Mary River Project

Attachment 5: Health and Safety Management Plan

Appendix 10E

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FOREWORD

Baffinland's Health and Safety Management Plan complies with the company's EHS Management Framework (see Appendix 10A-1 of the FEIS) and applies to all phases of the project. This Health and Safety Management Plan is a living document and continues to evolve with advancement of the Mary River Project. It is adapted to the scope of activities at every phase of Project development. The elements of the Health and Safety Management Plan apply equally to the engineering, procurement, and construction management (EPCM) contractor, who will assume responsibility for all activities during the construction phase of the project.

PLEASE NOTE:

Health and Safety Management Plan will be reviewed and/or expanded on a periodic basis to reflect all project activities associated with the current Project lifecycle. This is shown in Annex 1: Functional Guide Health and Safety: Contractor Safety Management Plan (Manual) – HS-FG-007 that will be used to dictate Health and Safety requirements during the Construction Phase of the Project. The Health and Safety Management Plan will be revised to reflect activities associated the current phase of the project lifecycle.

Health and Safety Management Plan

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ABBREVIATIONS

AED ..... automated external defibrillator
Baffinland..... Baffinland Iron Mines Corporation
CPR..... cardiopulmonary resuscitation
DEIS.....Draft Environmental Impact Statement
EHS .....environmental, health, and safety
EHS Policy .....Environmental, Health, and Safety Policy
EIS..... environmental impact statement
EPCM..... engineering, procurement, and construction management
ESIA .....environmental and social impact assessment
Mary River Project.....the Project
OH&S .....Occupational Health and Safety
OHSAS.....Occupational Health and Safety Management System
the Code .....Code of Business Conduct and Ethics

SECTION 1.0 - CONTEXT, PURPOSE, AND ORGANIZATION

Baffinland is committed to protecting the safety and health of our employees and contractors, and the communities in which we operate.

To implement the Sustainable Development Policy, Baffinland will conform to company environmental, health, and safety (EHS) management systems, standards, codes of practice, and guidelines. Baffinland values include specific expectations surrounding safety and health, and social and environmental responsibility. Baffinland has an EHS Corporate Committee, EHS Charter, and Code of Business Conduct and Ethics to support these values. These documents are posted on the company's website. Baffinland`s Health and Safety Management Plan is based on the principle of continuous improvement and is consistent with the Occupational Health and Safety Management System (OHSAS) 18001, dated 2007.

Baffinland` s Health and Safety Management Plan is in place to control health and safety risks of company activities. This plan contains the following elements:

- Policy;
- Legal Requirements;
- Hazard identification and Risk Assessment;
- Health and Safety Targets and Objectives;
- Roles and Responsibilities;
- Training and Awareness;
- Reporting and Documentation;
- EHS Communication;
- Operational Control;
- Emergency Preparedness and Response;
- Performance Measurement and Monitoring;
- Accidents, Incidents, Non-Conformance, and Corrective/Preventive Actions;
- Records and Records Management;
- Audits and Assurance; and
- Management Review

SECTION 2.0 - POLICY

For Baffinland's Sustainable Development Policy, see Figure 2.1. Baffinland is committed to leadership and continuous improvement in environmental, health, and safety practices for the benefit of employees, contractors, and communities. This will be accomplished by:

- Providing a safe and healthy workplace;
- Integrating environmentally sound practices in all processes;
- Complying with applicable laws, regulations, policies, and standards;
- Conserving natural resources and energy;
- Providing necessary resources to support environment, health, and safety goals and objectives; and
- Integrating environmental, health, and safety goals and objectives with overall business strategy.

2.1 BAFFINLAND EHS VISION

Baffinland's vision is to achieve:

- An accident / incident free-culture; and
- A sustainable and competitive business advantage through leadership and excellence in environmental, health, and safety.

Baffinland is focused on everyone's safety, each and every day. Business success will not be possible without safe workplaces and safe workers. Baffinland's objective is to implement processes and systems for safety excellence and integrate them in everyday activities to develop safe behaviour and ensure a safe place for employees.

Environmental, health, and safety excellence requires a daily commitment by all employees.

2.2 BAFFINLAND'S COMMITMENTS

Baffinland provides adequate resources to implement and maintain the EHS Management System, including the necessary human, material, and financial resources. For Baffinland's Sustainable Development Policy, see Figure 2.1.

2.3 UPDATE OF THIS MANAGEMENT PLAN

The Health and Safety Management Plan is a "living document." It will be regularly updated based on management reviews (see Section 15), incident investigations, regulatory changes, or other Project-related changes.

For all stages of the project, the engineering, procurement and construction management (EPCM) contractor will assume leadership of the Health and Safety Management Plan for all construction-related activities.

The EPCM contractor will also be expected to have their own Health and Safety Management Plan, which will comply with the Baffinland Health and Safety Management Plan. The Hatch Functional Guide Health and Safety: Contractor Safety Management Plan (Manual) – HS-FG-007 for the Construction Phase is attached in Annex 1 of this document.

Baffinland will perform regular audits of the EPCM contractor's Health and Safety Management Plan to ensure that it complies with Baffinland's Sustainability Policy and health and safety goals and objectives.

Figure 2-1: Baffinland Sustainable Development Policy

At Baffinland Iron Mines Corporation, we are committed to conducting all aspects of our business in accordance with the principles of sustainable corporate responsibility and always with the needs of future generations in mind. Everything we do is underpinned by our responsibility to protect the environment, to operate safely and fiscally responsibly and to create authentic relationships. We expect each and every employee, contractor, and visitor to demonstrate a personal commitment to this policy through their actions. We will communicate the Sustainable Corporate Policy to the public, all employees and contractors and it will be reviewed and revised as necessary on an annual basis.

These four pillars form the foundation of our corporate responsibility strategy:

1. Health and Safety
2. Environment
3. Investing in our Communities and People
4. Transparent Governance

HEALTH AND SAFETY

- We strive to achieve the safest workplace for our employees and contractors; free from occupational injury and illness from the very earliest of planning stages. Why? Because our people are our greatest asset. Nothing is as important as their health and safety.
- We report, manage and learn from injuries, illnesses and high potential incidents to foster a workplace culture focused on safety and the prevention of incidents.
- We foster and maintain a positive culture of shared responsibility based on participation, behaviour and awareness. We allow our workers and contractors the right to stop any work if and when they see something that is not safe.

ENVIRONMENT

- We employ a balance of the best scientific and traditional Inuit knowledge to safeguard the environment.
- We apply the principles of pollution prevention and continuous improvement to minimize ecosystem impacts, and facilitate biodiversity conservation.
- We continuously seek to use energy, raw materials and natural resources more efficiently and effectively. We strive to develop pioneering new processes and more sustainable practices.
- We understand the importance of closure planning. We ensure that an effective closure strategy is in place at all stages of project development and that progressive reclamation is undertaken as early as possible to reduce potential long-term environmental and community impacts.

INVESTING IN OUR COMMUNITIES AND PEOPLE

- We respect human rights and the dignity of others. We honour and respect the unique culture, values and traditions of the Inuit people.
- We contribute to the social, cultural and economic development of sustainable communities adjacent to our operations.
- We honour our commitments by being sensitive to local needs and priorities through engagement with local communities, governments, employees and the public. We work in active partnership to create a shared understanding of relevant social, economic and environmental issues, and take their views into consideration when making decisions.

TRANSPARENT GOVERNANCE

- We will take steps to understand, evaluate and manage risks on a continuing basis, including those that impact the environment, employees, contractors, local communities, customers and shareholders.
- We ensure that adequate resources are available and that systems are in place to implement risk-based management systems, including defined standards and objectives for continuous improvement.
- We measure and review performance with respect to our environmental, safety, health, socio-economic commitments and set annual targets and objectives.
- We conduct all activities in compliance with the highest applicable legal requirements and internal standards
- We strive to employ our shareholder's capital effectively and efficiently. We demonstrate honesty and integrity by applying the highest standards of ethical conduct.

Tom Paddon
President and Chief Executive Officer
September 2011

2.4 INTERACTION WITH NUNAVUT'S MEDICAL SYSTEM

The current intervention procedure for injuries will be as follows:

1. Stabilize the injured person and administer medical treatment within the capabilities of the medical professionals at site.
2. Depending on the nature of the injuries, the patient might be flown to Pond Inlet for stabilization and then flown by med-evac aircraft to Iqaluit.
3. If the patient is stabilized and is low risk to transfer to the Iqaluit Regional Hospital, they will be taken by aircraft chartered by Baffinland.
4. Depending on the severity of the injury, the patient will be flown to a major hospital (Montreal/Ottawa) as soon as possible.

Key responders and medical professionals will be trained in current first aid and cardiopulmonary resuscitation (CPR) techniques.

In addition automated external defibrillators (AED) will be located in strategic locations and all responders and medical professionals will be properly trained in its use.

During all phases of the project, Baffinland will establish a first aid room at Steensby Port. The existing first aid facilities at Mary River and Milne Inlet will continue in operation where qualified medical staff will attend to medical emergencies. These facilities will remain functional for the entire duration of the project. The existing medi-vac procedure will continue to be used or Baffinland will establish a remote link with an existing hospital facility and medical team.

Baffinland recognizes and will adhere to the Government of Nunavut's policy on medical evacuation of non-Nunavummiut.

SECTION 3.0 - LEGAL REQUIREMENTS

Specific knowledge of legal and other requirements and associated tasks are necessary to establish objectives and targets as well as to develop adequate management plans and operational controls to achieve the objectives and targets.

The significant current legislation governing occupational health and safety is as follows:

- *Mine Health and Safety Act* and Regulations; S.N.W.T. (Nu.) 1994, c. 25
  - Environmental Tobacco Smoke Worksite Regulations, Nu. Reg. 029-2003
  - Mine Health And Safety Regulations, N.W.T. Reg. (Nu.) 125-95
  - Mine Health and Safety Regulations, Amendment, Nu. Reg. 016-2003

- *Safety Act* and Regulations, R.S.N.W.T. (Nu.) 1988, c. S-1
  - Asbestos Safety Regulations, N.W.T. Reg. (Nu.) 016-92
  - Environmental Tobacco Smoke Work Site Regulations, Nu. Reg. 027-2003
  - General Safety Regulations, R.R.N.W.T. (Nu.) 1990 c. S-1
  - General Safety Regulations, Amendment, Nu. Reg. 021-2000
  - Safety Forms Regulations, N.W.T. Reg. (Nu.) 102-91
  - Silica Sandblasting Safety Regulations, N.W.T. Reg. (Nu.) 015-92
  - Work Site Hazardous Materials Information System Regulations, R.R.N.W.T. (Nu.) 1990 c. S-2
- *Workers' Compensation Act*, R.S.N.W.T. (Nu) 1988 c. W-6
  - Assignment of Statutes Administration Order, N.W.T. Reg. (Nu.) 040-96
  - Workers' Compensation General Regulations, R.R.N.W.T. (Nu.) 1990 c. W-21
- *Workers' Compensation Act* (Consolidation) S.Nu. 2007,c.15, 2007
  - Workers' Compensation General Regulations, R-022-2008
  - Assignment Of Statutes Administration Order, N.W.T. Reg. (Nu.) 040-96
- *Transportation Of Dangerous Goods Act*, 1990, R.S.N.W.T. (Nu.) 1988, c. 81 (Supp.)

Baffinland EHS staff will continually monitor legislation for any amendments and implement compliance programs and employee communication, with these changes, as required.

Baffinland has a written operational control to identify changes in activities, occupations, operations, and facilities that might affect the application of legal and regulatory requirements as well as health and safety risks. The operational control indicates who in management receives results of the report on changes and includes a regular review of the control. Operational controls for identifying such changes include workplace inspections and regular interviews with area supervision on changes in their areas.

SECTION 4.0 - HAZARDS IDENTIFICATION

Knowledge of hazards and evaluation of associated risks are necessary requirements for establishing health and safety objectives and targets, and for setting priorities to control the identified risks to employees and others on an ongoing basis. All contractors and subcontractors involved in the exploration, construction, and operation of the Project are required to carry out hazard identification.

For all phases of the Project, Baffinland will have knowledge of potential hazards through such sources as:

- Legal and regulatory requirements;

- Company sustainable development policy and supporting policies;
- Records of incidents, accidents and non-conformances;
- EHS management system audits;
- Company EHS audits;
- Communications from employees and others;
- Information from health and safety consultations;
- Information on best practices, typical hazards for the industry, and incidents and accidents in other organizations;
- Details of changes in occupations, facilities and activities;
- Inventory of hazardous materials and the toxicology of the hazardous materials;
- Monitoring data;
- Existing administrative, engineering and personal protective equipment controls;
- Workplace knowledge and other data;
- Professional judgment;
- Process hazard analysis; and
- Management of change process

Baffinland uses its Hazard Identification, Risk Assessment, and Controls Methodology (see EHS Management Framework, FEIS, Appendix 10A-2) to document ongoing identification of hazards and classification of risks for routine and non-routine events associated with activities, occupations, and facilities for all phases of the project. This procedure includes five distinctive steps (see Figure 4- 1).

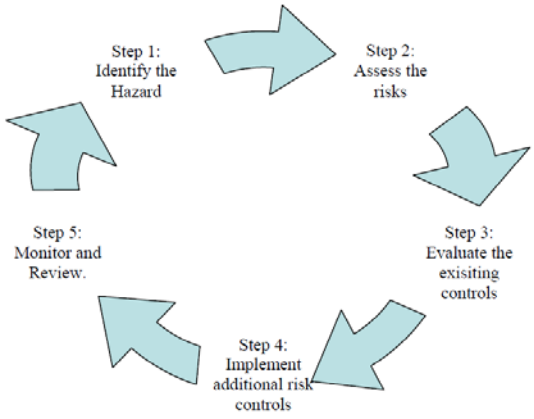


Figure 4- 1: Hazard Identification, Risk Assessment, and Controls Methodology

Based on the Hazard Identification, Risk Assessment, and Controls Methodology, Baffinland creates a list of activities, occupations, and facilities and associated hazards with established priorities for risk control and action.

The result of the hazard identification and risk assessment is a basis for establishing and documenting health and safety objectives and targets, and subsequent action to achieve established objectives and

targets. Each hazard classified as representing a priority risk requires an action plan with recommendations to control the risk. Recommendations include consideration for operational controls, training and awareness, and performance measurement and monitoring.

The action plan and recommendations are forwarded to the area management responsible for follow-up. In all cases, the action plan and recommendations are communicated to the interested and affected employees (and others as required). Typically, the recommendations are implemented in consultation with interested and affected employees (and others as required).

4.1 OCCUPATIONAL HEALTH AND SAFETY COMMITTEE

Involvement of everyone in EHS activities is the most powerful way to develop personal EHS values and build awareness and commitment. Baffinland encourages employee participation by providing mechanisms that:

- Support participation (by identifying and removing barriers to participation);
- Establish a workplace EHS committee(s) and employee representatives; and
- Ensure that employees and employee representatives are trained in, and consulted on, all aspects of EHS associated with their work.

An EHS Committee(s) is established at the operation/facility that will at minimum meet the requirements of the *Nunavut Mines Act*. Baffinland will ensure that:

- Meetings are held regularly, at least every 30 days;
- Employees are represented in EHS committees through all levels of the organization and criteria for minimum participation (i.e., attendance) of committee members are established and enforced;
- EHS committees have goals and objectives that support the operation's EHS goals and objectives, that progress is tracked, and results are reported and followed-up; and
- Minutes of committee meetings and follow-up action plans are documented and available to all employees. Minutes include attendance and follow-up action plans to identify outstanding issues, recommendations to management, planned action, assigned responsibility, and timeframes for completion. Action plans are reviewed at subsequent ehs meetings. Action plan items are completed within a reasonable timeframe.

4.2 HAZARD AND RISK IDENTIFICATION REVIEWS

Baffinland determines and communicates appropriately a timeframe to complete written initial hazard identification and risk assessment of identified occupations, activities, and facilities that might present health hazards.

Baffinland has written operational controls to review hazard identification, risk assessment, and risk control. Reviews will be conducted annually and the review documented and made available for all employees.

Baffinland has a written operational control to necessitate a review of any occupation, facility, and activity when there has been a change in the occupation, facility, or activity, or any other change that could affect the initial hazard identification and risk assessment.

SECTION 5.0 - HEALTH AND SAFETY TARGETS AND OBJECTIVES

Objectives and targets are necessary and are established at all levels of the company and for all contractors. Objectives and targets are documented and monitored to improve EHS performance.

5.1 HEALTH AND SAFETY STRATEGIES

- Senior Management: Senior management must provide leadership for health, safety, and environment activities and assumes overall responsibility for success of the EHS Management System.
- Line Management Driven:
  - Line supervisors play a pivotal role in the success of the EHS programs.
  - EHS policies, programs, and procedures are consistently applied throughout the Project by Baffinland's supervisors as they direct the workforce in their daily duties.
- Visibly demonstrated commitment:
  - EHS excellence only occurs when supervisors, managers, and executives demonstrate their values through actions and their credibility by engaging employees to actively participate in the program.
- Annual target reductions:
  - By establishing annual leading and lagging indicators for EHS improvements, Baffinland will strive for continuous improvement by meeting these reductions in maintaining "world-class EHS performance."
- High level of accountability:
  - Every employee is held accountable for exercising sound judgement and skills in a reasonable, practical, and timely way to prevent accidents and injuries.

5.2 HEALTH AND SAFETY PRINCIPLES

All incidents can be prevented. Baffinland believes that:

- All injuries and environmental incidents are preventable; and
- Injuries and incidents are not mere chance occurrences, but represent a system failure.

Employee involvement is essential. Employees are required to practice good housekeeping, participate in training, report hazards and injuries, use personal protective equipment, and practice safe work habits.

Management is responsible and accountable for preventing injuries. Leadership is all about people, and safety, at its essence, is respect through action for the well-being of people.

Working safely is a condition of employment. Baffinland's approach is "Safe from the Start." Each employee is held accountable for using sound judgement to prevent injuries.

All operating exposures can be controlled. Baffinland will continually analyze its process and procedures to maximize efficiency and reduce safety risks.

A "world-class" EHS program is achieved when incidents and injuries are intolerable, responsibilities and expectations are clearly defined, communication is open, and the organization is employee-centred.

5.3 CHALLENGING GOALS AND OBJECTIVES

Objectives and targets are necessary and can be established at all levels of the company. They are documented and measurable objectives and targets to monitor and improve EHS performance regarding health and safety risks, and environmental aspects and impacts.

Objectives and Targets

Each operating department will establish and document specific objectives and targets and are to be aligned with Baffinland objective and targets, demonstrate continuous improvement in EHS performance and achieve the goal of "zero harm."

Each operating department will establish EHS targets and objectives annually. Each target and objective is to have an associated action plan. The plan for achieving objectives and targets includes:

- Identifying the planned action;
- Designating responsibility for achieving objectives and targets;
- Determining timeframe within which the objectives and targets are to be achieved; and
- Verifying completion.

