, work organization, tasks and equipment may be recommended.

Ergonomic Hazard Hazards associated with the interface between person/machine and environment. Typical concerns include workstation design, work posture, manual materials handling work/rest cycles and seating.

Essential Job Functions Essential functions are the basic job duties that the employee who holds the position must be able to perform unaided or with the assistance of reasonable accommodation. Factors to consider in determining whether a function is essential include:
1) Whether the position exists to perform that particular function;
2) The number of other employees available to perform that job function or among whom the performance of that job function can be distributed;
3) The degree of expertise or skill required to perform the function.

Exercise Therapist/ Kinesiologist Specializes in fitness evaluations and program development as well as return to work program development/monitoring and education.

Exposure An instance where an employee is, or was, subject to some effect, influence or safety hazard or was in contact with a hazardous chemical or physical agent at a sufficient concentration, duration and intensity to produce an injury/illness.

First Aid Injury or Illness An injury or illness that is the result of a work-related incident which requires minor treatment by a trained first aider only and does not require medical care or treatment that is required to be performed by a physician.

Functional abilities An employee’s physical and/or mental capabilities as they relate to the employee’s job tasks.

Functional Capacity Evaluation (FCE) An assessment of the physical, and/or mental capacities of an injured/ill employee carried out by doctors, specialists, occupational or physical therapists. An FCE includes a medical history, a musculoskeletal examination and a standardized set of functional tests (i.e. push/pull, lifting, walking, coordination, etc.). Functional Capacity Evaluations are widely used to assess an employee’s physical work abilities; the results of the evaluation are used to investigate and determine appropriate, safe return-to-work opportunities.

Graduated Return to Work (GRTW) A medically-monitored return to work plan where an employee performs regular and/or modified work duties for less than pre-injury regular hours of work. The primary purpose of GRTW’s is to allow the employee to build stamina to return to their pre-injury job responsibilities on a full-time basis. GRTW’s typically take the form of reduced days of work and/or hours per shift and/or staggered hours or job duties.

Health Professional An organization or person who is licensed and trained to provide medical treatment to an employee, such as a hospital, physician, chiropractor or physiotherapist.

Independent Medical Examination (IME) A second opinion by a qualified physician to determine the extent of impairment resulting from injury or illness and to secure recommendations regarding physical restrictions, future treatment, medications and prognosis for return-to-work. An IME is designed to address specific referral questions, such as “What are the resulting limitations and/or restrictions?”; “Please comment on any other factors that may be affecting the employee’s recovery?”; “Is the employee capable of returning to pre-accident employment?” etc. The IMEs provide a general guideline and for more specific information, the Functional Capacity Evaluation may be completed as well.

Insurable Earnings The gross earnings of each employee up to the annual maximum insurable amount specified by the WCB. Insurable earnings include, but are not limited to:
- Wages, salaries and commissions;
- Labour portion of contract earnings;
- Bonuses, holiday pay and taxable benefits;
• Recorded tips and gratuities;
• Pay in lieu of notice;
• Value of service;
• Earnings paid to workers participating in the WCB's Vocational Rehabilitation Training on the Job Program;
• Any other remuneration or allowance the WCB determines is insurable.

**Lost Time Injury or Illness** An injury or illness that is the result of a work-related incident which results in missed time from work beyond the day of injury or illness.

**Maximum Insurable Earnings** Maximum Insurable Earnings refers to the maximum gross annual earnings prescribed by the WCB. The WCB does not levy premiums or pay benefits on the portion of employee's earnings which exceed the maximum amount.

**Measurable Permanent Clinical Impairment** A permanent clinical impairment is determined by a physician, expressed as a percentage of total impairment.

**Medical Aid Injury or Illness** An injury or illness that is the result of a work-related injury which requires medical treatment by a Health Care Professional as defined in the OSHA-Bureau of Labor Statistics Injury Classification Guideline.

**Medical Advisor** Physician who serves as a resource in assessment and making recommendations to injured or ill employees. Medical advisors may also communicate with other physicians and care providers. Typically employed by WCB or insurance companies but may also be an independent resource.

**Medical Plateau** The medical plateau is normally reached when the employee's medical condition has stabilized, further significant medical improvement is unlikely, and permanent work restrictions can be confirmed.

NOTE: In cases of permanent clinical impairment, the medical plateau and medical assessment for permanent clinical impairment need not occur at the same time. Depending on the nature of the injury, the WCB/insurance provider may recommend an additional period of time for minor changes to occur before assessing the permanent clinical impairment.

**Medical Status Exam (MSE)** Completed by a physician, the MSE determines an employee's current medical status including diagnosis and work restrictions. Any requirements for further medical investigations, consultation and treatment will also be identified.

**Medical Treatment** Treatment provided by a Health Professional recognized by the applicable WCB jurisdiction as authorized to provide such care (i.e. physician, chiropractor, etc.).

**Modified Work** May consist of the employee's normal work that has been changed, redesigned, or physically modified, including reductions in time or volume. It may also encompass a training opportunity, work which is normally performed by others, or work which has been specifically designed or designated as a modified work program. The goal of modified work is to provide the injured employee with the opportunity to utilize the work site as part of their treatment program. The work acts as a bridge, enabling an employee to work toward a return to their normal job and the normal activities of their life. The work will be appropriate, meaningful and productive. All work will be performed safely and without undue risk of re-injury and without undue risk to others or NCSG property.

**New evidence** New evidence is new information that may affect the outcome of an employee's compensation decision. It must meet two basic criteria:
1. The evidence is material (relevant) to the issue in question;
2. The evidence is substantive – it gives new information that was not previously available to the decision maker and could affect the outcome of the decision.

A medical report may be new evidence if, for example, new clinical findings lead to a change in diagnosis.

New evidence includes:
- Health information;
- Work-relatedness;
- Fitness to work earnings information;
- Information about employer operations;
- Administrative review findings that identify previous errors or omissions;
- Various other relevant facts.

**Occupational Illness or Disease** Any abnormality caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion or direct contact (e.g. repetitive stress).

**Occupational Injury** Any injury such as a cut, fracture, sprain, or amputation which results from a work-related event or from a single instantaneous exposure in the work environment.

**Occupational Therapist** Specializes in the functional aspects of living or occupation, which addresses the whole person. Occupation refers to the activities and tasks of daily life that have value and meaning to a person. Occupations can include self-care (i.e. personal care, mobility), leisure (i.e. social activities, sports) and productivity (play, school, and employment, home-making). Services may include:
- Work reintegration;
- Health promotion and prevention;
Return-to-work program development and monitoring;
Worksite modifications, assistive technology and ergonomics;
Functional capacity evaluations;
Education;
Worksite analysis.

Permanent Disability An employee is considered to have a permanent disability when a work injury results in a permanent measurable clinical impairment or a permanent impairment of earning capacity due to compensable work restrictions, or both.

Physical Demands The physical demands of the job that the employee performs, referring to required working postures and mobility, manual handling, and hand dexterity, strength, general fitness and attentiveness.

Physical Demands Analysis (PDA) Outlines all aspects of a position and includes the job description, critical job demands (i.e. lifting, push/pull), typical workday processes, environmental factors, other items specific to an employer’s worksite. Used to orient employees to the worksite, communicate to health care providers the essential components of a job so that they can determine more accurately what the limitations may be, provide more information on possible modified duties (decrease lost time), form basis for occupational rehabilitation/work hardening programs. PDA's can be performed by a physical, occupational or exercise therapist.

Physical Therapist Specializes in evaluating, restoring and maintaining physical function through a variety of hands-on treatments, education and exercise prescription. Physical therapists offer assessment of movement, strength, endurance and other physical abilities; assessment of the impact of an injury or disability on your physical functioning; assessment of physical preparation for work and sports; program planning and education to restore movement and reduce pain; and individualized treatment of an injury or disability based on scientific knowledge, a thorough assessment of the condition, environmental factors and lifestyle. Services may include:
• Return-to-work program development and monitoring;
• Hands-on treatment;
• Exercise prescription;
• Ergonomics;
• Functional capacity evaluations;
• Education.

Pre-existing Condition A pre-existing condition is any pathological condition which, based on a confirmed diagnosis or medical judgment, pre-dated a work-related injury.

Reasonable Accommodation The term "reasonable accommodation" means:
1) Modifications or adjustments to a job application process that enable a qualified applicant with a disability to be considered for the position such qualified applicant desires
2) Modifications or adjustments to the work environment, or to the manner or circumstances under which the position held or desired is customarily performed, that enable a qualified employee with a disability to perform the essential functions of that position
3) Modifications or adjustments that enable an employee with a disability to enjoy equal benefits and privileges of employment as are enjoyed by employees without disabilities.

An accommodation may include but is not limited to: making existing facilities used by employees readily accessible to and usable by employees with disabilities; job restructuring; part-time or modified work schedules; reassignment to a vacant position; acquisition or modifications of equipment or devices; appropriate adjustment or modifications of examinations, training materials or policies; the provision of qualified readers or interpreters; and other similar accommodations. Reasonable accommodation is required unless it can be demonstrated that the accommodation would impose an undue hardship on the business operation.

Report Only Injury or Illness An injury or illness that does not result in first aid or medical treatment and is the result of a work-related injury or illness. (i.e. worker reports slipping/ fall but does not have a sore back but the incident is reported in the event pain develops)

Restricted Work An injured employee is able to return to the workplace but is unable to perform what were previously considered "normal" work assignments. It includes the detailed medical information outlining the employee's physical restrictions and medical requirements that are to be accommodated in a modified work plan.

Return-to-Work An organized effort by an employer to assist an injured employee in resuming pre-injury job duties.

Supervisor An employee who is directly responsible for the performance of employees.

Undue Hardship An undue hardship is an action that requires significant difficulty or expense in, or resulting from, the provision of providing a reasonable accommodation. Undue hardship includes any action that is unduly costly, extensive, substantial, disruptive, or that would fundamentally alter the nature or operation of the business.

Worksite Visit A worksite-based assessment of an employee’s ability to perform work tasks that takes into consideration the job requirements and the employee’s abilities, limitations and restrictions. This assessment helps to determine which tasks the employee can perform safely without risk of injuring himself/herself or co-employees. It also identifies risk factors and suitable modified work tasks. This may also include a musculoskeletal screen, job coaching and problem solving to help the employee perform job tasks safely. A physical or occupational therapist can perform the Work Ability Assessment.
4.0 EXPECTATIONS

All NCSG employees are expected to comply with the Occupational Disability Management Program. Active participation in the program is an occupational requirement that promotes expedient recovery and appropriate compensation.

Complying with these requirements includes:
• Participation in appropriate modified work programs;
• Attending medical appointments and treatments and providing ongoing follow up documentation
• Following return to work and modified work guidelines;
• Not exceeding approved limitations/restrictions; and
• Reporting any further problems or concerns immediately to the appropriate supervisor.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees

In addition to the requirement detailed under “Expectations” (Section 4), it is the employee’s responsibility to:
• Immediately report a work-related injuries to the supervisor;
• Seek appropriate medical treatment immediately following a work-related injury or illness;
• Participate in the incident investigation;
• Cooperate and participate with medical treatment and medical assessments/reassessment;
• Accept and actively participate in the Modified Work Program as recommended by the Health Professional;
• Maintain regular communication with the supervisor, DMT, and WCB, including completion of forms and submission of documentation
• Take personal responsibility for successful return to work and recovery from injury/illness; and
• Provide medical confirmation of clearance to return to work following an injury or treatment.

5.2 Operations

5.2.1 Project & Department Managers

It is the manager’s responsibility to:
• Offer complete and effective implementation and support of the Program;
• Provide the resources to successfully implement and manage the program; and
• Provide support and guidance to Supervisors.

5.2.2 Supervisors

It is the Supervisor’s responsibility to:
• Ensure the provision of immediate, appropriate medical attention following a work-related incident (i.e. transportation to a medical clinic or hospital);
• Ensure accurate and timely reporting of incidents;
• Investigate all opportunities to provide suitable, safe modified work to the injured employee;
• Liaise with the DMT on a regular basis to provide updates regarding the employee’s progress (i.e. compliance with modified work, absenteeism, progress, and return to pre-injury job duties);
• Ensure the DMT receives copies of all documentation relating to the claim (i.e. the LCR, Modified Work Offers, medical updates, etc.) by fax or email as soon as they are available AND all original copies are forwarded to the DMT by interoffice mail;
• Maintain regular contact with an employee;
• Take appropriate steps to investigate any non-compliance with the Program; and
• Ensure ongoing implementation and effectiveness of the Program.
• Ensure the confidentiality of the employee’s medical information is maintained.

5.3 Human Resources

It is Human Resources responsibility to:
• Ensure support for the Program;
• Provide interpretation of collective agreements;
• Assist with Duty to Accommodate issues; and
• Manage Labour Relations issues.
• Ensure the confidentiality of the employee’s medical information is maintained.

5.4 Disability Management Team (DMT)

It is the Disability Management Team’s responsibility to:
• Obtain the required information and/or documentation of a disability claim within the established timeframes and to forward these to the appropriate WCB;
• Liaise with the appropriate Supervisor as required to assist in the facilitation of return to work strategies (i.e. modified work, GRTW’s, etc.);
5.5 Lead Health, Safety and Environmental Advisor
It is the Lead HS&E Advisors’ responsibility to:
- Actively participate in the initial response and investigation of the injury;
- Provide support to supervisors in the document completion and follow-up;
- Participate in identifying meaningful and productive modified work;
- Immediately address problems reported with respect to the modified work being performed; and
- Assist the Supervisor in ensuring that the DMT receives all original copies of documentation for the claim.

5.6 Health Professional(s)
Health care providers include occupational therapists, physical therapists, kinesiologists, exercise therapists, chiropractors, massage therapists, nurses, physicians or any health care professional providing services to assist the injured employee return to work in a safe and timely manner. The Health Professional(s) involved in the rehabilitation of the injured employee:
- Assess the employee’s injury or illness and provide effective recommendations for treatment and recovery;
- Assess the impact of the employee's injury or illness on his/her ability to resume work;
- Make recommendations for return-to-work planning by providing information with respect to the employee’s functional abilities as well as any restrictions and/or limitations. This may involve participation in meeting to discuss return-to-work planning and progress;
- Communicate with the employer and WCB by providing verbal reports and/or completing documentation as requested (i.e. Employer Restrictions Form, WCB Physician’s Reports); and

The Health Professional(s) may also be requested to perform clinical and functional capacity evaluations or ergonomic-safety assessments of jobs, as needed, on a timely basis and provide documentation to the DMT.

5.7 Employee and Family Assistance Program (EFAP)
Under the Occupational Disability Management Program, the services provided through the EFAP would only be utilized to facilitate a safe and timely return to work for the injured employee. The injured employee may sign a Release as provided by the EFAP provider authorizing stakeholder(s) to communicate with the EFAP provider with respect to issues affecting the injured employee’s return to work. The EFAP provider will:
- Provide the injured employee with the opportunity and knowledge to effectively solve problems, whether work related or personal.
- Provide the stakeholder(s) involved in the Occupational Disability Management Program with strategies to effectively assist the injured employee while respecting the employee’s right to confidentiality.

5.8 Workers’ Compensation Board/ Insurance provider
Each jurisdictional Workers’ Compensation Board (WCB) / Insurance provider is responsible for the adjudication of work-related injuries or illnesses. WCB legislation specifies the following employer obligations:
- Submit the Employer’s Report of Injury in all cases where an employee alleges a work-related injury or illness (i.e. the employer does not have to agree that an injury occurred for it to be obligated to file) and:
  - The employee seeks medical attention from a Health Professional (see Definitions); and/or
  - The employee is assigned modified duties post the day of injury; and/or
  - The employee loses time from work as a result of a work-related injury or illness; and/or
  - The employee requires dental treatment and/or repair of glasses or prosthesis as a result of a work-related injury that occurred as a result of an employment hazard and at a time and place consistent with the employee’s work obligations.
- Provide medical care and arrange for (including payment of) transportation of an injured employee to a medical facility, if required;
- Pay the employee regular wages for the day of injury; and
- Provide a means for injuries to be investigated and recorded.

Some Provincial / State / Federal government departments responsible for Occupational or Workplace Health & Safety require an employer to notify it immediately in the event of critical injuries such as:
- Life threatening injuries;
- Unconsciousness;
- Substantial loss of blood;
- Certain fractures;
- Amputation of limb;
6.0 METHOD
6.1 Principles

6.1.1 Case Management

NCSG will take a “case by case” approach to the management of each disability. This will ensure that
the needs of the employee and the employer are met while, at the same time, ensuring consistency and
fairness.

The NCSG DMT and Operations will collaborate to ensure a successful resolution to the employee’s
injury.

NCSG will make all reasonable efforts to ensure early intervention for an employee who sustains
a work-related injury or illness. This will require timely utilization of internal and community-based
services. Early intervention may take place before an employee sustains an injury and/or requires
accommodation.

NCSG will make every reasonable effort to control the personal and economic costs of injury. This
means that NCSG will attempt to ensure the injured employee receives the financial, medical and
rehabilitative benefits to which they are entitled. While this document does not address the cost of
disability to the employer, it is recognized that there are both direct costs (i.e. WCB premiums) and
indirect costs (i.e. modified work, labour costs for replacement employees) which impact the business.

6.1.2 Confidentiality & Protection of Personal Health Information

It is understood that confidentiality is an integral component of this Program. An employee’s rights to
confidentiality will be respected. Any medical information obtained by the Supervisor, Branch Manager,
Lead HS&E Advisor or DMT through this program will be used solely for the purpose for which it was
provided. Medical information obtained through the program will be kept in a locked, secure location
apart from the employee’s personnel file.

Information requests will be limited to information concerning the functional abilities of the employee.
The intent of obtaining this information is to assist in enabling the work site to be used as part of the
treatment and to aid in arranging an early and safe return to work.

Where it is deemed that the injured employee’s personal health information must be shared with a
third party, the third party will be required to follow this Program and ensure the confidentiality of
the employee. The information may only be used by the third party for the purpose it was provided.
Functional abilities information may be shared with the appropriate stakeholder to enable return to work
plans to be developed.

With respect to the employee’s personal health information, the intent of this Program meets or exceeds
any legislation that is in effect in the jurisdictions that NCSG has operations. All laws pertaining to the
freedom of information and the protection of privacy and any other applicable legislation are considered
to be part of this Program and must be adhered to by all employees. NCSG will make every effort to
ensure that:

• Collection of personal health information is only used for purposes of managing the injury;
• The employee’s disability file will be securely stored separately from the human resource personnel
  file;
• Only authorized employees will have access to the disability file;
• The employee has the right to access the disability file by contacting a member of the DMT during
  regular business hours.

6.1.3 Duty to Accommodate

The intent of NCSG’S Program is to meet or exceed any legislation that is in effect in the jurisdictions
that NCSG has operations. All laws pertaining to “Duty to Accommodate” and any other applicable
legislation are considered to be part of this Program and must be adhered to by all employees. Any legal
action requiring “Duty to Accommodate” requires at a minimum the involvement of the Vice President –
HS&E, Technical Training and Quality.

NCSG is committed to investigating every opportunity to accommodate and assist an injured employee
to return to their pre-injury job. If this is not possible, other suitable, meaningful job opportunities
within NCSG will be investigated. Where a feasible and appropriate job is not available within the
business, NCSG will support efforts by the applicable Workers’ Compensation Board to assist the
injured employee in obtaining retraining and/or alternate employment. In both cases, the Return to
Work hierarchy will be followed:
### Hierarchy of Return-to-Work Options

- Return-to-work with the same employer
  - same job—no restrictions—no accommodations necessary
  - same job—minor restrictions—some accommodations necessary
  - different job or modified job—no additional training—some job accommodations
  - same job – permanent accommodation
  - different job or modified job—additional training—some job accommodations
  - new job created by employer—additional training—additional accommodations

1a) RTW Goal: Same Job / Same Employer  
RTW Option: No modification or accommodation

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<th>WHEN TO CONSIDER</th>
<th>STRATEGIES</th>
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<td>• No restrictions</td>
<td>• Return to regular employment (not part of the formal Program)</td>
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| • RTW Goal: Same Job / Same Employer  
RTW Option: Short term temporary modified work |

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<th>WHEN TO CONSIDER</th>
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| • The employee is unable to perform regular job duties but is expected to return within a short time frame (i.e. 5 days). | • Obtain objective information re functional abilities.  
• Arrange temporary modifications or alternate duties for a few days.  
• Return to regular employment. |
| • RTW Goal: Same Job / Same Employer  
RTW Option: Different or modified job with no additional training and some job accommodation |

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<th>WHEN TO CONSIDER</th>
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| • When 1a and 1b are not possible or not feasible.  
• When reasonable time frames for recovery have been exceeded.  
• Entry criteria for modified work should be decided and agreed upon in advance.  
• With Program, participation criteria were outlined to include the following.  
• The employee has an injury and:  
  - Is expected to be unable to perform essential job duties for one scheduled work week.  
  - Has been off work for one week. | • Assist the Health Professional by providing information on the types of jobs available (use job banks).  
• Obtain objective information re functional abilities.  
• Identify the type of work to be performed:  
  - Modified tasks  
  - Alternate tasks  
  - Gradual RTW (hours and work duties)  
  - Safe work training and job skills  
  - Progressive physical conditioning  
  - Identify the accommodations that may be made. For example, ergonomic adjustments made to job tasks.  
    - Set time limits.  
    - Regular onsite assessment of the employee’s progress.  
  - Regular communication with the Health Professional, WCB case manager, etc. to work toward the program goal, as the injured employee progresses.  
• RTW Goal: Same Job / Same Employer  
RTW Option: Permanent Accommodations |

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<th>WHEN TO CONSIDER</th>
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| • When the injured employee is unable to achieve a successful transition back to full job duties within a reasonable time frame but would be able to perform essential job duties with reasonable and financially feasible job accommodations | • Obtain objective functional information to justify the accommodation.  
• Consider the use of a Functional Capacity Evaluation to quantify the functional restrictions and abilities.  
• Determine if the required accommodation is practical, and financially feasible.  
• Ensure that the accommodation will remove the task barrier in question. |
WHEN TO CONSIDER | STRATEGIES
--- | ---
• When the injured employee has been unable to achieve successful transition back to original job. | • In addition to the previous strategies, identify training requirements and include training in the modified work plan.
• Where job accommodations in the original job are not practical or feasible. | • Obtain objective functional information to justify the accommodations.
• When the injured employee is unable to perform the different or modified job without some additional training and/or accommodation. | • Consider the use of a Functional Capacity Evaluation to quantify the functional abilities of the referred employee.
• Participation criteria are the same as previous. | • Reassignment to a vacant position or identify alternate position.

6.2.1 Initial Response

Operations

• Ensure the provision of immediate, appropriate medical attention.
• With the assistance of the HS&E Advisor and based on the extent of injury, determine whether the employee requires an ambulance, transportation to a medical clinic, or first aid center. Always err on the side of caution in making this determination.

6.1.4 Conflict Resolution

Sometimes, it may be necessary to resolve difficult or sensitive disability management issues. This may occur in the following situations:

• Employee raises concerns about the fairness of the Modified Work Program;
• Conflict occurs between the employee and the supervisor;
• The job modifications are complex, expensive or permanent.

In such cases, it may be appropriate to form an Ad-hoc Committee, comprised of representative(s) from the Disability Management Team, Executive, as well as the injured employee and his/her representative(s).
• If the injured employee requires an ambulance, the applicable cost is the responsibility of the employer as per WCB legislation.
• Pay the employee’s regular wages for the day of injury.
• Advise the Disability Management Team (DMT) that an injury has occurred.
• If by telephone or email, notice should be provided to Manager of HSE

6.2.2. Information and Documentation

Operations
• If, immediately following the incident, the supervisor has concerns regarding the claim; these should be documented and discussed with the DMT (by telephone or email).
• Ensure the employee completes the Employee report of injury and forwards to the DMT, WCB or insurance carrier.
• Within 24 hours of becoming aware of the injury, the Employer Report of Injury form must be completed and forwarded to the DMT WCB or insurance carrier.
• If the employee was assessed and/or treated by a Health Professional, the completed WCB Physician’s Report (employer’s copy) should be received from the injured employee and forwarded to the DMT.
• Complete the Loss Control Report and forward to the DMT.
• Gather completed “Incident Statements” and other applicable documentation and forward to the DMT.
• Each time the employee is assessed by the Health Professional, a completed WCB Physician’s Report (employer’s copy) should be received from the injured employee and forwarded to the DMT.
• Other documentation, such as the WCB Occupational Readiness Report or the NCSG Restrictions Form, when received from the employee, should be forwarded to the DMT.

