

From: rossbeckwith@nalcenergy.com
To: [Nikolay Argirov](#)
Cc: [Lance Clarke](#); [James Meaney](#); [John Matovich](#)
Subject: RFP LC-PM-082: Independent Engineer
Date: Wednesday, May 9, 2012 5:14:31 PM
Attachments: [Revised HSE Appendix E \(9 May 12\).docx](#)

Nik Argirov
MWH Gobaal
Vancouver
604-648-6162

Thank you for attending a bid clarification meeting in our offices in St. John's on Friday morning, May 4. Our discussions can be summarized as follows.

Details May 4, 2012 (8:00 to noon) at Hydro Place

Attendees MWH Nik Argirov

Reynold Hokenson

Peter Dickson

Stanley Hayes

Ryan Bliss

Nalcor Lance Clarke - Commercial Manager

James Meaney - Corporate Treasurer & Chief Risk Officer

John Matovich - Financial Advisor

Ross Beckwith - Commercial Coordinator

Purpose To provide additional insight to Bidder and to gain better understanding of Bidder's proposal and approach.

Visitors were welcomed; introductions were made; orientation and safety moment were provided.

Key points of Nalcor's presentation can be summarized as follows:

- scope for which IE services are required does not include the Maritime Link but does include an AC line in Labrador - Labrador Transmission Assets (LTA).
- Nalcor is a provincial crown corporation and will establish new corporate entities for the project, three of which will carry out two project debt financings as follows (based on DG2 estimates) which will necessitate two IE reports:
 - Muskrat Falls (MF) and LTA - approximately 60% debt
 - Labrador-Island Link (LIL) - approximately 75% debt

- the Canadian federal government will provide a loan guarantee.
- water management agreements are in place which require that the MF facility be coordinated with the existing facilities at Churchill Falls.
- the project is high profile and will be the subject of debate in the provincial house of assembly with sanction expected in Q3/Q4 2012 (DG3), financial close in Q2/Q3 2013, and first power in late-2016.
- the successful bidder is likely to work for Nalcor until Q1 2013, when it is expected a binding financing commitment will be in place with a lead arranger, during which time it must maintain its independence.
- contracts for equipment and construction services will be awarded on a best value basis using national and international vendors to the extent possible; both incentives and liquidated damages are expected to be used to mitigate risk.
- detailed design is well advanced by the EPCM contractor, SNC-Lavalin Inc. (SLI), with reliance on proven technology including LCC rather than VSC HVdc for the LIL.
- SLI scope does not include marine crossing in the Strait of Belle Isle which Nalcor is self-managing; involves packages for cable supply and install, rock protection, and horizontal directional drilling (HDD).
- water depths will prevent larger ice bergs from entering the Strait of Belle Isle; HDD holes will protect subsea cable from ice and ice bergs in near shore shallow water.
- preponderance of crown land and low population will minimize transmission issues, especially in Labrador.
- MF to involve a RCC dam and low head Kaplan turbines; geographical conditions result in lower capital costs because of minimal spoil; construction power to be sourced from a nearby 138KV line.
- 80% of costs of the generation facilities at MF is expected to be represented by six packages, some of which will be lump sum and others will be unit rate agreements.
- an emphasis has been made on up-front work to de-risk the project to the extent possible; a HDD test hole was drilled for this purpose; prior model testing is expected to advance the schedule for delivery of turbines and generators by as much as a year.

- request for proposal processes are well advanced for submarine cable for the Strait of Belle Isle (by Nalcor) and for turbines and generators (by SLI) with awards expected in Q2 and Q3 2012; in both cases, the three principle global suppliers are bidding.

- Emera to acquire 29% interest in the LIL upon its sanction and will also provide a transmission route through Nova Scotia, New Brunswick and into New England for export of surplus power; projections of revenue required to service the debt do not include export sales.

It was noted that the successful bidder must be able to convince lenders of the merits of the preceding, the objective of which is to strike a balance between risk and cost certainty by reducing premiums associated with lump sum work.

- please outline your level of comfort with the contracting approach as outlined to you, provide your opinion of the top challenges that you would expect to encounter in convincing lenders of its merits, and suggest how you would approach these challenges.

- please ensure your response includes an indication of the ten key items - such as main risks or concerns, type of security, type of incentives, and type of interface risk coverage - required to convince lenders that the EPCM approach is workable.