Review of Objectives and Targets

Targets and objectives are reviewed regularly (at least annually) and progress toward meeting established objectives is measured and tracked (e.g., key performance indicators for EHS).

Communication of Targets and Objectives

Objectives and targets for the operating department are communicated to employees throughout the organization, and facility or department objectives and targets are communicated throughout the respective areas.

5.4 EHS BEST PRACTICES

A "world-class" EHS workplace incident rate is considered 2 or less, with a severity rate of 1 or less. Incident rate is usually calculated by multiplying the number of total recordable injuries by 200,000 and divide by the hours worked. Severity rate is usually calculated by multiplying the number of lost-time workdays by 200,000 and dividing by the hours worked.

Baffinland will strive to reduce these rates to the lowest possible level.

Baffinland strives to continuously improve to achieve world-class performance. The Mary River Project experienced a lost-time (LT) injury in June 2010 after working 668 days since the last LT. The company intends to be the leader in Nunavut Mining by ensuring strict adherence to the following strategies:

- EHS is line management-driven;
- Annual target reduction for EHS;
- Performance accountability (covered in annual performance review);
- High visibility for EHS (site inspection and job observations);
- Compliance auditing (planned inspections);
- Practical risk assessment;
- Team communication and consultation (EHS meetings, OHSC meetings);
- Training and awareness (all employees);
- Recognition for individual and team EHS performance;
- Document and data control;
- Emergency preparedness and response;
- Audits and assurance; and
- Management reviews.

SECTION 6.0 - ROLES AND RESPONSIBILITIES

Employee involvement is essential. Involvement of employees at all levels is needed for effective performance of HSE-related tasks. All employees are required to practice good housekeeping, participate in training, report hazards and injuries, use personal protective equipment, and practice safe work habits. It is necessary that roles, responsibilities, and accountabilities be defined, documented, and communicated.

Each employee is expected to actively participate in, and take ownership of Environmental, Health,

and Safety Policy, goals, and objectives. Line management will be accountable for implementing this policy. Senior management will be visibly committed and actively supportive of this policy.

Baffinland`s Vice President Sustainability is responsible for implementing the EHS Management System. The VP Sustainability ensures that EHS management system requirements are established, implemented, and maintained. The VP Sustainability also ensures that reports on performance of the EHS Management System are presented to senior management.

For all phases of the project, Baffinland and the EPCM contractor will work closely together. They will define, document, and maintain a list of the roles, responsibilities, and accountabilities of the employees (management) responsible for EHS performance in their areas. They will also review the implementation of their respective EHS Management System, and the EHS personnel advising and assisting management to meet their EHS Management System responsibilities.

Baffinland will regularly review and update any changes in roles, responsibilities, and accountabilities.

SECTION 7.0 - TRAINING AND AWARENESS

All employees need some level of training depending on whether they manage, perform, or verify activities affecting health and safety risks or environmental aspects. A key factor is to match training provided with training needed. Training and awareness needs are determined by:

- Results of the environmental aspects evaluation;
- Results of hazard identification, risk assessment, and risk control;
- Company sustainable development policy and supporting policies;
- Legal and regulatory requirements;
- Established objectives and targets; and
- Management Plans.

Baffinland identifies and documents training needs and delivers appropriate training to all employees whose work might affect risks to health and safety in the workplace and whose work might create a significant environmental impact. All Baffinland contractors are required to abide by this requirement. Employees and others are made aware of:

- Importance of conformance to requirements of the EHS Management System and EHS policies;
- Risk associated with work in a remote environment;
- Risk associated with work in extreme climatic conditions;
- Risk to the environment and to health and safety of their work activities;
- Risk to the environment and to health and safety of deviations from specified operational controls;
- Benefits of a healthy and safe workplace; and
- Their specific roles and responsibilities in achieving compliance.

Baffinland's training and awareness plan considers:

- The differing levels of risk;
- The remoteness of the site and the climate;
- The different responsibilities, abilities, and literacy of employees;
- The culture;
- Trainers;
- Training methods and settings;
- Training frequency;
- Contractors;
- Documentation of training; and
- Evaluation of training.

Baffinland regularly reviews and updates the training and awareness plan based on changes in training needs related to EHS Management System awareness, occupation-specific training, and regulatory-required training.

Emergency personnel will receive training in first aid and CPR and will practice hands-on rescue techniques. Employees will undergo formal safety and emergency response training. The training will identify site-specific hazards and hazards associated with the project in general. The training will also review standard operating procedures, use of personal protective equipment, signalling an emergency, evacuation routes and muster locations, reporting and notification protocol, and other general safety procedures.

As part of site orientation and ongoing awareness training, all site personnel are informed that any spill of fuel or other hazardous liquids or solids, whatever the extent, has to be reported immediately to the site HSE Manager.

An appropriate number of site personnel are selected and appropriately trained to form the Emergency Response Team (ERT). Crew members are trained in emergency spill response procedures and operations. Training includes knowledge in the:

- Properties of hazardous materials used on site;
- Common causes of spills;
- Environmental effects of spills;
- Worker health and safety during emergency interventions;
- Personal protective equipment and clothing;
- Spill response procedures and techniques on land, water, snow, and ice, and during all four seasons; and
- Spill response equipment and materials.

Training also includes analysis of potential spill events. Fuel spills are more likely to be caused by:

- Human error during fuel transfer operations (e.g., tank farm to tanker-trucks, tanker trucks to mobile equipment and drums to helicopters;
- Rupture of tanks, supply lines, or valves from accidental damage, deterioration, or equipment failure; and
- Road accidents involving tanker-trucks.

For emergency response crews, training includes spill response field drills and classroom training.

SECTION 8.0 - REPORTING AND DOCUMENTATION

Reporting and documentation requirements are outlined in Section 10 and Section 11 of Baffinland's EHS Standard (see Appendix 10A of the FEIS). During all phases of the project, the EPCM contractor will be required to implement a reporting and documentation system that satisfies Baffinland's EHS documentation and reporting standards.

SECTION 9.0 - COMMUNICATION

Communication requirements are outlined in Section 10 and Section 11 of Baffinland's EHS Standard (see Appendix 10A). During all phases of the project, the EPCM contractor will be required to implement an EHS communication plan that satisfies Baffinland's EHS communication standards.

SECTION 10.0 - OPERATIONAL CONTROL

Operational controls include administrative, engineering, and personal protective equipment controls and other protective measures (e.g., machine guarding, railing). Administrative controls include programs, standard operating procedures, practices, guidelines, and instructions. Operational controls are the significant means and actions to control health and safety hazards and risks, and environmental aspects and significant impacts. They help achieve the requirements of the company Sustainable Development Policy and supporting policies, established objectives and targets, and compliance with legal and other requirements.

Baffinland will regularly review:

- Legal and regulatory requirements;
- Occupations, facilities, and activities where the level of risk is such that further control measures are needed; and
- Environmental aspect evaluations where the significance is such that further control measures are needed.

When considering the outcome of such reviews, Baffinland develops operational controls:

- To control identified health and safety risks (including those that could be introduced by others such as contractors and visitors) and the significant environmental impacts;
- That stipulate operating criteria;

- For the design of workplace, process, installations, machinery, operational controls, and the work organization (e.g., 8-hour and 12-hour shifts), including their adaptation to human capabilities to eliminate or control adverse environmental impacts, and health and safety risks at their source; and
- To cover situations where their absence could lead to non-conformance with legal and other requirements, the company sustainable development policy and supporting policies, and established objectives and targets.

Baffinland regularly reviews and updates the operational controls for suitability and effectiveness in controlling health and safety risks, and adverse environmental impacts.

SECTION 11.0 - EMERGENCY PREPAREDNESS AND RESPONSE

Emergencies that could result in an accident or incident causing injuries, illnesses, or environmental impacts, or that could cause health and safety risks or environmental impacts need to be considered in the EHS Management System.

Baffinland establishes and maintains operational controls to identify the potential for and responses to accidents, incidents, and emergency situations, and to prevent and mitigate the likely associated injury, illness, and adverse environmental impacts (see FEIs, Appendix 10C: Emergency Response and Spill Contingency Plan).

Baffinland regularly reviews its emergency preparedness and response plans and operational controls. In addition, a timely review will be undertaken after accidents, incidents, or emergency situations.

SECTION 12.0 - PERFORMANCE MEASUREMENT AND MONITORING

It is important to identify key parameters to measure and communicate performance internally and externally, including compliance with relevant legal and other requirements, incident trends and progress toward objectives and targets.

The ultimate indicators of the effectiveness of the EHS Management Plan are:

Table 12-1: Ultimate Indicators of the Effectiveness of the EHS Management Plan

Indicator (as defined by OSHA)	Baffinland Performance Target
Recordable incident rate	Less than 2
Lost-time injury rate	Less than 1

NOTE: OSHA (United States Occupational Safety and Health Administration)

Baffinland recognizes that there is no single reliable measure of health and safety performance. What is required is a "basket" of measures or a "balanced scorecard" that provides information on a range of health and safety activities. A number of leading indicators, or positive performance measures (PPM), provide information on how the system operates in practice, identifies areas where remedial action is required, provides a basis for continuous improvement, and provides a mechanism for feedback and consequential motivation (see Table 12-2). Monitoring these leading indicators (PPM) will ensure the effectiveness of the EHS Management Plan and that Baffinland's targets and objectives are met.

Table 12-2: Positive Performance Measure for Safety

Objective	Indicator	Measure/Monitor	Results	Improvement
All activities to be subject to hazard analysis and risk assessment	Risk Assessment	% Risk assessment complete % Control measures implemented	Track reported % monthly by area/department	Review progress at monthly senior management meetings, target areas for improvement
Written work procedures in place for critical activities	Work procedures	% Written procedures complete	Track reported % monthly by area/department	Review progress at monthly senior management meetings, target areas for improvement
Provision of safe workplace	Work place inspection target for each frontline supervisor across whole site on a monthly basis each with specific area Workplace visibility tour by middle and senior managers in their work area once per month	% Scheduled inspections complete by name and work area/department % Actions arising complete by name and work area/dept % Visibility/inspection tours complete	Track reported % monthly by area/department	Review progress at monthly senior management meetings, target areas for improvement
Employees working safely	Performance based observations	% Employees working safely % Personnel protective equipment (PPE) compliance	Track reported % monthly by area/department	Review progress at monthly senior management meetings, target areas for improvement
Incident reporting and implementation of remediation measures	Timeliness of reporting Incident investigation effectiveness Log of corrective actions	% Incidents reported within 24 hours % Near-miss incidents % Incident investigation complete on time % Corrective actions implemented *All by area/dept.*	Track reported % monthly by area/department	Review progress at monthly senior management meetings, target areas for improvement
Safe and competent employees	Performance assessment including training needs identification Training records	% Performance assessments complete % Scheduled training complete *All by area/dept.*	Track reported % monthly by area/department	Review progress at monthly senior management meetings, target areas for improvement

Table 12-3: Examples of the Application of Positive Performance Measures for Safety

Objective	Indicator	Measure/monitor	Results	Improve
Improve safety awareness	Toolbox talks on targeted topics monthly by all Supervisors	% Toolbox talks complete by department % Employees attending % Actions arising complete All by Area/Dept. % Safety Representatives Trained	Track reported % monthly by area/department	Review progress at monthly senior management meetings, target areas for improvement
Improve safety culture	Annual climate survey	Overall findings based on selected criteria All by Area/Dept.	Track trends annually by area/department	Review progress at annual senior management meetings, target areas for improvement

SECTION 13.0 - ACCIDENTS, INCIDENTS, NON-CONFORMANCES AND CORRECTIVE AND PREVENTIVE ACTION

Root or basic cause analysis is important for evaluating and investigating accidents, incidents and non-conformance in establishing objectives and targets for a successful corrective action program. Through this process, the actions taken to address non-conformance can result in permanent and positive changes in the EHS Management System and continuous improvement. It is important that employees with health, safety, and environmental responsibility be part of this process to assist in identifying actual and potential health and safety risks, and adverse environmental impacts.

Baffinland has written operational controls for handling and investigating potential accidents, incidents, and non-conformance that includes:

- Tracking and recording details of accidents, incidents, and other non-conformance;
- Root or basic cause analysis;
- Mitigating any health and safety risks and adverse environmental impacts that arise from accidents, incidents, or other non-conformance, including corrective and preventive action;
- Where mitigation is necessary, conducting a health and safety risk assessment and significance evaluation of the environmental aspects of the proposed corrective and preventive action(s) to determine appropriateness and effectiveness; and
- Implementing, recording, and communicating changes arising from the corrective and preventive action, e.g., changes in operational controls.

SECTION 14.0 - RECORDS AND RECORDS MANAGEMENT

Baffinland maintains and preserves internal and external records that are critical to design and performance of the EHS Management System. These records include:

- Employee training records;
- Inspection reports;
- Management of change checklists and outcomes;
- Consultation reports;
- Accident, incident, and non-conformance reports and follow-up corrective and preventive action reports;
- Medical test reports (medical test reports and health surveillance reports might be considered confidential);
- Health surveillance reports;
- Cases of occupational disease and compensation claims;
- Audits and assurances;
- Management reviews;
- Other reviews;
- Environmental aspect evaluations;
- Emissions measurements;
- Exposure measurement records;
- Hazard identification, risk assessment and risk control records; and
- Government reports.

SECTION 15.0 - AUDITING, REVIEW, AND UPDATE

Baffinland conducts internal audits to determine the degree of implementation and to verify performance of the EHS Management System. Management and labour representatives may undertake audits. The results of audit(s) and management review(s) form the basis for the annual written statement of assurance by management on effectiveness of the EHS Management System.

Annually, management submits to the Chief Operating Officer a written statement of assurance as to effectiveness of the EHS Management System.

SECTION 16.0 - MANAGEMENT REVIEW

Senior management reviews the EHS Management System to determine its continued suitability, adequacy, and effectiveness. Outcomes of a management review include recommendations to revise Baffinland's Sustainability Policy and supporting policies, to revise established objectives and targets, and to specify corrective actions for individual management with target dates for completion.

Annex 1

Functional Guide Health and Safety: Contractor Safety Management Plan (Manual) – HS-FG-007

Baffinland Iron Mines Corporation
Mary River Project

Functional Guide Health and Safety

Contractor Safety Management Plan (Manual)

HS-FG-007

2012-01-09	A	Internal Review	D. Gallina	V. Tatone	H. Charalambu	
DATE	**REV.**	**STATUS**	**PREPARED BY**	**CHECKED BY**	**APPROVED BY**	**APPROVED BY**
			HATCH			**CLIENT**

Table of Contents

1. Purpose

This Contractor Safety Management Plan (Manual) identifies and encompasses the working behaviours and safe work practices that are expected of all vendors, contractors, subcontractors and visitors, engaged on the Project.

2. Scope

The Contractor is required to read and take note of the requirements within this Manual and ensure that they provide the required budget for stipulated safety requirements, and complete and submit the Contractor Safety Questionnaire.

This specification applies to all Hatch construction sites which are part of the Mary River Project.

3. Definitions

Contractor – Contractor personnel, subcontractors and agents.

Competent – possessing knowledge, experience and training to perform a specific duty.

Compulsory trade – electrician, plumber, refrigeration mechanic or sheet metal workers

FLRA (Field Level Risk Assessment) – A method that individuals and crews use to eliminate or minimize potential losses during the course of doing work.

Standards – they are a set of documents that have been prepared to address what are considered as the critical Safety activities within the project. They are based around activities that have the potential to cause significant harm to people or the environment or damage to the facility or equipment. They set the minimum standard that Hatch will apply on the project.

Functional Guides – provide an overview of mandatory safety systems and programs.

Safe Work Procedures – assist in implementation of safe work practices on projects.

4. References

The Principal H&S Legislation governing this project will be:

- Safety Act (R.S.N.W.T. 1988);
- Nunavut General Safety Regulations (R.R.N.W.T. 1990);
- Mine Health and Safety Act (Nunavut) (S.N.W.T. 1994);
- Nunavut Mine Health and Safety Regulations (R-125-95);
- Workers Compensation Act (S. Nu. 2007).

5. Requirements

5.1 General

As a minimum, all contractors and employers must meet the requirements contained in relevant Nunavut Territories OHS Acts and Regulations.

5.2 Contractor's Health and Safety Management Plan (Plan)

The Contractor must prepare, implement and administer the Contractor's site specific Health and Safety Management Plan. The Plan is in writing and accepted by the Hatch Construction Manager, prior to mobilisation to the construction site for work under the Contract. The Health and Safety Management Plan must comply with this Manual including any Project Site Rules, and applicable law relating to workplace health and safety and environmental health.

Any proposed amendments or revisions to the Contractor's Safety Management Plan must be submitted to Hatch for acceptance, and once accepted, they becomes part of the Contractors Safety Management Plan.

The Plan must provide a systematic method of managing hazards according to the risk priority, and must include all mobilization and site set-up activities. It must acknowledge that the Contractor is aware that the existing Mary River facility will continue to function during the construction. As such, separation between the operating facility and the construction must be maintained. Construction personnel and equipment are not to access any part of the existing facilities without authorization.

The Plan will be audited for completeness by Hatch using the Hatch audit tool, and a score of 85% will be required before it will be "accepted with comments" and permission is granted to the Contractor to mobilize to site.

5.2.1 Contractor's Safety Manual

The Contractor must provide both electronic and hard copies of its site specific safety manuals, policies and procedures to Hatch and must ensure that its personnel, at all times, strictly observe and comply with the procedures set out therein. Safety standards, functional guides, policies or procedures provided by Hatch will supersede the contractors program. Contractor must comply with such requests where the request is consistent with the requirements of the Contract. The Contractor must give prompt written notice to Hatch of any objection of the Contractor to the requested supplement, including the reasons for objection. Hatch's rights under this Clause are not intended, and must not be construed, to relieve the Contractor from any obligations to ensure compliance with all provisions of the Contract.

The Contractor must forward to Hatch any updates or revisions to its safety manuals, policies or procedures as soon as practicable following revision or update and must receive Hatch's acceptance in both electronic and hard copy format.

The contractors Plan must address the following key elements and describe how the contractor intends to meet the requirements outlined in each section. Details to be addressed are outlined in the sections below.

- Leadership and Commitment
- Performance Measurement and Reporting
- Involvement Communication and Motivation
- Contractor Management
- Training and Competency
- Hazard and Risk Management
- Occupational Health and Hygiene
- Safe Systems of Work
- Incident Management

5.3 Leadership and Commitment

The Contractor acknowledges Hatch's strong commitment to Health and Safety and the Contractor affirms that it has a copy of the Hatch Safety Management Policy and associated procedures which are actively supported and endorsed by the Contractor's management. The Contractor represents that its written policy is widely disseminated and understood among its employees, and that its policy includes a description of the Contractor's organization, procedures and methods of communication to and from personnel. The Contractor must provide copies of its policy and policy statement to Hatch.