Note: All documentation may be forwarded by fax or email. The originals should be forwarded for retention in the employee’s disability file.

Disability Management Team (DMT)
• Ensure the concerns expressed by the supervisor are documented for further follow-up, if appropriate.
• Review the employee’s disability file(s) (occupational and non-occupational) so that a determination regarding the potential impact of pre-existing or non-occupational factors may be reported to WCB, if appropriate.
• Ensure copies of all documentation (Worker’s Report, medical reports, LCR, Incident Statements, etc.) are placed in the employee’s disability file as well as copies of notes, emails, etc.

6.2.3 Filing the employer’s report with WCB

Operations
• Forward all paperwork to the DMT for review and submission.

Disability Management Team (DMT)
• Within the applicable WCB deadline, file the WCB Employer’s Report.

6.2.4 Appealing the Claim

Operations
• May be required to provide evidence, attend meetings or appeals with DMT.

Disability Management Team (DMT)
• There may be times when it is appropriate to file an appeal with WCB. Caution should be exercised to ensure that all appeals are made based on facts which can be supported.
• All appeals should be made in writing to the applicable WCB adjudicator/ claims Manager. The letter should outline events in chronological order and all information should be presented as concisely as possible. Attach witness statements, signed and dated, if applicable.

6.2.5 Monitoring the Claim

Operations
• Assist DMT with monitoring employee participation, rehabilitation and therapy and provide updated documentation.

Disability Management Team (DMT)
• Liaise with WCB to ensure the claim is adjudicated in a timely manner, according to legislation and/or policy.
• Communicate with Health Professionals to obtain regular updates regarding the employee’s recovery process, functional abilities and readiness to resume pre-injury level work.
• Arrange health care solutions with external providers as required. This may include, but is not limited
to: functional capacity evaluations, independent medical examinations, ergonomic consultations, specialty consultations, and expedited medical investigations, work site analysis, etc.

- Ensure the confidentiality of the employee’s medical information is maintained.
- Communicate with all stakeholders as necessary.
- If required, prepare for and represent NCSG on WCB claim appeals.

6.2.6 Staying in Contact with the Injured Employee

Operations

Maintain regular contact with an employee.

While an employee is recovering there is an ongoing need to maintain communication. This positively reinforces the organization’s support of the employee, encourages their return to pre-accident work and can identify the need for additional support. It is an employer’s obligation to maintain contact with an employee throughout recovery. Each situation should be determined on a case-by-case basis and coordinated between the supervisor and the DMT.

All information provided by the employee should be treated as confidential. All communications should be documented by the Supervisor and forwarded to the Disability Management Team for placement in the employee’s disability file.

Assistance with communicating with the employee can be provided with the appropriate stakeholder, whether the Disability Management Team or Human Resources. Below are some general guidelines that may be helpful:

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<th>DO</th>
<th>DON’T</th>
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<tr>
<td>• Ask the employee about their general condition.</td>
<td>• Ask them their medical diagnosis.</td>
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<tr>
<td>• Ask about upcoming medical appointments.</td>
<td>• Ask them about medical treatments or medications.</td>
</tr>
<tr>
<td>• Discuss any plans to return to work, including our commitment to accommodate them when they are ready to return to work.</td>
<td>• Confront them with suspicions.</td>
</tr>
<tr>
<td>• Let them know they are a valuable employee of NCSG and they are welcome back at work once their recovery is complete.</td>
<td>• Complain about work issues in their absence.</td>
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Disability Management Team (DMT)

- The supervisor will maintain contact with the employee regarding their recovery progress, etc.
- The DMT will be available to the employee to address concerns regarding the status of their claim as well as concerns regarding their medical treatment plans, appointments, etc.

6.2.7 Assigning Modified Work

Modified work is temporary and should not exceed eight consecutive weeks. The goal of modified work is to provide the injured employee with the opportunity to increase their functional abilities while in the workplace. The work acts as a bridge, enabling an employee to work towards a return to their regular job and the normal activities. Modified work is to be offered on a non-discriminatory basis and in keeping with the restrictions and/or abilities identified by the Health Professional. Modified work must be meaningful, productive, and value-added to the business. The employee must be able to perform it safely and without undue risk of re-injury and without undue risk to co-workers or property.

There are different types of modified work:

- Alternate job duties;
- Re-training;
- Change in days or hours of work (i.e. graduated return to work program).

If an employee who has sustained a workplace injury requires modified work, the following guidelines will apply:

1 For the day of injury, assignment of modified work can be based on recommendations made by the onsite health care centre, after a medical assessment of the employee and determination of the employee’s restrictions & abilities. The restrictions & abilities should be documented and a copy provided to the employee’s supervisor. The assigned modified work will be:
   a) Within the employee’s functional abilities.
   b) Performed for the duration of the employee’s regularly scheduled work hours.

2 Subsequent to the day of injury, assignment of modified work will be based on recommendations made by an attending physician (or other Health Professional), after a medical assessment and determination of the employee’s restrictions and abilities. The restrictions & abilities should be documented on the WCB Physician’s Report and/or the NCSG’s Restrictions Form and a copy
provided to the employee, who will forward to his/her supervisor. The assigned modified work will be:

a) Within the employee’s functional abilities.
b) Documented on the Modified Work Offer.
c) Performed within the regularly scheduled work hours to a maximum of eight (8) hours per shift until the employee has been cleared to return to pre-injury job duties.
d) On an exception basis, the employee’s supervisor with authorization by the DMT may offer additional hours of work provided that the work performed is essential to the operation of the project/worksite, remains within the employee’s functional abilities, and assists with the employee’s ongoing recovery.

3 Adjusting of modified work will be completed with updated medical documentation during the period of modified work; progressively more demanding work within the employee’s restrictions & abilities and up to the functional demands of the employee’s pre-injury job duties. This will assist the employee in their rehabilitation and eventual fitness to return to their pre-injury job duties.

If an employee declines modified work, the Workers’ Compensation Board may cease to pay compensation of wages. The decision with respect to compensation entitlement and the interpretation of the requirement to perform modified work rests with the Workers’ Compensation Board. Active participation in the program is an expectation of employment within NCSG.

Operations
• Investigate all opportunities to provide suitable, safe modified work to the injured employee.
• Complete the Modified Work Offer, noting the job tasks, the functional requirements of the tasks, as well as any other accommodations available to the employee (i.e. “able to take micro-breaks as appropriate for stretching”, “assistive device to keep leg elevated is available”, etc.) Ensure all stakeholders sign the Modified Work Offer.
• Prior to commencing modified duties, the employee’s supervisor should communicate to the employee’s co-workers that the employee will be participating in the Modified Work Program in an effort to rejoin the team at full capacity as quickly as possible, and that any and all support they give to the injured employee will assist in their recovery and ensure the program’s success.
• If, subsequent to the original Modified Work Offer, the employee’s functional abilities change as per documentation received from the Health Professional and this results in the assignment of new modified duties, an updated Modified Work Offer will be prepared (as per #2 above).
• Follow-up with the employee on a regular basis regarding progress. If concerns or problems arise, contact the DMT to determine appropriate follow-up.
• Liaise with the Disability Management Team on a regular basis to provide updates regarding the employee’s progress (i.e. compliance with modified work, absenteeism, progress, and return to pre-injury job duties).
• Take appropriate steps to investigate any non-compliance with the Program.

Disability Management Team
• Liaise with the appropriate Supervisor as required to assist in the facilitation of appropriate return to work strategies.
• Provide WCB with copies of the signed Modified Work Offers.
• Obtain regular updates from Operations regarding the employee’s progress while participating in the Modified Work Program.
• Take appropriate steps to identify, investigate, and address concerns by communicating with all stakeholders (i.e. Health Professional(s), Operations, the employee, Human Resources) as necessary.

6.2.8 Return to Pre-Injury Work
Operations
• Confirm with the DMT that the employee has returned to pre-injury job duties (i.e. regular job duties and full-time hours of work).
• Follow-up with the employee, as appropriate (i.e. periodically throughout the first shift, at the end of the following two or three shifts and again after a few shifts) to ensure the employee is managing well and there are no issues. If a concern or problem arises, contact the DMT to determine appropriate follow-up.

Disability Management Team (DMT)
• Advise WCB, in writing, of the employee’s return to pre-injury job duties (i.e. pre-injury job duties and full-time hours of work) based on either:
  • Submission of documentation by Operations
  • Notice received directly from the Health Professional.
• Follow-up, periodically, with Operations to ensure the employee is managing well. If concerns or problems arise, follow-up accordingly.
6.3 CAPTIVE EMPLOYEE

Injuries that are the result of an employee making reasonable and permitted use of facilities provided by the employer will be adjudicated by WCB. The same standards as for all work-related injury applies - the injury must arise from a hazard of the premises or the equipment provided. Hazards include any employer-provided equipment such as furniture, utensils, etc. and any food or drink provided by or purchased from the employer or employer's agent and consumed on the premises. Food, equipment, or other hazards introduced by the employee are not considered to be employment hazards.

If the employee is considered to be a "captive worker" in a residential facility (i.e. camp), the WCB may include other hazards, based on the individual merits of the claim. WCB defines a "captive worker" as an employee who, because of the circumstances and nature of their employment, has no reasonable alternative to living in a camp.

The extension of coverage is intended to cover an employee while they live in facilities operated by or for the employer, which by their nature, gives an employee less control over the environment and their activities than is the case in a normal home environment. The hazards of the premises are not considered hazards of employment if an employee lives in employer-provided premises with the same rights and privileges as those which normally exist between landlord and tenant. An exception may be made if the employer directs the worker to perform maintenance on the premises.

6.4 MISCONDUCT

If an injury is the result of an employee’s serious and willful misconduct, the WCB/insurance provider will examine whether or not the injured employee’s action has removed themselves from employment. The claim may be denied if there is a substantial deviation from employment. “Substantial deviation” includes the following scenarios:

- A criminal act with gainful intent;
- Intoxication, when drinking is not permitted or condoned by the employer and intoxication is the sole cause of the accident;
- An intentional self-inflicted injury;
- Fighting, when the issue is purely personal with no employment relationship;
- Horseplay, if the worker is the instigator and it is a serious deviation from of employment duties;
- Activities which are exclusively personal and have no relationship, to the employee’s employment duties or the employer's operations.

Examples: Employee plays a joke which requires a significant part of the working time and concentration of energies to the extent that the employment duties are neglected.

An example of “non-substantial” deviation would be an employee who walks over to chat with a co-worker and accompanies this with a flicking of elastic bands, causing injury to an employee.

6.4.1 Horseplay

The WCB applies the following guidelines to determine eligibility of benefits to an employee who is injured as the result of horseplay:

If the injured employee had not removed themselves from the course of employment AND was a non-participating employee in the incident, the WCB will generally provide compensation.

With respect to employees involved in horseplay, through instigating or participating, the WCB will review all the circumstances surrounding the incident to determine eligibility for compensation:

An injury may still be compensable if:

- The interruption of productive activity is too brief to be considered a substantial deviation from the course of employment;
- The horseplay is a common occurrence at work and is condoned by the employer;
- The horseplay is initially harmless then escalates into a dangerous activity, and the employee is not a willing participant in the escalation;
- The employee is still participating in productive activity or some other activity even though the task was performed in an non businesslike manner.

6.4.2 Fighting

The WCB applies the following guidelines to determine eligibility of benefits to an employee who is injured as the result of fighting. If the injured employee had not removed themselves from the course of and was a non-participating employee (i.e. an innocent bystander) to the fight, the WCB will generally provide compensation.

With respect to employees involved in fight, the WCB will review all the circumstances surrounding the incident to determine eligibility for compensation:

- If the fight was over a personal matter, the employees involved will not be eligible for WCB benefits;
- If the fight was over a work-related matter and occurs at a time and place that is consistent with employment (i.e. the employees have not removed themselves from the course of employment), the claim(s) may be eligible for WCB benefits.
Example: A foreman and a laborer were involved in a dispute over whether or not the laborer should finish the job before the end of the work day. Both parties were injured as a result of the fight. In this case, the foreman and the worker would be eligible for WCB benefits since the injury arose out of and occurred in the course of employment.

6.5 TRAVEL
6.5.1 To and From the Work Site

Employees are not covered during routine travel to and from the worksite.

Travel to / from the worksite is only covered when it is under the direction and control of the employer:

- The means of transportation is operated by, or for, the employer. For example, employees are covered if they commute to work in an employer-provided or operated bus. Coverage begins from the point that employees board the bus;

6.5.2 Medical Appointments

If an employee who has sustained a workplace injury is required to travel to a WCB-directed medical examination, the following guidelines will apply:

Travel Arrangements

- Will be made by NCSG.
- Will use the most economical mode of transportation within the injured employee’s medically-recommended restrictions & abilities.
- Hotel accommodation will only be arranged if it is not possible, or not economical, to return to the originating city the same day. If hotel and meals are required, reimbursement will be on the basis of WCB’s subsistence allowances in effect at time of travel.

6.5.2 Medical appointments and lost time wages

- NCSG will pay the employee’s regular wages for the time missed to attend a WCB-directed medical examination and treatments.

Medical examinations and impact to lost time statistics

- Absence from work due to a WCB-directed medical examination or treatments will not count towards “lost time” statistics.

6.6 SHUTDOWNS
6.6.1 Weather

An employee on modified duties is subject to the same guidelines as employees who are performing regular job duties – if the job is shut down for the remainder of the shift and employees performing regular job duties are sent home/to camp, the employee performing modified duties may also be sent home/to camp. The payroll guidelines that apply to employees performing regular duties will also apply to the employee performing modified duties. In other words, there is no obligation to continue providing modified duties for the disabled employee for the remainder of the shift. Not doing so will NOT result in the employee becoming eligible for wage-loss benefits.

6.6.2 Holidays

An employee on modified duties is subject to the same guidelines as employees who are performing regular job duties – if the job is shut down for a period of time during the holiday periods and employees performing regular job duties are laid-off for a period of time, the employee performing modified duties may also be laid-off. The payroll guidelines that apply to employees performing regular duties will also apply to the employee performing modified duties. In other words, there is no obligation to continue providing modified duties for the disabled employee for the applicable period of time. Not doing so will NOT result in the employee becoming eligible for wage-loss benefits from WCB.

6.6.3 Project Completion

An employee who still has medically-recommended restrictions & limitations when the work project is complete, will be entitled to wage-loss benefits from WCB unless the employee can continue to be accommodated with suitable, meaningful modified duties, either at the same worksite or at an alternate worksite. Note that if modified work is offered at an alternate worksite, it must not cause the employee ‘hardship’ to accept work in the alternate location. If WCB determines that it will cause hardship (i.e. financial because of increased transportation costs, child-care costs), the employee is not obligated to accept the modified work assignment and, therefore, may become entitled to wage-loss benefits from WCB.

It is recommended that the DMT be contacted as soon as possible should an employee participating in the Modified Work Program potentially be impacted by lay-off. This will ensure appropriate coordination with those involved in the employee’s rehabilitation (i.e. Health Professionals), the WCB, and other internal stakeholders.
6.7 PERMANENT ACCOMMODATION
NCSG will make every reasonable effort to provide suitable modified or alternate employment to employees who are permanently unable to return to their regular job duties as a result of an occupational injury or illness. This will include training and/or modification of workstations or equipment provided that any extended accommodation does not create undue hardship to the company. When it becomes clear that an employee needs permanent accommodation, an ad hoc committee will be formed and NCSG’s ability to accommodate will be determined involving all the stakeholders within the injured worker’s operational division. The injured employee will be responsible for participating in the program to the best of their ability and capacity.

NCSG will take a “case by case” approach to the management of each permanent accommodation. This will ensure that the needs of the employee and the employer are met while, at the same time, ensuring consistency and fairness.

Permanent accommodation will be offered on a non-discriminatory basis and be in keeping with the restrictions and/or abilities identified by the Health Professional. The work provided as permanent accommodation must be meaningful, productive, and value-added to the business. The employee must be able to perform it safely and without undue risk of re-injury and without undue risk to co-workers or property. The employee will be requested to provide updated information from the Health Professional on an annual basis to confirm the need for ongoing accommodation as well as the specific restrictions and/or abilities.

6.8 EMPLOYEE AND FAMILY ASSISTANCE PROGRAM (EFAP)
The Family Services Employee Assistance Program provides free, confidential assessment, referral, and short-term counseling services to employees and family members who are experiencing personal problems that interfere, or have the potential to interfere with their work performance, health, or overall life. The EFAP provides assistance with a wide range of personal and family problems. In addition to providing assessment, referral, and short term counseling services to employees and family members, the EFAP also provides consultation and support to the organization’s managers and supervisors who have employees with job performance and/or personal problems.

7.0 TRAINING REQUIREMENTS AND MATERIAL
- NCSG Occupational Disability Management Program

8.0 RESOURCES
In accordance with our Values, NCSG will ensure the fair and equitable treatment of our employees. NCSG understands that there may be questions and concerns involving the Occupational Disability Management Program.
Occupational Disability Management Process

1. Incident Occurs

2. Employee
   Report incident to Supervisor

3. Supervisor
   Ensure employee safety

4. Supervisor
   Determine injury severity

5. *Report Only

6. *First Aid Only
   *First Aid with Modified duties
   (day of injury only)

7. *Medical Aid Only
   *Medical Aid resulting in Lost Time
   *Medical Aid with Modified duties
   (Beyond date of injury)
Occupational Disability Management Process – Report Only

1. Incident Occurs
2. Employee: Report Incident to Supervisor
3. Supervisor: Ensure employee safety
4. Supervisor: Arrange for treatment
5. Report Only
6. First Aid Treatment (Reference First Aid Process)
7. Medical Aid Treatment (Reference Medical Aid Process)
8. HSE Advisor: Complete LCR with Supervisor and Employee
9. Employee: Return to regular duties
10. Supervisor: Monitor Employee Recovery
11. HSE Advisor: Forward completed documents to HSE Analyst
12. Reference First Aid Process

Yes

No
Occupational Disability Management Process – First Aid

1. Incident Occurs
   - Employee: Report Incident to Supervisor
2. Supervisor: Ensure employee safety
   - Supervisor: Arrange for treatment
3. Employee: Receive First Aid Treatment
4. Supervisor: Complete First Aid Log
5. Supervisor: Forward report to HSE Advisor
6. HSE Advisor: Complete LCR with Supervisor and Employee
   - HSE Advisor: Forward completed documents to HSE Analyst
7. Employee: Return to regular duties
   - Supervisor: Monitor Employee recovery
8. Modified duties required beyond day of incident
   - No: Return to regular duties

Reference Medical Aid Process:
- On Site Treatment Provider: Recommend appropriate restrictions

Employee: Work within assigned Modified Duties

Employee: Return to pre-incident job duties (beyond day of incident)
18.2 Classification Standard

1.0 PURPOSE
To ensure standardized recording, classification and reporting of injuries, illnesses, damage and other applicable events, throughout NCSG Crane & Heavy Haul and its affiliated companies.

2.0 SCOPE
This standard applies to all companies, employees and contractors injured in the course of employment at NCSG Crane & Heavy Haul and its affiliated companies referred to as NCSG. This standard provides direction for the classification of injuries, illnesses, damage and other applicable events.

3.0 CLASSIFICATION
An event as described herein shall be classified according to its most serious consequence. For example, if there are multiple injuries as a result of an accident, the most severe consequence shall determine its classification.

The Corporate Manager of HS&E will be the adjudicator for the interpretation of the policy. All appeals will be directed to VP of HS&E.

4.0 RECORDABLE
Recordable deals with the allocation of whether the event as described herein is classified as work related or not and how it will be applied against the company/division’s monthly Loss Management statistics.

The Corporate Manager of HS&E will determine the recordable frequency by reviewing the following:

Events will be reviewed to determine whether they occurred in the work environment and arose out of and in the course of employment while acting in the interests of the company. If there is a question as to whether the event is work related, the case will revert to work related until such time as there has been a review to necessitate a change to non-work related. (Examples are noted in Appendix II)

All injuries/illnesses will be reviewed to determine whether or not the employee actually received medical treatment as opposed to simple first aid, diagnostic or precautionary measures for injuries/illnesses. Injury classification shall be completed using the definitions defined in this standard. This standard is based on OSHA- Bureau of Labour Statistics (BLS) - Injury Classification Guideline.

The Corporate Manager of HS&E will identify any changes to the injury/illness classification with the management in the appropriate company/division, advising them of the rationale for change.

5.0 CLASSIFICATION APPEAL PROCESS
All appeals against the classification of an event will be made in writing to the VP of HS&E, with any new information to support the stated appeal. The VP of HS&E will review the case with the Corporate Manager of HS&E. Any changes to the classification will be made after the review and consultation.

Fatality (FAT): Any death as a resulting from a work related or on the job event.

Days Away (DA): Any work-related injury or illness that prevents the worker from reporting to work on the next scheduled work day.

Observation Period, if a worker is injured on the job and the physician places them in a hospital (or at home) for observation only and the worker misses a scheduled work day, it is classed as a Days Away incident.

Medical treatment, when a worker loses part or all of a work day following the day of injury due to medical treatment, it is classed as a Days Away incident.

Fatalities of workers resulting from occupational injury or illness are Days Away regardless of the time between the injury or illness and the expiration.

Medical Aid (MA): Any work related injury or illness that requires treatment outside of the definitions defined below under the First Aid, by a physician or by registered professional personnel under the standing orders of a physician. (Defined as; Physician’s Assistants, RN, Paramedic, Chiropractors, and Physio-therapists)

All diagnosed occupational illnesses are considered at least Medical Aid (MA) cases; no illnesses are considered First Aid (FA). Loss of consciousness due to an injury or exposure in the work environment is a MA and must be recorded as such until it meets the requirements of Days Away (DA).

Modified Work (MV): Any work related injury or illness that prevents a worker’s ability to perform their regularly assigned duties, but are medically able to perform alternate, modified or restricted work.

First Aid (FA): Minor injury requiring usually a one-time treatment, regardless of the professional status of the person providing the treatment. Even when a physician or other registered medical professional provides these treatments.

First Aid includes the following:

- Using an over-the-counter (OTC) medication at non-prescription strength.
- Administrating tetanus immunizations (other immunizations, such as hepatitis B Vaccine or Rabies Vaccine, are considered Medical Aid (MA))
- Cleaning, flushing, or soaking wounds on the surface of the skin
• Using hot or cold therapy
• Using wound coverings such as bandages, Band-Aids, gauze pads, etc. or using butter-fly closures or steri-strips. (other wound closures such as sutures, staples are considered Medical Aid (MA))
• Using non-rigid means of support, such as elastic bandages, wraps, back belts. (devices with rigid stays or other systems designed to immobilize parts of the body are considered Medical Aid (MA))
• Removing foreign objects from the eye using only irrigation or a cotton swab
• Using eye patches
• Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister
• Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs, or other simple means
• Using finger guards
• Using massages (physical therapy or chiropractic treatment is considered a Medical Aid (MA))
• Drinking fluids for relief of heat stress.

MVI (motor vehicle incident): Any incident involving a licensed motor vehicle in the care of, while performing work for, or for the purpose of NCSG or its affiliated companies. (Non MVI classes would be; ATV’s, crawler cranes, powered mobile equipment, side booms, loaders, and are included in property damage)

Use of a vehicle covers driving a company or contractor owned, leased or rented vehicle for business use, or use of a personal vehicle for which the operator is eligible for reimbursement for the mileage driven.