A digital copy of Bidder's presentation was provided.

Rather than maintaining personnel in St. John's, it was noted that MWH personnel would attend monthly progress meetings at project offices in St. John's and would attend supplier facilities for factory acceptance tests (FAT) and other key activities.

- please clarify how construction site visits would be effected to facilitate attendance at progress meetings.

It was noted that MWH would arrange foreign worker authorizations (work permits) as required for visits by non-Canadian personnel.

MWH's proposal dated March 6 can be summarized as follows; please confirm or update as required based on our discussions:

a) Total estimated cost (personnel): \$5,809,161

b) Content:

Compon.	NL	Other Canada	Foreign
Labour	7.0	30.0	63.0
Expenses	40.0	20.0	40.0

c) Average hourly rate: \$210.73

d) Estimated total hours - as follows:

Discipline

Position or Function	Hours	
	Ph 1	Ph 2
Project Manager	517	8,324
Transmission - submarine	220	3,236
Civil / structural	191	3,106
Transmission / switchyard	390	1,966
Geotech	218	1,992
Mech / hydro-mechanical	381	1,994
Elect / hydro-electrical	188	1,846
Administration	152	1,822
Other	1,024	0
	3,281	24,286

Individuals

Name	Hours	
	Ph 1	Ph 2
Bliss	202	1,966
Chen	173	1,822
Donalek	30	1,564
Hayes	152	1,994
Hokenson	517	8,324
Krohn	150	1,846
Lawson	150	1,672
Mohajeri	11	1,416
Penman	113	3,106
Other	1,783	576
	3,281	24,286

It was agreed a sample report would be provided.

It was agreed that MWH would provide further details on financing experience with a World Bank and Sithe Global transaction in the Philippines.

- please clarify experience with lending syndicates, experience with bond financing

(pre- and post-2007), and provide domestic lending references

- please clarify experience with projects involving guarantors

Nominated subcontractors and MWH's exceptions to the contract document issued with the RFP package were noted but deferred to a later stage.

It was noted that the work must start at the first opportunity and an extension of the current May 31 bid validity date would be requested if Nalcor is unable to conclude its evaluation by then.

Appendix A (Scope of Work) of the RFP defined Phase I as the period before financial close and indicated that a draft and final report was required. As noted earlier, Phase I is likely to cover the period from June 2012 to Q3 2013. Please acknowledge and suggest probable delivery date of the draft report associated with this phase.

Please indicate how you would maintain the requisite level of independence to be able to perform the role of Lender's IE after such period and outline any similar experience you may have in this regard.

Appendix E (Health, Safety, and Environment) of the contract document per Part II of the RFP package (34 pages) is hereby replaced with the attached (13 pages) which is intended to reflect that the IE would be a visitor to work sites and would not be in control of a site. Accordingly, section 9.0 of Appendix G (Coordination Procedures) would be deleted. Please acknowledge and confirm ability to comply in the event your proposal was successful.



Revised HSE Appendix E (9 May 12).docx

Please acknowledge and respond to the noted queries by e-mail by noon local time on Monday, May 14, indicate any additional queries or information required, and provide other information, comments, concerns, or recommendations as may be applicable based on our discussions.

Regards



Ross Beckwith

**Senior Contract Coordinator
(Consultant)**

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APPENDIX E - CONTRACTOR REQUIREMENTS – HEALTH, SAFETY, AND ENVIRONMENT