5.3.1 General

The program shall describe:

- How safety responsibilities are assigned to different roles within the organization including identification of role of Safety Advisors and on site supervisors/managers.
- Selection, placement and training procedures, including orientations and ongoing training in Health & Safety.
- Assessment of subcontractors, including requirements for Health & Safety Plans.
- Contractor senior management involvement with Company's staff in consultative processes and daily management safety inspections.
- Design control, if applicable.
- Record keeping, including details of what is kept and for how long.

5.3.2 Legal Requirements and Regulations for Health and Safety

The Contractor warrants that it is familiar with the contents and implications of the Nunavut OHS Act and associated Regulations (latest reprints), codes of practice, guidelines and standards applicable to the services to be provided.

The Contractor must ensure that its personnel and its subcontractors' personnel have been informed of all such laws, acts, and regulations, codes of practice, guidelines and standards.

5.3.3 Contractor's General Requirements for Health and Safety

The Contractor is solely responsible for carrying out the work under the Contract having the highest regard for the Health and Safety of its employees, Hatch's employees and persons at or in the vicinity of the site, the works, temporary work, materials, the property of third parties and any purpose relating to the Contractor carrying out its obligations under this Contract.

The Contractor must initiate and maintain safety precautions and programs to conform to all applicable Health and Safety laws or other requirements, including requirements of any applicable government instrumentality. The Contractor must, at its own cost, erect and maintain safeguards for the protection of workers and the public. The Contractor must manage all reasonably foreseeable hazards created by performance of the work. The Contractor shall at its own expense:

- Provide all things and take all measures necessary for maintaining proper personal hygiene, ensuring safety of persons and property and protecting the environment at or near the site.
- Avoid unnecessary interference with the passage of people and property at or near the site.
- Prevent nuisance and excessive noises and unreasonable disturbances in performing the work.
- Be responsible for the adequacy, stability and safety of all of its site operations, of all its methods of design, construction and work and be responsible for all of the work, irrespective of any acceptance, recommendation or consent by Hatch, its Contractors, employees, agents and invitees, or any government body.

The Contractor must comply and is responsible for ensuring that all of its subcontractors comply with the Act, relevant statutory regulations for safety, and Hatch's Health & Safety requirements included in this manual.

5.3.4 Policies Mandated by Hatch

Hatch will require all Contractors on the project to comply with and/or achieve the objectives of the following:

- The Hatch Safety Management Plan;
- Hatch Safety Management System, standards, functional guides and procedures.

5.3.5 Site Supervision

The Contractor must nominate and appoint a responsible person (appointee) on site to whom Hatch may refer in connection with the work. Persons are nominated for all shifts worked or while any activity relating to the Contract is being performed on site, and must have the authority to bind the Contractor with respect to the Contract.

The Contractor must ensure that the performance of all specified work is supervised throughout by a sufficient number of qualified and competent appointed representatives of the Contractor, who have experience in the type of work specified. All personnel holding supervisory responsibilities will be required to complete the Nunavut Mine Health and Safety Supervisor's Certificate Examination and holds a valid First Aid certificate. Original copies of both certificates are required to be on-site.

Note: No work may commence and/or continue without supervisory appointees present on site.

The Site Supervisor must be equipped with a mobile telephone with message bank and/or pager or an equivalent communication device so that communication throughout the Contract can be maintained at all times.

The Site Supervisor must provide a list of names and contact telephone numbers of all contractor's and subcontractors' supervisory employees on site. This list is updated as a new contractor or subcontractor supervisor commences on site.

The Site Supervisor must provide Hatch with a current record of all employees, including date of orientation, relevant skills and licences.

The Site Supervisor must complete and issue to Hatch manpower sheets describing the day's activities, labour numbers and classifications prior to 9:00 am on a daily basis.

5.4 Performance Measurement and Reporting

5.4.1 General

Measurement and reporting elements must include:

- Schedule of site inspections and audits involving persons in leadership roles. Minimum, a weekly documented inspection.
- Leadership participation and review of significant incidents and dangerous occurrences.
- Schedule of reviews of the Contractors Health and Safety Plan implementation progress.
- Schedule of external safety audits of the project.
- Scheduled reviews after the completion of potentially high-risk activities on site.

5.4.2 Health and Safety Statistics

The Contractor and each of its subcontractors must complete and submit to Hatch, or as amended by Hatch, their safety statistics by Monday at noon for the preceding week.

5.4.3 Safety Management Records

The Contractor must submit to Hatch for acceptance a schedule of the specific Health and Safety records it intends to maintain for the Contract. As a minimum, such records are as specified by applicable legislation. Copies of schedule are to be provided to Hatch.

5.4.4 *Field Technical/Safety Audit by Hatch*

Hatch has the right to conduct audits/inspections of the Contractor's Safety Management Plan implementation, operations, equipment, emergency procedures, etc. at any time, and the Contractor must fully cooperate with Hatch during such audits/inspections. Hatch's rights under this clause must not relieve the Contractor of its own obligations to conduct audits and reviews of its own Health and Safety performance.

Where such audits/inspections reveal deficiencies of a minor nature in the Contractor's procedures, drills, training or equipment, or nonconformities with the Contractor's accepted Project Safety Management Plan, the Contractor must investigate the cause of the nonconformity and initiate corrective and preventive action to rectify such deficiencies and nonconformities and prevent recurrence as soon as practicable.

Where such audits/inspections reveal deficiencies of a major nature (Risk rating of 7 or greater), the Contractor must stop work on the operation/activity concerned, immediately investigate the cause of the nonconformity, and initiate corrective actions to rectify such deficiencies and non-conformities and to prevent recurrence. These corrective action plans are to be submitted to Hatch for review and comment within 24 hours of the audit finding.

Where such deficiencies include an unsafe practice or a breach of the statutory or the Contract's requirements, Hatch may, in accordance with the General Conditions of Contract, suspend the work associated with the unsafe practice or breach until the deficiency is rectified.

Hatch will establish a schedule of regular field safety inspections which will be based on site operations and activities. The Contractor's inspection conformance will be assessed as a percentage and where conformance is better than 90% it will be considered satisfactory and the Contractor must develop and implement an action plan within 4 weeks, to be reviewed at the next regular audit. Where the Contractor's level of conformance is between 75 – 90 %, a corrective action plan will be required to be developed and implemented within 1 week, and a follow up audit will be carried out. Where the Contractor's conformance is less than 75% the Contractor must stop work until an investigation of the cause(s) has been completed and corrective actions have been developed and implemented by the Contractor.

The Contractor must provide to Hatch, at a time to be agreed, a regular status report on all outstanding corrective actions until they are successfully closed out.

5.4.5 *Unsafe Act/Condition Auditing*

The Contractor must implement a system to recognize, correct, and report unsafe acts/conditions (Unsafe Act/Condition Auditing) associated with all site activities.

5.4.6 *Preventative Maintenance Inspections*

A standard procedure for the safe scheduled quarterly inspection and colour coding of tools and equipment will be established. A tool and equipment inspection record will be maintained and will apply to:

- Ladders,
- Electrical equipment such as cords, electrical tools and GFI's;
- Rigging equipment such as shackles, slings, hooks, come along and chain falls;
- Fall arrest equipment such as harnesses, lanyards, lifelines, horizontal cable lines, rope grabs.

5.4.7 Management – Visible Felt Leadership (VFL)

On a daily basis, the Contractor's Construction Manager, Safety Advisor, and field supervision, must conduct and record a Daily Visible Felt Leadership checklist. (See Appendix 4 for the required document).

5.5 Involvement Communication and Motivation

The Contractor's and subcontractor's workforce must, through their supervision, safety notice boards, toolbox meetings be kept aware of safety related matters.

5.5.1 Health and Safety Communication and Consultative Processes

To include:

- How project leadership will ensure all personnel are kept regularly up to date with Health and Safety information and how prompt feedback will be given to personnel for issues they raise; e.g. hazard reports.
- The establishment and maintenance of a consultative process for the duration of the project.
- Implementation of improvement programs that encourage and recognize personnel suggestions to enhance Health and Safety on site.
- Attendance at site safety meetings by Project Manager, Site/Construction Manager, Safety Manager and Safety Advisors.

5.5.2 Field Level Risk Assessment (FLRA)

Field Level Risk Assessment (See Appendix 2 for the required document) will be implemented in the following manner:

- Assessing the risk prior to work commencing, in order to communicate the risks to the employees involved in the tasks to be carried out;
- To ensure that on completion of the daily work, the area is left safe and without risk to employees entering that work area.
- FLRA should be conducted before and on completion of every shift.
- If the scope of work or job changes, the FLRA is revised and the changes communicated before commencing the changed job.

The FLRA is to be carried out at the work area by the supervisors and the workers performing the task in the following manner:

- The Supervisor is to review the work to be carried out for the day, from which he must identify the hazard, assess the risk and decide on a methodology to minimize or mitigate those hazards and risks.
- The hazards and risks are to be written into the FLRA form and the controls are to be listed.
- Once the FLRA form is complete, the Supervisor is to communicate the hazards and risks to the workforce and discuss how they can be minimized and/or mitigated.
- The FLRA shall be signed by all team members acknowledging the items were discussed.
- The FLRA shall be posted in the area of work.
- The Contractor's Safety Advisor should sign all FLRAs in each of their work areas.
- Hatch will review FLRAs in the field.

5.5.3 *Daily Toolbox Meetings*

Each Contractor will hold daily toolbox meetings, lead by Supervision, which will involve all site personnel. The discussion will include positive and negative Health and Safety issues, and any specific interests or topics requested by management.

Toolbox meetings will focus discussion on hazards specific to the relevant area of the Mary River Project, and any recent incidents in the workplace. They will also include responses to questions or concerns from the previous day's toolbox meeting. Meeting minutes will be kept for review by Hatch. All employees must attend toolbox meetings and must sign the meeting attendance sheet.

A Toolbox Meeting is required daily or as the scope of work or site conditions change.

5.5.4 *Contractor Weekly Safety Meetings*

The Contractor must conduct weekly formal safety meetings, lead by Supervision, with his employees to foster safety awareness. Action items raised shall be tracked until completion and verification must be available. Copies of minutes and action items arising from such meetings are to be submitted to Hatch. Contractor senior site management shall attend.

Such meetings should at least address:

- Safety incidents;
- Hazardous conditions;
- Hazardous materials / substances;
- Work procedures;

- Personal protective equipment;
- Housekeeping;
- General safety topics;
- Job or work look-ahead issues;
- Safety statistics.

5.5.5 Weekly Safety Advisors Meetings

The Hatch Site Safety Lead will hold a weekly meeting with all contractor safety leads. The focus will be on alignment, resolution of issues and discussion on initiatives to improve safety. Action items shall be recorded and tracked to completion.

5.5.6 Monthly Contractor Safety Alignment Meetings

The Hatch Construction Manager, with the assistance of the Hatch Safety Lead, shall facilitate a monthly alignment meeting with all active site contractors. Attendees from Hatch shall include the construction manager, safety manager, area supervision and from the contractor, their site manager, safety lead, area supervision and senior offsite sponsor. These meetings shall be formally scheduled well in advance to allow for full attendance.

Key topics of discussion should include recent incidents, trends and preventative measures; status of required contractor deliverables such as inspections and VFL compliance; and discussion on areas of general improvement opportunities.

5.5.7 Safety Action Meetings

Safety Action Meetings that center on an issue that requires action shall be conducted as required. The topic for the action meeting is manageable within a group's area of responsibility; for example, the scaffold erection subcontractor on a construction site who continually has difficulty complying with the project working at height rules. A project leader calls the team together, states the purpose, outlines the facts and gives a problem-solving question for discussion. The group then brainstorms ideas, selects actions and decides responsibilities and timing. Outcomes will be documented and signed by participants.

5.5.8 Safety Review Meetings

Safety representative will participate in the Weekly Construction Management Meeting or the Contractor's Site Manager and a Site Safety Representative must take part in safety review meetings between the Contractor and Hatch; as per request of the Hatch Construction Manager

The Contractor must attend all project safety meetings as outlined in the Project Safety Management Plan.

5.5.9 Occupational Health & Safety Committee (OHSC)

The Occupational Health and Safety Committee will include a line manager or supervisor and worker representative from each Contractor. The committee will have a minimum of two (2)

members to a maximum of 12. The Contractor must ensure that sufficient elected and/or appointed OHSC Representative(s) represent all workers employed by the Contractor.

The OHSC is comprised of two co-chairpersons; one worker representative and one management representative, alternating chairing the meetings. The OHSC meet monthly and deal with overall site Health and Safety management issues and procedures. Any day-to-day Health and Safety management issues will be addressed immediately. As part of the OHSC role a formal inspection shall be completed at least monthly.

The Contractor must ensure that the elected and/or appointed OHSC representatives have sufficient time to devote to Health and Safety matters and activities and execute their functions under the provisions of the Safety Act. Minutes of the OHSC meeting minutes will be produced and posted throughout the Project Site.

5.5.10 Health & Safety Discipline Procedure

Where a breach of a site Health & Safety rule or the Contractors safety procedure is identified the Contractor must ensure that any disciplinary action taken is in accordance with the Hatch Disciplinary Policy. In the absence of a disciplinary procedure and dependent on the nature of the breach, the process as outlined below shall be used:

- First breach – verbal warning/counselling and corrective action plan;
- Second breach – written warning/counselling and written corrective action plan; and
- Third breach – appropriate disciplinary action taken, including removal of site privileges.

Where a breach of a Health & Safety rule has occurred and is considered blatant, the person's site access may be withdrawn at the discretion of Hatch after consultation with the relevant persons.

5.6 Contractor Management

5.6.1 Health and Safety Alignment Meeting

Hatch may hold a Health and Safety Alignment Meeting with preferred renderers' in the period between tender submission and contract award. The tenderer's senior project and proposed site management personnel will be expected to attend. As part of this meeting the contractor will be required to present to Hatch their methodology for executing safety on the job. An agenda will be provided. It is intended that this meeting is lead by the Contractors proposed site team. Additionally the Contractor Construction Manager, Site Lead and Safety Lead shall be interviewed.

This session will be focussed on the contents of the tender in relation to the expectations of Hatch with regard to the tenderer's Health and Safety leadership and project Health and Safety Management proposals.

The aspects of the Contractor's tender that are unclear or sections of the tender document that have been missed or not fully understood and may need further explanation, will be discussed and resolved.

At the end of the session, the Contractor will have a complete and unambiguous understanding of the requirements with respect to the management of Health and Safety during the project. Hatch may elect to allow the Contractor to review its tender submission as a result of this session.

5.6.2 *Health and Safety Kick-Off*

After award of the Contract and prior to work commencing, the Contractor must participate in a Kick-Off Health and Safety Review with Hatch. The purpose of this review is:

- To compare the contents of the Contractor's Health and Safety Management Plan and the Project Health and Safety Management Plan;
- To facilitate a consistent approach to Health and Safety issues; and
- To ensure specific health and safety risks are addressed prior to commencement.

The Contractor's Project Manager and Project Sponsor or equivalent, and senior site representative must attend the Kick-Off Health and Safety Review. The meeting is to be conducted prior to the Contractor commencing activities on the site, including mobilization and site set-up activities.

Contractors are responsible for qualifying all subcontractors using the Contractor Safety Questionnaire, Appendix 6. Subcontractor's approval is forwarded to Hatch for review and acceptance.

5.6.3 *Subcontractor's Safety Management Plan*

The Contractor must ensure that all its subcontractors have written Safety Management Plans in place that are of a standard suitable for the type of activity being undertaken, which address the hazards involved with the particular work activity, and which support the Contractor's accepted safety management approach. The Contractor must ensure these Plans are in place before allowing subcontractors to mobilize to site. Subcontractor Safety Management Plans must include management of transport and delivery contractors entering the site delivering materials and/or equipment. Copies are to be forward to Hatch for review a minimum of 10 business days prior to mobilization. Hatch reserves the right to deny access to any subcontractor until their Plan is acceptable to Hatch.

5.6.4 *Contractor's Safety Advisor*

If 20 or more of the Contractor's employees and/or those of the Contractor's subcontractors will perform the work, the Contractor shall appoint a dedicated site Safety Advisor who will be located at the work site for the duration of the project.

- 20 or less people on site - Part time Safety Advisor spending two (2) full days per week on site;
- 20 people on site and up to and including 75 people - Full time Safety Advisor;
- More than 75 people on site an additional full time Safety Advisor for every 100 thereafter (e.g. 76 = 2, 176 = 3 etc.);
- Full time Safety Advisor for night shift(s). Ratio as above.

If there are less than 20 employees as described above, then the Contractor shall nominate a suitable person as the primary contact. He must report functionally to Hatch Safety Manager on site. He is equipped with a phone and a PC to ensure his duties and functions can be met.

The Safety Advisor must have the following minimum qualifications:

- At least five (5) years experience as a Safety Advisor on construction projects;
- Successful completion of a Safety Supervisor training course;
- Sound knowledge of Occupational Health and Safety Acts and Regulations;
- Sound knowledge of hazard identification and risk management processes;
- Sound knowledge of accident investigation procedure; and

The Contractor must notify Hatch in writing of the name, qualifications, duties and responsibilities of the site Safety Advisor proposed. Acceptance must be obtained from Hatch prior to the Contractor mobilizing the safety advisor to site. When teams are working in separated areas Hatch may instruct the Contractor to appoint First Aiders and Safety Advisors per work area regardless of the number working in an area.

5.6.5 Working Together for a Safe Site

The Contractor and its subcontractors must actively participate in any programs and/or activities designed to improve the Health and Safety performance on the project.

5.7 Training and Competency

5.7.1 General

The Contractor's Safety Plan shall describe how they will perform the following activities:

- Identification of the competencies required by employees along with selection, placement and any training requirements.
- Identification and implementation of the process that will be used to ensure that employees hold the required competencies.
- The identification of minimum core and Health and Safety skills required by persons in leadership and supervisory roles.

- The development of a training plan that ensures personnel attains the desired skills and is also able to monitor refresher-training requirements.
- Mechanisms to review the effectiveness of training where appropriate.
- A site orientation system that includes specific site issues and requirements and complements the Hatch Site Orientation.
- Methodology for briefing personnel on new or changed standards, site rules and or procedures, particularly after absence from site.
- Compliance with Hatch training and competency requirements.

5.7.2 Contractor Personnel Competency and Responsibility for Health and Safety

Prior to the commencement of the work, including mobilization and site set-up activities, the Contractor must provide current documentation to the satisfaction of Hatch verifying that the Contractor's and subcontractors' personnel are competent and have the appropriate qualifications, job skills and training as required by the Contract and applicable legislation.

The Contractor must ensure that all his employees and his subcontractors' employees working on the site are adequately trained in the type of work to be performed, are trained in relevant procedures and have the appropriate qualifications, certificates and tickets, and are under competent supervision. Records are to be maintained on site of appropriate training and qualifications of all employees by each Contractor.

All mobile equipment operators will be required to be assessed for competency, by the contractor, using the equipment provided by contractor and in the conditions existing on site, in relation to heavy vehicle/light vehicle operation and interactions. A copy of the competency check will be provided to Hatch.