Non-collision incidents of the upset, rollover, jackknife, or run-off-the-road types that cause fatality, injury or damage are MVI’s.

Shifting cargo, when abnormal driving causes the shifting of cargo, which results in a fatality, injury or damage is considered a MVI. (Examples are materials coming off trailer while in transit)

Towing or Pushing; Damage resulting from towing or pushing actions is considered Property Damage. A towed vehicle while in transit causes a fatality, injury or damage is classified as a MVI.

Contact with animals, birds, rocks, gravel and tar while in motion that cause fatality, injury or damage is considered a MVI.

Environmental (ENV):
Spill, leak, release or loss of means of containment which results in a potential impact to soil, water or air.

Near Miss (NM)
Any potential event (incident or injury) that could or would have occurred. “No contact was made”

Security (SC):
Theft, fraud, unauthorized entry or vandalism of any amount, threats and acts of violence.

Property Damage:
Incident involving contact by machinery or energy other than MVI.

Significant:
Having or likely to have a major effect, example; fatality, third party involvement, dollar value >$10,000.00, or regulatory notification.

TRIR:
Total Recordable Incident Rate, formula defined by the number of medical aids + modified work cases + days away cases + fatalities multiplied by 200,000 and divided by the total number of man hours worked.

6.0 APPENDICES

APPENDIX A – Definitions

Occupational Injury Any injury such as a: cut, fracture, sprain, amputation etc., which arises from an accident or from a single instantaneous exposure in the work environment (i.e. insect bites, one-time exposure to chemicals).

Occupational Illness Any abnormal condition or disorder of an employee, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. These illnesses or diseases may be caused by inhalation, absorption, ingestion or direct contact with contaminants.

The following are some typical examples of recordable occupational illnesses and disorders:
• Occupational skin diseases and disorders – such as contact dermatitis, eczema, or rash caused by primary irritants and sensitizers or poisonous materials, chemical burns or inflammation, etc.
• Dust diseases of the lungs (pneumoconiosis) – such as silicosis, asbestosis, byssinosis, etc.
• Respiratory conditions due to toxic agents – such as pneumonitis, pharyngitis, rhinitis, acute congestion due to chemicals, dust, gases, exhausts, mists, fumes, etc.
• Poisoning – such as acute and chronic toxic effects from lead, mercury, arsenic and other metals, hydrogen sulfide, sulfur dioxide, etc., solvents and pesticides, etc.
Health, Safety & Environment Manual  
NCSG Crane & Heavy Haul Services  

SECTION 18  

On-Site Occupational Injury/Illness  

Any injury/illness occurring on a NCSG work site, arising out of and in the course of employment and while acting in the interests of NCSG will be considered work–related and therefore occupational.

Off-Site Occupational Injury/Illness  

Illnesses/Injuries which occur during off-site training programs, schools, conventions or meetings while acting in the interests of NCSG or its affiliated companies, during the employee’s normal hours of work or after hours at the request of the company will be considered occupational. All off-site occupational illnesses/injuries will be considered non-recordable.

Non Occupational Injury/Illness  

Non occupational injuries/illnesses do not arise as a direct result of employment, but rather have their origins outside of the workplace. Non occupational injuries are neither recordable nor non-recordable.

Work Environment  

The work environment is defined as all physical locations, equipment and materials processed or used and the operations performed by employees in the course of their assigned duties, irrespective of location.

APPENDIX B – Clarification, Exceptions and Special Cases  

Injuries/illnesses which occur while making “reasonable use” of a site cafeteria or eating area shall be considered occupational, but not recordable.

Injuries/illnesses which occur as a result of employer provided equipment such as knives, forks, etc., or food or drink provided by or purchased by an employee are occupational, but not recordable. However, injuries/illnesses arising from food, equipment or other hazards introduced by the worker are non-occupational.

If an injury occurs while boarding or exiting a bus on a worksite property, while walking from a designated on-site bus drop off point or while making reasonable and permitted use of the company parking lot, it shall be considered occupational but not recordable.

Injuries sustained during employment regardless of the area or duty, inflicted by or arising out of horseplay while in the work environment are considered occupational.

Injuries occurring to employees driving to and from work on a special assignment or as a result of being called out for an emergency situation are occupational and non-recordable.

Injuries occurring to employees traveling to and from their regular place of employment during routine travel in their own transportation, including travel at irregular hours due to late shifts or overtime are not considered occupational as workers are not in the course of employment while commuting. This includes injuries occurring while driving private or company vehicles to and from work on a regular basis.

Injuries occurring to employees going to/from their house from/to a designated bus stop where employees board buses are not considered occupational.

Employees injured during a specifically defined off-duty period in such areas as cafeterias or camp facilities, or while using any such facilities or their buildings or equipment therein in an off duty period will not be considered occupational. If, however, at such time, an injury should occur arising out of a hazard of the facility in question, it would be considered occupational, but not recordable.

In the event that an injury/illness occurred solely because of a pre-existing physical deficiency with no distinct accident involved (an employee falls down because of his “trick knee” giving out although the ground was smooth and level) it would not be considered occupational. However, should the ground be icy or wet and the employee was to fall, spraining their “trick knee” this would be considered occupational.

Aggravation at work of symptoms resulting from non-occupational injury may be considered recordable only if a new accident or unusual occurrence at work has transpired.

APPENDIX C – Examples of Medical Aid  

In the event that x-ray examination for fractures is required, this procedure would be considered a diagnostic procedure and as such not considered medical aid or first aid.

Common Medical Aid Treatments  

All cases involving loss of consciousness, caused by the industrial injury or illness unless more severe consequences dictate another classification.

- Butterfly or steri-strip sutures, only if used in lieu of standard sutures.
- Sutures and closures, by or on the advice of a physician.
- Compress, hot or cold, multiple soakings and drainage of collected blood on a second or subsequent visit if prescribed by a physician.
- Administration of prescription only medicines, if exceeding one single dose. (See definition of Medical Aid).
- Cutting away of dead tissue. (Surgical debridement).
- Aspiration (draining) of blood or fluids from damaged areas using suction or temporary implants.
- Application of non-temporary casts, splints or other immobilizing procedures following need diagnosis by a physician or registered professional.
- Diathermy treatment on second or subsequent visit if prescribed by a physician.
- Removal of EMBEDDED foreign objects, if removal from wound requires surgical means, including the use of
prescription medication to treat the condition.
• Removal of EMBEDDED foreign bodies from the eye, if removal requires surgical means.
• Treatment of 2nd degree burns. The determining factor in classifying 2nd degree burns as medical aid will be primarily based on the actual size of the burn (2.5 cm x 2.5 cm or larger). In addition, if the injury requires a series of treatments including soaks, use of whirlpool and surgical debridement, the injury should also be considered a medical aid.
• Treatment of 3rd degree burns including multiple treatments (dressing changes, soaks, whirlpool treatments and surgical debridement).
• Treatment of fractures, other than hairline.
• Treatment of infections.
• Treatment of secondary infections.
• Ultrasound treatment, on the second or subsequent visit if prescribed by a physician.
• Whirlpool or similar physical therapy treatment, on the second or subsequent visit if prescribed by a physician.
• Application of Skin Glue in lieu of sutures, if the wound have required sutures due to the location and severity of the affected area.
• Dental injury requiring dentistry and/or oral surgery.
18.3 Modified Duty Process

1.0 PURPOSE
NCSG Crane and Heavy Haul Services and its affiliated companies referred to as NCSG are committed to providing and maintaining a safe and healthy workplace for all its employees. Part of our commitment includes the availability of a Modified Work Process for workers who are injured on the job. The primary objective of the Modified Work Process is to provide the employee with an opportunity for a safe and full recovery following a work-related injury.

NCSG recognizes the effect an injury can have on the physical and mental well-being of all of its employees. It is NCSG’s intention to minimize the consequences endured by the employee who has suffered an injury or work-related illness. The Modified Work Process has been designed to ensure the injured/ill worker is placed into a temporary but appropriate work situation that provides value to both the employee and the company. Years of experience has proven that the rehabilitation process and overall wellbeing of an injured worker is dramatically improved when meaningful Modified Work has been provided to a worker. NCSG benefits through reduced claim costs, while the injured worker continues to draw an uninterrupted wage and remains productive in the workplace and social settings with their coworkers.

2.0 SCOPE AND APPLICATION
This Process requires the full participation and cooperation of company management and all employees. It is company policy to implement a Modified Work Process for any injured worker, who by nature of their injury can legitimately be assigned other suitable employment without adding to the risk or safety to the worker or others. The Modified Duty Process is designed to function as part of the NCSG Disability Management Program.

NCSG will facilitate the rehabilitation process by providing the following benefits:

- Suitable and meaningful employment for employees unable to perform their normal work duties as a result of a work-related injury;
- Timely medical intervention resulting in better care and a more rapid recovery with no risk of worsening the injury; frequent communication with the injured employee and regular contact with medical service providers and Worker’s Compensation Board (WCB) or insurance provider;
- Continuous wages with no waiting period.
- Documented case management while maintaining worker personal and medical information confidentiality.

3.0 DEFINITIONS

Accident/Incident Term used in the usual and ordinary sense, and means an unexpected mishap or event. The meaning of accident is satisfied when it can be shown that an employee’s job duties have contributed to personal injury, occupational disease, or death.

Accommodation Includes; assistive devices or equipment, modifications to the work environment, schedule, work space or job duties to enable employees to perform the essential duties.

Adjudicator Employed by WCB or applicable insurance plan holder, refers to the employee who determines a claimant’s eligibility for disability benefits.

Aggravation An aggravation is the clinical effect of a compensable accident on a pre-existing condition, resulting in temporary or permanent clinical impairment and/or loss of earning capacity.

Case Manager Employed by WCB or applicable insurance plan holder, refers to the employee who determines a claimant’s eligibility for disability benefits and coordinates efforts to return an injured employee to work in a safe and timely manner.

Case Management A collaborative process for assessing, planning, implementing, coordinating, monitoring and evaluating the options and services available to promote cost-effective outcomes. An insurance case manager and/or the Disability Management Team (DMT) can complete elements of case management.

Claims Management A process of collecting the necessary documentation and information about a claim to determine if benefit eligibility requirements have been met.

Clinical Impairment The loss of use of, or derangement of any body part, system or function. The presence and extent of impairment is determined by medical (clinical) means.

Confidentiality Spoken to in confidence; entrusted with information. It is the right of employees to have all medical & personal information held in confidence and released only to those to whom they have consented.

Compensable Entitling an individual to compensation. Example: a compensable job-related injury.

Compensable Work Restrictions Compensable work restrictions are based on an assessment of medical conditions (physical and/or psychological) which resulted from the work-related injury. Work restrictions impair an employee’s ability to perform pre-injury work duties or to adapt to some other employment.

Disability Management Disability management refers to the use of available services, resources and processes to:

- Minimize or prevent the impact and/or costs of workplace absence due to injury or illness; and
- Encourage a safe and early return to work.
Disability Management Team (DMT) The Disability Management Team is responsible to provide quality, proactive services to an employee who requires injury management. The team is comprised of: a Manager of HS&E, HSE Advisor, Branch Manager and a Human Resources representative, who are jointly responsible for managing the disability claim and coordinating, with the employee’s supervisor, effective and timely return to work plans, including Modified Work if appropriate.

Early and Safe Return to Work Returning to employment in a capacity that assists in rehabilitating the employee back to the pre-injury level.

Employee and Family Assistance Provider (EFAP) An external provider of professional services including clinical psychologists, psychiatrists, social employees and other providers to address the human aspect of change and challenges by offering employees the opportunity and expertise to effectively solve problems, whether work related or personal.

Ergonomics The study of the relationship between human beings and their work environment.

Ergonomic Hazard Hazards associated with the interface between person/machine and environment. Typical concerns include workstation design, work posture, manual materials handling work/rest cycles and seating.

Essential Job Functions Essential functions are the basic job duties that the employee who holds the position must be able to perform unabided or with the assistance of reasonable accommodation. Factors to consider in determining whether a function is essential include:

- Whether the position exists to perform that particular function;
- The number of other employees available to perform that job function or among whom the performance of that job function can be distributed;
- The degree of expertise or skill required to perform the function.

Exposure An instance where an employee is subject to some effect, influence or safety hazard or was in contact with a hazardous chemical or physical agent at a sufficient concentration, duration and intensity to produce an injury/illness.

Functional abilities An employee’s physical and/or mental capabilities as they relate to the employee’s job tasks.

Functional Capacity Evaluation (FCE) An assessment of the physical, and/or mental capacities of an injured/ill employee carried out by doctors, specialists, occupational or physical therapists. An FCE includes a medical history, a musculoskeletal examination and a standardized set of functional tests (i.e. push/pull, lifting, walking, coordination, etc.).

Graduated Return to Work (GRTW) A medically-monitored return to work plan where an employee performs regular and/or modified work duties for less than pre-injury regular hours of work. The primary purpose of GRTW’s is to allow the employee to build stamina to return to their pre-injury job responsibilities on a full-time basis. GRTW’s typically taking the form of reduced days of work and/or hours per shift and/or staggered hours or job duties.

Health Professional An organization or person who is licensed and trained to provide medical treatment to an employee, such as a hospital, physician, chiropractor or physiotherapist.

Independent Medical Examination (IME) A second opinion by a qualified physician to determine the extent of impairment resulting from injury or illness and to secure recommendations regarding physical restrictions, future treatment, medications and prognosis for return-to-work.

Lost Time Injury or Illness An injury or illness that is the result of a work-related incident which results in missed time from work beyond the day of injury or illness.

Medical Aid Injury or Illness An injury or illness that is the result of a work-related injury which requires medical treatment by a Health Care Professional as defined in the OSHA-Bureau of Labor Statistics Injury Classification Guideline.

Medical Advisor Physician who serves as a resource in assessment and making recommendations. Medical advisors may also communicate with other physicians and care providers.

Medical Status Exam (MSE) Completed by a physician, the MSE determines an employee’s current medical status including diagnosis and work restrictions.

Modified Work Modified work may consist of the employee’s normal work duties that have been changed, redesigned, or physically modified, including reductions in time or volume. It may also encompass a training opportunity, work which is normally performed by others, or work which has been specifically designed or designated as a Modified Work Process. The work will be appropriate, meaningful and productive. All work will be performed safely and without undue risk of re-injury and without undue risk to others or NCSG property.

Occupational Illness or Disease Any abnormality caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion or direct contact

Occupational Injury Any injury such as a cut, fracture, sprain, or amputation which results from a work-related event or from a single instantaneous exposure in the work environment.
Permanent Disability  An employee is considered to have a permanent disability when a work injury results in a permanent measurable clinical impairment or a permanent impairment.

Physical Demands  The physical demands of the job that the employee performs, referring to required working postures and mobility, manual handling, and hand dexterity, strength, general fitness and attentiveness.

Physical Demands Analysis (PDA)  Outlines all aspects of a position and includes the job description, critical job demands (i.e. lifting, push/pull), typical workday processes, environmental factors, other items specific to an employee’s worksite. Used to orient employees to the worksite, communicate to health care providers the essential components of a job so that they can determine more accurately what the limitations may be, provide more information on possible modified duties, form basis for occupational rehabilitation/work hardening process.

Pre-existing Condition  A pre-existing condition is any condition pre-dates a work-related injury.

Report Only Injury or Illness  An injury or illness that does not result in first aid or medical treatment (i.e. worker reports slipping/ fall but does not have a sore back but the incident is reported in the event pain develops)

Restricted Work  An injured employee is able to return to the workplace but is unable to perform what were previously considered “normal” work assignments. It includes the detailed medical information outlining the employee’s physical restrictions and medical requirements that are to be accommodated in a Modified Work plan.

Return-to-Work  An organized effort to assist an injured employee in resuming pre-injury job duties.

Supervisor  An employee who is directly responsible for the performance of employees.

Work Hardening  A series of carefully designed, controlled job tasks used to build strength and endurance to assist an injured/ill employee to return to work.

4.0 EXPECTATIONS
All NCSG employees are expected to comply with the Modified Duty Process. Active participation in the Process is an occupational requirement that promotes expedient recovery and appropriate compensation.

Complying with these requirements includes:

- Participation in appropriate Modified Work Process;
- Attending medical appointments and treatments and providing documentation
- Following return to work and Modified Work guidelines;
- Not exceeding approved limitations/restrictions; and
- Reporting any further problems or concerns immediately to the appropriate supervisor.

5.0 ROLES AND RESPONSIBILITIES

5.1 Employees
In addition to the requirement detailed under “Expectations” (Section 4), it is the employee’s responsibility to:

- Immediately report all injuries (work related and non-occupational) to the supervisor;
- Seek appropriate medical treatment immediately following a work-related injury or illness;
- Participate in the incident investigation;
- Cooperate and participate with medical treatment and medical assessments/reassessment;
- Accept and actively participate in the Modified Work Process
- Maintain regular communication with the supervisor, DMT, and WCB,
- Complete and submit all forms and documentation
- Take personal responsibility for successful return to work and recovery from injury/illness; and
- Provide medical confirmation of clearance to return to work following an injury or treatment.

5.2 Operations

Project & Department Managers
It is the manager’s responsibility to:

- Offer complete and effective implementation and support of the process;
- Provide the resources to successfully implement and manage the process; and
- Provide support and guidance to Supervisors and workers.

Supervisors
It is the Supervisor’s responsibility to:

- Ensure the provision of immediate, appropriate medical attention following a work-related incident (i.e. transportation to a medical clinic or hospital);
- Ensure injury management paperwork (where available injury package) is completed by the worker, doctor and supervisor immediately after initial medical care is provided.
- Ensure accurate and timely reporting of incidents;
- Investigate all opportunities to provide suitable, safe modified work;
• Liaise with the DMT on a regular basis and provide updates regarding the employee’s progress (i.e. compliance with modified work, absenteeism, progress, and return to pre-injury job duties);
• Ensure the DMT receives copies of all documentation relating to the claim (i.e. the LCR, Modified Work Offers, medical updates, etc.) by fax or email as soon as they are available, all original copies are to be forwarded to the DMT by interoffice mail;
• Maintain regular contact with an employee;
• Take appropriate steps to investigate any non-compliance with the Process; and
• Ensure ongoing implementation and effectiveness of the Process.
• Ensure the confidentiality of the employee’s medical information is maintained.

5.3 Human Resources
It is Human Resources responsibility to:
• Ensure support for the Process;
• Provide interpretation of collective agreements;
• Assist with Duty to Accommodate issues; and
• Manage Labour Relations issues.
• Ensure the confidentiality of the employee’s medical information is maintained

5.4 Disability Management Team (DMT)
It is the Disability Management Team’s responsibility to:
• Obtain the required information and/or documentation of a disability claim within the established timeframes and to forward these to the appropriate WCB or insurance provider;
• Liaise with the appropriate Supervisor as required to assist in the facilitation of return to work strategies (i.e. modified work, GRT’W’s, etc.);
• Liaise with WCB to ensure the claim is adjudicated timely manner;
• Communicate, with Health Professionals to obtain regular updates regarding the employee’s recovery process, functional abilities and readiness to resume pre-injury level work;
• Arrange health care solutions with external providers as required. This may include, but is not limited to: functional capacity evaluations, independent medical examinations, ergonomic consultations, specialty consultations, expedited medical investigations, work site analysis, etc.;
• Ensure the confidentiality of the employee’s medical information is maintained;
• Communicate with all stakeholders as necessary; and
• Prepare for and represent NCSG on claim appeals.
• Maintain Injury management files in a separate secured file form the employee file.

6.0 METHOD
6.1 Determination of Modified Duties
The determination of Modified duties rests with the Supervisor, DMT and the worker based on the medical information and restrictions provided by the Health Care Provider after assessing the worker and reviewing the PDA specific for the workers role. Once restrictions are provided and modified duties are agreed to they are documented on the Modified duty Agreement form. Completed forms are to be forwarded to the DMT to be secured. Regular medical assessments (typically weekly) are to be completed along with updating the modified duty agreement forms after each assessment.

Assigning Modified Work
Modified work is temporary and should not exceed eight consecutive weeks. The goal of Modified Work Process is to provide the injured employee with the opportunity to increase their functional abilities while in a safe workplace. Modified work is to be offered on a non-discriminatory basis and in keeping with the restrictions and/or abilities identified by the Health Professional. Modified work must be meaningful, productive, and value-added to the business. The employee must be able to perform it safely and without undue risk of re-injury and without undue risk to co-workers or property. When possible (in most cases) goal of the process is to keep the worker active in their regular work environment completing tasks that are required with in their regular job scope. Where accommodations are not suited for the workers regular environment the DMT will make recommendations on the tasks and environment to ensure the modified duties are within the restrictions and in a safe environment.

6.2 Information and Documentation
Operations
• If, immediately following the incident, the supervisor shall ensure the worker is provided medical assessment and care.
• Ensure the employee completes and provides to the doctor the “Fitness for Work” form which provides consent to the doctor to release medical information regarding the injury / illness to NCSG; completed forms are to be sent to the DMT.
• Ensures the worker completes the WCB / Insurance provider forms (Employee Report of Injury) and forwards to the DMT, WCB or insurance carrier.
• Supervisor is to complete the Employer Report and forward to the DMT
• Within 24 hours of becoming aware of the injury, the Employer Report of Injury form must be completed and forwarded to the WCB or insurance carrier.
• If the employee was assessed and/or treated by a Health Professional, the completed WCB Physician’s Report (employer’s copy) forwarded to the DMT by the employee.
• Complete the Loss Control Report and forward to the DMT.
• “Incident Statements” and other applicable documentation and forward to the DMT.
• Each time the employee is assessed by the Health Professional, a completed WCB Physician’s Report (employer’s copy) should be received from the injured employee and forwarded to the DMT. Other documentation, such as the WCB Occupational Readiness Report and the updated “Fitness for Work” form, when received from the employee, should be forwarded to the DMT.

Note: All documentation may be forwarded by fax or email. The originals should be forwarded for retention in the employee’s disability file.

**Disability Management Team (DMT)**

• Ensure the concerns expressed by the supervisor are documented appropriately.
• Review the employee’s disability file(s) (occupational and non-occupational) so that a determination regarding the potential impact of pre-existing or non-occupational factors may be identified.
• Ensure copies of all documentation (Worker’s Report, medical reports, LCR, Incident Statements, etc.) are placed in the employee’s disability file as well as copies of notes, emails, etc.

**Filing the Employer’s Report with WCB Operations**

• Forward all paperwork to the DMT for review and submission.

**Disability Management Team (DMT)**

• Within the applicable WCB deadline, file the WCB Employer’s Report.
• Ensure copy of Employers report is made available to the worker.

**6.3 Staying in Contact with the Injured Employee Operations**

Maintain regular contact with an employee.

While an employee is recovering there is an ongoing need to maintain communication. This positively reinforces the organization’s support of the employee, encourages their return to pre-accident work and can identify the need for additional support. It is the supervisor’s obligation to maintain contact with an employee throughout recovery. Each situation should be determined on a “case-by-case” basis and coordinated between the supervisor and the DMT.

All information provided by the employee should be treated as confidential. All communications should be documented by the Supervisor and forwarded to the DMT for placement in the employee’s disability file.

**Disability Management Team (DMT)**

• The supervisor will maintain contact with the employee regarding their recovery progress, etc.
• The DMT will be available to the employee to address concerns regarding the status of their claim as well as concerns regarding their medical treatment plans, appointments, etc.

**6.4 Return to Pre-Injury Work Operations**

• Once the worker has been cleared from all restrictions by the Health Care Provider and the “Fitness for Work” form is completed a Medical Clearance Letter (Appendix-B) is to be completed by the Health Care Provider.
• Operations will provide the completed form and confirm with the DMT that the employee has returned to pre-injury job duties (i.e. regular job duties and full-time hours of work).
• Follow-up with the employee, as appropriate (i.e. periodically throughout the first shift, at the end of the following two or three shifts and again after a few shifts) to ensure the employee is managing well and there are no issues. If a concern or problem arises, contact the DMT to determine appropriate follow-up.