1.0 PURPOSE

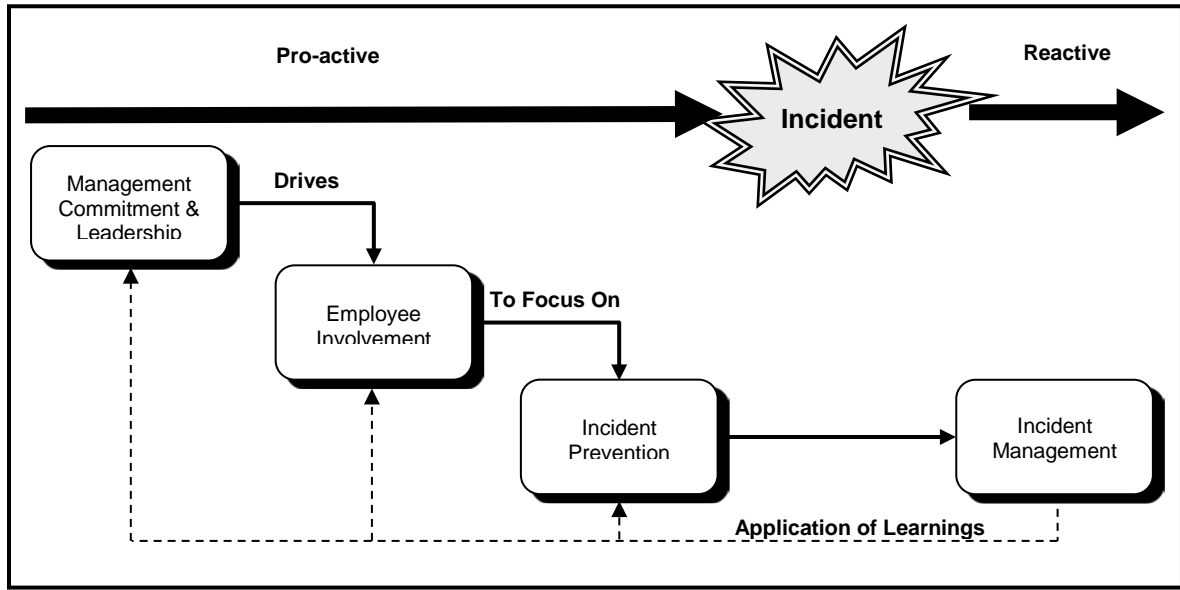
- 1) Establishes Company's requirements for Contractor to implement a systematic approach to health and safety management on the Project.
- 2) Provides Contractor with Company's minimum requirements and expectations related to Contractor's implementation of a systematic approach to health and safety management on the Project.

2.0 OBJECTIVES

2.1 Expectations

- A. Company maintains a management system that integrates safety, health of personnel, asset integrity, security, the impact of operations on the environment, and the quality of work with other critically important aspects of Company's business.
- B. Company's health and safety management approach has a foundation rooted in a proactive culture focused on preventative measures, while having the ability to respond to incidents should they occur. In the simplest of terms, Company believes that management commitment and leadership drive worker involvement to focus on incident prevention processes. In the event that an incident does occur, the learnings shall be applied to continuously improve. Figure 1 illustrates this concept. Company requires Contractor and sub-contractors to adopt a similar systematic approach to health and safety management. This systematic approach is predicated upon:
 - Management involvement, leadership, and commitment;
 - Getting line supervisors and workers actively involved in health and safety management;
 - Significant safety and technical resources to support Contractor's health safety management plan and site health and safety plans for the Project; and
 - Dedication and persistence.

Figure 1 – Company's fundamental approach to safety management



- B. Company is committed to undertake its business in such a way as to minimize the risks of injury or ill health to people and damage to property or the environment. Company believes sound health and safety performance is fundamental to successful business performance. It is therefore Company’s requirement and expectation that everyone associated with the Company shall play their part in the implementation of its occupational health and safety management strategy, performing at the highest possible levels, and foster continuous improvement in the areas of health and safety. Company believes that achieving its safety commitment of “Zero Harm – Nobody Gets Hurt” requires the participation of Contractors and sub-contractors and is only attainable from proactive health and safety management by Contractor at the work-face level.

- C. Company is committed to providing a safe and healthy workplace for its employees, Contractor personnel, sub-contractors and the general public. Safety is Company’s core value. Company is committed to “Zero Harm – Nobody Gets Hurt” and believes this is both achievable and sustainable, while each individual Project team member has a personal responsibility for safety. These commitments are reflected in Company’s internal responsibility system depicted in Figure 2.

Figure 2 – Company’s Internal Responsibility System



- D. Company's Health and Safety Policy (Attachment 1) reflects its commitment to safety. Contractor shall subscribe to this commitment throughout all phases of work and relentlessly pursue an objective of an injury and illness free workplace by:
- Not compromising their focus on safety to achieve other business objectives;
 - Actively caring for Contractor's workers and the public;
 - Taking personal responsibility for safety; and
 - Promoting and recognizing safe behaviour exhibited by workers.
- E. Company's Environmental Policy and Guiding Principles (Attachment 2) reflects its commitment to the environment. Contractor shall subscribe to this commitment throughout all phases of work.