The Contractor represents and warrants that its supervisors are competent, and have been trained and advised in writing that they are responsible, and have accepted and acknowledged such responsibilities in writing, for ensuring that the work is performed in accordance with all applicable laws, rules and regulations, good working practices, and any additional guidelines and/or operating standards provided to the Contractor by Hatch.

The Contractor must, provide Hatch with organization charts, specifying the areas of safety responsibility of supervisors. The Contractor's supervisors must assess and assure themselves that employees under their control have adequate skills and training to carry out their tasks and will not be permitted to perform tasks for which they have not been adequately trained.

Contractor's and subcontractor's employees carrying out the following designated tasks require specific authorization by Hatch:

- Operation of mobile equipment including cranes and elevating work platforms.

- Slinging of loads from, and the direction of movement of loads by, cranes and other lifting devices.
- Erection and dismantling of scaffolding in excess of 4.5 metres in height.
- Supervising excavations deeper than 1.5m.

The Contractor must request authorization of persons nominated to perform these tasks, with one (1) week notice, and must support that request with copies of competency certificates, including driving licence, copies of log books or work experience that can be verified, and a written statement attesting to the fact that the employee is competent to perform the nominated function. Copies of all such evidence of competence are logged in a Register maintained by the Contractor. The Contractor must provide electronic copies of such Register(s) to Hatch upon request.

Hatch may at any time conduct a task observation as to the ability of any operator of equipment or person carrying out a nominated specific task, to carry out that task in a safe and competent manner. If Hatch is of the opinion that the person is not "currently competent", that person must cease work immediately, undergo the necessary retraining or be removed from that activity. Retraining is at the Contractor's expense.

5.7.3 5.7.3 Training

5.7.3.1 Orientation in Health and Safety

The Contractor must ensure that no employee of the Contractor or its subcontractors, including transport and delivery contractors entering the site delivering materials and/or equipment, is permitted to enter the site or any operations area until they have received all training required under applicable laws and regulations, including, but not limited to, work activity orientations and Hatch Site Orientation.

All personnel must complete the Hatch Project Site Orientation before being allowed access to the workplace. This will ensure that all personnel are made aware of and are conversant with the requirements of the Safety Management Plan, Site Rules, environmental requirements, and community relations. Due to limited space, contractors requiring orientation for workers must provide 24 hours notice. Individuals who are not scheduled for orientation or arrive late will be advised to return on the next available date. Orientations are scheduled by contacting the Contract Administrator or Site Safety Manager.

5.7.3.2 Contractor Orientation in Health and Safety

The Contractor must prepare and present to all its employees its own Contractor orientation, explaining the Contractor's Safety Management Plan, the Contractor's rules, code of conduct, personal safety protection, emergency Health and Safety response, personal health conduct, the obligations imposed by the Nunavut OHS Act and Regulations and Baffinland Safety Manual.

The training shall also include a site-specific orientation, and which must as a minimum consist of an introductory briefing explaining the nature of the work, the general hazards which may be encountered during the work, the separation of the construction and existing facilities at the site and the particular hazards attached to their own functions and how these hazards are identified and accounted for. The Contractor must also ensure that all its personnel and its subcontractors' personnel receive a copy of the Contractor's Health and Safety training manuals or handbooks relevant to their jobs.

The contractor shall review, with their management and supervision, the required Hatch project specific safety procedures as detailed in the Employee Dossier.

5.7.3.3 Construction Safety Leadership Program (CSLP)

CSLP is an interactive, facilitated course that equips attendees with the knowledge and skills to manage Hatch work in accordance with the requirements of this Safety Management Plan.

Required attendees are project managers, management with field responsibilities and field supervision from both Hatch and Contractor staff. The session is to be completed prior to filling the role of a supervisor and is (2) two days in length.

Key topics covered include:

- Roles and Responsibilities;
- Inspections and Auditing;
- Safety Meetings;
- Safe Job Planning;
- Safe Systems of Work – e.g. PPE, Confined Space Work, Fall Protection;
- Incident Management.

5.7.3.4 Contractor's Health and Safety Management Handbook

The Contractor must develop a Health and Safety Management Handbook that will summarize the requirements of the Contractor's Health and Safety Management Plan and Contractor's Rules. The document is in a format that can be issued to all employees at orientations and prior to any employee commencing work on site, and is maintained for reference by all employees. Hatch must approve the format and contents of the Handbook prior to its issue.

The Contractor must ensure that each employee acknowledges receipt of the Contractor's Health and Safety Management Handbook by way of signature. The Contractor is responsible for producing these records of signature and acknowledgement if audited.

Where reading skills and/or language is an issue with the workforce the Contractor must propose an alternative to the above, maintaining the intent of the above, for acceptance by Hatch.

5.8 Hazard and Risk Management

Prior to commencement of the work, including mobilization and site set-up activities, the Contractor must demonstrate to the satisfaction of Hatch that the Contractor has performed hazard identification and risk assessment of the Work, and of the associated equipment and facilities, to meet the requirements of the Contract. The Contractor is responsible and accountable for ensuring that effective procedures and assessment systems are in place so as to control hazards and so mitigate risks to as low a level as is acceptable and to meet all the Health and Safety management requirements under this Contract.

5.8.1 Hazard Identification, Risk Assessment and Control

Hazard Identification, Risk Assessment and Control will include, but not limited to:

- The development of a project/scope and activity risk profile identifying and considering, safety, health and environmental hazards and exposures, for example, rigging, working at heights, welding, confined spaces, delivery contractors, unloading materials and equipment from trucks, hazardous substances.
- Pre-Job Hazard Assessments which are to be completed and submitted to Hatch before mobilizing to site.
- How controls to manage risks identified within the risk profile will be formalized and implemented.

5.8.2 Project Specific Hazards

The project specifics hazards are described below, but are not limited to:

- Work at heights, steel erection;
- Fall in excavations/open holes;
- Slips Trips Falls;
- Congested Area – equipment and personnel;
- Mobile Equipment – congested work area, swing hazard;
- Rail interaction – employees & equipment in the area;
- Manual Handling;
- Stored Energy – in equipment and electrical;
- Wildlife - predatory animals;
- Work near or over water;
- Helicopter travel and lifting.

5.8.3 *Hazard and Facility Review Studies*

Hatch is to conduct Hazard Identification studies and incorporate findings into the projects Design Criteria and schedule at appropriate stages of the design process.

Contractors are to make available suitably qualified and experienced personnel to participate in these studies. A Hatch and/or Hatch nominated Representative will also participate. Contractors are required to provide all input data for the conduct of the studies.

Hatch is responsible for the implementation of the study findings and must carry out any modifications to design required by the outcomes of the studies.

Hatch has made all reasonable efforts to ensure that the safe and clean design input information provided is complete and correct. However, the Contractor must make its own assessment of the hazards and risks associated with the work under the Contract, consistent with the requirements of the Contract and the obligations imposed by all applicable legislation.

5.8.4 *Hazard Identification and Risk Assessment Workshops*

The Contractor, with support from Hatch, must conduct, with appropriate personnel, Construction Safety Studies to identify the detailed methodology and related hazardous activities, in particular those with potentially catastrophic consequences such as multiple and single fatalities, of the Contractor's site installation work scope, for example crane operations and positions, lift sizes, work at height locations, confined spaces locations, work near operating equipment, hot work, hazardous substances and dangerous goods being used, etc.

The Contractor, with support from Hatch, must also conduct, with appropriate personnel, Preliminary Hazard Assessment (PHA) workshops to identify the work methodology and related hazardous activities, in particular those with potential for fatality or serious injury, of tasks and activities related to particular work packages or locations. In all circumstances the objective of these risk management processes will be to eliminate hazards or otherwise reduce risks through the hierarchy of controls.

Where the PHA workshop identifies that administrative controls (procedural controls) have to be used to reduce the risk to an acceptable level, then the Contractor's work crew or individual if it is a one-person task, must carry out a Job Hazard Analysis (JHA) of the task or activity, which will result in a Work Instruction for routine tasks and activities or the documented JHA for non-routine, one-off or changing tasks and activities. JHA's will be reviewed by the Contractor prior to starting work each day or shift, and Work Instructions prior to starting work each week.

A five stage hazard identification (define job, identify hazards, assess risk, control risk, monitor) and risk assessment process will be implemented by the Contractor for commissioning and start-up activities, conducted on all system commissioning and live testing operations, activities and tasks prior to introducing hazardous energy and/or materials.

The Contractor's Site Management Representatives, supervisory personnel, technical experts as required, and work force personnel directly involved will participate in these hazard and risk assessment processes, and the findings documented. Hatch must attend the workshops/studies. At these workshops/studies the Contractor's methodology may be reviewed task by task, potential hazards identified, and actions agreed on to mitigate risk.

5.8.5 Risk Assessment of Facility and Equipment

Risk assessments of facility and equipment are undertaken and documented before arrival at site and after major service, after modification, and before use in an unusual operating mode. They are undertaken by a suitably qualified and experienced person and are reviewed and signed by the Contractor Project Manager or Equipment Supervisor.

Such risk assessments for equipment mobilizing to site must be reviewed and accepted by Hatch prior to the equipment arriving at site, and it must be considered, where applicable, potential for entanglement in moving parts, crushing or striking by moving or falling objects, cutting or stabbing by sharp objects, high pressure fluids, electrical shock or burns, burns from hot or cold surfaces, slips, trips and falls, ergonomic design of access and egress (three points of contact to be maintained), seating, vibration, noise, exhaust fumes, etc. The identification of hazards shall consider normal operations, abnormal or unusual operations, maintenance and servicing operations. Particular attention is given to fall protection attachment points when there is a requirement to work over 1.2m above the ground.

The contractor must implement and comply with relevant legislation for electrical work.

The Contractor must ensure that all equipment, power and hand tools brought onto the site by him or his subcontractors are:

- Appropriate for the type of work to be performed.
- Approved, inspected, tested, numbered and tagged (if appropriate) in accordance with Hatch rules, before importation onto the site.
- Properly maintained in accordance with manufacturer's recommendations.
- Placed on register and checked at least monthly and or more frequently as required by legislation and or Hatch rules.

5.8.5.1 Construction Facilities and Equipment

The Contractor must supply, at their cost, all tools and equipment necessary to perform the work and must maintain all items in good order and condition.

Hatch reserves the right to inspect facilities or equipment brought to site by the Contractor for use on this Contract. Should Hatch form the opinion that any item is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, Hatch must advise the Contractor in writing and the Contractor must forthwith remove

the item from the site and replace it with a safe and adequate substitute. In such cases, the Contractor will not be entitled to extra payments or extensions of time in respect of delay caused by Hatch's instructions.

5.8.5.2 Standard Log Sheets

As standard project procedures, the Contractor is expected to:

- Complete the logs for each piece of tool & equipment brought onto site;
- Maintain a complete, continuous and comprehensive inspection & service history in these logs.

5.8.6 Critical Hazard Management Plan

Where the Contractor identifies a Critical Hazard that has the potential to cause multiple fatalities, and the exposure is not an isolated occurrence, the contractor must develop a Critical Hazard Management Plan to control the risk. These Plans are submitted to Hatch for review and must be entered in the site Risk Register. Journey hazards to and from the site should be included.

The plans is periodically reviewed (every four months) for applicability and suitability.

5.8.7 Job Hazard Analysis (JHAs)

Prior to the commencement of each work activity, or as requested by Hatch, a JHA or similar assessment is completed and documented. The purpose of the JHA is to identify all potential hazards associated with the work and the work environment, assess the risk these hazards present and then to provide risk control action that deals with those hazards, as well as provide to the workforce involved in the particular work activity, details of any hazards and the proposed controls.

- To be completed and submitted to Hatch for acceptance:
  - One week before the execution of a significant task/job to avoid delays;
  - See Appendix 1 for the required document;
- Each Contractor must submit a JHA plan that will also include a monitoring and review plan;
- Attach required permits and procedures to JHA;
- Each Supervisor to communicate JHAs to every person involved on the job, and work crew must sign acknowledgment of the communication and understanding of the risks related to the job and preventative measures and controls;
- The JHA team shall consist of the Contractor's Specific Task Supervisor, Safety Advisor and workers executing the job;
- General JHA's will not be accepted;

- The JHA must:
  - Describe the operation to be performed in the sequence of the basic job steps;
  - Identify the hazards or potential hazards at each step;
  - Assess the risk the hazard presents;
  - Describe how the hazard is controlled such that the residual risk is as low as reasonably practicable (ALARP) and is acceptable to the work crew;
  - Identify the related procedure, if appropriate;
  - Be reviewed prior to each shift;
  - Be acknowledged by way of signature of all personnel involved in the work activity; and
  - Be updated as changes occur, reviewed at least weekly and the appropriate signature and revision number applied.

5.8.8 *Unsafe Operations*

If the Contractor believes that the work cannot be safely undertaken or that continuance of the work may result in unsafe conditions, it must immediately cease the operation until a safe method of work has been identified. The Contractor must at all times make every effort to control or overcome the cause, or minimize the effect of, any unsafe condition.

5.8.9 *Hazardous Materials*

The Contractor must set out its policy for the use, transportation, handling and storage of fuel and hazardous materials taking into account the legislative requirements.

The Contractor must ensure that all hazardous materials and waste products are disposed of in accordance with applicable laws and regulations and any procedures published by Hatch or in the absence of any relevant law, regulation or procedures, in accordance with sound safe practice.

5.8.10 *Hierarchy of Control*

The Contractor must ensure that all risk and hazard controls are applied in accordance with the 'Hierarchy of Control' methodology. Control measures to eliminate or minimize the risk are considered and implemented in the following order of priority:

Elimination of the hazard in the main objective

If this is not possible, prevent or minimize exposure to the risk by one or a combination of:

Substitution – substituting a less hazardous material, process or equipment.

Isolation – isolating the hazard from the person or the person from the hazard.

Engineering – redesigning equipment or work processes.

Administration – introduce administrative controls

As a last resort, when exposure to the risk is not (or cannot be) minimized by other means:

PPE – identify and use appropriate personal protective equipment.

5.9 Occupational Health and Hygiene

5.9.1 Fitness for Work

The Contractor must ensure that personnel under its control and authority comply with the requirements of the Fitness for Work endorsement regarding the possible effects of:

- General level of personal fitness and/or medical conditions;
- The consumption of alcohol;
- The use of other drugs (prescription, pharmaceutical or illicit);
- Fatigue;
- Stress.

5.9.2 Drugs and Alcohol

The Contractor must ensure that personnel under its control and authority do not at any time, during the performance of the work, take or work under the influence of any alcoholic and/or other drug other than for bona fide medical reasons. Employees on the project under the influence of drugs or alcohol will be removed from the site.

All worker camps are zero tolerance, no alcohol or illegal drugs are allowed on the Mary River Project.

The project has a D&A testing program in place for Site Pre-Access Testing, Reasonable Cause testing and Post-Incident Testing. Each Contractor is responsible for any and all costs related to testing their staff assigned to the Project Site. For all tests a Clearance Certificate shall be provided to Hatch upon completion of the testing process.

Each Contractor must comply with the Hatch project D&A Policy; Contractors may be able to use their existing policy (if it meets or exceeds requirements of the Hatch policy) upon review and acceptance by Hatch, a minimum of five work days is required for approval.

5.9.3 Health Assessments and Health Monitoring

The Contractor must ensure that all the Contractor's personnel are healthy and medically fit for their respective assignments and must certify the same to Hatch if so requested. The Contractor is responsible for pre-placement and ongoing health assessments, where required.

The Contractor is responsible for the medical welfare of its own employees.

5.9.4 5.9.4 Hygiene

The Contractor must ensure that its personnel and subcontractors' personnel maintain a high standard of hygiene in connection with the performance of the work.

The Contractor must maintain all work areas in a clean and tidy state and must promptly and appropriately dispose of waste material.

Lunch rooms must be kept in a clean and tidy manner to the satisfaction of Hatch and any statutory requirements.

5.9.5 Cleaners, Solvents and Hazardous Materials

No potentially hazardous chemical is to be brought onto the site without the prior acceptance of Hatch.

The Contractor must submit to Hatch a Materials Safety Data Sheet (MSDS) with its request for acceptance of each hazardous substance the Contractor proposes to use at the site.

The Contractor must ensure that all necessary transport, storage, spill containment, spill clean-up and usage precautions are taken and that safety or spill control equipment if necessary is available on the site.

5.9.6 First Aid Services

All contractors working on the Mary River Project must fulfill the requirements of the Nunavut General Safety Regulations (R.N.W.T. 1990) Sections 60 to 79 inclusive, pertaining to first aid - supplies, equipment, facilities, etc.

Contractors must arrange to accompany all injured employees to outside medical care.

First Aid Facilities

First Aid stations and facilities will be identified with the appropriate signage.

5.9.7 Emergency Numbers

A list with emergency numbers to be posted at phones, radio call boxes, notice boards and in every office. Stickers printed with emergency numbers must be provided to workers for attachment inside their hardhats.

5.9.8 Smoking

The Contractor must not permit smoking at the site, including within mobile equipment and vehicles, except within designated smoking areas.

5.9.9 Cold Weather

The Contractor must ensure that all personnel are provided with working in cold weather information including how to dress warmly, how to work on snow and ice, vital signs of cold injury and use of machinery and equipment.

5.9.10 Working Hours

The Contractor is responsible for the administration of the working hours of its employees and subcontractors. Maximum working hours per day and minimum rest times between shifts are to be specified in the Contractor's Health and Safety Management Plan and must comply with the requirements for the project site unless specifically approved by Hatch.

At no time shall work hours exceed those as specified in provincial legislation. Extended work hour permits are required for all work shifts greater than 8 hours or 5 days per week, by Nunavut. All work outside the contractor's normal hours shall be requested in writing to Hatch.

5.10 Safe Systems of Work

The contractor must implement and comply with applicable legislation and code of practice. The guidelines to follow provide Hatch's best practice and requirements and must be followed by the Contractor.

5.10.1 Barriers & Barricading Requirements

The Contractor must ensure that:

- Solid barriers or barricades shall be erected in all cases where the presence of a hazard which has the potential to affect the health or to cause injury to personnel or inflict damage to property has been identified.
- Barricading must be tagged, placed on register, maintained and inspected daily. The name, phone number of the barricade's owner, work activity and contractor company name must appear on the tag.
- Solid barriers to prevent persons falling into openings must protect all openings in floors, stairwells, staircases, open-sided buildings and any structure in the course of erection, where dangerous openings exist.
- Contractors must pre-plan the delivery of floor grating, stair treads, landings and handrails to ensure safe access and protection for persons working on structures.
- People and vehicles must be prevented from entering any area in or adjacent to the site where there is a risk of injury or damage from cranes lifting, lowering or moving material or gear.
- Excavations shall have barricades or barrier fencing.

All barriers shall have signage that clearly communicates the hazard. All handrails and fencing must comply with Hatch Standards and must be provided around all holes or openings to prevent any person being injured as a result of a fall.

Where it is impracticable to provide fixed guard railing, effective removable barriers must be provided at all unguarded openings in guard railing or floors, and be maintained in position at all times until the hazard no longer applies.