**Disability Management Team (DMT)**

• Advise WCB/Insurance provider, of the employee’s return to pre-injury job duties (i.e. pre-injury job duties and full-time hours of work) based on either:
  • Submission of documentation by Operations
  • Notice received directly from the Health Professional.
• Follow-up, periodically, with Operations to ensure the employee is managing well. If concerns or problems arise, follow-up accordingly.

**7.0 TRAINING REQUIREMENTS AND MATERIAL**

• NCSG Occupational Disability Management Program
• Appendix A – Fitness for Work form
• Appendix B – Medical Clearance Letter

**8.0 RESOURCES**

In accordance with our Values, NCSG will ensure the fair and equitable treatment of our employees. NCSG understands that there may be questions and concerns involving the Modified Duty Process.
APPENDIX A – Fitness for Work Form

FITNESS FOR WORK

COMPANY NAME: ________________________________

Worker’s Name: ________________________________

Company contact: Peter Schaefer Phone: 780-977-9960 Fax: 780-960-9215

NCSG is committed to doing everything we can to achieve a successful recovery and return to work for our injured employees. Our Disability Management program is designed to help them return to work safely and at the earliest opportunity, using appropriate modified work alternatives when required.

We appreciate your assistance. Please complete the fitness-for-work section at time of treatment and fax to the above number, or have our employee return it.

Authorization to Release Information (to be completed by injured employee)

Injury: ________________________________ Injury date: ________________________________

I hereby authorize my treating health care provider to release information related to my fitness for work.

Employee name: ________________________________ Date: ________________________________

Employee signature: ________________________________

Fitness for Work (to be completed by treating health care provider)

Examination date: ________________________________ Injury: ________________________________

This worker is  □ Fit for regular work, no restrictions
□ Fit for modified work with the following recommendations:

Specific fitness recommendations and physical restrictions:
□ Sedentary □ Light □ Medium □ Heavy
(See next pg. for guidelines)

__________________________________________________________
__________________________________________________________

Estimated date fit for regular work: ________________ Next Appointment: ________________

Health care provider’s name: ________________________________

Payment address: ________________________________

Health care provider’s signature: ________________________________
Dear Health Care Provider,

Thank you for your time and assistance.

To ensure a safe workplace for our workers, customers and the public, NSCG will require your assistance.

To assist us in ensuring a safe workplace for all, please review the attached Physical Demands Analysis and sign off on the lower portion of this letter if you approve [Worker Name] as being “Fit for Duty” as a (_______ Position_______).

Again, I thank you for your time and invite any questions or concerns you may have.

Kindest Regards,

[Signature]

Peter Schaefer
HSE and Injury Claims Manager
NCSG - Crane and Heavy Haul
(780) 977-9960

Physician Approval & Sign Off

I, [Treating Physician], have assessed the worker and have reviewed the Physical Demands Analysis and approve the worker as “Fit for Duty” for these tasks without undue risk to themselves or others.

Signature: ______________________ Date: ______________________
18.4 Non Occupational Injury Process

1.0 PURPOSE
The Non-Occupational (Non-Occ) Injury / Illness process at NCSG is a workplace strategy aimed at safely reintegrating the injured / ill employee into the workplace. The Non-Occ Injury / Illness process provides a coordinated, structured approach to Non-Occ injury / illness management. It reflects our commitment to employee wellness and safety by ensuring an employee’s “fit for duty” status prior to returning to their duties and work environments that may aggravate, delay or complicate recovery, or create undue hazards in safety sensitive positions.

The Non-Occ Injury / Illness process involves the coordination of a number of different management levels including HS&É, Human Resources, Operations, the employee and their Health Professional(s). In every instance the distinctive nature of the employee and the injury will be considered in the development of a customized approach to managing a specific injury/ illness to ensure a safe and timely return to work.

2.0 SCOPE AND APPLICATION
NCSG has implemented a Non-Occ Injury / Illness process that is timely, consistent, effective and fair. Employees and perspective employees who become injured and/or ill outside the course of work are required to actively participate in the program.

This document is not intended to modify, change and/or supersede Management/Union rights as detailed in Collective Agreements. The intention of this program is to meet or exceed any applicable Provincial / State / Federal legislation. Should a conflict with any legislation be identified, the applicable legislation will be the standard and will be followed.

This process is subject to ongoing review and evaluation. Modifications will be made as deemed necessary to respond to current circumstances and evolving needs. Formal reviews will be conducted at a minimum every three years.

3.0 DEFINITIONS
Accident Term used in the usual and ordinary sense, and means an unplanned / unexpected mishap or event that occurred away from employment and contributed to personal injury, occupational disease, or death.

Accommodation Includes; assistive devices or equipment, modifications to the work environment, schedule, work space or job duties to enable employees to perform the essential duties.

Case Management A collaborative process for assessing, planning, implementing, coordinating, monitoring and evaluating the options and services available.

Clinical Impairment The loss of use of, or derangement of any body part, system or function. The presence and extent of impairment is determined by medical (clinical) means.

Chief Compliance Officer (CCO) VP of HSE or designated position with granted authority to review the claim and authorize the return to work. The CCO will be the final authorization to return to work and oversee the conditions of the return to work on a case by case basis.

Confidentiality Spoken to in confidence; entrusted with information. It is the right of employees to have all medical & personal information held in confidence and released only to those to whom they have consented.

Disability Any restriction or lack of ability (resulting from an impairment) to perform an activity in the manner or within the range considered normal for a human being.

Disability Management Team (DMT) The Disability Management Team is responsible to provide quality, proactive services to an employee who requires injury management. The objective is to attain a safe return to productive employment for the injured employee. The team is comprised of a: HS&É Manager and a Human Resources representative, who are jointly responsible for managing the Non-Occ process.

Employee In reference to this process an employee is a person that conducts work on behalf of NCSG, through an employee agreement, a contractor or lease agreement or as a volunteer. This process may extend to perspective employees if a known history or when a disclosure of injury / illness occurs during the recruitment process.

Ergonomics The study of the relationship between human beings and their work environment. It addresses work content and work context for both office and industrial settings. Organizational, personal, physical, psychosocial and environmental risk factors may be evaluated in an ergonomic assessment. Changes in pacing, technique, work organization, tasks and equipment may be recommended.

Essential Job Functions Essential functions are the basic job duties that the employee who holds the position must be able to perform unaided or with the assistance of reasonable accommodation.

Functional Capacity Evaluation (FCE) An assessment of the physical, and/or mental capacities of an injured ill employee carried out by doctors, specialists, occupational or physical therapists. An FCE includes a medical history, a musculoskeletal examination and a standardized set of functional tests (i.e. push/pull, lifting, walking, coordination, etc.). Functional Capacity Evaluations are widely used to assess an employee’s physical work abilities; the results of the evaluation are used to investigate and determine appropriate, safe return-to-work opportunities.

Health Professional An organization or person who is licensed and trained to provide medical treatment to an employee, such as a hospital, physician, chiropractor or physiotherapist.
Independent Medical Examination (IME) A second opinion by a qualified physician to determine the extent of impairment resulting from injury or illness and to secure recommendations regarding physical restrictions, future treatment, medications and prognosis for return-to-work.

Medical Clearance Letter Medical Clearance letter is a documented declaration by the health care professional stating that the worker is “fit for duty” in relation to the physical demands analysis for the workers tasks without unforeseen risk to the worker or others or without complication or aggravation of the Non Occ injury or illness.

Medical Plateau The medical plateau is reached when the employee’s medical condition has stabilized, further significant medical improvement is unlikely, and permanent work restrictions can be confirmed.

Medical Status Exam (MSE) Completed by a physician, the MSE determines an employee’s current medical status including diagnosis and work restrictions. Any requirements for further medical investigations, consultation and treatment will also be identified.

Medical Treatment Treatment provided by a Health Professional recognized by the applicable WCB jurisdiction as authorized to provide such care (i.e. physician, chiropractor, etc.).

Modified Work May consist of the employee’s normal work that has been changed, redesigned, or physically modified, including reductions in time or volume. It may also encompass a training opportunity, work which is normally performed by others, or work which has been specifically designed or designated as a modified work program. The goal of modified work is to provide the injured employee with the opportunity to utilize the work site as part of their treatment program. The work acts as a bridge, enabling an employee to work toward a return to their normal job and the normal activities of their life. The work will be appropriate, meaningful and productive. All work will be performed safely and without undue risk of re-injury and without undue risk to others or NCSG property.

Non-Occupational Illness or Disease Any abnormality caused by exposure to factors not associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion or direct contact.

Permanent Disability An employee is considered to have a permanent disability when an injury / illness or condition results in a permanent measurable clinical impairment.

Physical Demands The physical demands of the job that the employee performs, referring to required working postures and mobility, manual handling, and hand dexterity, strength , general fitness and attentiveness.

Physical Demands Analysis (PDA) Outlines physical aspects of a position, a brief job description and the critical job demands (i.e. lifting, push/pull), typical workday processes, environmental factors, other items specific to an employer’s worksite. May be used by health care providers to evaluate an employee’s abilities against the essential components of a job so that they can determine the employee’s “Fit for Duty Status”.

Pre-existing Condition A pre-existing condition is any condition which, based on a diagnosis or medical judgment, pre-dates employment with NCSG.

Undue Hardship An undue hardship is an action that requires significant difficulty or expense in, or resulting from, the provision of providing a reasonable accommodation. Undue hardship includes any action that is unduly costly, extensive, substantial, disruptive, or that would fundamentally alter the nature or operation of the business or negatively impacts other employees.

Working Conditions A description of potential chemical, physical, biological, ergonomic and psychosocial hazards and the risk of exposure are directly related to an employee’s job duties or tasks. The working conditions also include a description of the personal protective equipment to be worn to conduct the employee’s job duties or tasks.

4.0 EXPECTATIONS
Although NCSG employees are expected to comply with the Non-Occ Injury / Illness Process, participation in the program is voluntary. As such the process places the onus on the employee to provide appropriate medical clearance prior to being authorized to return to work after a Non-Occ injury or illness has occurred.

Expectations include:
- Notification of inures, illnesses, treatments or conditions that may impact the workers’ health, performance or ability to perform work safely without increased risk to themselves, others or property.
- Participation in appropriate medical assessments and treatment programs;
- Providing ongoing follow up documentation;
- Not exceeding approved limitations/restrictions;
- Reporting any further problems or concerns immediately to the appropriate supervisor
- Providing a medical clearance letter and reviewed PDA. (Costs are employee’s reasonability)
- Not operate company vehicles or perform work related functions without authorization by the CCO; and
- Not start work until authorization from the CCO or designate has been provided.
5.0 ROLES AND RESPONSIBILITIES

Employees
In addition to the requirement detailed under “Expectations” it is the employee's responsibility to:

• Immediately report a non-work-related injuries to the supervisor;
• Seek appropriate medical treatment immediately following a non-work-related injury or illness; Arrange health care solutions with external providers as required. This may include, but is not limited to: functional capacity evaluations, independent medical examinations, ergonomic consultations, specialty consultations, expedited medical investigations, work site analysis, etc.;
• Cooperate and participate with medical treatment and medical assessments/reassessment;
• Maintain regular communication with the supervisor and DMT;
• Take personal responsibility for successful return to work and recovery from injury/illness; and
• Provide medical confirmation of clearance to return to work following an injury or treatment.

Operations Managers
It is the manager’s responsibility to:

• Notify the VP of HSE and HR of the situation;
• Ensure compliance with the Non-Occ Process;
• Provide the resources to successfully implement and manage the process;
• Provide support and guidance to Supervisor; and
• Ensure the confidentiality of the employee’s medical information is maintained.

Supervisors
It is the Supervisor’s responsibility to:

• Ensure the provision of immediate notification of the situation to the manager
• Remove the employee from scheduled tasks;
• Liaise with the DMT on a regular basis to provide updates regarding the employee’s progress (i.e. potential medical clearance assessments prior to return to pre-injury duties);

Ensure the DMT receives copies of all documentation (i.e. medical updates, etc.) by fax or email and all original copies are forwarded to the DMT by interoffice mail;

• Maintain regular contact with an employee;
• Ensure ongoing implementation and effectiveness of the Program; and
• Ensure the confidentiality of the employee’s medical information is maintained.

Human Resources
It is Human Resources responsibility to:

• Ensure support for the Program;
• Provide interpretation of collective agreements;
• Assist and participate on the DMT;
• Manage Labour Relations issues.
• Ensure the confidentiality of the employee’s medical information is maintained.

Disability Management Team (DMT)
It is the Disability Management Team’s responsibility to:

• Obtain the required information and/or documentation of the Non–Occ claim;
• Liaise with the employee and supervisor as required to assist in the facilitation of the medical assessment and clearance for return to work strategies (i.e. Full clearance, modified work, gradual return to work, etc.);
• Communicate, as appropriate, with the employee to obtain regular updates regarding the employee’s recovery process, functional abilities and readiness to resume pre-injury level work;
• Ensure the confidentiality of the employee’s medical information is maintained; and
• Communicate with all authorized stakeholders as necessary;

Health Professional(s)
Health care providers include occupational therapists, physical therapists, kinesiologists, psychiatrist, exercise therapists, chiropractors, massage therapists, nurses, physicians or any health care professional providing services to assist the injured employee return to work in a safe and timely manner. The Health Professional(s) involved in the rehabilitation of the injured employee:

• Assess the employee’s injury or illness and provide effective recommendations for treatment and recovery;
• Assess the impact of the employee’s injury or illness on his/her ability to resume work;
• Make recommendations for return-to-work planning by providing information with respect to the employee’s functional abilities as well as any restrictions and/or limitations. This may involve participation in meeting to discuss return-to-work planning and progress;
• Communicate with the employer by providing verbal reports and/or completing documentation as requested (i.e. Employer Restrictions Form,); and
• Provide assessment based on the review of the PDA and Medical Clearance letter
The Health Professional(s) may also be requested to perform clinical and functional capacity evaluations or ergonomic-safety assessments of jobs, as needed, on a timely basis and provide documentation to the DMT.

**Employee and Family Assistance Program (EFAP)**
Under the Occupational Disability Management Program, the services provided through the EFAP would only be utilized to facilitate a safe and timely return to work for the injured employee. The injured employee may sign a Release as provided by the EFAP provider authorizing stakeholder(s) to communicate with the EFAP provider with respect to issues affecting the injured employee’s return to work. The EFAP provider will:

- Provide the injured employee with the opportunity and knowledge to effectively solve problems, whether work related or personal.
- Provide the stakeholder(s) involved in the Non-Occupational Injury / Illness process with strategies to effectively assist the injured employee while respecting the employee’s right to confidentiality.

**Insurance provider**
Insurance provider/s may be responsible for the adjudication of Non-Occupational injuries or illness claims and health benefits. Insurance providers require the employee to submit the claim of Injury / illness in all cases where an employee seeks benefits. Insurance providers may require information from the company. All release of employer information is to be coordinated through Human Resources and approved by the Chief Compliance Officer prior to release.

### 6.0 METHOD

**Principles**

**Case Management**
NCSG will take a “case by case” approach to the management of each Non–Occ situation. This will ensure that the needs of the employee and the employer are met while, at the same time, ensuring consistency and fairness. The NCSG DMT and Operations will collaborate to ensure a successful resolution to the employee’s injury/illness with consideration to the employee, the public and the company.

NCSG will make all reasonable efforts to ensure timely management for an employee who sustains a Non –Occ injury or illness. This will require timely utilization of internal and community-based services.

**Confidentiality & Protection of Personal Health Information**
It is understood that confidentiality is an integral component of this program. An employee’s rights to confidentiality will be respected. Any medical information obtained by the Supervisor, Branch Manager, Lead HS&E Advisor or DMT through this program will be used solely for the purpose for which it was provided. Medical information obtained through the program will be kept in a locked, secure location apart from the employee’s personnel file. Information requests will be limited to information concerning the functional abilities of the employee. The intent of obtaining this information is to assist in enabling the work site to be used as part of the treatment and to aid in arranging an early and safe return to work.

Where it is deemed that the injured employee’s personal health information must be shared with a third party, the third party will be required to follow this program and ensure the confidentiality of the employee. The information may only be used by the third party for the purpose it was provided with written authorization by the employee. Functional abilities information may be shared with the appropriate stakeholder to enable return to work plans to be developed.

With respect to the employee's personal health information, the intent of this Program meets or exceeds any legislation that is in effect in the jurisdictions that NCSG has operations. All laws pertaining to the freedom of information and the protection of privacy and any other applicable legislation are considered to be part of this program and must be adhered to by all employees. NCSG will make every effort to ensure that:

- Collection of personal health information is only used for purposes of managing the injury;
- The employee’s Non-Occ claim file will be securely stored separately from the human resource personnel file;
- Only authorized employees will have access to the disability file;
- The employee has the right to access the disability file by contacting a member of the DMT during regular business hours.

**Duty to Accommodate**
The intent of NCSG’S Program is to meet or exceed any legislation that is in effect in the jurisdictions that NCSG has operations. All laws pertaining to “Duty to Accommodate” and “Americans with Disabilities Act-(ADA)” any other applicable legislation are considered to be part of this Program and must be adhered to by all employees. Any legal action requiring “Duty to Accommodate” or “ADA” requires a minimum the involvement of the Vice President – Human Resources and the CCO.

NCSG is committed to investigating reasonable opportunities to accommodate and assist an injured employee to return to their pre-injury job. If this is not possible, other suitable, meaningful job opportunities within NCSG will be investigated. Where a feasible and appropriate job is not available within the business, NCSG may consider assisting the injured employee in obtaining retraining and/or alternate employment. Duty to accommodate authorization rests with solely the Chief Compliance Officer.
Conflict Resolution
Sometimes, it may be necessary to resolve difficult or sensitive Non-Occ Injury / Illness issues. This may occur in the following situations:
• Employee raises concerns about the fairness of the Non-Occ program;
• Conflict occurs between the employee and the supervisor;
• The job modifications are complex, expensive or permanent.

In such cases, it may be appropriate to form an Ad-hoc Committee, comprised of representative(s) from the Disability Management Team, Human Resources Executive, as well as the injured employee and his/her representative(s).

Managing the Disability
Initial Response
Operations

Upon notice of the injury, illness or condition verify information with employee and provide notice to Human Resources and HSE Manager.

With the assistance of the HS&E Manager and based on the extent of injury, illness or condition, determine whether the employee requires a Medical Clearance. Always err on the side of caution in making this determination.

Where it is determined that the Non-Occ injury/illness or condition impacts the employee’s ability to perform their duties, or increases the risks to the safety of the employee or others, the employee is to be remove from their scheduled tasks pending investigation. Please contact Human Resources to assist in benefit coordination (as needed).

Notify the Disability Management Team (DMT) of the situation by telephone or email, notice should be provided to Manager of HSE. A PDA and Medical clearance letter will be drafted specific to the employee’s situation and provided to the employee to have their Health Care Professional review and sign off on the “Fit for Duty” status.

When the Health Care Professional signs the Medical Clearance Letter that the employee is “Fit for Duty” after reviewing the PDA, the case is reviewed by the Chief Compliance Officer (CCO) for authorization for the employee to return to work.

When the Health Care Professional signs the Medical Clearance Letter that the employee is NOT “Fit for Duty” after reviewing the PDA, the case is reviewed by the DMT and notice is provided to the CCO. No authorization for the employee to return to work will be granted until the Medical Clearance is provided by the Health Care Professional.

In either case the CCO may request independent medical assessments or additional documentation as part of the claim review prior to authorizing the return to work.

Information and Documentation
Immediately following notification of a Non-Occ injury, illness or condition, or where the supervisor has concerns regarding the “Fit for Duty” status of an employee; concerns and observations and statements shall be documented and discussed with the DMT (by telephone or email).

Disability Management Team (DMT)
Ensure the concerns expressed by the supervisor are documented for further follow-up, if appropriate.

• Review the employee’s non-occupational file so that a determination regarding the potential impact of pre-existing or non-occupational factors may be considered;
• Ensure copies of all documentation (Employee volunteered information, authorizations, statements, Medical clearance letters, PDAs etc.) are placed in the employee’s disability file as well as copies of notes, emails, etc.

Monitoring the Claim
Operations

• Assist DMT with monitoring employee participation, rehabilitation and therapy and provide updated documentation.

Disability Management Team (DMT)
• Liaise with employee to ensure the Medical Clearance Letter and PDA are available in a timely manner,
• Where authorized communicate with Health Professionals to obtain regular updates regarding the employee’s recovery process, functional abilities and readiness to resume pre-injury level work.
• Assist employee with health care solutions with external providers as required. This may include, but is not limited to: functional capacity evaluations, independent medical examinations, ergonomic consultations, specialty consultations, and expedited medical investigations, work site analysis, etc.
• Ensure the confidentiality of the employee’s medical information is maintained.
• Communicate with all stakeholders as necessary.

Staying in Contact with the Injured Employee
Maintain regular contact with an employee. While an employee is recovering there is a need to maintain communication. This positively reinforces the organization's support of the employee, encourages their return to pre accident work and can identify the need for additional support. It is an employee’s obligation to maintain contact with an employer throughout recovery of Non-Occ injuries/ Illness and conditions. Each situation should be determined on a case-by-case basis and coordinated between the supervisor and the DMT.
All information provided by the employee should be treated as confidential. All communications should be documented by the Supervisor and forwarded to the Disability Management Team for placement in the employee’s Non-Occ file.

Assistance with communicating with the employee can be provided with the appropriate stakeholder, whether the Disability Management Team or Human Resources. Below are some general guidelines that may be helpful:

<table>
<thead>
<tr>
<th>DO</th>
<th>DON’T</th>
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<tbody>
<tr>
<td>• Ask the employee about their general condition/prognosis.</td>
<td>• Ask them their medical diagnosis.</td>
</tr>
<tr>
<td>• Ask about upcoming medical appointments.</td>
<td>• Ask them about medical treatments or medications.</td>
</tr>
<tr>
<td>• Discuss any plans to return to work,</td>
<td>• Confront them with suspicions.</td>
</tr>
<tr>
<td>• Let them know they are a valuable employee of NCSG and they are welcome back at work once their recovery is complete.</td>
<td>• Complain about work issues in their absence.</td>
</tr>
</tbody>
</table>

**Disability Management Team (DMT)**

- The supervisor will maintain contact with the employee regarding their recovery progress, etc.
- The DMT (HSE manager and Human Resources) will be available to the employee to address concerns regarding the status of their claim as well as concerns regarding benefits.

**Assigning Modified Work**

Modified work is temporary and should not exceed eight consecutive weeks. The goal of modified work is to provide the injured employee with the opportunity to increase their functional abilities while in the workplace. The work acts as a bridge, enabling an employee to work towards a return to their regular job and the normal activities. Modified work is to be offered on a non-discriminatory basis and in keeping with the restrictions and/or abilities identified by the Health Professional. Modified work must be meaningful, productive, and value-added to the business. The employee must be able to perform it safely and without undue risk of re-injury and without undue risk to co-workers or property. Authorization for the return to work (full duty or modified) is at the sole discretion of the Chief Compliance Officer or designate.

**Return to Pre-Injury Work**

When an employee is authorized to return back to work the supervisor shall confirm with the DMT that the employee has returned to pre-injury job duties (i.e. regular job duties and full-time hours of work). The DMT provides follow-up with the employee, as appropriate (i.e. periodically throughout the first shift, at the end of the following two or three shifts and again after a few shifts) to ensure the employee is managing well and there are no issues. If a concern or problem arises, contact the DMT to determine appropriate follow-up. The DMT will follow-up, with Operations to ensure the employee is managing well. Where concerns or problems arise, the DMT coordinates and follows-up accordingly.

**7.0 PERMANENT ACCOMMODATION**

NCSG will take a “case by case” approach to the management of each permanent accommodation. This will ensure that the needs of the employee and the employer are met while, at the same time, ensuring consistency and fairness.

**8.0 EMPLOYEE AND FAMILY ASSISTANCE PROGRAM (EFAP)**

Where employee benefits include EFAP referral will be coordinated through Human Resources.