2.2 Health and Safety Management Systems

- A. Contractor is responsible for maintaining a safe working environment at all times, at all worksites, whether of a temporary or permanent nature. To ensure work performed by Contractor meets Company's expectations, Contractor shall have an effectively implemented health and safety management system which addresses specific requirements for instruction, supervision and resources pertaining to permanent, temporary, subcontractor personnel, other contractors

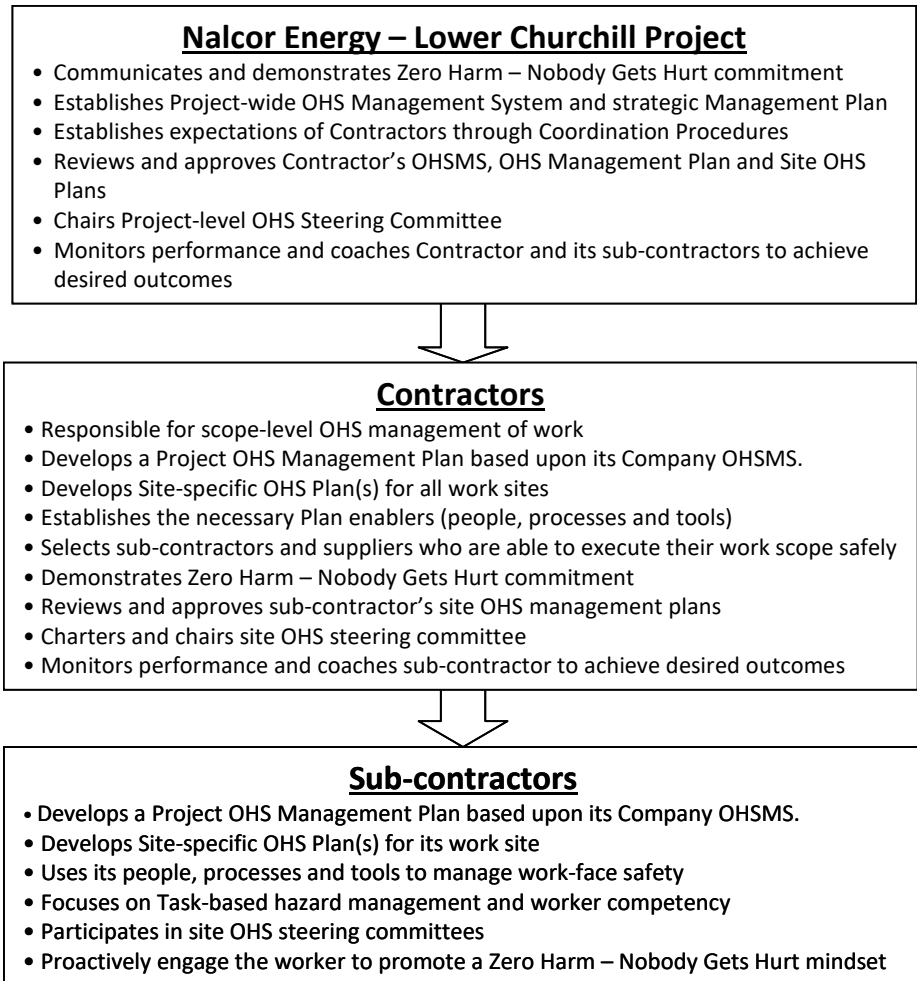
or Company personnel.

- B. Contractor is required to demonstrate its ability effectively manage safety on the Project such that Company's commitment of "Zero Harm - Nobody Gets Hurt" is achieved.

2.3 Overview of Company, Contractor and Sub-contractor Roles

- A. Figure 3 describes the health and safety management relationships between Company, Contractor, and subcontractors. Contractor is responsible for Project level health and safety management of the Work, while Contractor shall be responsible for health and safety management at the Project's Work locations and the site, including oversight of health and safety management activities of both Contractors and sub-contractors.
- B. Company shall influence, monitor, and coach Contractor at Company's sole discretion to leverage Company's health and safety management expertise and to ensure that Contractor has the guidance necessary to position them for success.
- C. Company reserves the right to supplement the health and safety management effort of Contractor, and to influence, monitor, and coach Contractor's Personnel at Company's sole discretion. Contractor shall work with Company in this capacity and shall support Company's desire to positively influence health and safety management.
- D. Company's role in health and safety management in no way relieves Contractor, Contractors, or sub-contractors of their health and safety management responsibilities.