Note: Danger tape or flagging is not accepted as barricading.

5.10.2 Confined Space Work

All Confined Space Work requires a permit. This may only be obtained from the authorized person nominated in writing and after approval by Hatch. Confined space entries (CSE) shall be properly planned, managed, supervised and carried out to prevent incidents, with a documented safe system of work.

The responsibility for safety of the workers, both at the time of entry and during the entire operation of entering and working in confined spaces, rests with the Contractor. The Contractor must be certain that adequate steps have been taken to eliminate or control hazards. Before working in an area which contains dust, the area is to be ventilated and hosed down to settle and dampen the dust.

The Contractor must provide all necessary equipment to manage confined spaces, including all necessary monitoring and rescue equipment (such as tripods, breathing equipment, etc.).

The Contractor must ensure all persons working in a confined space or managing entry to a confined space are appropriately trained.

Note – It is compulsory to ensure continuous monitoring, trained rescue teams, radio communication & adequate ventilation.

5.10.3 Crane & Rigging Requirements

All contractors must adhere to the following before any crane is allowed to operate on site:

5.10.3.1 Selection of Operators

- All crane operators shall have a valid Operators ticket for the equipment they are operating.
- The contractor shall perform an on-site assessment of operators' competency for specific cranes. Training in specific project procedures will be given by the contractor. Documentation of completion shall be provided to Hatch.
- Crane and industry experience shall be verified by Hatch prior to commencing on site.
- Records shall be retained by the contractor in the Employee Dossier.

5.10.3.2 Crane Test Certificate and Inspection

Prior to starting work on the project, each crane or hoist must receive a complete inspection and certification at the project site. Additional inspection and re-certification is required at least once a year and after every major assembly thereafter. Copies of the documentation and inspection must be submitted to Hatch. The following to be covered:

- Ropes and cables;
- Hooks;

- Slew brakes;
- Outriggers and pads;
- Boom and guides;
- Anti two-block device;
- Load indicating system;
- Wheel and tire condition;
- Brakes and air system.

Copies of all documentation must be kept in the crane at all times.

5.10.3.3 Safety Devices

- Anti two block cut out systems shall be fitted to all cranes;
  - Such anti two block devices shall not be of a butterfly type or configuration, and should be of a bolt or pin type;
  - They must have a secondary cable in addition to the primary chain securing device;
  - The anti two block systems must be installed as per the manufacturer's specifications and be inspected as part of the crane certification and at monthly intervals thereafter.
- A load cut out device shall be fitted to all cranes.
- All cranes must operate in a power down mode.

5.10.3.4 Lift Study

The use of a specialist heavy lift engineer to produce a crane lift study to minimise risk to personnel and structures are required when:

- All loads greater than 20 t or;
- Any load in excess of 70% of crane capacity (where the crane stability could be compromised by the operating range (i.e., the load required to tip the crane at a given radius) or;
- Any crane lift involving two or more cranes or;
- The lifting device is operating above 60% of its rated capacity when lifting over or near critical lines or equipment (a critical line contains harmful material with potential for vapour release or auto ignition);
- Any lifting situation where bearing pressure of the supporting foundation is in question.

5.10.3.5 *Lifting Equipment Inspection and Testing*

- All Lifting equipment shall be pull-tested or inspected using an accepted non-destructive method prior to initial use on a project and yearly thereafter. Visual inspection, logging and colour coding must occurred quarterly.
  - Slings must be proof-loaded to two (2) times the safe working limit or the limit as specified by the manufacturer;
  - Shackles used in lift requiring engineer drawings or design shall be inspected for magnetic particle;
  - Plate and beam clamps shall be inspected and proof-tested by a third party agency;
  - Come-along and chain falls shall be inspected for internal wear and be proof-tested to 1.5 times their Safe Work Load (SWL) or the limit as specified by the manufacturer;
  - Spreader bars, lifting beams, links and other rigging components shall be inspected for magnetic particle.
- Engineered Design - Any rigging or lifting equipment fabricated by an employer such as spreader bars, links, clamps, lifting beams must be designed and certified by a professional engineer.

5.10.3.6 *Mobile Crane Near Power Lines*

- No mobile crane is to be used within 3m (three meters) of any overhead power line and until Hatch has issued a valid Permit to Work.
- Mobile cranes must be effectively grounded when working in the vicinity of electrical wires.

5.10.3.7 *Suspended Loads*

- Contractors and their employees must keep out from under suspended loads, including excavators, and must not stand between a load and a solid object where they might be crushed if the load should swing. They must not pass or work under the boom or any crane or excavator.
- Contractors and their employees must ensure that crane loads are not carried over the heads of any work crew.
- Taglines are to be used to prevent loads from swinging.

5.10.3.8 *Man Basket*

- A fall protection certificate and fall arrest PPE is required for anyone to be suspended in a man basket attached to the hook of any crane. Only certified man baskets may be used and the Contractor must strictly comply with written procedures for their use.
- Personnel in the man basket must have their feet on the floor at all times, and remain within the man basket.

- Each employee within the man basket must wear an approved safety harness and lanyard attached to a lifeline/ safety line which has an independent an anchorage point, which does not form part of the man basket.
- Appropriate means of communication is provided for people in the man basket.
- A tagline is used to control the man basket.
- Each man basket is to be fitted with an information plate to indicate the maximum weight and number of persons to be lifted.
- All man baskets and cranes must be inspected prior to initial and daily use and the findings recorded.

5.10.3.9 Wind Speed

The wind speed shall be monitored before every lift. When the wind speed is above 25km/h, the Contractor needs the authorization of the Hatch construction department prior to performing a lift.

5.10.4 Excavations and Trenches

- The Contractor must ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing.
- A permit and drawing highlighting underground obstructions is required prior to any excavation or trenching activities beginning.
- Barricading to be provided around all holes or openings to prevent any person being injured as a result of a fall.
- Where it is impracticable to provide fixed guard railing, effective removable barriers must be provided at all unguarded openings in guard railing or floors, and be maintained in position at all times until the hazard no longer applies.
- When excavations are necessary across roadways, approval is to be requested from Hatch. Where necessary, "Detour" notices and detour routes are to be provided.
- Warning signs and flashing warning lights at night or during poor visibility periods must be provided in suitable positions to warn any persons approaching the area of the location and extent of any excavation.
- Personnel must report any unusual conditions that may be found, such as ice, water, unstable ground conditions or inconsistent materials, immediately to Hatch and, if a risk to personnel safety is involved, stop all work until approval to continue is granted by Hatch.
- Safe access and egress to be provided and excavation sides to be sloped or shored as per appropriate legislation.

- If a person works in an excavation that is at least 1.2 m deep, then at least one other person is present in the immediate vicinity.
- All excavations must be inspected daily before work commences & after inclement weather by the Contractor's appointed competent person. The excavations must be declared safe by the contractor before allowing workers in. All inspections and findings must be noted in the contractors' register.
- No loose material may be within 1.8m of the excavation edges.

5.10.5 Flooring, Guardrail Installation and Removal

- Prior to work commencing, a JHA and permit shall be developed. The completed Hazard Assessment shall be signed by all persons involved, and displayed in a prominent location at the workplace.
- Where there is a risk of a fall to personnel, all handrails, permanent or temporary, shall be installed around the perimeter of the floor prior to installation of the flooring.

5.10.5.1 Formwork and Support Work

The contractor must implement and comply with applicable legislation/code of practice etc.

5.10.6 Falling Objects

- Employees working overhead must ensure that materials and tools are properly secured to prevent articles from falling.
- "MEN WORKING ABOVE" signs are to be displayed in the appropriate places.
- Where there is danger of falling material, the area is to be barricaded.
- Material must not be thrown from above but lowered in a safe manner using a securely fixed rope to lower the material.

5.10.7 Lock-out/Isolation

5.10.7.1 Lock and Tag Requirements

- All locks used as part of this program shall be red in colour;
- A tag alone is not sufficient for isolation; a physical lock is required;
- All isolations must be tested to ensure all energy sources have been properly de-energized;
- Locks shall be uniquely numbered and have a single key;
- Each person working on the system requires their own lock;
- Tags shall contain a space to identify the person placing the tag.

5.10.7.2 Blinds

- Are required for pressure testing, vessel entry purposes, and to provide isolation from live systems.
- The use of valves for isolating confined spaces where leakage from the valve may pose a hazard to workers is prohibited.
- Valves will not be used to isolate sections of pipe for pressure testing.
- All safety blinds shall have red handles and only be removed when authorized by Hatch.

To ensure the safety of persons, the Contractor's management is responsible to ensure Compliance with:

- Lock-out procedure;
- Instructing all work crew concerned in its application and implementation;
- Instructing the appointed Contractor's supervisors in the issue of applicable permits;
- Daily checking of permits; and
- Distributing information and communicating any other permit system required; e.g. for work to be carried out on equipment, roof work, excavation, demolition, hazardous areas, etc.

5.10.7.3 Working on Live Electrical Equipment/Sub-Station

Only qualified and competent workers may work on live electrical equipment.

5.10.8 Mobile Equipment & Light Vehicles

5.10.8.1 Riding On and Operating Equipment

The Contractor must ensure their employees and those of their sub contractors do not ride on or attempt to vehicles, elevators, cranes or other moving equipment unless authorized and licensed to do so.

5.10.8.2 Access to Site

- The Contractor must limit his onsite vehicles to valid permit holders issued by Hatch.
- Upon written application to Hatch, the Contractor's senior supervisory personnel may be issued with vehicle passes permitting access to the premises for nominated vehicles.
- The Contractor is solely responsible for the safety and security of any of his vehicles, including private vehicles, on the premises.
- The company name must be clearly identified on each site vehicle.

5.10.8.3 Safety Equipment

- All mobile equipment and vehicles shall have backup alarms suitable to be heard in the work environment.

- All mobile equipment and vehicles shall be equipped with a 10-lb. or larger ABC fire extinguisher and a first aid kit.
- All mobile equipment shall be equipped with rollover protective structures as designed and required in accordance with statutory regulations.

5.10.8.4 *Registration of Vehicles*

All vehicles used by the Contractor on the premises must be roadworthy, carry the appropriate insurance and be registered by the appropriate authority.

The Contractor must provide evidence to Hatch that all mobile equipment (e.g. cranes, forklifts, front-end loaders, back hoes, elevated platforms) comply with the requirements of the applicable local legislation prior to that equipment being brought onto the premises.

In the event the equipment is not owned by the Contractor, the Contractor is still responsible for ensuring all conditions are complied with by all of his subcontractors or hire companies.

5.10.8.5 *Accidents*

In the event of an accident on site in which the Contractor's employee or subcontractor is involved, the driver must remain at the scene until the accident is attended by Hatch or the Contractor has received approval from Hatch to leave the scene, unless medical attention is required.

5.10.8.6 *Safe Operation*

- All personnel using mobile equipment and vehicles shall be in possession of a valid driver's license or certificate.
- The contractor shall perform an onsite competency check of all mobile equipment operators; records must be maintained by the contractor and forwarded to Hatch for review; Hatch will then issue a sticker to the operator authorizing him to use that equipment at site.
- All mobile equipment or vehicle shall be kept with lights on when operating or driving.
- Personnel shall not ride on or in equipment, unless in a seat designed for the purpose and equipped with a safety belt. Seat belts must be used at all times. The only exception – seat belts should not be used when crossing ice covered water bodies.
- Vehicles must be turned off when refuelling; smoking or hot work is prohibited in the vicinity of refuelling.
- Loads shall not be left suspended while the equipment is unattended.
- The operator of any vehicle or mobile equipment with less than 3600 of direct visibility must ensure they are directed by a signal person. The signal person will be identified with reflective vest and arm gauntlets.
- A walk-around shall be done prior to moving any mobile equipment or vehicle.

- All vehicles left unattended will have the parking brake applied and the motor turned off. When necessary reinforce safe parking on grade (edge) terrain using chock blocks on the wheels.
- When maintenance procedures are to be carried out, equipment will be suitably locked out and tagged or rendered immobile during the maintenance work. All pinch points will be blocked or locked open.
- A key shall be left in all vehicles and equipment in the event it needs to be moved during an emergency.
- In the event of an evacuation, all vehicles and equipment shall be moved to the side of the road, shut off and the operator shall walk to their assembly point.
- Although it is discouraged, when transporting material that by length or width exceeds mobile equipment or light vehicle size shall be mandatory to place light reflective signals or flags to notify its presence.

5.10.8.7 Inspection

- All equipment and vehicles shall be mechanically inspected prior to mobilizing, current within 7 days, on the project. Copies shall be kept on file for review and forwarded to Hatch for review; upon acceptance Hatch will issue an approved equipment sticker.
- Equipment and vehicles shall be inspected at the start of each shift, and shall not be operated if conditions pose a hazard to safe operation.

5.10.8.8 Transportation and Securing of Loads

Long and Wide Loads

When transporting long and wide loads, the contractor will make arrangements in conjunction with Hatch where an escort may be necessary.

Securing of Loads on Vehicles

All loads shall be secured on the transport vehicle. It is unacceptable that a person may be injured or property damaged as a result of loads being transported on site without appropriate securing.

5.10.9 Working at Heights

The Contractor must:

- Submit a fall protection and rescue plan to Hatch Construction Manager for approval, before any elevated work commences.
- Provide fall-arrest harness with shock absorber and double lanyard for all elevated work at or above 1.2m.

- Fall arrest equipment such as lifelines and anchors, that are not part of an approved manufactured system, shall be certified by a professional engineer.
- Ensure that:
  - Where possible, all tools in elevated positions are attached to lanyards and to either the person or structure.
  - Equipment in elevated positions is tied back to the structure.
  - No loose items in elevated positions; e.g. bolts and nuts must be in pouches, not paper boxes.
  - Overhead work allowed only if the area below is barricaded in accordance with Hatch barricading requirements.
  - Competent persons must complete a pre-use inspection of lifelines and record findings on the appropriate inspection sheet.

Note: 100% tie off is required when conducting elevated work 1.2m or above.

5.10.10 Steel Erection

5.10.10.1 General

- A rescue plan shall be developed prior to beginning steel erection.
- Multi Piece Lifting is prohibited; structural steel members shall be rigged and placed singularly.
- Proper load rated canvas tool bags with rope handles shall be provided for storing bolts and drift pins. Containers shall be secured against dislodgement when used at elevations.
- Ladders, scaffolds and stairwells shall provide safe access and egress from work areas.
- Material shall be ordered and received to support the installation of permanent floors and stairwells as the erection of structural member's progress.

5.10.10.2 Safety Review Meeting

Prior to the start of the erection of structural steel or skeletal structure, a safety review meeting shall be held between Hatch and the erecting contractor to plan safe execution of the work:

- The Construction Manager, as well as the superintendent and engineer involved in the work shall be in attendance.
- Job Safety Analysis shall be used to sequence the execution and identify the hazards. The following issues shall be addressed at the meeting:
  - Delivery – off-loading;

- Placement and storage in lay down areas - stability of material;
- Cranes and rigging - lift calculation forms;
- Fall protection, types - required approvals, 100% tie-off requirement;
- Falling objects - flagging, barricades, securing of tools/equipment;
- Temporary access - ladders, stairwells, scaffolds;
- Temporary decking and hand rail requirements;
- Erection sequence - structural members, stairwells, decking;
- Bolting and fitting, installation of braces;
- Temporary guying.

5.10.10.3 Fall Arrest

- Engineer specifications for fall arrest anchors and systems shall be incorporated, as far as reasonable and practical into the design of skeletal structures.
- Climbing columns and braces or walking beams is prohibited unless protected by fall protection specific to the hazard.

5.10.11 Scaffolding & Ladders

5.10.11.1 Scaffold

- Scaffolds shall only be erected, altered, maintained or demolished by suitably qualified and authorised personnel.
- Guard rails and toe boards are to be provided on all outer edges and ends of all scaffolding where a person or an object can fall a distance of 1.2 m or more. Where it is not practical to have handrails or there is a need to work outside handrails, the use of an approved fall protection system is required.
- Ladders to be staggered every 3m inside scaffold frame with safe landing platform and a guardrail fitted on the working platform around an opening.
- A three (3) tag scaffolding management system is to be employed by the Contractor to ensure that scaffolding erected on site complies with the provisions of applicable standards and Hatch requirements.
- Contractors' competent appointed scaffold inspectors must carry out inspections of their scaffolding whenever the scaffolding has been modified, damaged or altered in any manner or form, and otherwise inspected daily when in use for any damage, deterioration or weakening of the scaffold or the scaffold's components.
- Tags must be updated as required and records of inspections must be kept on file.

5.10.11.2 *Suspended Scaffold Platform*

- Suspended platforms may only be used on site with prior written approval from Hatch.
- The Contractor must ensure that all suspended platform work operations are carried out under the supervision of a competent person who has been appointed in writing, and that all suspended platform erectors, operators and inspectors are competent to carry out their work.

5.10.11.3 *Ladders*

- All ladders used on the site are to be constructed and used in compliance with the applicable legislation/code of practice and regulations.
- Ladders, which provide access to a working platform, must extend one meter above the platform where it provides access, and is secured to prevent slipping.
- Timber ladders must not be painted other than with clear preserving oils, clear varnishes or clear plastics.
- Ladders, which are in a damaged condition, must not be used and must be labelled accordingly and removed from the site.
- All ladders shall be inspected daily prior to use; additionally all ladders are to be numbered, logged in a register, and inspected quarterly.
- A ladder in use may be held by an assistant or must be properly tied down on the top and bottom.

5.10.12 *Respiratory Protection*

Specific procedures and requirements for the use of respiratory equipment shall be developed as part of health and safety work plans.

A medical questionnaire for respirator users shall be completed by all potential candidates, prior to respiratory protection use and reviewed by a licensed physician. A more comprehensive medical evaluation may be required based on the results of the questionnaire, or the details of the work assignment. No employee shall be fit tested, or assigned to a task that requires the use of a respirator unless it has been determined that they are physically able to perform the work while using the required respirator.

5.10.13 *Emergency Management – Site*

5.10.13.1 *Site Fire and Emergency Equipment*

The Contractor must provide and maintain all their fire and emergency equipment. The Contractor must ensure all personnel familiarize themselves with locations of fire equipment in the vicinity of their work site. Work areas must be clear, at all times, of any material, which could fuel a fire. A thorough inspection is made of the area at the end of any working period to ensure that no material is left at the work site or any situation left in such a manner that a fire or

accident could result. All machines must be turned off at main switches, and cylinders closed and hoses deflated.

The Contractor must supply all fire extinguishers for his work as required on the site during the construction phase. Fire extinguishers are not to be used for any purpose other than their intended use and must be tagged and inspected monthly.

The Contractor must ensure that his personnel are trained in the use of fire extinguishers.

5.10.14 Emergency Response Plan

The Contractor must provide Hatch with copies of the Contractor's Emergency response plan that sets out its procedures for fire and spill response, rescue from heights and other relevant emergency response procedures. Those procedures must be compatible with the existing Emergency Response Procedures prior to commencing site activities. Unforeseen conflicts between the sites policies and those of the Contractor will be addressed and resolved at the direction of Hatch prior to the Contractor commencing the work.