**9.0 RESOURCES**

In accordance with our Values, NCSG will ensure the fair and equitable treatment of our employees. NCSG understands that there may be questions and concerns involving the Non-Occupational Injury / Illness Process. The DMT, HSE and Human resource managers are available for assistance.
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
1.0 POLICY
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG will conduct its transportation activities in a safe, compliant and ethical manner. All employees will be held to the highest standard as drivers and representatives of the company. Ensuring that business activities meet the minimum requirements herein as well as those represented within the Transportation Compliance Code’s elements will allow NCSG to meet these objectives and continue to be the employer and transportation provider of choice.

Introduction
NCSG is committed to ensuring that its over-the-road transportation activities are performed safely and within the guidelines established by regulations. This Road Transportation Standard, the Transportation Compliance Code and company policies and guidelines were designed to comply with the prevailing legislation in Canada and the United States. In addition, many best practices have been utilized to ensure that NCSG continues to maintain its position among its peers as a leading and innovating company with a forward approach to matters of Health and Safety and its integration into all of the companies’ business activities.

In development and review of the Road Transportation Safety Standard, all efforts have been made to ensure that the references to legislation are the most up-to-date possible, however all employees should be mindful that the most current legislation will be available online or made available upon request.

This Standard applies across North America and efforts to differentiate or indicate Canada only or USA only sections are identified with corresponding flags.

Errors should be noted and submitted to compliance@ncsg.com.

2.0 ROLES AND RESPONSIBILITIES

Commercial Driver
Definition
In Canada, a Commercial Driver (aka NSC/DOT) is any driver authorized to operate a vehicle with a gross registered vehicle weight in excess of 4,500 KG’s.

In the United States, a Commercial Driver is any driver authorized to operate a vehicle with a gross vehicle weight rating or gross combination weight rating or if not equipped with a rating, the actual gross vehicle weight or combined vehicle weight of 10,001lbs or more.

Commercial Drivers are identified through the completion of a Driver Authorization (Status) Form and recorded when submitted to compliance@ncsg.com or compliance.us@ncsg.com.

Responsibilities
Commercial Drivers are responsible to:
• Ensure they are suitably licensed and authorized to drive vehicles they are assigned,
• Report potential issues of impairment, due to alcohol, drug, fatigue or medical conditions,
• Participate in the pre-job hazard assessment process and journey management process,
• Submit documentation as soon as possible and not beyond the dates required by law,
• Know the dimensions and weights of their vehicle and loads and ensure that they are not exceeding the allowances of the jurisdiction or permits;
• Never engage in distracting activities, such as using a handheld electronic devices, while driving,
• Always wear seatbelts, adhere to the speed limits, and all traffic laws, and
• Complete vehicle inspections prior to, during and following use of a vehicle and record defects on the inspection report.
• Immediately report any out-of-service defects found during the inspection.

Drivers Obligation to Notify Carrier
Legislation requires that all commercial drivers are required to notify their employer of any violations or citations received while employed by the company, even if received on personal time. Failing to report as required will result in discipline up to termination.

Light Duty Vehicle Driver
Definition
In Canada, a Light Duty Drivers is one authorized to operate any vehicle with a gross registered vehicle weight that is less than 4,500kg’s.

In the United States, a Light-Duty driver is any driver authorized to operate a vehicle with a gross vehicle weight rating or gross combination weight rating or if not equipped with a rating, the actual gross vehicle weight or combined vehicle weight of 10,000lbs or less.

This, like the Commercial Driver status, is determined through completion of a Driver Authorization (Status) Form and recorded when submitted to compliance@ncsg.com or compliance.us@ncsg.com.

Responsibilities
Light Duty drivers are not authorized to drive any vehicle over 4,500kg’s or 10,011lb’s and are not subject to all of
the same legal requirements as a Commercial Driver. NCSG has determined that Light duty drivers are responsible for:

- Ensure they are suitably licensed and authorized to drive the vehicles they are assigned,
- Report potential issues of impairment, due to alcohol, drug, fatigue or medical conditions,
- Submit all required documentation as soon as reasonably possible,
- Never engage in distracting activities, such as using a handheld electronic devices, while driving,
- Always wear seatbelts, adhere to the speed limits, and all traffic laws, and
- Complete vehicle inspections prior to, during and following use of a non-permanently assigned vehicle (pool vehicles, rentals, etc.).

**Pilot (Escort Vehicle) Driver**

**Definition**

The driver of a light duty vehicle commercially equipped in accordance with the laws of the jurisdiction in which they are operating to function as a guide or tailing vehicle for a vehicle with an over-dimensional load or trailer.

**Responsibilities**

While the primary function of this operator/vehicle is to provide warning to the public, the secondary function is to serve as traffic control. This function will be performed from inside and outside of the vehicle and for the sake of this standard, only those duties performed inside of the vehicle are being addressed. In addition to the responsibilities of a Light Duty driver, a Pilot is responsible to,

- Participate in the pre-job hazard assessment process and journey management process,
- Retain a copy of the loaded vehicles permit and route,
- Be aware of the weather conditions for the duration of travel (as far as reasonable),
- Communicate traffic and weather concerns to the driver of the escorted vehicle,
- Protect the safety of the public while in the vicinity of the over-dimensional vehicle,
- Flag vehicles ONLY from outside of the vehicle, where you can safely be seen,
- Watch for any sign of upset or loss of control with regards to the load, and
- Ensure seatbelts are used at all times unless specific exemptions exist for the actions being completed.

**Trailer Operator**

**Definition**

A Trailer Operator is any individual, assigned the duty of controlling a trailer with powered self-steering capabilities. Control can be applied with a wired or wireless remote and requires very minimal interaction on part of the Commercial driver in the tractor unit.

**Responsibilities**

The Trailer Operator is never permitted to operate a trailer while driving a motor vehicle and as such, the responsibilities are not inclusive of driver responsibilities.

The Trailer Operator is responsible to;

- Participate in the pre-job hazard assessment process and journey management process,
- Participate in equipment inspections prior to the use of equipment, and
- Participate in the necessary pre-use inspection documentation (DVIR’s) prior to use of the equipment.

### 3.0 RECORDS MANAGEMENT

**Driver Records**

**Definitions**

**Principle Place of Business** – The location that has been used in the registration of vehicles, as the primary place of business. Often, this will match the company’s central record-keeping location.

The Manager of Transportation Safety and Compliance is responsible to ensure that the records maintained at each Principle Place of Business meet the minimum requirements in place by regulations and by company policies.

**Responsibilities**

In Canada, the records are to be maintained at the principle place of business for the business and its respective province.

Addresses for Principal Place of Businesses by province can be found on the HUB under Safety/Transportation Compliance.

For example, NCSG Crane and Heavy Haul Services Ltd. has listed the principle place of business as 817, 53016 Hwy 60, Acheson, Alberta. By necessity, all Alberta records pertaining to that business must be stored at that location.

In the United States, the FMCSA requires that a company declare its primary place of business and that all records are made available at that place of business with 48 hours of the request.

Addresses for Principal Place of Business in the United States can also be found on the HUB under Safety/Transportation Compliance.
Required Documentation

All driver records are to be maintained in a fashion that is compliant with the laws of the jurisdiction.

At a minimum, a Canadian driver’s file must contain the following items;

- A driver’s application for employment,
- A copy of the Drivers Abstract, dated within 30 days of hire,
- Annually updated copies of the drivers abstract,
- Drivers prior employment history for the preceding 3 years,
- A record of driver’s convictions of safety laws pertaining to the operation of a motor vehicle in the current year and in each of the preceding 4 years,
- A record of any administrative penalties imposed upon the driver,
- A record of all collisions involving motor vehicles operated by the driver that are required to be reported to a peace officer,
- A record of all training taken by the driver

At a minimum, a US Driver Qualification File must contain the following items,

- The driver’s application for employment completed in accordance with § 391.21;
- A copy of the motor vehicle record received from each State record pursuant to § 391.23(a)(1);
- The certificate of driver’s road test issued to the driver pursuant to § 391.31(e), or a copy of the license or certificate which the motor carrier accepted as equivalent to the driver’s road test pursuant to § 391.33;
- The motor vehicle record received from each State driver licensing agency to the annual driver record inquiry required by § 391.25(a);
- Signed proof of receipt of FMCSA Safety Regulations,
- A note relating to the annual review of the driver’s driving record as required by § 391.25(c)(2);
- A list or certificate relating to violations of motor vehicle laws and ordinances required by § 391.27;
- The medical examiner’s certificate as required by § 391.43(g) or a legible copy of the certificate.

  • Exception. For CDL holders, beginning January 30, 2012, if the CDLIS motor vehicle record contains medical certification status information, the motor carrier employer must meet this requirement by obtaining the CDLIS motor vehicle record defined at § 384.105 of this chapter. That record must be obtained from the current licensing State and placed in the driver qualification file. After January 30, 2015, a non-excepted, interstate CDL or CLP holder without medical certification status information on the CDLIS motor vehicle record is designated “not-certified” to operate a CMV in interstate commerce. After January 30, 2015, a motor carrier may use a copy of the driver’s current medical examiner’s certificate that was submitted to the State for up to 15 days from the date it was issued as proof of medical certification.

  • If that driver obtained the medical certification based on having obtained a medical variance from FMCSA, the motor carrier must also include a copy of the medical variance documentation in the driver qualification file in accordance with § 391.51(b)(8);

- A Skill Performance Evaluation Certificate obtained from a Field Administrator, Division Administrator, or State Director issued in accordance with § 391.49; or the Medical Exemption document, issued by a Federal medical program in accordance with part 381 of this chapter; and

- A note relating to verification of medical examiner listing on the National Registry of Certified Medical Examiners required by § 391.23(m).

  • Except as provided in paragraph (d) of this section, each driver’s qualification file shall be retained for as long as a driver is employed by that motor carrier and for three years thereafter.

  • The following records may be removed from a driver’s qualification file three years after the date of execution:
    • The motor vehicle record received from each State driver licensing agency to the annual driver record inquiry required by § 391.25(a);
    • The note relating to the annual review of the driver’s driving record as required by § 391.25(c)(2);
    • The list or certificate relating to violations of motor vehicle laws and ordinances required by § 391.27;
    • The medical examiner’s certificate required by § 391.43(g), a legible copy of the certificate, or for CDL drivers any CDLIS MVR obtained as required by § 391.51(b)(7)(ii);
    • Any medical variance issued by FMCSA, including a Skill Performance Evaluation Certificate issued in accordance with § 391.49; or the Medical Exemption letter issued by a Federal medical program in accordance with part 381 of this chapter; and
    • The note relating to verification of medical examiner listing on the National Registry of Certified Medical Examiners required by § 391.23(m).

Equipment Records

Definitions

The term “equipment” refers to any vehicle or trailer that is registered and plated for over-the-road (OTR) travel. This includes all tractors, straight trucks, trailers, AT cranes, dollies, pick-up trucks and cars that are registered to an NCSG Company.

Responsibilities

The responsibility to maintain equipment files rests within the following groups,

NCSG Crane and Heavy Haul Services Ltd. – Purchasing Department
At a minimum, an equipment file for a piece of OTR equipment registered in Canada is to include,

- An identification of the vehicle, including
  - A unit number, the manufacturer’s serial number or a similar identifying mark,
  - The make of the vehicle, and
  - The year of manufacture;
- A record of the inspections, and repairs, lubrication and maintenance for the vehicle, including
  - The nature of the inspection or work performed on the vehicle, and
  - The date on which that inspection or work took place and the odometer or hubometer reading on the vehicle at that time;
  - Notices of defect received from the vehicle manufacturer and the corrective work done on the vehicle in relation to those notices;
  - Trip inspection reports (DVIR’s).

At a minimum, an equipment file for a piece of OTR equipment registered in the United States is to include,

- An identification of the vehicle, including
  - A unit number, the manufacturer’s serial number or a similar identifying mark,
  - The make of the vehicle, and
  - The year of manufacture;
- A record of the inspections, and repairs, lubrication and maintenance for the vehicle, including
  - The nature of the inspection or work performed on the vehicle, and
  - The date on which that inspection or work took place and the odometer or hubometer reading on the vehicle at that time;
  - Notices of defect received from the vehicle manufacturer and the corrective work done on the vehicle in relation to those notices;
  - Trip inspection reports (DVIR’s); and
  - Vehicle tire size, written onto the file jacket or the first visible document within the file.

Document Retention

All equipment files must be maintained for the life of the equipment, plus 7 years following disposal; with exception to the Daily Vehicle Inspection Reports (DVIR’s) which are to be maintained for 5 years in the event of a noted defect, or disposed of after 6 months if no defect is noted.

**4.0 DRIVER MANAGEMENT**

**Recruitment**

All positions, where driving is a required element of their position, must be recruited and on-boarded in accordance to the criteria identified within the Acceptable Driver Code.

**Driver Authorization (status)**

Drivers can be authorized as Non-Drivers, Light Duty Drivers or Commercial Drivers. When used properly, this authorization process ensures that only those individuals that will be driving commercial vehicle are being required to meet the minimum requirements of a commercial driver for NCSG. For instance, an individual with a commercial class of driver’s license (CDL, Class 1, etc.) that does not drive commercial vehicles, should not be required to complete a daily drivers log to account for their hours of service.

**Definitions**

**Authorization**  The documented permission and approval to drive motor vehicles while on company business or in connection with business activities for the company.

**Driver**  A person whose responsibility it is to drive a company owned, rented or leased vehicle.

**Commercial Vehicle**  Also known as a “NSC/DOT Vehicle”

- In Canada, a commercial vehicle is a vehicle with a registered gross vehicle weight in excess of a regulated minimum, ranging from 4,500kg’s to 11,974kg’s depending on the carrier’s jurisdiction. NCSG will adhere to the 4500kg threshold for commercial vehicles in all Canadian jurisdictions, making any vehicle that is registered for more than 4500kgs a commercial vehicle.
- In the United States, a commercial vehicle is any vehicle with a gross vehicle weight rating or gross combination weight rating of 10,001lbs or more. If not equipped with a rating - the actual gross vehicle weight or combined vehicle weight of 10,001lbs or is the determining factor.

**Light Duty Vehicle**  A vehicle not exceeding the above stated minimum weights for regulatory intervention.
Non-Driver A person who does not drive company vehicles or vehicles used for company business.

Light Duty Driver A person who drives only light duty company vehicles (as defined above) or any light duty vehicles used for company business.

Commercial Driver (aka NSC/DOT Driver) A person who drives a "commercial vehicle" (as defined above) for the company or a "commercial vehicle" used for company business. Commercial drivers are also authorized to operate light duty vehicles.

Authorization Process
See the NCSG Driver Authorization Code for more information on proper authorization process and the associated forms with their submission requirements.

5.0 FATIGUE MANAGEMENT

Overview
Fatigue is one of the greatest dangers to drivers as it is often misunderstood and inappropriately managed by managers, supervisors and the workers themselves. The Fatigue Management Program within NCSG is intended to educate the workforce at all levels, provide a maximum number of work hours allowable without additional controls and establish controls for any instance where workers are being asked to exceed their maximum work hours.

Definitions
Fatigue - The result of physical or mental exertion that impairs performance as well as biological factors such as natural sleep rhythms and medical health issues.

Responsibilities

Drivers
It is the employee’s responsibility to:

• Ensure they have received enough rest, so as to mitigate or eliminate the effects of fatigue, prior to arriving for duty.
• If feeling fatigued while driving, pull over at a safe location and take a break (short naps are more effective at restoring energy levels than coffee or other stimulants).
• Never operate equipment or machinery while fatigued.
• Avoid medication that may induce drowsiness. (FIT FOR DUTY)
• Recognize the signals and dangers of drowsiness (frequent yawning, heavy eyes, and blurred vision) taking action to pull over and contact your assigned dispatcher or supervisor immediately.
• Must refuse to drive if driver’s abilities are impaired to the extent that the health and safety of the public, driver or other employees is at risk due to fatigue.
• Do not rely on alertness tricks to keep you awake (smoking, loud music, drinking coffee and opening the window are not real cures for drowsiness).

Supervisors
• It is the supervisor’s responsibility to:
• Ensure that all employees have the opportunity for adequate rest between days and throughout the workshift to perform their job duties safely.
• Ensure that the hazard assessment processes reflects a consideration for fatigue where fatigue is a known risk factor associated with the work being completed.
• Must not allow a driver to drive if driver’s abilities are impaired to the extent that the health and safety of the public, driver or other employees is at risk due to fatigue.

Dispatchers
It is the Dispatchers responsibility to:

• Ensure that all employees are afforded a period of rest between work assignments (shifts),
• Ensure that worker fatigue is addressed as a serious risk to employees and is managed accordingly through effective work planning,
• Prior to allowing or requesting a worker to exceed their maximum work hours, dispatch has confirmed, through conversation in person or over the phone, with the employee that they are not suffering from fatigue or engaging in situations where fatigue related impairment is likely.
• Must not allow a driver to drive if driver’s abilities are impaired to the extent that the health and safety of the public, driver or other employees is at risk due to fatigue.

Branch Management
It is management’s responsibility to:

• Ensure that supervisors and employees understand the dangers of fatigue and the purpose of this program.
• Ensure that all employees under their direction are provided with adequate time off so as to be well rested and ready to work.
• Hold accountable, any employee that exceeds maximum hours as listed within the Fatigue Management Standard without satisfying the requirements of the code.
• Hold accountable, any supervisor that would request an employee to exceed maximum hours.
• Must not allow a driver to drive if driver’s abilities are impaired to the extent that the health and safety of the public, driver or other employees is at risk due to fatigue.

**Maximum Work Hours**

No employee is permitted to exceed 14 continuous hours of on-duty time without the appropriate level of approval.

**Authority to Exceed Hours**

Approval may be granted by the operating units Vice President, to exceed the 14 hours of continuous on-duty time by no more than an additional 2 hours, to a total of 16 hours of continuous on-duty time in a 24 hours period.

**Emergency Exceptions**

In the event of an emergency, the Vice President – HSE, Technical Training and Quality, or the Chief Executive Officer, may grant permission to exceed the 16th hours of continuous on-duty time in a 24 hours period.

The Emergency Exception may only be granted on the following grounds;

• That the worker is responding to, or mitigating the effects of an incident,
• The worker is incapable of leaving the work-site due to inoperable transportation,
• The worker is engaged in safety critical work for a client and incapable of being replaced by another worker by virtue of location, inclement conditions, or lack of technical knowledge.

The Branch Manager is required to contact the above listed individuals for documented (expressed) permission to allow an employee to continue working. Evidence that the process has been followed must be supplied upon request. Conditions for approval may be put in place by either approver and evidence that those conditions have been satisfied is required upon request.

### 6.0 JOURNEY MANAGEMENT

**Overview**

Travelling presents many hazards, from unfamiliar locations, working alone, interruptions or blackout in cellular services and even dangers from the general public. As an employer, NCSG is committed to ensuring it meets its legal obligations and our clients expectations while keeping our employees safe on their journey to the next destination.

**Route Studies**

Many of the jobs that we engage in will require some kind of pre-planning. Part of that planning is knowing the route you will be travelling. We can’t simply stop at a line on a map though. Route Studies are conducted wherever we find ourselves travelling an unknown road or whenever we are transporting loads that possess dimensional characteristics that exceed a normal load. For instance, a load with a 25 foot height will necessitate a review of power-lines and overpasses to ensure that the route is not placing the driver, the public or the load in danger. This review is a route study.

**When to do a Route Study**

Dispatch should always be considering the variables involved in a travel situation. Documenting the following items when planning travel will suffice the majority of the time;

• Where are we going?
• What are we using to get there?
• Does the vehicle or the load have unique characteristics (weight, width, height, etc.)?
• Does the driver have previous experience on this route?
• How many escorts will the vehicle and load need and what types?
• What happens if the vehicle breaks down or there is an emergency en-route?
• When will the driver leave and when do I anticipate their arrival at the destination?

As a bare minimum, supplying this information, along with the permits, should they be required, will be sufficient for a route study.

In the event that a client has requested a more detailed route study, or where we find that the hazards being faced may factor into the end cost and resulting safety of the job, a dispatcher must notify the Branch Manager and allow time for the Branch Manager to determine if it is necessary to run the route in advance using a light-duty vehicle.

The task of an on-site route study should include a supervisor familiar with all of the task variables so as to allow an informed decision on whether the task can safely be completed and what kind of controls will need to be put in place. All of the previously mentioned variables need to be documented, however additional information regarding the topography, land-owner contact info and rules, load dynamics, or other hazards need to be identified and added to the job documentation.

**Responsibilities**

Dispatcher

The dispatcher is responsible to,

• Ensure that all job details have been documented and passed along to the driver and their escorts in a timely manner.
• Refer to the Branch Manager, any job that possesses an increased risk of injury or damage, or where the client has requested a more thorough route study to be completed.
Branch Manager
The Branch Manager is responsible to ensure,

- A route study is completed in accordance with the requirements of this Road Transportation Standard.
- All those involved in the travel plan have been made aware of all information relevant to that travel plan and the requirements in place.

Permits
NCSG’s core business functions involve the movement of over-dimensional loads and equipment on a regular basis. As a result of this, most of NCSG’s activities require permits from the local jurisdictions that operations necessitate travelling through.

Dispatch is responsible to ensure that all necessary permits are in place for the vehicle and the load. In addition, dispatch is responsible to ensure that the drivers and their escorts have been provided with the necessary copies of the permits that have been obtained.

Where the Branch Manager or Supervisor have provided the functions of a dispatcher for an employee, the responsibilities mentioned above transfer to them.

Dispatch’s Obligation to Check
Dispatchers have several legal and ethical responsibilities to the workers that they assign work to on a daily basis. These responsibilities largely surround the hours they have worked and their fitness to complete the assigned work. In addition, a dispatcher must ensure that the individuals they are assigning to work are permitted to work by virtue of their status in VTA or other certification, licensing and documentation requirements. Failing to complete this function places the dispatcher, branch manager and the employee at risk.

Proving that the Dispatcher has checked these items is as easy as documenting the request and the resulting answer on the dispatch documentation for the job in question. If it is not written down, it cannot be proven to have occurred.

Driver Hours
Dispatch must verify that the driver possesses the hours necessary to complete the assigned task. This must consist of the dispatcher speaking to the driver and requesting a summary of hours available. The hours check must be made in consideration with the regulated maximum hours for drivers and/or the companies Fatigue Management Standard.

Driver Fitness to Work
In accordance with the companies Alcohol and Drug policy, a Dispatcher, Supervisor and Branch Manager are required to report any suspicious behavior or activity where they believe the employee may be impaired or suffering from an illness that would result in impairment.

Communications Requirements
Working Alone Contact Plan
At the time of dispatch, a contact plan must be agreed upon. The contact plan can be added to the dispatch documentation for the job in question and must include consideration for anticipated time of departure, arrival and contact intervals should the worker find themselves outside of cell phone coverage during the journey.

In addition to the contact plan referenced above, an employee must be provided with an emergency contact number that will allow them to speak to a live person who is empowered to take their information and contact a responding individual in the next phone call or physical contact made.

7.0 TOWING AND VEHICLE RECOVERY
Overview
Having vehicles means the company will ultimately need to deal with towing and vehicle recovery situations. While these are not the primary or even secondary functions of the company, they are a reality. The following rules are to be observed at all times when conducting towing or vehicle recovery operations.

Towing
Connecting to a vehicle with the intent of pulling it to another location constitutes towing. The opportunities for damage and injury are heightened during these operations and require that the task being completed be preceded by the completion of a Hazard Assessment.

All workers must be involved in the hazard assessments completion and acknowledge that they understand those hazards identified and the controls that are intended to mitigate risk of injury and damage.

This hazard assessment must be submitted with all other paperwork to the designated individual as soon as possible.

Towing a Third-Party
An NCSG vehicle may only be used to tow a third-party vehicle if the following conditions are met;

- NCSG vehicle is the larger, heavier vehicle of the two,
- Hazard assessment has been completed,
• Appropriate, engineered towing points are available for connecting the two vehicles,
• No chain is used,
• Permission to proceed has been granted by the NCSG Branch Manager, and
• Waiver has been completed by the third-party representative on site.