Figure 3 – Health and safety management roles and responsibilities



3.0 CONTRACTOR DUTIES

Without limitation to the full implementation of the health and safety management system, Contractor shall:

- Require all Contractor’s and subcontractor’s personnel to wear personal protective equipment (PPE) and clothing suitable for existing work as applicable to industry/regulatory standards.
- Provide specific instruction to personnel on their responsibilities for safe work during normal and emergency operations, including explanation of hazards and associated protective measures, procedures and emergency response measures.
- Ensure that all personnel, including subcontractors’ personnel, regardless of prior experience, demonstrates competency to Company in his/her job. Contractor supervisor will also observe new personnel's work performance until Company is

satisfied that the personnel are competent to fill the position in a safe and effective manner.

- d) Instruct personnel on (written) work procedures, safe practices, and where applicable, Contractor's safety rules and standards, emergency plans and duties and applicable regulations.
- e) Conduct scheduled and impromptu meetings of the personnel, including any subcontractor's personnel, in which the possible hazards, problems of the job, and related safe practices are emphasized and discussed.
- f) Practice good housekeeping standards.
- g) Provide general safety education through training, safety meetings, Company publications, and other educational media.
- h) Provide all reasonable means to control and prevent fires and explosions, injury to personnel and damage to equipment and property.
- i) When and where applicable, comply with governing confined space entry procedure.
- j) When and where applicable, comply with governing lock out/tag out procedure for all work on equipment, which may inadvertently operate during installation, repair or maintenance.
- k) Institute a pre-work inspection program where prior to commencement of Work, Contractor shall inspect and perform work analysis to ascertain whether any health or safety hazards exist. Contractor will correct identified hazards before commencement of Work or will take steps to prevent personnel exposure to the hazard. Contractor shall document this inspection and hazard analysis process and maintain a copy of the document on file.
- l) Institute a program to ensure Contractor's personnel are fully trained and currently qualified for their jobs in accordance with regulatory and industry standards and as otherwise specified in this Agreement. Records of certification and training shall be maintained for each person.
- m) All lifting and rigging equipment shall be fully certified with suitable inspection procedures in place. All personnel involved in lifting/rigging activities shall be suitably trained and certified. Contractor shall ensure that all lifting gear is inspected by a 3rd party inspection lifting/rigging company on a yearly basis.

Contractor shall not cause, permit, or tolerate a hazardous, unsafe, unhealthy or

environmentally unsound condition or activity over which it has control, to exist or be conducted in the work place.

Contractor shall provide notification to Company within twenty-four (24) hours of all incidents (Lost Time Injuries, Restricted Work Cases, Medical Aids, Property Damages, Environmental Exceedances, high potential near misses). Follow up incident investigation reports shall be submitted to Company within ten (10) working days after the occurrence. Contractor shall also provide Company with copies of all reports or other documents filed or provided by Contractor's insurers and regulatory authorities in connection with such accidents and incidents.

Contractor shall submit to Company a monthly statistical safety performance report for the duration of the contract and shall include, but not limited to:

- Person Hours Worked
- Lost Time Injuries
- Restricted Work Cases
- Medical Aids
- First Aids
- Property Damage
- Environmental Incidents
- Near Miss Incidents
- Equipment Damage

The use, possession, distribution or sale of alcohol, illegal drugs or drug-related paraphernalia, firearms, explosives, weapons or other dangerous substances or articles is not permitted in the work place. Contractor shall ensure that Contractor's Personnel who are engaged in the performance of the Work, are familiar with, and comply with, governing drug and alcohol policy. Company may, if it has reasonable cause to believe that a Contractor's Personnel is under the influence of alcohol or drugs, require such Personnel be tested for use under Contractor's own alcohol and drug policy or require Personnel to be removed from the Work place and denied further access.

Contractor shall place the highest priority on safety and health while performing the Services. Contractor is solely responsible for providing and maintaining a safe working environment for Contractor's agents, employees, subcontractors, the public, Company, and other third parties involved in providing the Services.

Contractor shall not permit nor tolerate an unsafe or unhealthy condition or activity over which it has control. Contractor shall immediately inform Company of any unsafe or unhealthy condition or work practice of which it becomes aware but over which it has no authority to correct.