The following information will be made available by each Contractor to their workforce and posted in temporary and permanent facilities:

- Emergency services contact information;
- Manager and supervisor contact information;
- Emergency numbers;
- Evacuation routes and musters points;
- Nearest medical facility location, route directions, and estimated time to travel to it;
- Means of communication;
- Location of first aid kits;
- First aid personnel available on site;
- Fire extinguisher locations;
- Controlled product storage locations;
- Applicable MSDS;
- Medical transportation services (land and air); and
- Helicopter landing zones (as required).

5.10.14.1 Emergency Drills

The Contractor must participate in emergency response drills, including but not limited to fire, rescue and spills, to test the effectiveness of emergency procedures and equipment as well as the

knowledge and proficiency of all response personnel. The contractor shall document and submit to Hatch any deficiencies found during a drill and plan to correct.

5.10.15 Fire Fighting

The Contractor must prominently publish, in all relevant languages for all areas of operation under its control, the procedures to be carried out in the event of fire.

The Contractor must train all employees in the procedures to be followed in the event of a fire and/or a fire alarm.

Contractors must familiarize themselves with locations of fire equipment in the vicinity of their work site. Work areas must be clear, at all times, of any smouldering material which could fuel a fire. A thorough inspection is made of the area at the end of any working period to ensure that no smouldering material is left at the work site or any situation left in such a manner that a fire or accident could result.

The Contractor must supply all fire extinguishers for its work as required by the statutory regulations governing the site. Fire extinguishers are not to be used for any purpose other than their intended use.

5.10.15.1 Fire Precautions on Construction Sites

Good housekeeping plays a major role in fire prevention.

The Contractor must ensure that:

- All flammable and combustible material is removed on a daily basis.
- The minimum amount of flammable liquids (fuel, thinners and paint) is brought on to site.
- All required safety signs (No Smoking, No Open Flame, and No Unauthorized Entry) must be posted if any work is carried out with any flammable or combustible materials.
- Those Supervisors do constant and regular inspections to ensure adherence of Procedures.

Maintenance

All Fire Extinguishers must be:

- Conspicuously numbered and fitted with an inspection tag;
- Visibly inspected monthly by a competent person;
- Inspected at least every yearly by an accredited supplier;
- Entered in the inspection check sheet after each inspection.

Damaged Equipment

Fire extinguishers with damaged or broken seals are to be returned to an accredited supplier for re-charge/repair. Details are to be entered in the inspection check sheet.

5.10.16 Emergency Evacuation

The Contractor must establish and implement an emergency evacuation procedure that aligns with the existing Hatch and Baffinland system and ensure that in the event of fire, explosion emission release, or flooding all staff leave their place of work at the sound of the alarm and proceed to a safe area demarcated for the purpose. The Contractor must provide an air horn or alarm markedly different from any alarms or signals used on operating equipment.

The safe assembly area is marked with a sign "Assembly Point" or other means of demarcation. An evacuation route diagram is readily available at each work site.

An Emergency Evacuation Procedure is drawn up; all staff members and Contractors given awareness training and participate in regular evacuation drills.

The procedure must be submitted to Hatch Project Manager.

5.10.17 Dangerous Good & Hazardous Substances

Hazardous substances are any substance or material specified in statutory regulations as being hazardous.

Prior to any hazardous substances being brought onto the site or produced on the site, the Contractor must supply Hatch with the following:

- Material Safety Data Sheets (MSDS) and the proposed arrangements for safe storage;
- Purpose for bringing the hazardous substance onto the site;
- Proposed methods for handling/usage;
- Proposed method of disposal;
- Proposed method of transportation.

The information is to be provided at least 3 working days prior to the expected arrival on site.

Hatch will only approve the use of any hazardous substance after receiving a copy of the Materials Safety Data Sheet for the substance from the Contractor. Substances are not to be brought onto the site until Hatch's approval is received.

The Contractor must ensure that all-necessary usage and storage precautions are employed and that safety equipment and spill containment equipment is available on the site.

5.10.18 *Explosive Actuated Tools*

- The use of explosive actuated tools must be documented in the daily safe task instruction.
- Prior to use a person must be able to provide sufficient evidence of having successfully completed a training course based on the manufactures requirements.
- Stored in a locked cabinet when not in use.
- Job Hazard Analysis shall be performed for all tasks requiring the use of explosive actuated tools.

5.10.19 *Permit to Work*

Hatch will issue all Permits to Work. The permit must list specific conditions and hazards involving the specific task.

- The following permits shall be required:
  - Excavation and Break-In;
  - Confined Space Entry;
  - Hot Work Permit;
  - Work on High Voltage Equipment and Systems.

For all work done in the existing Mary River Facilities, the Contractor must obtain a permit from Baffinland; with the original request made through Hatch.

5.10.20 *Welding, Cutting, Grinding and Hot Work*

- Contractors must instruct employees in the safe use of welding equipment.
- Non-combustible or flameproof shields to protect employees from direct ultra-violet radiation generated during welding and protection against airborne particles from welding, cutting and grinding operations.
- All arc welders (electric or engine powered) used in wet areas or outdoors must have a voltage reduction device (VRD) installed by the manufacturer or use a device such as Shock Stop; this device will turn the power from the welder on and off remotely by sensing the actions (striking an arc) of the welder operating locally or remotely from the welding machine.
- Electrode holders or welding guns must be maintained in good order; when they are to be left unattended, the electrodes must be removed and the holders placed or protected to ensure they cannot make electrical contact with employees or conducting objects.
- All arc-welding cables are to be properly maintained and completely insulated. There shall be no repairs or splices within 3m (three) of the electrode holders, except where splices are

insulated equal to the cable. Defective cables are to be repaired or replaced. The ground cable shall be connected to the workface in close proximity to the welding location.

- Fuel gas and oxygen hoses must be of an approved type, be easily distinguishable and must not be interchangeable. Hoses are to be inspected at the beginning of each day and repaired or replaced if defective.
- Fire extinguishers must be available at all points of grinding, cutting and or welding and the Contractor must provide shield and fire blankets for all welding activities.
- No welding or cutting is undertaken where hot metal or sparks can fall onto walkways, work areas, cable ladders, electrical equipment, etc. Before welding or cutting is started, fire retardant blankets are placed to arrest such hot metal or sparks. Particular attention is taken when working above cables that are not adequately covered.
- Use an approved type flint striker for lighting of torches. Do not use matches or disposable lighters.
- During welding operations, the ground lead is to be attached to the work area as close as possible and never such that the ground is established through equipment bearings or through clearance gaps of any sort.
- Objects rigged into place to weld must be secured with non-conductive rigging.
- Welders and other people executing hot work must not wear any jewellery and or carry cigarette lighters on their person.
- Falling sparks and/or hot cuttings must be contained.
- Fire Blankets and Fire Extinguishers must be on hand.
- Hot Work, cutting and/or grinding must not be carried out in the vicinity of flammable liquids.
- Rubber lined vessels/tanks etc. must be protected.
- All wall and floor openings must be covered.
- Containers/pipes must be purged of flammable vapors
- Fire Watch must be provided and stay in place for at least 2 hours after the operation.
- A warning must be given to all employees working under Hot Work process.

The Contractor must provide appropriate breathing apparatus (e.g. half face respirator) when welding, cutting or heating as harmful gases are given off when doing certain types of welding work.

5.10.21 Electrical Safety

The Contractor must ensure that:

- All electrical installations carried out on the site are in accordance with the relevant Electrical Regulations. For permanent or temporary installation, as appropriate. In addition, electrical installations must comply with Hatch Standards.
- Connections are not made to any existing power supply without the prior written approval of Hatch and an isolation permit.
- All electrical installations are carried out by an appointed and qualified electrical installation electrician. The Contractor must keep a record of his approval of the installation.
- All electrical machines and appliances provided by the Contractor for his own use on the site are in a serviceable condition.
- Power tools used on the site are to be protected by ground fault circuit interrupter (GFCI) devices and must be double insulated.
- All extension cords, portable tools and electrical equipment supplied are inspected, tested and tagged by a licensed electrician at regular quarterly intervals. Details of inspections and tests are to be kept in logbooks available for inspection by Hatch.
- All extension cords and cables shall not be lying on the ground, but be fixed to the ceiling or structure at no less than 2.5m above the floor, if possible.
- Where natural lighting is inadequate, artificial lighting is to be provided in all work areas, access ways and for rescue equipment.
- Portable lights have adequate stability and are fitted with a mechanical guard to protect the lamp.
- Temporary lighting is to be 'double insulated' and is supported at least 2.5m above the floor, if possible.

Any installations deemed unsatisfactory by Hatch shall be removed by the Contractor at his expense.

The Contractor must obtain approval from Hatch before any of his employees or sub Contractors commence work within 3m (three meters) of conductors or high tension wires, or where there is a possibility of equipment coming close to and/or touching a power source, and must provide suitable protective insulating barriers. For the erection of scaffolding, the distance is 5m (five meters).

Only authorized persons may enter electrical enclosures, motor rooms, switch rooms, control rooms or cable ducts. Should the Contractor require entering such places to carry out work, he must first obtain permission from Hatch and obtain a valid permit to work.

The Contractors' employees who are required to enter "authorized" electrical spaces " must provide Hatch with the names of the employees entered in the Hatch Authorized Persons Register, after receiving approval from the Hatch Electrical Supervisor, or they are accompanied by an authorized person who must supervise the placement of Danger Tags and Out-of-Service Tags, as well as electrical isolation permit.

All equipment must be isolated, prior to a person carrying out work on that equipment. No work is allowed on energized equipment.

5.10.22 Change Management

The Contractor must develop a procedure and system to manage the change process. This procedure and system must address the required processes to ensure that proposed changes do not give rise to unacceptable risk to health, safety, assets and/or the environment.

The change management process must aim to ensure the following:

- Changes are identified and recognized, on the Permit, JSA or FLRA;
- Careful consideration is given to managing the risks associated with any change;
- Due diligence can be shown to have taken place;
- A reduction in the number of unsatisfactory or unnecessary changes;
- Involvement of the right people in the change process; and
- All statutory requirements are met.

The change management controls must apply having regard to the fact that change may be planned, sudden or gradual.

5.10.23 Personal Protective Equipment (PPE)

5.10.23.1 Standard PPE

All Contractors' personnel at the site, including visitors, must use the following minimum CSA approved personal protective equipment at all times:

- Hard hat with chin strap or ratchet head band.
- Safety footwear with minimum 150mm (6 inch) high boot in good condition; e.g. good soles, no toe cap exposed and fully laced up.
- Eyewear which provides a 100% seal for the protection from dust and flying particles with clear lenses; no contact lenses are allowed.
- Gloves suited to the task shall be worn at all times in the field.
- CSA Z96.02 approved high visibility vest, shirts, coveralls, jackets, etc.

- NIOSH approved respirators, including disposable N95 particulate respirators, as required.
- Suitable outer protective clothing including arc flash garments for electricians.
- Long pants and long-sleeved shirts are required.
- Personnel exposed to noise levels exceeding 85dBA for any period of time or where signs indicate hearing protection are required to wear hearing protection.
- Other personal protection items such as face shields, leather spats, safety harnesses, aprons or other such items may be specified for use by legislation, the Scope of Work or the Hatch Representative.

5.10.24 Pile Driving Operations

- All pile driving machinery, core/dynamic drilling machinery and attachments must comply with legal requirements and have a pre-inspection done by the Contractor as well as be reviewed by Hatch prior to pile driving.
- Each piece of equipment must be operated only by a qualified competent operator. The equipment must have an up to date logbook and mechanical inspection certificate.
- Copies of JSA's and safe operating procedures will also be required for each specific operation. Verification is required to ensure that every employee involved in the pile driving operation has been trained in the JSA's process and safe operating procedures.
- Special care must be taken when working in the vicinity of pile driving equipment and the area must be properly barricaded according to Hatch Standards.

5.10.25 Compressed Air

- Compressed air must not be used to remove dust from clothing;
- Compressed air must never be directed at a person as it could enter the body and cause serious injury or death;
- Locking clips and whip checks or other suitable approved devices must be used to prevent accidental uncoupling of compressed air hoses;
- Air hoses must not be disconnected until confirmation is made that the supply valve is closed and the pressure in the hose has been released;
- Hoses must be routed in an orderly manner and elevated to prevent tripping hazards.

5.10.26 Compressed Gas Cylinders

Contractors must establish satisfactory storage areas (fenced, shaded, approved surface and all necessary signs posted) for oxygen, acetylene and liquid propane gas (LPG) cylinders. Oxygen and fuel gas cylinders must be stored separately and in an upright position.

When cylinders are moved from place to place, they must be secured from being knocked over or falling. Before moving a cylinder without a suitable truck or trolley, the cylinder valve must be closed and the regulator removed. Only specially approved cylinder crates/cradles are to be used. Cylinders must never be used as rollers, even if they are marked 'empty'.

- Storage areas shall whenever possible is well clear of buildings.
- A protective covering must be provided.
- Adequate ventilation must be provided.
- Storage areas must be kept free from all combustible materials; no other materials may be stored in cylinder enclosure.
- Full cylinders must be kept separately from empty cylinders so that so it will not be necessary to open valves to check whether cylinders are empty or full. Empty cylinders must be marked clearly and stored in the space provided.
- Cylinders must always be stored upright and secured in position.
- For security and ventilation purposes a wire mesh fence shall surround the storage area.
- All danger signs must be prominently displayed at storage area; e.g.:
  - No Smoking;
  - No Open Flame.
- Adequate firefighting equipment must be available.
- The storage shall be clearly marked as to gas type and whether the cylinder is full or empty.
- Flammable and oxidizing gasses must not be stored together; greases and oils must never be allowed to come in contact with Oxygen.

5.10.27 Designated Walkways

When walking through the site or to personal work areas, designated or recognized thoroughfares only must be used.

5.10.28 Commissioning of New Installation

To be guided by specific Job Hazard Analysis and Safe Work Procedures.

Notice boards must be erected clearly stating which items have been made 'LIVE'. The information on these notice boards is for general guidance to persons working about the area and warns of increased hazards. As soon as any item is made 'LIVE' commissioning procedures must apply.

5.10.29 Pneumatic Tools

Pneumatic tools must not be operated by using a compressed gas cylinder. Pneumatic equipment must only draw supply from mobile air compressors or from compressed air lines installed within the premises.

5.10.30 Noise

When Contractor's personnel are required to operate equipment, noise levels at the operator position and surrounding area must not exceed an equivalent level of 85dBA during normal working conditions. If exceeded, appropriate hearing protection is required.

5.10.31 Sand Blasting and Spray Painting

The Contractor, prior to performing any sand blasting operations on the site, must:

- Obtain written permission from Hatch.
- Comply with any direction from Hatch as to the suitability of proposed blasting site, prescribed times of blasting operations, wind conditions or other considerations that Hatch may deem appropriate.

Hatch may conduct or instruct the contactor to conduct an Environmental Impact Audit of the Contractors' proposed operation and the Contractor must comply with any direction by Hatch in relation to the Contractor's spray painting operation.

Painting work is carried out in such a manner that airborne particles of paint are contained in the immediate work area.

Any damage caused by such paint particles to privately owned vehicles parked or passing adjacent to the site is the Contractor's responsibility and all cost involved in repairing and making good such damage is to the Contractor's account.

5.10.32 Ventilation

The contractor must implement and comply with any and all Environmental Regulations.

For any job that generates excessive dust or fumes (for example welding), an effective exhaust system is to be used.

5.10.33 Lighting

- Where natural lighting is inadequate, artificial lighting is to be provided in all work areas, access ways and for rescue equipment.
- Portable lights must have adequate stability and be fitted with a mechanical guard to protect the lamp.
- Temporary lighting is grounded, insulated and supported at least 2.5m above the floor if possible.

Illumination checks are to be performed for night time work to check conformance to minimum light requirements.

5.10.34 Stacking Material

- Stacking to be neat and safe.
- Before stacking any material, the Contractor, subcontractor or their employees must consult Hatch for allocation of a storage area.

5.10.35 Manual Handling of Materials

- Contractors must ensure that no employee is required or permitted to lift or move by hand any heavy object that is likely to cause a risk of injury.
- Adequate PPE is to be issued and used if required.

5.10.36 Cutting Safety

- Cutting tools must only be used to perform tasks for which they were designed and not be used beyond the design capacity intended by the manufacturer.
- Inspect cutting tools prior to use and properly discard all dull or damaged knives or saw blades.
- Use only a sharp blade. A dull blade requires more force and is more likely to slip than a sharp one.
- Keep saw blades clean, and use light machine oil on the blade to keep it from overheating and breaking when cutting metal.
- When changing blades, cut resistant gloves shall be worn.
- Disposing of used cutting blades, the blades should be placed in containers to prevent a cut exposure to the garbage handler.
- Select a proper cutting surface and secure the item which you are cutting in order to minimize having to make an awkward cut. Preferably use clamps or vice, versus holding with your hand. Do not rest material being cut on or near your legs.
- Certain hand tools used for cutting are prohibited; this includes knives with break-off blades, blades of multi tools, unguarded locked blade, utility knives, pocket knives or hooked blade knives. If there is a task, where this type of knife is truly the only tool to accomplish the job, then a written Job Hazard Analysis shall be completed and approved by the Hatch Construction.
- For using a type of cutting tool NOT included in Appendix 7, a written Job Hazard Assessment shall be completed and approved by a Hatch safety representative.

- Adequate PPE must be worn when using cutting tools. Cut resistant gloves, sleeves and chaps shall be worn.

5.10.37 Explosives

- Explosives must not be brought onto the site or be used without the express permission of Hatch.
- Explosives or detonators must be stored in suitably designed magazines or storage facilities.
- Detonators and other explosives must never be carried together in the same box.
- The provisions of all relevant Acts & Regulations are to be strictly observed.

5.10.38 Earthwork Hauling Requirements

- Contractor to submit a detailed traffic plan to Hatch. Reversing of vehicles shall be minimized.
- During night driving, flashing lights are to be placed at crossings and intersections.
- All haul trucks, passenger vehicles and excavation equipment are to be operated with headlights on at all times.
- A minimum following distance of 3 trucks length is to be maintained between the trucks at all times.
- Speed limit on site is 35 kph unless posted otherwise.
- Always drive at a safe and controlled speed for the road conditions.
- Use extra caution when nearing or driving in or through areas of increased vehicle activity or congestion.
- Reduce speed, pull over to the side, and stop if necessary in conditions of extreme dust, fog, or blowing snow.
- Use signal indicators when required.
- In merging traffic, yield to the vehicle on the left.
- Do not park near heavy vehicles or equipment; remain in view of the operator or operator cab.
- Any vehicle or equipment that is broken down must be clearly identified with warning lights or some other effective warning device and must be removed ASAP.
- Vehicle back-in rule is in effect on the site.
- Vehicles without back up alarms must sound the vehicle horn twice before reversing.
- All reversing equipment without a 360 ° view must be guided by a spotter.