Permitting a Third-Party to Tow

An NCSG employee is only permitted to allow a non-towing company third-party to tow an NCSG vehicle if the following conditions have been met;
• NCSG vehicle is the smaller and lighter of the two,
• A hazard assessment has been completed,
• Appropriate, engineered towing points are available for connecting the two vehicles,
• No chain is being used,
• Permission to proceed has been granted by the NCSG Branch Manager, and
• Waiver has been completed and signed by the third-party representative on site.

Hauling vs Towing

Hauling is a function of securing two vehicles together for the purpose of transporting over a distance. This typically means loading up a vehicle onto a specially designed and equipped truck such as a tow-truck or a flat bed, securing the vehicle being hauled and then transporting it on public roadways to the destination.

Only a company that is appropriately insured and equipped to complete this function is permitted to do so at the request of NCSG.

8.0 SECUREMENT OF LOADS

Overview
Load securing is one of the most critical aspects of highway travel as a lost load can injure, kill and/or critically impact the lives of others and the company as a whole. With an opportunity for loss so great, NCSG has developed a Cargo Securement Code that meets the requirements put in place by the Commercial Vehicle Safety Alliance, National Safety Code and Federal Motor Carriers Safety Administration.

Responsibilities

All Light Duty and Commercial Drivers

• Must ensure that this standard is applied whenever materials are being transported in a company vehicle
• Must notify their respective supervisor or manager in the event of any incident
• Must identify and correct any unsafe situation
• Must refuse to transport any load which, by virtue of its design or characteristics, cannot be properly secured and may present a threat to the driver or public.

Supervisors

• Must ensure that the workers under their direction are adequately trained and capable of ensuring their responsibilities under this standard.
• Must notify their immediate manager of any incident as soon as is safe to do so.
• Must identify and correct any unsafe situation
• Must refuse to transport any load which, by virtue of its design characteristics, cannot be properly secured and may pose a threat to the driver or public.

HSE & Training Department

• Will ensure that any necessary support or assistance is provided to ensure successful implementation of this standard.
• Will report on overall compliance with the contents of this standard.
• Will report and correct any unsafe acts or incidents.
• Will conduct an annual review of this standard to ensure its continued accuracy to the requirements of the legislation in the provinces and states that NCSG operates.

Senior Management

• Will ensure that all branches are provided with the necessary resources to comply with the requirements of this standard.
• Will ensure that branch level management is held accountable to the successful implementation of this standard.

Demonstrating Compliance

All drivers are responsible for ensuring that they have inspected the securing devices in use and be capable of demonstrating that they have completed a load securing calculation intended to verify that sufficient securing is in place to meet the requirements of the Cargo Securement Code.

The load securing calculation can be completed on the accompanying Hazard Assessment document or present on the Bill of Lading for the load in question and must be initialed by the driver when complete.

Training Requirements

As a Carrier, NCSG has a legal obligation in all of our jurisdictions to ensure that drivers are being trained in the use of cargo securing devices and the policies and laws surrounding their use. NCSG has developed the Cargo
Securement Code as a reference guideline to be made accessible to all drivers and used as a backbone for the training of cargo securement within the company.

Computer Based Training

The NCSG Training Department will ensure that training is made available within the Virtual Training Assistant program for all authorized drivers of NCSG and its subsidiary companies.

Completion of this training must be made a top priority for all authorized drivers of NCSG.

Practical Skill Testing

Understanding must be verified through practical skills testing at a field level. All drivers must be evaluated on their knowledge and understanding of the use and limitations of cargo securement devices during their annual review process and periodically as needed.

9.0 Over-Dimensional Transportation

Overview

As a specialized heavy haul and mobile crane company, a great number of our vehicles and loads are considered to be over-dimensional by nature. While most of NCSG’s over-dimensional vehicles will possess quarterly or annual permits allowing for movement, the loads will require permits specific to the trip in question. As road owners vary depending on locations and distance travelled, there may be many jurisdictions to consider and permits to request. In addition to permits, considerations such as public safety, number and types of escort vehicles, utilities affected, and other specialized needs may exist.

Definitions

Over-Dimensional Load – Any load, transported on a roadway, that by virtue of its weight, height, width or length, exceeds those limitations put in place by the governing body for the roadway in questions, and requiring of a permit to allow transportation.

Over-Dimensional Vehicle – Any vehicle, intended for transportation use on a roadway that by virtue of its weight, height, width or length, exceeds those limitations put in place by the governing body for the roadway in questions, and requiring of a permit to allow transportation.

Responsibilities

Drivers

The driver is responsible for ensuring that the follow items are completed prior to departure;

- Driver meets all requirements of the NCSG Road Transportation Standard and Acceptable Driver Code,
- Measure and record the loads width and height,
- Compare load dimensions against issued permit to ensure the read dimensions of the vehicle and load do not exceed those indicated on the permit,
- Permits are in place for the vehicle and load prior to transport,
- The vehicle and trailer (if applicable) have been inspected and are safe prior to the beginning of the journey,
- The driver is compliant with the NCSG Hours of Service (HOS) Code and HOS log-book have been updated to the most current time and status prior to departure,
- The load has been adequately secured against movement and is compliant with the NCSG Cargo Securement Standard,
- The load has been flagged to improve visibility and improve public safety
- The route plan has been determined and all required documentation passed on to all workers involved,
- Escorts are informed and have a copy of trip documents prior to departure, and
- Variances to the route plan are only made with approval of the dispatcher and with proper documentation.

Supervisors and Dispatchers

The supervisor is responsible to ensure;

- Dispatch is responsible to ensure that all necessary permits are in place for the vehicle and the load.
- Driver meets all requirements of the NCSG Road Transportation Standard and Acceptable Driver Code,
- Drivers are provided with their route plans and all documentation required for the safe transport of the load,
- Drivers are provided with the time to comply with the requirements in place (pre-job hazard assessments, completion and documentation of vehicle inspections, cargo securement checks, etc.)
- Loads are inspected prior to departure and at the point of arrival with any damage accounted for, documented and brought to the attention of NCSG and the client, and
- Driver’s hours of service are verified to ensure that the driver possesses an adequate number of hours to complete the trip.

Branch Managers

Branch Managers are responsible to;

- Ensure all drivers, dispatchers and supervisors are aware of their responsibilities under this standard, and
- Ensure compliance with policies and codes through regular reviews.
Flagging and Identification
Over-Dimensional Loads may require flagging if their width or length presents a danger to the vehicles operating in their presence or if the width or length exceeds the limits in place for the jurisdiction.

Flagging must meet the following requirements;

- Must be durable enough to complete the entire journey without loss to weather conditions,
- Must be visible from a distance of 45 meters or 150 feet in clear conditions (day or night), and
- Must be affixed to the farthest points of the load, either on the sides or at the rear.

Escort Vehicles (pilots)
Escort vehicles (pilots) are used to provide advance warning to the public, that they are approaching an over-dimensional vehicle a/o load. Their presence is required by law and the number of pilots is often stipulated within the trip permits conditions.

Escort Vehicle Best Practices
Jurisdictions possess guiding documents for use by escort vehicles. While this standard does not contain a reference to each best practice, it does require that Branch Managers and Dispatchers are aware of, and make their drivers aware of, the presence of such practices.

Pilots are required to ensure that they are in possession of a copy of the Escort Vehicle Best Practice for the region that they are operating in.

Jurisdictions and their acceptable Escort Vehicle Best Practice documents

British Columbia – Pilot Car Load Movement Guidelines
Alberta – Escort Drivers Handbook
United States of America – Pilot Car Escort Guidelines (Available via the SC&RA’s website)

All publications are available online or upon request. Please speak to your HSE Advisor or Transportation Compliance Advisor for these reference documents. Additionally, you can submit your request via compliance@ncsg.com or compliance.us@ncsg.com

Third-Party Escorts
All third-party escorts must possess the following;

- An insurance certificate, valid at the date of booking, and showing NCSG or its subsidiary as an additionally insured party with a minimum policy value of $5,000,000 (million) in local currency values,
- Appropriately equipped vehicle(s) for the jurisdiction, and
- Compliance with NCSG’s Vendor Management Program.

Police Escorts
Police escorts may be required based on the conditions of the permit and determined by the risk of the load and the route travelled. Police escorts must not be utilized as the ONLY escorts on a load as they may be required to leave the load at any time.

Routing
Routing must be appropriate for the dimensions of the load. Consider that most permit issuing offices will not validate the route against any master list of roadways and overpasses to ensure that you will have a safe journey. It is the responsibility of the dispatcher and the driver to ensure that the route is correct and that any foreseeable hazard has been reconciled in advance of departure.

Knowing Your Dimensions
Found within the Commercial Drivers Responsibilities is the obligation to know your dimensions. A driver is required to validate the measurements provided to them by physically confirming the dimensions of the load. This may be done with a measuring tape, stick or laser measurement device. The measurement must be recorded and any variance from the measurements provided in the dispatch or permit must be brought to the attention of the dispatch person or branch manager immediately.

The driver is solely responsible for ensuring this obligation has been met and evidence is documented.

Confirming Prior to Departure
The Dispatcher or Branch Manager must confirm the dimensions with the driver prior to dispatch. This can be communicated in written form on the dispatch paperwork or via email. Do not communicate via text message or verbal communication.

Confirming on Site
Upon completion of loading, it is the driver’s responsibility to ensure that the physical dimensions have been verified and documented. This can be done by annotating the hazard assessment document, bill of lading or permit and initialing the annotation.
10.0 Unattended Loads
Overview
Leaving a load unattended poses a risk to the vehicle/trailer, load and the public. Taking the time to complete a few steps can greatly reduce the risk.

Responsibilities
Driver
The driver is responsible to;

- Ensure that the tractor/trailer is parked off of the roadway and in a well lit location,
- Ensure that reflective markings are clearly visible and that triangles are placed at the rear and front of the vehicle if required,
- Ensure expressed permission has been granted from any land owner or business that may hold claim over the location the vehicle is being left unattended in,
- Ensure that a disconnected trailer has been blocked and had the air released from the suspension,
- Ensured that a disconnected trailer has blocking or pads placed under the dolly legs to prevent sinking or movement of the legs resulting in damage to the trailer or load, and
- Ensure the vehicle has been secured against theft and dispatch notified prior to departure from the unattended vehicle.

11.0 Trip Inspections
Overview
Trip Inspections are required by all jurisdictions with most requiring it to be documented, regardless of findings. NCSG requires that a trip inspection is completed prior to departure, during travel and following arrival at the final destination for the day. The process allows drivers to identify minor and major defects in the equipment, record vital information such as odometer and hour-meter and allows the company to maintain a maintenance surveillance system on the equipment and its general state of repair.

Failing to complete a trip inspection will result in fines, points against the carrier on it’s regulatory record and places the company is a situation of potential litigation by third parties should a collision occur.

Responsibilities
Driver
The driver is responsible to;

- Complete a vehicle inspection using the appropriate document for the type of vehicle being inspected prior to departure at the beginning of the day, during travel and following arrival at the end of a day,
- Note and report any defects, on the inspection form and on a MRR (maintenance repair request) form aka. “Cry sheet” and submit to the dispatcher and / or the branch designate,
- Provide the record of inspection to the designated individual at the branch office, and
- Immediately report and refuse to drive any vehicle that is found to possess a major defect that would classify it as “Out of Service” in accordance with NCSG’s Schedule 1.

Supervisors and Branch Managers
Supervisors and Branch Managers are responsible to;

- Ensure drivers are completing the necessary inspections on the equipment they are assigned to operate,
- Ensure that any major defect results in a repair prior to departure,
- Ensure that any major defect that cannot be repaired results in the vehicle being placed Out of Service until it can be accommodated,
- Ensure that drivers who do not complete and submit a record of inspection are held accountable and disciplined as necessary to ensure compliance.

Document Handling
Branches must ensure that the inspection forms used, their handling processes and their storage practices are in compliance with NCSG’s Preventative Maintenance Program, found on the Hub.

12.0 Drivers Hours of Service
Overview
Commercial carriers, such as NCSG and its companies, are carriers and as such, they are subject to regulations that govern the number of hours that a driver can drive in a day and potentially in a cycle, depending on the jurisdiction. NCSG possesses a documented Hours of Service Code, intended to provide direction and instruction on the use and handling of drivers Hours of Service Logs and making the policy statement known that NCSG will operate in a legally compliant manner at all times.

Responsibilities
Commercial Driver
Commercial Drivers will ensure that they;

- Are compliant with the hours of service legislation applicable to their duties.
- Refuse to drive beyond their allowable hours of service and into a state of non-compliance,
- Report any harassment or abusive behavior that is intended to cause them to drive beyond their allowable hours and into a state of non-compliance,
• Maintain an accurate record of their driving and non-driving time, submitting it as prescribed within company policy, and
• Ensure that current or impending issues of non-compliance are reported to the Dispatcher or Branch Manager immediately to ensure an opportunity for remedy.

Supervisors, Dispatchers and Branch Managers
Supervisors, Dispatchers and Branch Managers will ensure;
• Commercial Drivers are supplied with Hours of Service training in advance of commencing their duties as a driver subject to the Hours of Service regulations,
• Commercial Drivers are not requested to drive beyond their allowable hours,
• Work is planned with the allowable hours of service taken into account and enough time to complete the work and the driving without causing the driver to encounter an over-hour’s situation,
• Issues of harassment or abusive behavior are identified and remedied using the companies progressive discipline processes.

Training
Any employee or agent of the company that would drive, or request a driver to drive, is required to participate in Hours of Service training prior to commencing their first day of work.

Any existing employee or agent that would drive, or request a driver to drive, and has not participated in Hours of Service training prior to the approval date of this standard is required to complete this training within 90 days of its approval. No employees will be grandfathered into this training by virtue of experience in their duties.

Resources
NCSG has committed the resources necessary for success in this requirement. This commitment is in the form of paid training, policy and procedures to reinforce its use, retention of auditing services for 100% of logs submitted and the expectation that all employees will continuously endeavor to improve their performance and maintain the highest degree of compliance in this matter.

Monitoring
All submitted driver logs will be audited for violations within one week of submission through the approved process.

Violation Letters
Records of the potential violations discovered within the audit process will be supplied to the Branch Manager on a monthly basis with the intent of the Branch Manager providing coaching and support towards improvement on part of every driver.

Improvement Expectations
All drivers are expected to show a continued effort towards compliance in their Drivers Daily Hours of Service Logs. Failing to display improvement over time will result in discipline and potential termination.
1.0 POLICY
NCSG, through execution of the Acceptable Driver Standard, will work to consistently ensure that all of our company employed or authorized drivers are of appropriate skill and capability to demonstrate that they are operating safely and competently while behind the wheel.

2.0 SCOPE
This Standard and all supporting guidelines apply to all authorized drivers in the employ of an NCSG company.

3.0 RESPONSIBILITIES
3.1 All Employees
- Must not operate a vehicle they are not appropriately classified for. (i.e. Light duty vehicle drivers must be classified as light duty drivers)
- Will ensure they are in possession of a valid driver’s license of suitable class and any other appropriate/necessary certifications, to be supplied to an officer or company agent upon request.
- Will ensure that they are operating a vehicle within the guidelines of the law. (Wearing of a seatbelt, obeying traffic controls, traveling within the speed limit, etc.)
- Will not use handheld electronic devices, even in hands-free mode, while driving.
- Will drive with all due care and attention to ensure they are exhibiting the appropriate behaviors of a professional driver.
- Will extend all due courtesy to others while in control of a vehicle.
- Will report any incident, infraction, citation or warning received while in control of a vehicle, whether provided by the company or personally owned.

3.2 Supervisors
- Will ensure that the workers assigned to them are appropriately trained and suitably qualified to operate equipment that they are assigned to utilize.
- Will assist or cooperate as needed with driver evaluations.
- Will report and correct any unsafe acts or incidents and will elevate the necessary corrective actions appropriately to ensure completion in a timely fashion.

3.3 Branch Managers
- Will ensure that the workers within their responsibility are appropriately trained and suitably competent to operate equipment that they are assigned to utilize.
- Will ensure that employees are provided with the necessary time and resources to complete their required training.
- Will coordinate the necessary activities to ensure that drivers, identified as medium to high risk, are provided with evaluations in a timely fashion.
- Will develop and implement appropriate corrective actions to address the root of unsafe behaviors in drivers that are within their responsibility.
- Will report back to the Manager - Transportation Safety and Compliance upon completion of an employee’s corrective action plan.

3.4 HSE & Training Department
- Will ensure that any necessary support or assistance is provided to ensure successful implementation of the processes and guidelines within this document.
- Will report on overall compliance with the contents of this policy.
- Will report and correct any unsafe acts or incidents and will elevate the necessary corrective actions appropriately to ensure completion in a timely fashion.

3.5 Senior Management and Executive
- Will ensure that all branches are provided with the necessary resources to ensure the successful implementation of this policy and its accompanying process and guidelines.
- Will ensure that Branch Managers are held accountable to the successful implementation of this policy and its accompanying process and guidelines.
- Review and approve, on an bi-annual basis, the contents of this policy

4.0 GUIDELINES
NCSG believes that the time we spend behind the wheel is the most critical part of the job. The potential for an incident to occur while driving is far higher than any other opportunity throughout your work day. As a result of this reality, NCSG has determined the need to focus attention on the proper on-boarding and education of all authorized drivers and take a more active role in providing oversight and due diligence.

4.1 Pre-hire
A driver recruitment process will be utilized to ensure we are selecting only those candidates that meet the minimum standards put in place by NCSG for all authorized drivers.
- Pre-screening of resumes and applications (includes drawing a pre-screening report for US DOT on US drivers)
- Ensure that the candidate possesses a valid class of license, necessary for the vehicle(s) they will be operating.
- Candidates with a driver record indicating an impaired conviction in the previous 24 months or greater than 9 points, as determined by the NCSG Point Assignment Table, are not eligible for hire.
• Contacting a minimum of 3 professional references, including prior employers, to adequately determine a
  driver’s level of compliance to regulatory and company standards.
• Receiving and evaluating the drivers abstract for their home province, state or country.
• Complete the SQ Risk Assessment tool online, to be reviewed by HR and Hiring Manager. (see sec 6.3)

4.2 Post-hire
The new hire process, when completed accordingly, will ensure any new workers successful integration into the
company and display to them that safety and compliance is of paramount importance.

• Ensure the driver receives a complete orientation on their first day of work.
• Ensure the driver completes all priority 1 training items prior to assignment of work.
• Ensure the driver receives an in-cab evaluation within the first 30 days of work.

4.3 CONTINUING EDUCATION
All drivers will have a professional education plan determined for them. The plan will include mandatory and
elective training that will serve to provide them with continuous improvement. Management will ensure that
the driver’s education plan is made to be a priority and an appropriate amount of time to complete the plan is
provided to the driver. At a minimum, the Drivers continuing education plan must include:

• Hours of Service (P1)
• Cargo Securement (P1)
• Daily Vehicle Inspection (P1)
• Employee Alcohol and Drug Training (P1)
• CSTS 9.0 (P1) CANADA ONLY
• Light Duty Driver Orientation - Light Duty Only (P1)
• Commercial Driver Orientation - NSC/DOT Only (P1)
• Fire Extinguisher Training (P1)
• NCSG General Orientation (P1)
• H2S Alive (P1) CANADA ONLY
• Standard First Aid (P1)
• WHMIS 2015 (P1) CANADA ONLY

In addition to the above, NCSG will provide driver mentoring opportunities through use of peer evaluators. The
evaluators are selected based on experience and merit and are themselves, coached and mentored to ensure that
they are providing the best level of feedback possible to drivers throughout the NCSG fleet.

4.4 ADDITIONAL TRAINING TOOLS
Driver, Job Hazard Analysis (JHA)
This document is a part of the NCSG Hazard Assessment process and acts as an encompassing overview of the
Driver’s tasks, tools, hazards and controls. These JHA’s are developed with input from experts in the field and
reviewed on an annual basis for relevancy and required edits.

Driving, Task Hazard Analysis (THA)
Driving is more than just a job; it’s also a task that a great number of NCSG employees perform every day. As a
result of this, NCSG has developed a THA for the purpose of cataloguing all of the steps within the task, the
tools, hazards and the controls. These THA’s are developed with input from experts in the field and reviewed on
an annual basis for relevancy and required edits.

Both of the above documents are made available to the driver at the time of hire, playing a large part in their
initial orientation, and then remain available throughout their employment. The JHA and THA are available at
any time and may be requested from your Dispatcher, Branch Manager or HSE Advisor. It is required that the
driver be able to present their THA upon request.

5.0 OVERALL DRIVER BEHAVIOUR
Driver behavior makes every difference in determining risk behind the wheel. Some drivers are conscious of their
actions and surroundings, while other drivers are barely aware of the danger they present to those around them, nor
do they necessarily have the right attitude to change if they are confronted with that reality. The following programs
and processes are designed to provide branch and department managers with a great deal of information related to
a person past driving record and current driving behaviors, which when paired together with other tools, will provide
a more clear representation of the risk that the driver brings to the organization. No one tool is meant to be perfect.

6.0 EVALUATIONS & ASSESSMENTS
Driver Evaluations are an excellent way to gather in-field data on drivers’ behaviors. Driver evaluations can be
completed by an authorized employee, or by an external third-party provider. In either case, the evaluation is not
a training opportunity and the evaluator’s role is simply to document performance behind the wheel so as to permit
the company to assign meaningful corrective actions with the aim to improving performance.

The average driver evaluation will range between 3-4 hours and may extend for an entire work-shift. This is to
encourage normal driver behaviors and permit a fair evaluation based on a larger sample of driving performance.

7.0 AUTHORIZED EMPLOYEE EVALUATORS
An Employee Evaluator must be authorized to perform any in-cab evaluations. This authorization is provided by
the Manager, Transportation Safety and Compliance and only following an evaluation of the identified individual’s
knowledge, and incident history along with their in-cab demeanor and approach towards their peers. The authorization will only apply for vehicles that the evaluator has experience and a proven history of excellent performance. Any driver who is risk ranked at Yellow 2 or above is ineligible to become an Employee Evaluator.

Once an individual has been identified as an Authorized Employee Evaluator, they will be required to undergo additional coaching and training in this field to ensure that they are capable of providing the best evaluation possible. Where possible, preference will be given to in-house training provided by the TSC group.

8.0 THIRD-PARTY PROVIDERS
The company may require the use of a third-party provider if no Employee Evaluator is available to perform the assessment. In some cases, this may be preferable due to associated costs. In any event, a third-party evaluator is only permitted where the evaluator has experience operating the same equipment that they are assessing an NCSG driver in.

The determination of what constitutes sufficient experience will be made by the Manager, Transportation Safety and Compliance in consultation with the Manager of Training.

The third-party evaluator will be required to assess the driver using the company’s assessment form and will communicate results to the driver only when the evaluation is complete; ensuring that the time spent inside the vehicles cab is only used for the purpose of evaluating and not correcting driving behaviors. Only in the event that the driver’s skill levels pose a danger to the evaluator or the general public will the evaluator intervene.

Once the evaluation has been completed, the form will be sent to compliance@ncsg.com or compliance.us@ncsg.com for use in determining corrective actions and entry into the drivers file.

9.0 DRIVER RISK ASSESSMENT PROCESS
The Driver Risk Assessment is a tool used to determine an individual’s driver risk based on history of performance. This is initially completed based on three variables

- Pre-hire (to determine potential for hiring)
- Semi-Annual Abstract Pulls (to monitor driver performance)
- Post Incident (to determine if there has been a change since the previous review was completed)

Driver managers are required to work with the employee and the Transportation Safety and Compliance department to ensure that action items assigned are meaningful and have an appropriate level of attention to the root cause of driver’s violations.