Contractor shall:

- Perform all Services in a responsible manner;
- Adhere to Company’s objective of performing its activities in a way that protects the workers from injuries and occupational illnesses;
- Be committed to identifying, reducing and, if possible, eliminating the risk of injury to the worker;
- Design and maintain facilities, establish management systems, provide training, and conduct operations in a manner that safeguards workers and property;
- Respond quickly, effectively, and with care to emergencies or accidents resulting from its operations, co-operating with authorized government agencies;
- Comply with all applicable Laws and regulations and apply responsible Standards where Laws and regulations do not exist; and
- Undertake appropriate reviews and evaluations of its operations to measure progress and to ensure compliance with applicable safety policies, Laws, and regulations.

For those sites where Company representatives shall be required to perform onsite activities, Contractor shall, prior to commencement of the Work:

- Provide Company in writing with all existing or potential hazards to which Company Representatives may be exposed to in performing their onsite activities; and
- Take the necessary actions to ensure that the Company Representatives can safely perform their onsite activities -- the level of safety deemed acceptable is at the sole discretion of Company and shall be defined as those industry and governmental Standards applicable to similar Work scope performed in Canada.

4.0 COMPANY DUTIES

Company categorizes jobsites per Table 4 below. Company requires an appropriate stewardship approach for each nominated site as detailed below. Contractor shall ensure that its representatives and sub-contractors clearly understand the expectations of Company for each.

Table 4– Stewardship approach selection guidelines

Level	Deciding Principals	Stewardship Approach
1	A. Activity performed on Company or	Control and oversee implementation of location

	<p>Contractor property or right-of-way, or</p> <p>B. Mobile resource specifically selected by Contractor for essentially 100% dedication to a project activity</p>	<p>specific health and safety management plan with support from Company, on Company property or right-of-way. Measure and report safety metrics to Company.</p>
2	<p>A. 3rd party locations with sufficient Contractor resources to influence health and safety management, or</p> <p>B. 3rd party locations involving scenarios or activities which have the potential to adversely affect cost, schedule, public image, or safety of Contractor or Company Representatives, or</p> <p>C. 3rd party with whom Contractor or Company intends to develop a long term business relationship, or 3rd party sites where Contractor utilizes essentially 100% of a site's capacity or essentially 100% of a segregated portion of the overall site.</p>	<p>Influence with Contractor presence and oversee implementation of a location-specific health and safety management plan. Measure and report safety metrics to Company.</p>
3	<p>A. Subcontractor or Supplier activities not included in Level 1 or 2, or</p> <p>B. Engineered work packages not included in Level 1 or 2</p>	<p>Influence health and safety when feasible and as requested by Contractors / sub-contractors. Measure and report safety metrics to Company for utilization in establishing future business relationships.</p>

For purposes of this Agreement, the following stewardship levels (and associated site-specific health and safety management plan requirements) shall apply:

<u>Location</u>	<u>Level</u>
Field	1
Engineering office(s)	2
Manufacturing sites	3

5.0 SPECIFIC REQUIREMENTS FOR PROJECT HEALTH AND SAFETY MANAGEMENT PLAN

5.1 General

Each location specific health and safety management plan shall:

- A. Identify the means that Contractor's site team shall communicate safety expectations to onsite Project Personnel.

For level 1 sites, Contractor, shall facilitate kickoff meetings for site management, site supervisors, and the workers to:

- Communicate safety policy, expectations, objectives, and desired results;
- Promote alignment, teamwork, and ownership; and
- Provide a high level rollout of the site Health and Safety Plan and the associated safety processes.

- B. Identify processes that position Contractor, the site supervisors, and the workers to recognize, and then eliminate or control potential site hazards.

Contractor shall perform (or provide) hazard assessments for each generic task (e.g. river operations, formwork erection, brush cutting). Such assessments shall:

- Identify the steps associated with performing a task;
- Identify the hazards associated with each step;
- Identify the means that the hazards shall be eliminated or minimized;
- Be developed prior to commencement of the overall work scope; and
- Be developed by knowledgeable and experienced personnel.

Contractor shall identify common safety rules, procedures, and safe work practices to be Utilized.

Contractor shall identify the statutory regulations that are applicable to the Work.