- For reversing vehicles that carry a driver and passenger(s), one of the passengers is to act as a spotter and guide the vehicle.
- Except for ambulances and fire trucks in emergency situations, all light vehicles must yield to heavy equipment and heavy vehicles.
- A signal system shall be in place between driver of haul truck and loader operator, for example:
  - To enter: one (1) blow of horn;
  - To stop: two (2) blows of horn;
  - To pull off: three (3) blows of horn.
- Drive on the right-hand side of all roads unless signs are posted for driving on the left-hand side.
- Warning signs are to be displayed during day-time operations; flashing lights during night-time operations.
- Road signs apply to all vehicles and equipment throughout the site unless otherwise specified. These signs, including warning lights, barricades, and markers, are to be strictly observed.
- A Signal Person or Dump Person is required in front and back of haul trucks when loading and offloading.

5.10.38.1 Haul Roads

- No pedestrians are allowed on haul roads; employees are to be transported to designated crew areas.
- Dust control measures are to be completed on regular intervals on all haul roads or as the need arise.
- Large rocks and or spillages are to be removed and cleaned from all roads immediately.
- Ground pollution such as oil, diesel and hydraulic fluid spills must be contained and cleaned up immediately. Spills that result in penetration of the ground surface will require the contaminated soil to be excavated and disposed of in an environmentally safe manner to the satisfaction of Hatch. The excavation will be backfilled and re-compacted to ensure a good driving surface.

5.10.38.2 Equipment

All vehicles/equipment must be roadworthy at all times. With the exception of small vehicles, roll over protection and wheel chocks will be required on all mobile equipment.

Contractors will be required to submit proof of a current full mechanical inspection of all equipment and vehicles prior to mobilizing to the site.

A pre-use check is to be done against an approved checklist; all faulty items are to be attended to immediately. In the case of faulty brakes, lights, air/hydraulic system and oil leaks, the vehicles/equipment must be withdrawn from service and repaired.

- The contractor is to submit the brake testing protocol that will be employed at the beginning of each shift before vehicle/equipment use.
- No major repairs or services are to be carried out on site.

5.10.38.3 Operators/Drivers

- No operator/driver is allowed to operate any vehicle/equipment without proof of training, driver's license and letter of competency.
- No passengers are allowed on dump truck, loaders or excavators.
- No eating or drinking is allowed while operating equipment.
- You must not receive or send mobile phone calls while you are driving. If you need to receive or send a call stop the vehicle in a safe place and only send or receive a mobile call while you are stopped.

5.10.39 Elevated Working Platforms and Material Hoists

- No elevated working platform or material hoist is to be used until it has been inspected by the Contractor and results passed to Hatch. The accompanying Certificate must not be older than 1 month.
- The unit must have an appropriate logbook.
- The Safe Working Load must be clearly displayed and never exceeded.
- The operators must make use of harnesses and lanyards at all times while in the basket.
- Only trained, competent and appointed persons can operate the elevated working platform or material hoist. Proof of operator training and training program must be submitted to Hatch.
- No person must stand on the handrails of an elevated working platform or material hoist.
- The key shall be removed or power supply disconnected when the elevated working platform or material hoist is not in use to prevent unauthorized use.

5.10.40 Motor Fuel and Flammable Liquids

All fuel storage areas must be clear of buildings and combustible materials and must have written approval from Hatch. The amount of fuel allowed to be stored is dependent on site conditions and statutory regulations.

Storage areas must have a bund wall or berm to contain 110% of the maximum volume of the container(s). Containment areas are to be constructed according to applicable legislation and impervious to leaks. Drip trays of sufficient size are to be provided at tap locations.

Storage tanks are to be clearly marked with a "Flammable Liquid, No Smoking & No Open Flame" signs and be clearly marked to indicate contents of the tank. Double wall tanks shall be used for storage and transport of fuels.

Adequate numbers of dry chemical fire extinguishers, each with a minimum capacity of 20 lb, must be provided, installed and maintained.

All electrical lighting and equipment is to be of an approved flameproof type and no other material/equipment is to be stored in the containment area.

Before a machine is refuelled, the motor is to be shut off and the equipment bonded. Refuelling must take place at designated safe areas with appropriate warning signs installed.

5.10.41 Site Trailers

All site trailers, used as offices or storage, shall meet the following requirements:

- Shall be installed as per manufacturer's requirements or as per engineer's specification;
- As a minimum 10-lb. fire extinguishers installed at each doorway and further as required by local fire code;
- Smoke detector to be installed, tested and logged each month;
- All trailers with power shall be adequately grounded;
- Adequate lighting for the task to be performed;
- Proper access stairways with appropriate handrails.

5.11 Incident Management

5.11.1 Incident Reporting System

The contractor shall implement and comply with the Hatch Incident Management Procedure.

The Contractor must verbally notify Hatch immediately of any non-conformance to procedures or of any other incident within the Contractor and subcontractors' areas of responsibility.

The Contractor must have an incident reporting system that is compatible with Hatch's standards and all applicable statutory requirements. Any incident including a near miss or dangerous occurrence involving Hatch, the Contractor, their subcontractor's or any third party's personnel, property or equipment must be verbally reported immediately to Hatch, whether or not injury to personnel or damage to property or equipment resulted. Within eight (8) hours a brief written report or Safety Alert stating the known facts and conditions and including a preliminary

assessment of the most likely potential consequence of the incident in the circumstances must be submitted to Hatch. This is to be followed up by a full incident report within 24 hours.

The Contractor is reminded that this incident reporting system does not exempt the Contractor from providing accident reports required by statutory authorities, in particular, the Contractors' responsibility for reporting accidents in accordance with the legislated requirements.

5.11.1.1 Incident Management

- An incident reporting and investigation structure, including root-cause establishment and corrective action taken.
- All injuries requiring medical treatment and all other incidents with a potential severity of lost time or restricted work activities shall require the Contractors Project Manager to attend to the site to lead the investigation.
- Use of Hatch prescribed forms for all investigations.
- As a minimum, all incidents requiring medical treatment or higher shall be reviewed with the site leadership team within three (3) working days of the incident.
- Experienced/trained investigators.
- A process to review the effectiveness of incident investigation action plans.
- Conducting first-aid needs analysis and emergency response risk assessments.
- A return to work program; modified work or restricted duties.
- A rehabilitation program.
- Processes to ensure the appropriate authorities are notified in the event of a reportable incident.

5.11.2 Serious Incidents

For any serious incident involving a fatality, or permanent disability, the incident scene is left untouched until witnessed by the RCMP and/or appropriate legislated Health and Safety agency. This requirement does not preclude immediate first aid being administered and the scene made safe.

5.11.3 Incident Report and Close Out

The Contractor must investigate the causes of all work incidents and dangerous occurrences and provide Hatch with the results of the investigation and recommendations on how to prevent a recurrence. A formal root causes investigation process to be used for all high potential incidents. Appendix 5 is the report to be used for all investigations.

The written report must include:

- Date, time and place of non conformance;

- Description of non conformance;
- Type of injury (if any);
- Medical treatment provided (if any);
- Persons involved; and
- Corrective action to prevent recurrence.

Hatch has the right to designate a representative to participate in the investigation.

Where the results of any investigation are not completed and issued to Hatch within 24 hours from the time of occurrence, the Contractor must supply Hatch a written update every 24 hours with the progress and results of the investigation until the incident report has been fully completed and issued to Hatch.

Where required by statutory requirements the Contractor is responsible for incident reporting to the appropriate authority.

5.11.4 Corrective Action

The Contractor must:

- Ensure all hazards, incidents and accidents, including near misses, are investigated fully and documented;
- Take corrective action to eliminate the cause of the incident or accident to prevent recurrence;
- Review inspection and audit reports to identify areas of improvement;
- For the purposes of this specification, a Health & Safety incident is taken as an incident involving harm or potential harm to any employees of the Contractor, the community, subcontractor and/or the work environment, or where the physical well being of a person, the community or the work environment has been placed at risk, e.g. a near miss.

5.11.5 Injury Management

The aim of injury management is to ensure appropriate and adequate medical treatment is provided to injured employees, to enable a quick and efficient return to the workplace.

The contractor must make arrangements for the injured worker to be treated at the nearest medical facility. The treatment of the injured worker will not be compromised and the immediate needs will be referred as required by the site first aid attendants.

Contractors are to have a modified “light-duty” return to work program. The doctor should be briefed on the commitment by the contractor to injury management, alternative duties, and early return to work programs and rehabilitation.

Effective injury management must commence immediately after the accident has occurred and is to include:

- Counselling of the patient;
- Referral to a medical practitioner via the project first aid attendants(s);
- Follow up, including personal off site visits by the contractor (where required);
- Provision of offsite personal, family and social assistance where required;
- Formal assessments of employee capabilities prior to return to work; and
- Provision of alternate meaningful duties, where appropriate.

5.12 Site Management

5.12.1 Notices

The Contractor must provide copies of any notices, correspondence or directions issued by any relevant government authority concerning Health and Safety within four (4) hours of the dispatch and/or receipt of such notice, correspondence or direction, and must immediately comply with same.

5.12.2 Incorporation of Site Rules and Instructions

The Contractor must comply with all site rules/site instructions issued by Hatch, which are by this reference incorporated into and made part of this Contract.

5.12.3 Interpretation of Safe Working Instructions

The contractor must implement and comply with:

- Nunavut General Safety Regulations, R.R.N.W.T. 1990 ;
- Hatch Safety Management Plan, associated standards, safe work procedures, safety guidance notes and this manual;
- BIM site rules and regulations;
- This Contractor Safety Management Plan and related documents.

If any site personnel are in doubt as to the meaning of any safe working instructions, they must consult their supervisor.

5.12.4 Safety Equipment

The Contractor must ensure that all its safety equipment is regularly maintained and tested, that it is always in a serviceable condition, and that the Contractor's personnel and its subcontractors' personnel are instructed, trained, competent and, where required, certified in the use of such safety equipment. The safety equipment must comply with all applicable laws, rules, and regulations.

5.12.5 Weather Precautions

The Contractors' Emergency response plan must include procedures for adverse weather conditions including but not limited to high winds, flooding, storms and lightning. In the event of impending adverse weather or other conditions, the Contractor, in consultation with Hatch must decide whether to institute precautionary measures in connection with the carrying out of the work. For example, emergency temporary berms and tie down of cranes and partly installed structures.

5.12.6 Commencement of Work

Prior to the commencement of any site work, the Contractor must consult with Hatch regarding the availability of and access to the item or area to be worked on and to obtain instructions relating to any special or unusual safety procedures that are to be followed.

The Contractor must not commence work on a particular item or area of the site until Hatch has provided the appropriate "authority to commence work".

5.12.7 Notifications

5.12.7.1 Electrical Work (Power Supply)

The Contractor must submit to Hatch in writing, notification of completion of any power supply system electrical work prior to power being supplied. No further work is undertaken without the written acceptance of Hatch. All electrical work is carried out in accordance with the relevant statutory requirements. The Site Construction Manager must approve all electrical work before being energized.

5.12.7.2 Plumbing Work

The Contractor must submit to Hatch, in writing, notification of completion of any plumbing work prior to water being supplied. No further work is undertaken without the written acceptance of Hatch. All plumbing work is carried out in accordance with the relevant statutory requirements.

5.12.8 Completion Inspection

On completion of any work on site the Contractor must notify Hatch and conduct a final inspection to ensure that all items and areas are left in a safe, clean and operational condition.

5.12.9 Housekeeping

The Contractor must maintain all work areas in a tidy state, free of debris and rubbish. Unless directed otherwise, the Contractor must dispose of all debris, rubbish, spoil and hazardous waste off site, in a designated and authorized area or facility. The Contractor shall make itself aware of Hatch's waste management plan and collection and disposal arrangements and align its waste management program accordingly.

In cases where an inadequate standard of housekeeping has developed and compromised safety and cleanliness, Hatch has the right to instruct the Contractor to cease work until the area has

been tidied up and made safe. Neither additional costs nor extension of time to the Contract is allowed as a result of such a stoppage.

The Contractor must carry out regular safety/housekeeping inspections at least weekly to ensure maintenance of satisfactory standards. The Contractor must document the results of each inspection and must maintain records for viewing by Hatch.

At the time that the Contractor establishes site facilities and permanently mans the site, or at an alternative time agreed between Hatch and the Contractor, the Contractor must assign dedicated housekeeping crews.

These crews must assist in maintaining a clean and safe working environment by patrolling the Contractor's work area (including Hatch site offices, lay down areas and construction site) and performing such duties as ensuring that scrap material, general refuse, rubble and other forms of unwanted materials are removed from the site within four (4) hours of generation.

Housekeeping crews must also actively assist in creating and maintaining a safe work environment by being aware of unsafe conditions, bringing these conditions to the attention of appropriate personnel, and by direct intervention through tasks such as ensuring leads and hoses are placed in a manner that avoids the creation of trip hazards or potentially unsafe conditions.

Note: No shift may commence without and/or before proper housekeeping is in place.

5.12.10 Maintenance

All equipment and structures both fixed and temporary are to receive regular maintenance, at intervals no longer than that recommended by the manufacturer, under a planned maintenance system to ensure the safety of personnel who are responsible for operating the equipment.

The Contractor must maintain copies of all current tests and maintenance certificates relating to cranes, lifting beams, pulley blocks, lifting gear and slings, and must make them available to Hatch upon request. No lifting beam or spreader bar is used unless a current Certificate of Inspection is available and the safe work load is stamped or displayed on the equipment.

5.12.11 Defect Reporting and Correction

Where defects are identified during any routine inspection, pre-start check or during operation or use of any tools, equipment, motor vehicle, structure, etc., it is immediately reported for repair and the tools, equipment, etc. appropriately tagged to identify the defect and to limit further use until repairs have been completed and re-inspection carried out. Such defect reports are in writing.

5.12.12 Contractor Health & Safety Documentation

The Contractor is required to supply to Hatch Health & Safety documentation as indicated in this Manual and as directed by Hatch throughout the Contract.

5.12.13 *Trespass*

The Contractor and his employees must not trespass on any land outside the limits of the site, as determined by Hatch, and must ensure that all fences are maintained during the Contract. If instructed by Hatch, the Contractor must remove from the site any employee who offends against the provision of this clause.

The Contractor and his employees are required to work only in the specified construction areas and access to these areas is only by routes specified by Hatch.

5.12.14 *Visitors to Site*

Visitors to the site are required to comply with site-specific safety orientation prior to being allowed access to site.

The Contractor must refer all applications for site inspections to Hatch. The Contractor must not arrange inspections by visitors to the site without the prior approval of Hatch.

The Contractor, at Hatch's direction, may allow casual visitors, who will be on site for less than 1 day, access to the site without attending an orientation, providing that, for the full period the visitor is on site, the visitor remains in the care and custody of a person who has been properly inducted.

5.12.15 *Health and Safety Experience Board*

The Contractor must provide a Health and Safety Experience board, to be approved by Hatch Site Manager, displaying:

- Contractors Logo;
- Lost Time Injury Frequency Rate – LTIFR;
- Man-hours;
- Incidents and injuries;
- Emergency contact information with contact numbers;
- Emergency Response Plan;
- Recent safety meeting notes;
- Weekly Safety Report.

5.12.16 *Contractor Health and Safety Submittals*

Before any work commences, proof of and the following non-negotiable deliverables are required:

- Safety Leadership training or equivalent approved course for all Contractor Construction Managers, Supervisors and Foremen;

- Incident investigation training for Construction Manager and Safety Advisor;
- Letter of good standing from Nunavut WCB;
- Public Liability insurance;
- Competency records of all mobile equipment operators;
- Completed Equipment Dossier for all mobile equipment;
- Site specific Safety Management Plan that covers the contractor's scope;
- JHA for each major task identified;
- All equipment to be on a current log, backed up by relevant test certificates;
- Attend Site Specific Orientation.

5.13 Termination and Suspension for Breach of Health and Safety Conditions

Hatch and the Contractor agree that the provisions of this Clause are of the utmost importance, and any relevant violation of them is considered to be a material and substantial breach of this Contract.

The Contractor must not cause, permit, or tolerate a hazardous, unsafe, unhealthy or environmentally unsound condition or activity over which it has control at the site. If the Contractor becomes aware of any hazardous, unsafe, unhealthy or environmentally unsound condition, including a violation of any of the Health and Safety requirements, it must immediately notify Hatch and take whatever steps are necessary and as agreed between Hatch and the Contractor to remove from site, eliminate, terminate, mitigate, and rectify the condition. If remedial action is not implemented within the agreed term, Hatch has the right to stop work immediately.

If the Contractor fails to take the necessary steps to resolve that breach or violation promptly or to otherwise comply with this Clause, Hatch may exercise its rights of termination according to the default provisions of this Contract.

Should Hatch observe an unsafe act or become aware of a planned unsafe act, Hatch may direct the Contractor to cease, or not to proceed with, the unsafe work. The Contractor must, at the Contractor's own cost and risk, modify its Method of Work in order to work safely.

5.14 Safety Conflict

Where any conflict exists between the requirements of this document, the site rules or statutory requirements/regulations, the higher standard must apply unless such conflict is brought to the attention of Hatch and a direction provided. The Contractor is deemed to have allowed for the higher standard.

The Contractor is legally responsible for ensuring that he conforms to all applicable aspects of the Nunavut General Safety Regulations, R.R.N.W.T. 1990, other relevant acts and regulations and Baffinland Iron Mines Safety Manual, Appendix 8. If in dispute with client specification and or local legislation, the most stringent requirement must apply for all Hatch controlled project/ sites.

6. Appendices

Appendix 1 Job Hazard Analysis (JHA)

Appendix 2 Field Level Risk Assessment (Sample)

Appendix 3 Planned Task Observations

Appendix 4 Visible Felt Leadership Checklist

Appendix 5 Incident Reporting Form

Appendix 6 Contractor Safety Questionnaire

Appendix 7 Approved Cutting Tools and Required PPE

Appendix 8 BIM Safety Manual

Appendix 1 – Job Hazard Analysis Record

PROJECT / TASK:	CONTRACTOR:	JOB No.:
SUPERVISOR:	LOCATION:	DATE:

JOB STEP Break the job into steps. Listing work which may be hazardous.	HAZARDS List the hazard or type of harm identified with each step	Consequence	Likelihood	Risk Ranking	CONTROL MEASURE List the necessary control measures to be followed to eliminate/ reduce the identified hazards	Consequence	Likelihood	Risk Ranking	ACTION Person who will ensure this happens

Job Hazard Analysis Attendees: _____

	Name	Signature	Date
Written by:			
Reviewed by:			

REQUIRED AND EXISTING CONTROL MEASURES: (SUBMIT AND ATTACH TO RISK ASSESSMENT)

Score	*TABLE OF CONSEQUENCE*		
	People	**Plant**	**Environment**
5 – Very High/ Catastrophic	Multiple Fatalities	Greater than $10Million Loss	Catastrophe, destruction of sensitive environment, worldwide attention. Likely EPA prosecution. More than 30 days delay.
4 – High/ Major	Fatality or Permanent Disabilities	$1Million to $10Million Loss	Disaster, high levels of media attention, high cost of cleanup. Offsite environmental harm, more than 10 days delay.
3 – Moderate	Major Injuries – Incapacitations or requiring time of work	$100Thousand to $1Million Loss	Major spills, onsite release, substantial environmental nuisance, more than 1day delay. (Leads to an additional resources call out i.e. SES)
2 – Low/ Minor	Significant Injuries – Medical Treatments, non-permanent injury	$10Thousand to $100Thousand Loss	Significant spills (Leads to a call out of Site Emergency Response Group)
1 – Very Low/ Insignificant	Minor Injuries – First Aid Treatments (cuts/bruises)	Less than $10Thousand Loss	Low environmental impact. Minor Spills less than 80 Litres.