In order to ensure that all drivers are being assessed against the same standard, the following point chart must be applied. Only infractions or citations obtained through the previous 24 months can be assessed for points.
<table>
<thead>
<tr>
<th>Violation</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failing to remain at the scene of an accident</td>
<td>7</td>
</tr>
<tr>
<td>Careless driving</td>
<td>6</td>
</tr>
<tr>
<td>Speeding in excess of 11mph or 15km/h</td>
<td>6</td>
</tr>
<tr>
<td>Failing to stop for a school bus</td>
<td>6</td>
</tr>
<tr>
<td>Failing to yield right-of-way to a pedestrian in a crosswalk</td>
<td>4</td>
</tr>
<tr>
<td>Failing to yield right-of-way to an emergency vehicle</td>
<td>4</td>
</tr>
<tr>
<td>Following too closely</td>
<td>4</td>
</tr>
<tr>
<td>Failing to use seatbelt</td>
<td>3</td>
</tr>
<tr>
<td>Traffic Lane Violation</td>
<td>3</td>
</tr>
<tr>
<td>Driving on the wrong way of a one-way highway</td>
<td>3</td>
</tr>
<tr>
<td>Failing to report an accident</td>
<td>3</td>
</tr>
<tr>
<td>Failing to stop at a stop sign</td>
<td>3</td>
</tr>
<tr>
<td>Failing to stop at a red light intersection</td>
<td>3</td>
</tr>
<tr>
<td>Impeding passing vehicle</td>
<td>3</td>
</tr>
<tr>
<td>Improper passing</td>
<td>3</td>
</tr>
<tr>
<td>Stunting</td>
<td>3</td>
</tr>
<tr>
<td>Failing to obey instruction of traffic control device</td>
<td>2</td>
</tr>
<tr>
<td>Improper backing</td>
<td>2</td>
</tr>
<tr>
<td>Improper turns</td>
<td>2</td>
</tr>
<tr>
<td>Speeding - exceeding limit (not more than 10mph or 14kph)</td>
<td>4</td>
</tr>
<tr>
<td>Speeding - unreasonable rate due to road conditions or inclement weather.</td>
<td>4</td>
</tr>
<tr>
<td>Past Alcohol Related Suspension</td>
<td>9</td>
</tr>
<tr>
<td>Past Administrative Suspension (due to points and/or convictions)</td>
<td>6</td>
</tr>
<tr>
<td>Distracted Driving (Includes use of cell phone, or other electronic device)</td>
<td>6</td>
</tr>
<tr>
<td>Failure to Produce Documentation</td>
<td>2</td>
</tr>
<tr>
<td>Hours of Service Violation</td>
<td>3</td>
</tr>
<tr>
<td>Load Securement Violation</td>
<td>3</td>
</tr>
<tr>
<td>Failed CVSA Inspection</td>
<td>1</td>
</tr>
<tr>
<td>Overweight or failure to obey permit conditions</td>
<td>1</td>
</tr>
</tbody>
</table>
## Driver Behavior

Driver behavior is a combined measure of their documented, as well as observed actions. To this end, it is required that any driver who scores within the orange risk band, is required to undergo a driver evaluation conducted by an approved evaluator, as prescribed within the guideline.

This risk matrix is intended to act as a guideline for driver authorization ONLY and not to replace the Managers authority to terminate based on cause. Should a driver’s violation necessitate additional disciplinary action above and beyond what is recommended in this matrix, they are required to contact Human Resources for guidance.

### 10.0 DISCIPLINE RELATED TO SPEEDING

When operating a company owned, leased or rented vehicle, the driver is in direct control of an asset that has the power to injure or kill others, themselves and do significant damage to company reputation. Speeding is an act that takes the most dangerous task you will perform and make it substantially worse. It increases your reaction times, stopping distance and chance of a collision, thus increasing your risk as a driver for NCSG.

To drive home the point that NCSG will not tolerate speeding offences, the company has instituted a Speeding Discipline Matrix for use in Canada and the United States. This matrix is a minimum level of discipline and individual violations may necessitate more severe penalties based on situation, driver history or driver attitude. The Branch or Department Manager is free to use their discretion in increasing the discipline level as needed; however any reduction in discipline must be authorized by the operating group VP and the VP-HSE.

### 11.0 DISCIPLINE REVIEW COMMITTEE

Employee discipline related to speeding, must be reviewed and approved at a senior management level and will not be handed out until the review committee has taken the following factors into account.

- Driver tenure
- Driver’s history of incidents and discipline
- Driver’s participation in the company’s HSE program
- Mitigating factors in the driving incidents leading up to the disciplinary action

The review committee can be formed through a minimum of the Regional VP and VP – HSE and may include the Branch Manager, Director – HR and the Manager, Transportation Safety and Compliance; at the discretion of the VP – HSE.

Discipline approved by this committee is final.
<table>
<thead>
<tr>
<th>Offences (based on a sliding 24 month window)</th>
<th>1-10 Km/h over in a 50 km/h or greater zone</th>
<th>11-15 Km/h over in a 30 km/h zone (e.g. School &amp; Playground Zones)</th>
<th>11-15 Km/h over in a 50 km/h or greater zone</th>
<th>&gt;15 Km/h over in a 50 km/h or greater zone</th>
<th>&gt;15 km/h in a 30 km/h zone (e.g. School &amp; Playground Zones)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Corrective actions based on Driver Risk Review AND Verbal Warning Letter.</td>
<td>Documented Discipline Letter.</td>
<td>Mandatory 2 day suspension AND a Documented Discipline Letter.</td>
<td>Documented verbal discipline AND management option for up to 1 week suspension without pay based on CAUSE ANALYSIS*.</td>
<td>1 week suspension PLUS Last Chance Agreement AND VP approval.</td>
<td></td>
</tr>
<tr>
<td>2nd Suspension from driving OR all duties for 1 day without pay based on CAUSE ANALYSIS*.</td>
<td>Mandatory suspension from all duties for 1 day without pay AND Documented Discipline Letter.</td>
<td>Mandatory suspension from driving OR all duties for 3 days without pay PLUS a Documented Discipline Letter.</td>
<td>1 week suspension PLUS Last Chance Agreement AND VP approval.</td>
<td>Mandatory Suspension from all duties for 1 week AND a Discipline Letter based on CAUSE ANALYSIS*.</td>
<td>Termination OR Last Chance Agreement with VP approval.</td>
</tr>
<tr>
<td>3rd Suspension from all duties for 2 days without pay AND documented Discipline Letter OR Termination based on CAUSE ANALYSIS*.</td>
<td>Termination OR CEO/VP HSE review.</td>
<td>Termination OR CEO/VP HSE review.</td>
<td>Termination OR CEO/VP HSE review.</td>
<td>Termination</td>
<td></td>
</tr>
<tr>
<td>4th Termination OR CEO/VP HSE review.</td>
<td>Termination</td>
<td>Termination</td>
<td>Termination</td>
<td>Termination</td>
<td></td>
</tr>
</tbody>
</table>
## UNITED STATES OPERATIONS

<table>
<thead>
<tr>
<th>Offences (based on a sliding 24 month window)</th>
<th>1 - 6 mph over in any zone other than a school or playground zone.</th>
<th>1 - 6 mph in a school or playground zone.</th>
<th>7 - 10 mph over in any zone other than a school or playground zone.</th>
<th>7 - 10 mph over in a zone with a posted speed limit not less than 25 mph.</th>
<th>&gt;10 mph in a zone with a posted speed limit not less than 25 mph.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>Corrective actions based on Driver Risk Review AND Verbal Warning Letter.</td>
<td>Documented Discipline Letter.</td>
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<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Suspension from driving OR all duties for 1 day without pay based on CAUSE ANALYSIS*.</td>
<td>Mandatory suspension from all duties for 1 day without pay AND Documented Discipline Letter.</td>
<td>Mandatory suspension from driving OR all duties for 3 days without pay AND a Documented Discipline Letter.</td>
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<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>Suspension from all duties for 2 days without pay AND documented Discipline Letter OR Termination based on CAUSE ANALYSIS*.</td>
<td>Termination OR CEO/VP HSE review.</td>
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<td>Termination</td>
</tr>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Termination OR CEO/VP HSE review.</td>
<td>Termination</td>
<td>Termination</td>
<td>Termination</td>
<td>Termination</td>
</tr>
</tbody>
</table>
12.0 DISPUTE RESOLUTION
In the event that a violation is contested and resolved in favor of the driver, the discipline process will be reversed and any days served as suspended without pay will be reimbursed at 8hrs per day.

13.0 PASSENGER & RIDER
The purpose of this policy is to ensure the safety of those individuals who travel as a passenger in company vehicles including those that are not directly involved in company business such as travelling as a passenger when the vehicle is being used for personal use.

Company vehicles are to be driven by authorized employees only. Spouses, family members, friends or other non-employees are not authorized to drive company vehicles.

The following guidelines are established to provide accommodation for passengers traveling in a company vehicle. These guidelines are written to ensure safe and appropriate use of company assets. The guidelines are divided according to vehicle type.

Light Duty Vehicles Passengers
- The number of passengers transported in a company vehicle must not exceed the number of available seatbelts/personal restraints.
- All drivers and passengers travelling in a company vehicle MUST wear seatbelts.
- Children under the age of 12 should never ride in the front passenger seat. If a child age 12 or under is transported in a company vehicle, the child should ride in the rear seat. Child safety seats and booster seats MUST be used for the child’s appropriate age and size.
- The vehicle must not be used to transport a hitchhiker or stranger.
- Company drivers are responsible for the behaviour and conduct of their passengers.
- Prior authorization to use a company vehicle by an employee to convey passengers must be obtained by the Vice President of the respective department.

Approval for exceptions must be made by the VP of HS&E in advance unless emergency circumstances prevent advance approval.

Commercial Vehicles Passengers
Due to the design of these vehicles and related safety concerns, passengers are generally limited to those individuals that need to ride in the vehicle to conduct company business such as company employees and clients. Non-employee passengers are not allowed except due to emergency or exceptional needs. Such use may be approved on a case (per incident) basis by the Vice President of the respective department and the Vice President of HS&E. Approval for exceptional use should be in advance unless emergency circumstances prevent advance approval and must be documented in a formal sign-off agreement applicable to the jurisdiction of operation.

Pets
Pets are not authorized to ride in any vehicle owned by the company or any vehicle used for company business.
1.0 PURPOSE
NCSG Crane and Heavy Haul Services (NCSG) has developed a Driver Authorization Code to demonstrate and account for employees driving, in whatever capacity, for the company. By introducing a classification system, the Authorization Code will enable management to more effectively document the driving duties of an employee, identify the responsibilities associated with driving, and reduce the potential for violations.

2.0 SCOPE AND APPLICATION
This Code applies to all NCSG businesses and operations.

3.0 DEFINITIONS
Authorization The documented permission and approval to drive motor vehicles while on company business or in connection with business activities for the company.

Driver A person whose responsibility it is to drive a company owned, rented or leased vehicle.

Commercial Vehicle Also known as a "National Safety Code/Department of Transport (NSC/DOT) Vehicle"
A commercial or NSC/DOT vehicle is one that is owned, leased or rented by the company that is;

• A single vehicle or a vehicle combination where the total registered gross vehicle weight (GVW) or gross vehicle weight rating (GVWR) exceeds a minimum value for regulatory intervention.

Canadian Commercial Vehicles The weight threshold for regulations to apply to a commercial vehicle in Canada is based on the registered weight that can range from 4500kgs to 11,974kgs depending on the carriers jurisdiction. NCSG will adhere to the 4500kgs threshold for commercial vehicles in all Canadian jurisdictions, making any vehicle with a registered GVW of 4500kgs or more a commercial vehicle.

American Commercial Vehicle In the United States, a commercial vehicle is any vehicle with a gross vehicle weight rating or gross combination weight rating of 10,001lbs or more. If not equipped with a rating - the actual gross vehicle weight or combined vehicle weight of 10,001lbs or more is the determining factor.

Light Duty Vehicle A light duty vehicle is one that is owned, leased or rented by the company that does not exceed the above stated minimum weights for regulatory intervention.

Non-Driver A non-driver is a person that does not drive any company vehicles or vehicles that are used for company business.

Light Duty Driver A person who drives only light duty company vehicles (as defined above) or any light duty vehicles used for company business. Light duty drivers include those employees that only drive a vehicle on behalf of the company occasionally such as a rental car when traveling.

NSC/DOT Driver A person who drives a "commercial vehicle" (as defined above) for the company or a "commercial vehicle" used for company business is a NSC/DOT driver. This includes contract drivers, lease operators and their drivers. Commercial drivers are also given authority to drive light duty vehicles.

4.0 ROLES AND RESPONSIBILITIES
Employees
It is the employee’s responsibility to:

• Ensure the information provided on the driver authorization form is accurate and correctly reflects their status while driving/working for the company.

• Immediately inform their supervisor as soon as possible should their driving status change in any way. Examples include but are not limited to:
  a. Suspension from driving
  b. Revocation of licence by the court or other authority
  c. Change of status within the company (such as a change of position/promotion/role)

Supervisors
It is the supervisor’s responsibility to:

• Ensure that all employees have the correct consent via the Driver Authorization Code to perform their job duties safely and in compliance.

• Communicate and enforce the company policy on a field level, regarding Driver Authorization status.

• Immediately remove employee from driving company owned or controlled vehicles upon notification of suspension, revocation of license or loss of employment with NCSG.

Management
It is management’s responsibility to:

• Authorize drivers to operate vehicles for the company.

• Sign off on the Driver Authorization Form.
  (See appendix A: Driver Authorization [Status] Form)

• Ensure the authorization level is set and is modified as necessary (via the Driver Authorization Form) throughout the employee’s time with the company.

• Ensure that all related paperwork is completed accurately.
• Ensure that supervisors, and employees under their direction, know their current status to allow them to operate vehicles in a compliant manner and in line with regulatory, legal and company policy requirements.
• Inform Transportation Safety Compliance (TSC) to update the status of any driver should it change for any reason via the Driver Authorization Form.
• Hold accountable, any employee that violates the Driver Authorization Status under which they are employed, and
• Hold accountable, any supervisor that would request an employee to exceed their permitted status.

TSC Advisors (HSE Dep’t)
It is the TSC (Health, Safety and Environment team) responsibility to:
• Monitor and report issues of non-compliance with this code and the responsibilities therein, and
• Provide assistance to branch management teams in implementing this code and any associated processes at a field level.

5.0 CHANGING A DRIVER’S STATUS
The Drivers Authorization form permits the transfer of an employee from any one group to another with minimal effort. This enables better situational management for workers who may be leaving their driving duties behind for several weeks or drivers who are moving onto larger vehicles in a regulated role.

An example of how this process can be used for better management is the act of switching a crane operator from an NSC/DOT driver to a Light Duty driver while on a project where the limits of their driving do not extend beyond the site gates.

The Driver Authorization Status Form can be found on The Hub.

Policies>Human Resources>All Employees – New Hire Forms - All>Driver Authorization Form
Or;
Safety>Transportation Compliance Code> Driver Authorization> Driver Authorization Form

Completed forms
• Canadian based branches email form to compliance@ncsg.com
• US based branches email form to compliance.us@ncsg.com

Ultimately, the purpose of this code is to enable the company to record, log and monitor the status of its drivers and ensure that employees are compliant within current legislation and with associated company policy.

Related Regulations, Policies a/o Code’s
• Acceptable Driver Code
• Hours of Service Codes
• FMCSA
• Motor Vehicle Transport Act (1987), T-6 RSA 2000

Refer to this guide for assistance in performing a quality check on Driver Authorization (Status) Forms. Any questions can be directed to the Transportation Safety, Compliance and Quality Manager or the Transportation Compliance Advisor.
<table>
<thead>
<tr>
<th>Driver Authorization Form</th>
<th>QUALITY CHECK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Type</td>
<td>Type of employment at the time of authorization.</td>
</tr>
<tr>
<td>Employee Information</td>
<td>The employee’s full legal name as it appears on their driver’s license. The date that the employee’s driver authorization type is given. The branch that the employee is permanently assigned to. The employee’s job title. The company the employee is employed by (i.e. NCSG Crane &amp; Heavy Haul Services, NCSG Hauling &amp; Rigging or Energy Transport, etc.).</td>
</tr>
<tr>
<td>Driver Authorization (Status) Type</td>
<td>NSC/DOT Driver (National Safety Code in Canada, Department of Transportation in U.S)</td>
</tr>
<tr>
<td></td>
<td>• NSC/DOT drivers are drivers that are authorized to operate company owned, leased or rented NSC/DOT vehicles which are vehicles with a registered gross vehicle weight (GVW) of 4500kgs or greater in Canada or vehicles with a gross vehicle weight rating (GVWR) of 10,001lbs or more in the United States.</td>
</tr>
<tr>
<td></td>
<td>NSC/DOT drivers MUST submit a driver’s log for every day employed; even for days they don’t drive. Employees that are authorized as NSC/DOT drivers are also authorized to operate light-duty vehicles.</td>
</tr>
<tr>
<td></td>
<td>Light-duty Driver</td>
</tr>
<tr>
<td></td>
<td>• Light-duty Drivers are only authorized to operate light-duty vehicles which are vehicles with a registered GVW of 4490kgs or less in Canada or a GVWR of 10,000lbs or less in the United States. This also includes vehicles paid for by the company such as lease and rental vehicles.</td>
</tr>
<tr>
<td></td>
<td>Non-driver</td>
</tr>
<tr>
<td></td>
<td>• Non-drivers are drivers that have no authority to operate any company owned, leased or rented vehicle.</td>
</tr>
<tr>
<td>14 Day Graph</td>
<td>ONLY APPLICABLE TO NEW OR RETURNING NSC/DOT DRIVERS.</td>
</tr>
<tr>
<td></td>
<td>Area that captures the on-duty and off-duty hours for the 14 days PRECEEDING the authorization date. The hours must be numerical (cannot just check the boxes). Graph can be left blank for light-duty drivers and non-drivers.</td>
</tr>
<tr>
<td>Certification of Compliance with Hour of Service Legislation</td>
<td>Certification that the NSC/DOT driver is compliant with HOS rules.</td>
</tr>
<tr>
<td></td>
<td>Employee cannot drive after accumulating, for ANY employer;</td>
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<td><strong>In Canada</strong></td>
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<td>• 70 hours of on-duty time in past 7 days, and requires 36 hours of off-duty time to reset accumulated hours to 0 (Cycle 1) or;</td>
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<tr>
<td></td>
<td>• 120 hours in past 14 days and requires 72 hours of off-duty time to reset accumulated hours to 0 and must also include 24 hours of off-duty time prior to reaching the 70th hour of on-duty time (Cycle 2).</td>
</tr>
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<td><strong>In the United States</strong></td>
</tr>
<tr>
<td></td>
<td>• 70 hours of on-duty time in past 8 days, and requires 34 hours of off-duty time to reset accumulated hours to 0.</td>
</tr>
<tr>
<td></td>
<td>If an employee is not in compliance with HOS rules, then the employee must take the required hours of off-duty time prior to being able to drive.</td>
</tr>
<tr>
<td>Driver’s Name and Signature</td>
<td>Signature verifying employee understands the requirements and/or limitations of their driver authorization.</td>
</tr>
<tr>
<td>Supervisor’s Name and Signature</td>
<td>Signature verifying supervisors understands the requirements and/or limitations of the employee’s driver authorization.</td>
</tr>
</tbody>
</table>
Note: Driver authorization is not based on class of license an employee holds, but rather on the registered weight of the vehicle (Canada) and the gross vehicle weight rating (U.S.) that an employee is authorized by the supervisor to drive.
Driver Authorization (status) Form

☐ New Employee  ☐ Existing Employee  ☐ Returning Employee

Employee: ____________________ Date: _____________ Branch: _____________

Job Title: ____________________ Company: ____________________

☐ NSC/DOT Driver  ☐ Light Duty Driver  ☐ NON-Driver

FOR NEW OR RETURNING NSC/DOT DRIVERS

Fill in the number of hours On-Duty and Off-Duty the Employee has had for each day in the past 14 days.

<table>
<thead>
<tr>
<th>Date</th>
<th>On-Duty</th>
<th>Off-Duty</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Is the Employee currently compliant with the required Hours of Service Legislation?

d ☐ Yes

☐ No [The Employee must take the required Off-Duty time before driving]

Driver’s Name: ____________________ Signature: ____________________

Supervisor Name: ____________________ Signature: ____________________

Date: _____________ (Day / Month / Year)

ONCE COMPLETED EMAIL THIS DOCUMENT TO; compliance@ncsg.com for Canadian employees

compliance.us@ncsg.com for U.S. employees

ORIGINAL documents must be forward to the company’s principle place of business and filed in the employee’s driver file.

A full list of Principal Place of Business addresses for NCSG companies can be found on the HUB at;

HUB> Safety>Transportation Compliance Code > Principal Place of Business

Only send Transportation Compliance documents that are marked □ TC to the email address listed above unless specifically requested to do otherwise. Compliance will not forward payroll or HR documents.
FOR CANADIAN COMMERCIAL DRIVER AND CANADIAN/US LIGHT-DUTY DRIVER

This package captures information required by law and company policy for new hires and rehires that have been absent for greater than 30 days and must be submitted as detailed below. Any DIPs received incomplete will be returned to the originating branch for correction. The finished package must include:

1. **This Driver Information Package (DIP) consisting of:**
   - POSITION INFORMATION (Page 2)
   - DRIVER’S WORK HISTORY (Page 2)
   - VEHICLE USE AGREEMENT (Page 3)
   - CERTIFICATION OF VIOLATIONS (Page 4)

2. Scanned and enlarged front and rear image of the driver’s license.

3. A completed abstract consent form or Request for Check of Driving Record.

4. Pre-hire Drivers Abstract or Motor Vehicle Record dated within 30 days of hire date.
   Provided prior to hire by applicant at their cost.

5. Driver Authorization Form completed and signed by supervisor and employee.
   Found on the HUB under Safety>Transportation Compliance Code>Driver Authorization.

Only send Transportation Compliance documents that are marked to the email address unless specifically requested to do otherwise. Compliance will not forward payroll or HR documents.

<table>
<thead>
<tr>
<th>Driver Information Package (DIP)</th>
<th>Canada</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCSG Crane and Heavy Haul Services Ltd (Alberta)</td>
<td>Acheson office</td>
<td></td>
</tr>
<tr>
<td>NCSG Crane and Heavy Haul Services Ltd (BC)</td>
<td>Fort St John office</td>
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<tr>
<td>NCSG Crane and Heavy Haul Services Ltd (Sask)</td>
<td>Regina office</td>
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<tr>
<td>NCSG Crane and Heavy Haul Trans Tech</td>
<td>Acheson office</td>
<td>Casper office</td>
</tr>
<tr>
<td>NCSG Hauling and Rigging</td>
<td>Acheson office</td>
<td>Casper office</td>
</tr>
<tr>
<td>NCSG Crane and Heavy Haul Services Inc</td>
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<td>Casper office</td>
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<tr>
<td>Energy Transport Inc</td>
<td></td>
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<tr>
<td>B&amp;G Crane Service LLC</td>
<td>New Orleans office</td>
<td></td>
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</tbody>
</table>

### POSITION INFORMATION

<table>
<thead>
<tr>
<th>Full Name:</th>
<th>Date of Hire:</th>
</tr>
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<tbody>
<tr>
<td>Date of Birth:</td>
<td>Home Phone:</td>
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<tr>
<td>Home Address:</td>
<td>Driver’s License #:</td>
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<td>Driver’s License Province/State:</td>
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<td>Years with current class of license:</td>
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<tr>
<td>Branch</td>
<td>Hiring Manager</td>
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</tbody>
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**ONCE COMPLETED EMAIL ALL DOCUMENTS TO:**
- compliance@ncsg.com for Canadian employees
- compliance.us@ncsg.com for U.S. employees
DRIVERS WORK HISTORY
For Canadian drivers only
It is a requirement by law for a driver to provide a minimum 3 years’ worth of prior work history to the employer. This history can be provided in the form of a work resume, or by completing this form in its entirety. Please request another page be printed if required to ensure work history is adequately captured.

| Company Name | | |
| Contact Name | Manager or HR Contact | |
| Location Employed | City, State/Province | |
| Length of Employment (day/month/year) | From | To |

Company Name
Contact Name
Manager or HR Contact
Location Employed
City, State/Province
Length of Employment (day/month/year)
From
To

I ______________________________ certify this information to be a true and accurate account of work history at the time of signing below.