5.2 Selection of Sub-contractors and Suppliers

- A. Contractor's Project Health and Safety Management Plan shall identify Contractor's selection criteria for selecting sub-contractors and suppliers to perform the Work. The selection of sub-contractors and suppliers who are able to execute their Work scope in a safe manner is a key health and safety management expectation. Contractor shall address safety performance sub-contractors and suppliers by utilizing a structured selection process that addresses the following considerations:

- Adequacy of sub-contractors' / supplier health and safety management systems, plans, processes, and procedures;

- Maturity of sub-contractors' / supplier's health and safety management culture;
 - Recent experience with sub-contractors' / supplier;
 - Similar work scope experience;
 - Historical safety performance (including recent trends);
 - Willingness of sub-contractors'/ supplier to make system and cultural improvements prior to the commencement of the Work;
 - Sub-contractors' / supplier's ability and willingness to adequately address hazards identified in the Project-level hazard and risk management processes;
 - Sub-contractors' / supplier's ability and willingness to provide resources to the site Health and Safety Management Plan development and implementation process; and
 - Sub-contractors' / supplier's ability and willingness to execute the Work scope in a safe manner while working within the parameters of this Coordination Procedures, applicable statutory regulations, and relevant Project agreements.
- B. Contractor must look beyond historical safety performance (trailing safety performance measures) when selecting potential sub-contractors and suppliers for the Work. In many cases, safety performance comparisons between sub-contractors and suppliers are not equivalent due to the following considerations:
- Variable cultural, social, and regulatory philosophies/drivers;
 - Variable injury classification definitions;
 - Variable policies/drivers for case management and injury/illness classification; and
 - Failure to follow generally accepted record keeping guidelines.
- C. For those situations where sub-contractors and suppliers with inadequate safety performance must be utilized, Contractor shall provide the appropriate level of resources and a written plan to improve such sub-contractors and suppliers safety performance. Company reserves the right to review and comment on the plan, and where deficiencies are identified to request alternative actions be implemented.

5.3 Safety Training

- A. Contractor's Project Health and Safety Management Plan shall identify required Project level safety training for Contractor site team. Contractor shall address the following considerations for Project level safety training:

- Evaluation of training needs, including regulatory requirements and Newfoundland and Labrador content issues;
- Development of an implementation plan, including required resources and timing;
- Documentation of training;
- Periodic assessments of effectiveness; and
- Refresher training.

5.4 Incident Management Requirements

- A. Contractor's Project Health and Safety Management Plan shall identify how Contractor shall manage incidents that occur.
- B. Contractor is responsible for the following:
- Verbal and written notification to Company by the next calendar day and to local authorities as required;
 - Follow up incident investigation reports shall be submitted to Company within ten (10) working days after the occurrence.
 - Verifying that the injured party receives adequate care and that the appropriate level of case management has been performed by Contractor's site teams;
 - Verifying that injuries are classified according to the Company guidelines and as per appropriate regulations;
 - Verifying that the incident has been fully investigated and that the root cause and contributing factors have been identified and communicated to the appropriate Personnel; and
 - Taking immediate measures to prevent reoccurrence of similar incidents.
 - Sharing incident learnings across Contractor's site teams.

5.5 Other

Each location specific health and safety management plan shall:

- B. Identify the means that Contractor's site team shall communicate safety expectations to onsite Project Personnel.
- For level 1 sites, Contractor, shall facilitate kickoff meetings for site management, site supervisors, and the workers to:
- Communicate safety policy, expectations, objectives, and desired results;
 - Promote alignment, teamwork, and ownership; and
 - Provide a high level rollout of the site Health and Safety Plan and the associated safety processes.

5.5 Other System Requirements

Contractor's Project Health and Safety Management Plan shall identify how:

- A. Contractor shall comply with prevailing strategic emergency response at the Project level.
- B. Contractor shall manage Project level changes that could potentially affect health safety at the site.
- C. Contractor shall identify the requirement for each site team performing Work on Company property or right-of-way (level 1 Stewardship) to utilize Company's Substance Abuse Prevention Policy (ON HOLD).

6.0 REPORTING

- A. Contractor shall provide Company with a safety report each month no later than five (5) calendar days after the close of the month. The safety report shall include the following measures, at minimum:
 - high potential near misses
 - occupational illnesses
 - restricted duty injuries
 - fatalities
 - first aid cases
 - recordable injuries
 - lost time injuries
- B. Such measures shall be calculated per 200,000 work hours.

7.0 COMPLIANCE

Company shall have the right to perform surveillance to verify the performance of Contractor and Contractor's subcontractors to ensure compliance with relevant requirements in all areas during the execution of the Work. HSE assessments/audits may also be performed by Company during the course of the Work.