Score	*LIKELIHOOD*
5 – Almost certain	The event is expected to occur in most circumstances. Likely to occur frequently - More than 1 per year
4 – Likely/ probable	The event will probably occur in most circumstances. Likely to occur several times. 1 per year
3 –Moderate/ occasional	The event should occur at some time. Likely to occur sometime. 1 per 5 years
2 – Remote/ unlikely	The event could occur at some time. Unlikely but possible. 1 per 10 years
1 – Rare/ very unlikely	The event may occur only in exceptional circumstances. Assumed it may not be experienced. 1 per 100 years

Risk Rating = Consequence + Likelihood

Consequence	Risk Rating				
5	**6**	**7**	**8**	**9**	**10**
4	**5**	**6**	**7**	**8**	**9**
3	**4**	**5**	**6**	**7**	**8**
2	**3**	**4**	**5**	**6**	**7**
1	**2**	**3**	**4**	**5**	**6**
	1	**2**	**3**	**4**	**5**
	Likelihood				

Risk Rating - Definitions

Risk	Definition	*Action Required*
8 - 10	Intolerable	Task not to start till the risk is eliminated or reduced. Bring to the immediate attention of management. Formal assessment required. MUST reduce the risk as a matter of priority.
7	High	Bring to the immediate attention of management. Task not to start till the risk is eliminated or reduced. Further Assessment required. MUST reduce the risk as a matter of priority.
6	Significant Risk	Bring to the attention of supervision. Review risks and ensure that they are reduced to as low as reasonably practicable. To be dealt with as soon as possible, preferably before the task commences. Introduce some form of hardware to control risk.
5	Moderate Risk	Needs to be controlled but not necessarily immediately, an action plan to control the risk should be drawn up. Review effectiveness of controls. Ensure responsibilities for control are specified.
2-4	Low Risk	If practical reduce the risk. Ensure personnel are competent to do the task. Manage by routing procedure. Monitor for change

A JHA considers a variety of activities/tasks involved in a job scope and analyses the key hazards (sources of harm) and their consequences (types of harm) e.g. Sources of harm – lifting a heavy pipe - manual handling. Types of

Main Points – On how to write a JHA

1. Define the task – what is to be done.
2. Review previous JHA if any – have we done it before?
3. Identify the steps – what is to be done.
4. Identify the hazards of each step.
5. Identify who or what could be harmed.
6. Give the task a risk rating – Consequence + Frequency
7. Develop solutions to eliminate or control hazards in each step.
8. Review the risk rating after the control system has been implemented.
9. If risk rating unacceptable review the solutions till risk rating acceptable.
10. Agree who will implement the control system.
11. Document the JHA and discuss with the relevant personnel.

Hierarchy of Hazard Management – Control Measures

These steps outline what should be planned for when deciding what control measures are to be put in place. Whenever possible the highest step should be used first and then progress down the list.

1. Eliminate the hazard.
2. Substitution.
3. Reducing the frequency of a hazardous task.
4. Enclosing the hazard.
5. Additional procedures.
6. Additional supervision.
7. Additional training.
8. Instructions / information.
9. Some personal protective equipment.

Appendix 2 – Field Level Risk Assessment

(CHECKLIST AND DISCUSSION -BEFORE WORK COMMENCES)				
COMPANY:			**AREA:**	
			DATE:	
DESCRIPTION	**TO STANDARD**		**CORRECTIVE MEASURES**	**DATE**
	YES	**NO**		
Safe access to work area – clean & tidy				
Sufficient / correct barricading erected				
Electrical equipment in good condition				
Machine guarding adequate				
All tools/equipment pre-inspected				
Safe access & egress available and used				
Scaffolding tagged accordingly				
Gas cutting equipment & hoses				
Correct PPE (Utilized & available)				
Safe working platforms for elevated work				
Safe Lifting & Rigging equipment				
SMI board up to date				
Correct PERMITS for application				
PERMITS VALID				
LOCK-OUT REQUIRED AND IN PLACE?				
CORRECT TOOLS & EQUIPMENT AVAILABLE				
NO OVERHEAD WORK ALLOWED				
The above list does not exclude and or wave any other checklist and or legal requirements!				
RISK ASSESSMENT REFERENCE NUMBER				
CURRENT JOB - LIST MAIN STEPS OF TASK?	**WHAT ARE THE HAZARDS – JOB & ENVIRONMENT?**		**LIST CONTROLS REQUIRED\ IMPLEMENTED?**	

Note:

- If tasks change, this list and the Risk Assessment must be revised before proceeding with new/changed task.
- A signed attendance register must be attached to this list.

I hereby certify that the above items were checked and all workers under my supervision received a safe task instruction:

Responsible Person: (Foreman/Supervisor) Print Name _____ Signature: _____

Safety Officer (Contractor) Print Name _____ Signature: _____

Appendix 3 – Planned Task Observation

DATE : _____ NAME : _____
DEPARTMENT : _____ OCCUPATION : _____
JOB OBSERVED : _____

Time on this job	Notification			Reason for observation	
_____ years		Yes	No	Six Monthly observation	
	Told in advance			New worker	
	Not told			To determine if worker has learned to do job safely and effectively	

Is there a written standard procedure for this job? Yes ☐ No ☐
Did you get understanding & acceptance from the worker on doing this work? Yes ☐ No ☐

Could acts / conditions observed lead to
- ☐ Reduced productivity
- ☐ Damage
- ☐ Injury

Loss potential
- ☐ Major
- ☐ Minor

1.	Are company Health & Safety rules complied with	Yes	☐	No	☐
2.	Is standard procedure for the job followed	Yes	☐	No	☐
3.	Is correct personal protective clothing used	Yes	☐	No	☐
4.	Is person physically fit for the job	Yes	☐	No	☐
5.	Environmental conditions (is there gas, smoke, heat, etc)	Yes	☐	No	☐

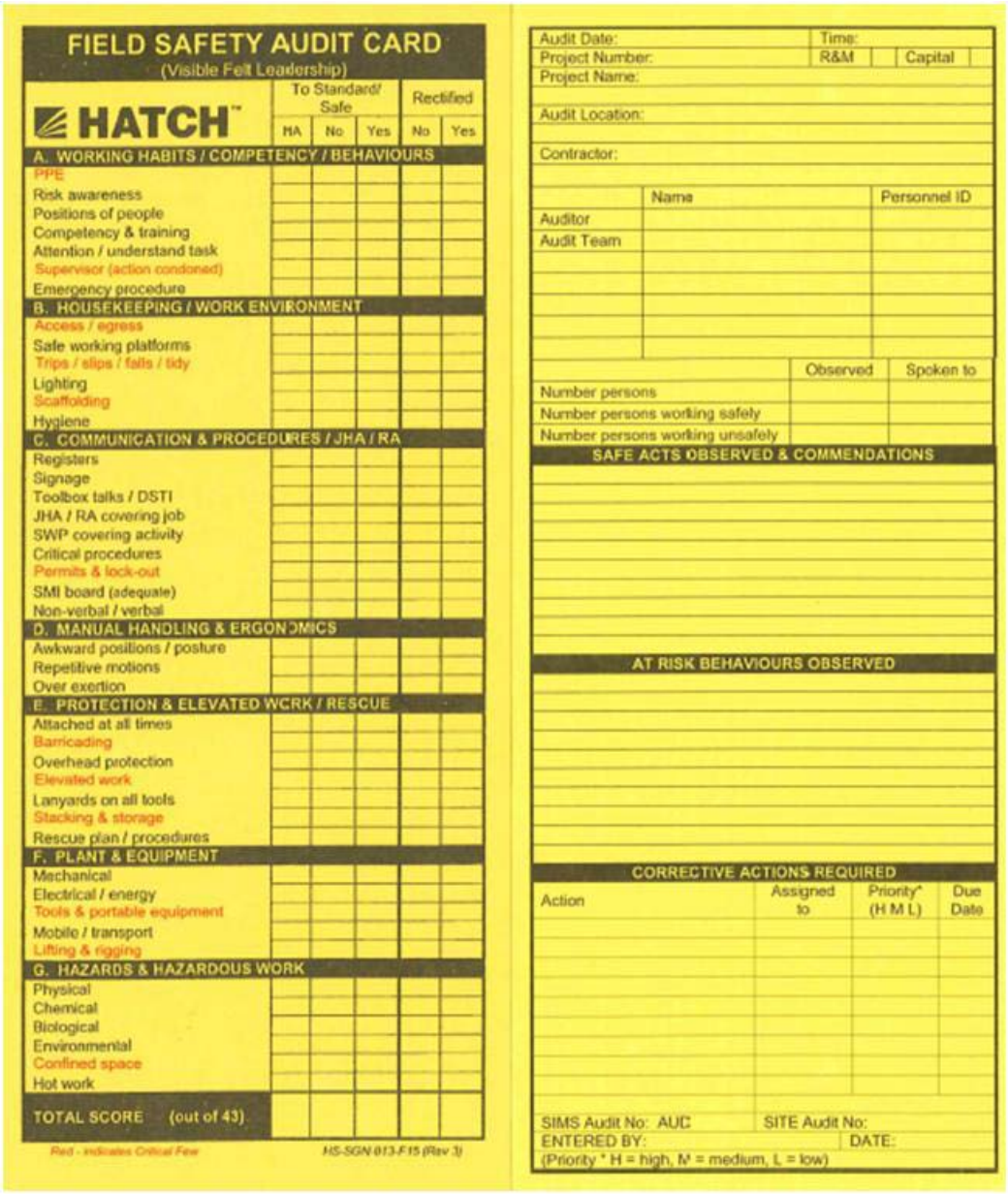
Remarks _____

Suggested remedies
1. Start procedure on this job ☐
2. Revise present procedure ☐
3. Different equipment – tools ☐
4. Engineering revision ☐
5. Retraining ☐
6. Additional – better personal protection ☐
7. Placement of worker ☐

Signature :
- Foreman : _____
- Superintendent : _____
- Manager / Engineer : _____

Observation conducted by : _____ Date : _____
Reviewed with employee : _____ Date : _____
Employees signature : _____ Co. No. : _____
Reviewed by : Supt / Eng / Manager : _____ Date : _____

Appendix 4 – Visible Felt Leadership Checklist



FIELD SAFETY AUDIT CARD
(Visible Felt Leadership)

HATCH™

	To Standard/ Safe			Rectified	
	NA	No	Yes	No	Yes
A. WORKING HABITS / COMPETENCY / BEHAVIOURS					
PPE					
Risk awareness					
Positions of people					
Competency & training					
Attention / understand task					
Supervisor (action condoned)					
Emergency procedure					
B. HOUSEKEEPING / WORK ENVIRONMENT					
Access / egress					
Safe working platforms					
Trips / slips / falls / tidy					
Lighting					
Scaffolding					
Hygiene					
C. COMMUNICATION & PROCEDURES / JHA / RA					
Registers					
Signage					
Toolbox talks / DSTI					
JHA / RA covering job					
SWP covering activity					
Critical procedures					
Permits & lock-out					
SMI board (adequate)					
Non-verbal / verbal					
D. MANUAL HANDLING & ERGONOMICS					
Awkward positions / posture					
Repetitive motions					
Over exertion					
E. PROTECTION & ELEVATED WORK / RESCUE					
Attached at all times					
Barricading					
Overhead protection					
Elevated work					
Lanyards on all tools					
Stacking & storage					
Rescue plan / procedures					
F. PLANT & EQUIPMENT					
Mechanical					
Electrical / energy					
Tools & portable equipment					
Mobile / transport					
Lifting & rigging					
G. HAZARDS & HAZARDOUS WORK					
Physical					
Chemical					
Biological					
Environmental					
Confined space					
Hot work					
TOTAL SCORE (out of 43)					

Red - Indicates Critical Few

HS-SGN 013-F15 (Rev 3)

Audit Date:		Time:	
Project Number:		R&M	Capital
Project Name:			
Audit Location:			
Contractor:			

	Name	Personnel ID
Auditor		
Audit Team		

	Observed	Spoken to
Number persons		
Number persons working safely		
Number persons working unsafely		

SAFE ACTS OBSERVED & COMMENDATIONS

AT RISK BEHAVIOURS OBSERVED

CORRECTIVE ACTIONS REQUIRED

Action	Assigned to	Priority* (H M L)	Due Date

SIMS Audit No: AUC SITE Audit No:
ENTERED BY: DATE:
(Priority * H = high, M = medium, L = low)

Appendix 5 – Incident Reporting Form

MARY RIVER PROJECT INCIDENT REPORTING FORM

BASIC DETAILS	
Incident Number:	Client Incident Number:
Incident Date/Time:	Supervisor:
Reported Date/Time:	Project Description:
Reported By:	Project Number:
Contracting Firm:	Exact Location:

INCIDENT DESCRIPTION	
Summary:	
Incident Type:	Select From List
Detailed Description:	

CONSEQUENCES					
Please enter a rating (0-5) for all consequences					
Category	**Actual**	**Potential**	**Category**	**Actual**	**Potential**
Injury / Illness:	N/A	N/A	Financial:	N/A	N/A
Environment:	N/A	N/A	Outrage and Reputation:	N/A	N/A
Plant and equipment damage:	N/A	N/A	Security:	N/A	N/A
Motor vehicle accident:	N/A	N/A	Quality:	N/A	N/A

IMMEDIATE CORRECTIVE ACTIONS

INVESTIGATION DETAILS		
Investigator:	Start Date:	End Date:
Investigation Team:		
Detailed description of investigation:		
Witnesses to incident:		
Supporting documentation location:		

INCIDENT INVOLVING ENVIRONMENT DAMAGE:			
Type Of Ecological Loss:	Select From List	Initiating Event: Select From List	
Habitat Description:			
Detailed Description:			
Species:	Number:	Protected: Yes ☐	No ☐

INCIDENT INVOLVING PLANT, EQUIPMENT OR VEHICLE DAMAGE:			
Equipment damage of loss classification:	Select From List		
Equipment Description:			
Model	Year	Serial number	Owner

ROOT CAUSE ANALYSIS		
iPas SM Root Cause Analysis Categories:	Select From List	Select From List
	Select From List	Select From List
	Select From List	Select From List

CORRECTIVE ACTIONS				
No.	Category	Description	Issued To	Due Date
	Select From List			
	Select From List			
	Select From List			
	Select From List			

NOTIFICATION	
An email will be automatically sent to these people after this notification has been verified.	
People Immediately Notified:	People to be Notified:
Safety Advisor for the area:	Hatch Supervisor (Who will review this notification):

PICTURES	
You may insert up to 4 photographs relevant to the incident. Include a caption in the text box below the frame. Please be sure to reduce file size prior to inserting them into the document.	
Fig.1	Fig. 2
Fig. 3	Fig. 4

INVESTIGATOR'S ACKNOWLEDGMENT	
Investigation team members:	
Investigator comments and key learning's:	
Signature:	Date:

Print Report

Appendix 6
Health and Safety History Questionnaire (Contractors)

Contractor Health & Safety Pre-Qualification Instructions

As part of the Hatch health and safety system, we prequalify all contractors who will perform any on-site work on the Mary River Project. This prequalification includes the completion of a questionnaire as well as the submission of certain documents. These are reviewed by Hatch safety professionals and scored.

Note that the Health and Safety Pre-Qualification Questionnaire in particular requires that certain documents be submitted so that your safety management system can be evaluated against the high standards required by Hatch and Baffinland Iron Mining Corporation.

Some of the documents that you MUST submit to be considered include:

- A recent printout of your workers compensation injury experience summary, or experience modification rate (EMR) from your insurance provider
- A copy of any documents pertaining to past regulatory enforcement activities or violations
- Your current safety manual and employee handbook (Table of contents is not acceptable)
- New employee / supervisor orientation outline or checklist
- Documentation on how you review and communicate incidents and measure the success of your safety program
- Documentation such as a training matrix or completed checklist indicating that your employees have received safety training appropriate for the job
- Completed examples from past projects of the following: Site Safety Work Plans, Job Safety Assessments, Pre-task assessments, work methods, inspection reports

The above listing is not exhaustive and you may submit additional documentation that you believe demonstrates your company's commitment to working injury-free.

However without the abovementioned proof of your company's health and safety program, you will not be successful in passing our evaluation.

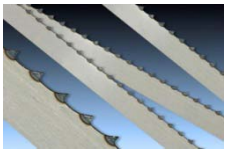
It is preferable that all documentation be sent via email, not exceeding 11MB. If your message is larger than this, please feel free to send multiple messages containing the required documentation.

Appendix 7
Approved Cutting Tools and Required PPE

Approved Cutting Tools and Required PPE

Task	Tool Description	Required PPE
Cutting/Trimming: ▪ Drywall ▪ Cardboard ▪ Rubber lining materials ▪ Geotextile liners	 "Auto Retracting" or "Auto guarded" blade that retracts or is guarded automatically when it loses contact with material being cut.	▪ Cut-resistant gloves ▪ Cut resistant sleeves ▪ Chaps required when work position requires cutting toward your body.
Cutting: ▪ Bubble wrap ▪ Foam ▪ Twine/string ▪ Thin sheet materials ▪ Cardboard or Film ▪ Rope	 Concealed Blade Cutter	▪ Work gloves
▪ Cutting Wire ▪ Stripping Wire	  Wire Cutter / Stripper	▪ Work gloves
▪ Cutting insulation from medium & large diameter electrical wires/cables	 Electrical Cable Cutter / Stripper	▪ Cut-resistant gloves

Approved Cutting Tools and Required PPE

Task	Tool Description	Required PPE
▪ Cutting sheet metal ▪ Cutting banding	 Snips or Shears	▪ Cut-resistant gloves ▪ Cut resistant sleeves ▪ Chaps required if potential for laceration exists
▪ Cutting rope or wire	 Side cutters	▪ Work gloves
▪ Cutting a conveyor belt	 Conveyor Belt Cutter	▪ Cut-resistant gloves
▪ Sawing by hand	 Hand Saw specific to material	▪ Cut-resistant gloves ▪ Cut resistant sleeves
▪ Changing blades		▪ Cut resistant gloves

Appendix 8
Baffinland Iron Mines Safety Manual

Please refer to Hatch document H337697-0000-01-126-0002