______________________________  _______________
Employee Signature     Date

VEHICLE USE AGREEMENT
Company policies concerning the use of a company owned, rented or leased vehicle can be viewed, downloaded and printed via The Hub. Please consult with your hiring manager or supervisor for more information.

You have been identified as an AUTHORIZED DRIVER for NCSG Crane & Heavy Haul Services. Whether this is a full time responsibility or a task you may be completing on an infrequent basis, you will be required to adhere to company policies regarding the safe operation of vehicles on company business.

I ______________________________ agree to the following terms of use for company vehicles

• All company owned, rented or leased vehicles are to be operated in accordance with the laws of the state or province you are driving in.
• You will provide the company with the most current driver’s license issued to you and only operate the appropriate class of vehicle that you are trained and authorized to operate. License must be in your procession while operating the vehicle.
• You will provide the company with annual consent in the necessary format, allowing the company to request a drivers abstract at a minimum of once per year. (NCSG Acceptable Driver Code details the companies purpose for drawing abstracts and how it will affect you as a driver)
• You acknowledge that the decision to assign a company vehicle rests with the applicable senior management representative for the branch or department, or another designated individual.
• The primary purpose of assigning use of a company vehicle is business. Personal use, if permitted by your hiring manager, must be documented and emailed to mileage@ncsg.com on a monthly basis, in the manner prescribed. Vehicle mileage that has not been accounted for will be assumed to be personal use.
• Under no circumstances will you permit a non-employee or an individual designated as a non-driver to operate a company vehicle, unless expressly authorized to do so.
• You are responsible for ensuring the vehicle is clean at all times while in your possession.
• SMOKING is not permitted in any company vehicle.
• Weapons, drugs, alcohol or paraphernalia are not permitted in a company vehicle.
• You must ensure the vehicle is maintained in accordance with NCSG’s Preventative Maintenance Program
• You must immediately report any ticket, citation or violation that is received while in custody of the company vehicle.
• You will be financially responsible for the cost of any ticket, citation or violation where you as the driver were found to be in direct care and control of the vehicle.
• You must immediately report any collision that occurs, following the laws of the province or state as well as the requirements of the Incident Management Process.
• You will ensure that your actions are in keeping with the intent of the company’s Acceptable Driver Policy.
• You will not exceed the posted speed limit and drive to current road and traffic conditions.
• You are responsible to ensure that all occupants are wearing seatbelts.
• You will ensure that all cargo is secured as per the cargo securement standard.
• Absolutely no handheld use of electronic devices while driving (texting, talking, other forms of distraction)
• Immediately notify direct supervisor or manager of any suspension, revocation or loss of license and stop operating any company owned or controlled vehicle.
• Do not operate any company owned or controlled vehicles if you have had any consumption or use of Drugs or Alcohol. You MUST immediately notify your supervisor of your fitness for work.

Employee Signature
Date

DRIVER’S CERTIFICATION OF VIOLATIONS
In the case of all commercial drivers, this information is required by law and cannot be replaced with a driver abstract/ MVR. This requirement has been extended to all drivers within NCSG to ensure compliance with the legal requirements when transitioning between driver authority levels. By certifying this form, you are declaring all violations, citations or collisions that may have occurred, listing you as a participant, including those that may have occurred while in possession of a previously issued license from another jurisdiction.

NOTE: It is illegal to possess more than one driver’s license at the same time.

I certify that the following account of violations is a true and complete listing of all traffic violations, collisions or criminal driving offences for which I have been convicted of or have been involved in over the previous 5 years.

<table>
<thead>
<tr>
<th>Date</th>
<th>Violation Details</th>
<th>Province/ State</th>
<th>Commercial Vehicle?</th>
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<tbody>
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I certify that if the above fields are left blank, I have not been convicted of, or forfeited bond or collateral on account of any violation required to be listed in accordance with this document or the governing legislation.

Driving Record
I understand that NCSG will request annually my driver’s abstract or MVR and/or record of violations related to the operation of a motor vehicle, from the province or state that issued my license. I also understand that additional abstracts or MVR’s may be requested by NCSG on a case-by-case basis.
Licensing
I understand that my driver’s license will require periodic renewal and that as a driver it is solely my responsibility to ensure that it is renewed prior to the expired date printed on it and a copy of the interim or new license must be supplied to the company as soon as possible. Failure to do so may result in disciplinary action.

Laws of the Land
As a driver, I am responsible to ensure that I am operating in accordance with the laws established by the jurisdiction that I am driving in. All company vehicles will be driven in accordance with the conditions and under no circumstances shall I exceed the posted speed limit or limits imposed by the owner of the road or NCSG. I also understand that I must immediately report any violations that I receive while driving, whether in possession of a company vehicle, or a personally owned vehicle.

________________________  ____________________________  ______________
Drivers Name               Drivers Signature               Date
Driver Authorization (status) Form

☐ New Employee ☐ Existing Employee ☐ Returning Employee

Employee: __________ Date: __________ Branch: __________

Job Title: __________ Company: __________

☐ NSC/DOT Driver ☐ Light Duty Driver ☐ NON-Driver

FOR NEW OR RETURNING NSC/DOT DRIVERS
Fill in the number of hours On-Duty and Off-Duty the Employee has had for each day in the past 14 days.

<table>
<thead>
<tr>
<th>Date</th>
<th>On-Duty</th>
<th>Off-Duty</th>
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</tbody>
</table>

Is the Employee currently compliant with the required Hours of Service Legislation?

☐ Yes

☐ No [The Employee must take the required Off-Duty time before driving]

Driver’s Name: __________________________ Signature: __________________________

Supervisor Name: __________________________ Signature: __________________________

Date: __________ (Day / Month / Year)

ONCE COMPLETED EMAIL THIS DOCUMENT TO:

compliance@ncsg.com for Canadian employees
compliance.us@ncsg.com for U.S. employees

ORIGINAL documents must be forward to the company’s principle place of business and filed in the employee’s driver file.

A full list of Principal Place of Business addresses for NCSG companies can be found on the HUB at:

HUB> Safety>Transportation Compliance Code > Principal Place of Business

Only send Transportation Compliance documents that are marked TC to the email address listed above unless specifically requested to do otherwise. Compliance will not forward payroll or HR documents.
20.1 Subcontractor Management Process

1.0 PURPOSE
NCSG Crane & Heavy Haul Services and its affiliated companies referred to as NCSG have developed a Subcontractor Management process to ensure adequate and proper management of all Subcontractor’s in order to prevent potential injury to employees, Contractors, and the public and prevent potential damage to property while operating within NCSG areas of responsibility. In the role of prime Contractor and or general Contractor or when engaging a subcontractor, NCSG has a responsibility to ensure selected Subcontractors are competent to perform the contracted work in a safe manner and comply with the established project requirements. NCSG has established a Subcontractor Management process for identifying the criteria for Subcontractor selection, compliance monitoring criteria, and post contract evaluation.

It is a management priority for NCSG to only select Subcontractors who can safely deliver a quality job, on time and within budget constraints. NCSG accomplishes this task through a thorough evaluation and selection process.

2.0 SCOPE AND APPLICATION
The scope of this process is to provide a consistent and standardized process for evaluating, selecting and managing Subcontractors to NCSG. Subcontractors are treated just like an employee, all the same applicable rules/policies/training requirements and procedures apply. This involves managing the Subcontractor prior to site mobilization to ensure all Subcontractors meet, as a minimum, the certification requirements through to NCSG performing a pre-qualification evaluation involving the review of the Subcontractor Health and Safety history, through to reviewing the Subcontractor’s HS&E program and leading to monitoring the Subcontractor’s performance during project activities and a post project evaluation.

In conjunction with referenced legislation, clear and concise direction drives the standards which are to be viewed as the minimum requirements identified by NCSG.

This Process applies, without exception, to all NCSG companies.

3.0 DEFINITIONS
Pre-Contract Phase Period prior to assigning a Sub Contractor Agreement or Employment Services Contract, during which the Subcontractor is evaluated and verified as being competent to safely deliver quality work within schedule and requirements.

Subcontractor Agreement This is our standard agreement or services contract that applies to companies providing services, personnel or equipment to perform or conduct work under our overall responsibility or on our behalf.

Employment Services Contract (direct service provider) This is our standard agreement or services contract that is only applicable to consultants, individuals or direct service hire contractors who are only operating in the capacity as an individual. This may include but not limited to; Project Managers, Managers, Engineers, Drivers, etc.

Contract Supervisor The individual within NCSG deemed responsible for supervising the Subcontractor and administering this contract or direct service agreement.

Contract Phase Period when the contract or direct service agreement is deemed active and the Subcontractor executes the work. NCSG monitors Subcontractor compliance to established HSE standards, monitors against NCSG HS&E Expectations and initiates corrective action as required.

Post-Contract Phase When contracted work or direct service agreement has been completed and Subcontractor performance is evaluated to determine suitability for future work.

Risk Reduction Plan A plan prepared by the Contract Supervisor and applicable HS&E Advisor when awarding to a risk rated Subcontractor, this plan must be approved by the applicable NCSG Manager and by the Corporate Manager - HS&E. This plan will address missing or weak areas within the detailed assessment of the subcontractor’s HSE program. This would include but not limited to; safe work practices, task hazard assessments, all elements of HSMS.

4.0 EXPECTATIONS
The Subcontractor Management process shall provide required and adequate guidelines to ensure knowledge of current NCSG processes related to HS&E management of Subcontractors from the pre-contract phase through the site work execution and post control phase evaluation. This process will ensure mitigation of all potential hazards to the client, employees, Subcontractors, visitors and the general public within NCSG areas of responsibility. This Subcontractor Management process will be reviewed at a minimum of every three years.

This process shall supplement, but not supersede any regulatory Provincial/State/Federal legislation within the operational areas of responsibility of NCSG.

Legislative changes shall be monitored by Health, Safety and Environment as per the Legislative Tracking and Updating Process.

Health, Safety and Environment documents will be made available to all personnel.

When the Health, Safety and Environment Management system is updated a revision record will be posted to all employees notifying them of the update.
5.0 ROLES AND RESPONSIBILITIES

5.1 Contract Supervisor
• Facilitate Subcontractor evaluation process and forward completed evaluations to the Purchasing Manager.
• Monitor compliance to the established HS&E management system. (ensure appropriate subcontractor agreement is signed, WCB coverage and clearance is in place, adequate insurance in place, applicable training certifications in place, verify copies of driver abstracts, criminal record checks – as applicable, and ensure Alcohol and Drug testing program in place) – Verify through S2web.
• Provide, collect and forward all documentation as required within this process. Act as the primary contact point between Company (NCSG) and the Subcontractor.
• Lead a post contract review of the Subcontractor project performance and document on the contractor evaluation form. Completed forms are to be sent to the Purchasing Manager.
• Chair all meetings with subcontractor.
• Ensure subcontractor is orientated to NCSG HS&E program.
• Advise Subcontractor of site hazards that may have an impact on their work.
• Verify implementation of the Subcontractor site specific HS&E plan where applicable.
• Overall responsibility for compliance monitoring.

5.2 Corporate Manager – HS&E
• Ensure Contractor Information Form (CIF) is has been entered into S2web by HS&E Admin.
• Establish and review the standard for evaluation of Subcontractor pre-qualification documents
• Assign the applicable HS&E Advisor to review all risk ranked (Red) Subcontractor documents as supplied from the Contract Supervisor and Subcontractor.
• Review the risk plan and approve for each subcontractor ranked as red.
• Ensure subcontractors Alcohol and Drug Program and audit application meet NCSG expectations.
• Ensure applicable HS&E Advisors conduct ongoing Subcontractor compliance evaluations and advise Contract Supervisor of findings. Findings and inspections will be maintained in S2web.

5.3 Purchasing Manager
• Overall responsibility for the vendor management list.
• Responsible for contractor evaluations and adjust approved vendor lists as appropriate.

5.4 Subcontractor
• Comply with the requirements as identified in NCSG HS&E management system.
• Submit weekly or monthly HS&E summary report as agreed to at pre-award meeting etc.

5.5 Supervisor
• Immediately correct any violations or infractions which have been brought to the attention of the supervisor, which did or could result in an incident or injury to the worker, employees, Contractors, or general public within the area.
• Provide in accordance with NCSG programs, any corrective action or discipline required for ensuring compliance with this process and document said action appropriately.

5.6 Management
• Ensuring compliance with this process, by all levels of the company including Contractors, visitors and the general public within NCSG areas of operation or active worksites.
• Adequate training and monitoring for compliance is established through the use of the Health, Safety and Environment team.
• Overall responsibility for the Subcontractor Management Process.

5.7 Health, Safety and Environment Team
• Develop and review as outlined in Health, Safety and Environment program this process to ensure current compliance with all regulatory legislation and company practices.
• Amend and maintain this process within the defined review period.

6.0 METHOD

6.1 Subcontractor Control Requirements
Subcontractor Management will take place at three phases from an HS&E point of view: pre-contract, active, and post contract.

6.2 Pre-Contract Phase
Subcontractor Pre-Qualification
The Contract Supervisor will review S2web to verify if proposed Subcontractor presently exists in our system.
• If the Subcontractor exists in S2web, the Contract Supervisor will review the risk ranking to determine if a full review is required (full review is required for Red or Risk Ranked and Subcontractors not presently entered into S2web- see 6.2.2). The Subcontractor information within S2web is then evaluated to see that it is not expired and not older than 2 years; WCB clearance letter, subcontractor agreement, insurance, etc. Post review of the Subcontractor information (barring Red Risk Ranked) the Contract Supervisor will meet with the contractor to;
• Review scope of work
• Provide NCSG Orientation
• Review Contract terms and conditions (including terms posed to NCSG from clients)
• Sign and formalize Subcontractor Agreement
• Update information in S2web for contractor (ie/Subcontractor agreement, etc)

Awarding to a Risk Rated Contractor

Subcontractors not entered into S2web, missing information, expired information, Red Risk Ranked, please use the following;
• Contract Supervisor will forward to the Subcontractor the Contractor Info Form (CIF) for completion and return. Additionally the Subcontractor is further requested to provide;
  • Driver abstracts
  • GST Number
  • Training records and certifications
  • Copies of insurance
  • WCB clearance letters
  • Safety statistics and records (if applicable)
  • Vehicle or equipment safety fitness certificates (if applicable)
• The Contract Supervisor will then forward the CIF and above documentation to the HS&E Admin for entry into the S2web system.
• The HS&E Admin upon receipt of the above info will data enter into the S2web system. The HS&E Admin will review the risk ranking provided in S2 web and notify the Corporate Manager - HS&E for any Red Risk ranked subcontractor(s) in the system.
• The Corporate Manager – HS&E will review the Red risk ranked contractors and will assign an HS&E Advisor to develop a Risk Plan for approval.
• Assigned HS&E Advisors will review and gap analysis the Red risk ranked subcontractors HS&E program against our expectations and expectations as they may exist from client/contracts assigned to us. A formal Risk Plan will be developed by the HS&E Advisor working in consultation with the Contract Supervisor to address areas of weakness or deficiency.
• Developed Risk Plan will be forwarded for review and approval by the Corporate Manager – HS&E.
• Approved Risk Plan’s will become an appendix term under the Subcontractor agreement and entered into S2web upon approval.

The Vice President HS&E must be advised of all risk rated Contractors used.

Subcontractor Written Program (not applicable to direct service providers)

Subcontractor (where applicable) shall provide NCSG for review a copy of their company HS&E program.

The Contractor’s written HS&E program (at a minimum meets NCSG’s standards) will be required to address the following:
• Leadership Issues: policy, audit, authority
• Specific HS&E Responsibilities Assigned (E.g. site manager, line supervisor, HS&E advisor, worker etc.)
• Planned Inspection & Audit Guidelines
• HS&E Communication Requirements
• Incident Management (reporting, recording & investigation)
• Training (company, project and skill specific requirements)
• Environment;
• Subcontractor Controls (i.e. selection, monitoring and post-contract evaluation)
• Hiring & Placement
• Security
• Recordkeeping
• Work Procedures & Methods (specific standards and procedures for work activities that the Subcontractor will conduct on site)
• General Rules
• Office Safety
• Recognition & Awareness
• Emergency Response Planning
• Occupational Health Services
• Alcohol and Drug Testing Program
• Journey Management Program
• Stop Work Authority
• Fitness to Work

The Subcontractor will supply a copy of their company HS&E program to both the Contract Supervisor and Corporate Manager – HS&E prior to starting work on site.
6.3 Active Contract Phase
This is the phase of the project where work is ongoing. The NCSG Contract Supervisor has a responsibility to ensure Subcontractor’s continue to comply with company requirements.

Subcontractor Weekly Report (as applicable)
On a weekly basis or as per NCSG Direction, Subcontractors will submit an HS&E summary report detailing their activities for the past week to the Contract Supervisor. This report will include the following:

- Number of personnel on site
- Number of hours worked, including Subcontractor’s of Subcontractor’s
- Number of incidents by type
- Training program delivered and number of attendees
- Number of Orientations conducted
- Number of HS&E Communications Meetings conducted
- Number of Pre-Job Instruction meetings
- Number of Planned Inspections conducted
- Details of outstanding actions from inspections, investigations, and HS&E communications meetings.

6.4 Post Contract Phase
After the completion of a project, the applicable NCSG HS&E advisor and NCSG Contract Supervisor will review the Subcontractor’s project performance. (at least done annually)

The result of the evaluation will be forwarded to the Purchasing Manager for their reference. This information will be used to determine future suitability of a Subcontractor.

6.5 Compliance Monitoring
The following actions will take place while monitoring Subcontractor compliance to the plan:

- Verify Subcontractor’s compliance to the established HS&E management system
- Verify Subcontractor’s compliance to their own HS&E program
- Verify all issued “Confirmation of Violation of Contract HS&E Requirements” have been followed up and closed out.

6.7 Documents
The following documents will be maintained in S2web;

- Copies of Subcontractor pre-qualification
- Contractor Information Form
- HS&E Summary Report as required
- Copies of "Confirmation of Violation of Contract HS&E Requirements" issued to the Subcontractor
- Risk Reduction Plan for Risk Rated Subcontractor’s
- Signed Subcontractor agreement

7.0 TRAINING REQUIREMENTS AND MATERIALS

- Subcontractor Management Process
- Flow Process Subcontractor Management
- Contractor Info Form
- Employment Services Contract
- Subcontractor Agreement
- Contractor Evaluation Form
20.2 Subcontractor Flow Process

**Work to be awarded**

- **Previously approved subcontractor?**
  - Yes
  - No

  - **Current Records?**
    - Yes
    - No

    - **Verify S2web and ensure ranking is Green or Yellow (Contract not older than 2 years, all other documents current and not expired)**

    - **Award work, meet with contractor, orientate, discuss terms and conditions**

    - **Provide Contractor with Contractor Info Form (CIF)**
      - Forward CIF to HSE Admin
      - HSE Admin enters into S2web

    - **Ranking Generated**
      - Green
      - Yellow
      - Red

      - **HSE Advisor develops Risk Plan with Requester**

      - **Fill out subcontractor agreement template and enter into S2web**

      - **Update S2Web with documents**

    - **Award work, meet with contractor, orientate, discuss terms and conditions**

**Work to be awarded**

**Previously approved subcontractor?**

- Yes

  - **Current Records?**
    - Yes
    - No

    - **Verify S2web and ensure ranking is Green or Yellow (Contract not older than 2 years, all other documents current and not expired)**

    - **Award work, meet with contractor, orientate, discuss terms and conditions**

- No

  - **Provide Contractor with Contractor Info Form (CIF)**
    - Forward CIF to HSE Admin
    - HSE Admin enters into S2web

  - **Ranking Generated**
    - Green
    - Yellow
    - Red

    - **HSE Advisor develops Risk Plan with Requester**

    - **Fill out subcontractor agreement template and enter into S2web**

    - **Update S2Web with documents**

    - **Award work, meet with contractor, orientate, discuss terms and conditions**
PLEASE REFER TO HUB OR HSE DEPARTMENT FOR CURRENT COPY
21.1 Short Service Employee Process

1.0 PURPOSE
The purpose of the Short Service Process (Green Hand) is to heighten the visibility of new (new and new to us) and young workers and prevent incidents during their initial months of service.

Young workers are at a much higher risk of injury than other workers. Young workers generally have less experience in recognizing hazardous situations than older workers. Many are also eager to please and afraid they'll look dumb if they ask questions, so they take risks that could be avoided. They may also be unaware of rights and responsibilities such as questioning potentially hazardous work activities.

Starting with a new job/employer can be risky for workers of any age, including experienced workers. Whether young or old, new workers may not be fully aware of the hazards in their new job, and they may feel pressured to work quickly to keep up with more experienced workers.

2.0 SCOPE AND APPLICATION
The process applies to all employees who are engaged in company business, including contractors. All craft work employees who are considered new or young workers, will take part in the process.

3.0 DEFINITIONS

Green Hand A worker that is; new at their job, new to the type of work, new to the worksite, or require additional assistance or guidance.

Competent Worker Adequately qualified, suitably trained and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

New Worker A new worker can be any age, and includes workers who are:
• New to the workplace (new to the company)
• Facing hazards that have changed or developed while they were at work or absent from work
• In a new workplace or location that has different hazards than the old one

Young Worker A young worker is any worker who is under 25 years of age.

4.0 EXPECTATIONS
This Process outlines the method by which new workers will be identified and provided extra assistance or guidance.

5.0 ROLES AND RESPONSIBILITIES

5.1 HS&E Advisors
• Conduct new hire orientation.
• Forward training documentation to VTA.
• Document items reviewed in the orientation.
• Distribute the appropriate color hard hat sticker (Green Hand) to employees.

5.2 Supervisors
• Instruct workers in safe work procedures.
• Train workers for all tasks assigned to them, and regularly check that they are doing their work safely.
• Ensure that only authorized, adequately trained workers operate tools and equipment or use hazardous chemicals.
• Ensure that workers follow safe work procedures for handling, storing, and maintaining equipment and materials.
• Enforce health and safety requirements.
• Ensure all new and young workers receive a Green Hand hard hat sticker.
• Conduct competency tests with green hands after 3 months of on the job experience.

5.3 Employees
• Know and follow health and safety requirements that apply to your job.
• If you don’t know how to do something safely, ask your supervisor for training before you begin work.
• Participate in all required health and safety education and training.
• Work safely, and encourage your co-workers to do the same.
• Use all required personal protective equipment and clothing.
• Correct any unsafe conditions or immediately report them to your supervisor.
• Immediately report any injury to a first aid attendant or supervisor.
• Inform your supervisor of any physical or mental impairment that may affect your ability to work safely.

6.0 METHOD

6.1 Orientation
All workers will receive a health and safety orientation to the company and the site prior to starting work.

When a worker is classified as a new or young worker, it’s essential to include safety issues as part of their orientation to the worksite on the first day of work, before they start working.

Appendix A outlines the topics reviewed in orientation.
6.2 Green Hand
After the health and safety orientation is complete, new and young workers will receive a hard hat sticker to wear.

The hard hat sticker signifies that the worker is new to the worksite or task and may need extra assistance and/or guidance with working safely on the site.
- New to Site (Green Hand Sticker)
- Apprentice sticker A1, A2, A3
- Journeymen J
- New to company N

6.3 Competency
After a probationary period of 3 months at a task or site, all new and young workers will complete a job evaluation that assesses their knowledge of information that was covered in their health and safety orientation.

The workers will be evaluated and their safety performance will be taken into consideration. If the new workers have shown that they are knowledgeable about the safety program and have met the safety performance expectations, then they graduate out of the green hand hard hat sticker.

7.0 TRAINING MATERIAL
- New Hire Orientation