

BC HYDRO SITE C CLEAN ENERGY PROJECT

GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

for the Site C Clean Energy Project

Schedule 10

Safety

GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

SCHEDULE 10

SAFETY

TABLE OF CONTENTS

1	INTERPRETATION.....	1
1.1	Definitions	1
2	GENERAL HEALTH AND SAFETY REQUIREMENTS.....	4
2.1	Safety Areas	4
2.2	General Duties of the Contractor	5
2.3	Contractor as the Prime Contractor	6
2.4	Site Safety Coordinator.....	7
2.5	Qualified Coordinator	10
2.6	Construction Safety Officers	11
2.7	Refusal to Recognize the Prime Contractor	11
2.8	Contractor Safety Certification Requirements	11
2.9	Subcontractor Safety Certification Requirements.....	11
2.10	Safety Manager.....	12
3	SITE SAFETY MANAGEMENT PLAN.....	13
3.1	Preparation and Submission.....	13
3.2	Management of Change Process	14
3.3	Review and Amendment of SSMP	14
3.4	Compliance to SSMP.....	15
3.5	Safe Work Procedures.....	15
3.6	Amendment of Safe Work Procedures	16
3.7	Compliance to Safe Work Procedures.....	16
3.8	Life Saving Rules	16
3.9	Safety Practice Regulation Training	17
3.10	Isolation.....	17
3.11	WorkSafeBC Requirements.....	18
3.12	Indemnity for WorkSafeBC Non-Compliance	18
3.13	Failure to Comply with WorkSafeBC Requirements.....	18
4	SAFETY REQUIREMENTS.....	18
4.1	Emergency Action Plan	18
4.2	Compliance to the Emergency Action Plan	19
4.3	Amendment of the Emergency Action Plan.....	19
4.4	First Aid Responsibility	19
4.5	Safety Training.....	20
4.6	Failure to Comply.....	21
5	SAFETY MEETINGS	21
5.1	Compliance, Participation, Attendance and Documentation	21
5.2	General Meetings.....	22
5.3	Special Safety Related Meetings.....	22
6	AUDITS AND INSPECTIONS	22
6.1	Access to Contractor's Work Area, Contractor's Safety Area(s), Personnel and Records	22
6.2	Workplace Safety Audits.....	22
6.3	Response to Safety Deficiencies	23

6.4	Annual Audit.....	23
6.5	Self-Reporting.....	24
7	SAFETY INCIDENTS.....	24
7.1	Safety Incident and Near Miss Reporting.....	24
7.2	Orders.....	25
8	PUBLIC SAFETY.....	26
8.1	Public Safety Management Plan.....	26
9	HAZARDOUS SUBSTANCES AND DANGEROUS GOODS.....	26
9.1	Hazardous Substances.....	26
9.2	Contractor Hazardous Substances.....	26
9.3	Discovery of Hazardous Substances.....	27
9.4	Use of Hazardous Substances in the Permanent Work.....	28
9.5	Use of Hazardous Substances not part of the Permanent Work.....	28
9.6	Use of Hazardous Substances in Protective Coatings.....	28
9.7	Banned Products or Hazardous Substances.....	28
9.8	Hazardous Substances Procedures.....	29
9.9	Specialized Hazards.....	29
9.10	Dangerous Goods.....	29
9.11	Dangerous Goods Occurrence.....	29
9.12	Cooperation and Collaboration.....	30
9.13	Respirable Crystalline Silica Dust.....	30
10	FIRE SAFETY.....	30
10.1	General Requirements.....	30
10.2	Local Authority.....	32
10.3	Contractor's Fire Protection Design Basis Document.....	32
10.4	Fire Safety Program.....	32
10.5	Annual Fire Risk Management Audit.....	33
10.6	Fire Inspector.....	34
10.7	Fire Prevention.....	34
10.8	Wildfire Prevention.....	35
10.9	Use of Vehicles and Equipment.....	35
10.10	Egress Routes.....	36
10.11	Hot Work Operations.....	36
10.12	Training.....	37
10.13	Fire Protection.....	37
10.14	Inspection, Testing and Maintenance of Fire Protection and Life Safety Systems.....	37
10.15	Use of Shipping Containers.....	38
10.16	Fire Response and Rescue Services.....	38

APPENDIX 10-1	SAFETY AREAS
APPENDIX 10-2	CONTRACTOR SAFETY INCIDENT REPORT FORM
APPENDIX 10-3	AIR QUALITY
APPENDIX 10-4	PRIME CONTRACTOR ASSIGNED/RESCISSION FORM
APPENDIX 10-5	AIRCRAFT REQUIREMENTS
APPENDIX 10-6	INITIAL IDENTIFIED HAZARDS LIST
APPENDIX 10-7	BANNED PRODUCTS
APPENDIX 10-8	FIRE BRIGADE AND WILDFIRE RESPONSE REQUIREMENTS

GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

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1 INTERPRETATION

1.1 Definitions

In this Schedule 10 [Safety], in addition to the definitions set out in Schedule 1 [Definitions and Interpretation]:

“**AOP**” has the meaning given in Appendix 10-5 [Aircraft Requirements];

“**As Low As Reasonably Achievable**” or “**ALARA**” has the meaning set out in Part 5.1 of the OHSR;

“**Construction Safety Management Plan**” means the document included in the Data Room (Data Room ID# 1016.Z.01.001.PMO.00181.PLAN);

“**Construction Safety Officer**” has the meaning set out in Section 2.6 of this Schedule 10 [Safety];

“**Contractor Hazardous Substances**” has the meaning set out in Section 9.2 of this Schedule 10 [Safety];

“**Contractor’s Safety Area(s)**” has the meaning set out in Section 2.1 of this Schedule 10 [Safety];

“**Emergency Action Plan**” has the meaning set out in Section 4.1 of this Schedule 10 [Safety];

“**Fire Codes**” has the meaning set out in Section 10.1(c) of this Schedule 10 [Safety];

“**Fire Inspector**” has the meaning set out in Section 10.6 of this Schedule 10 [Safety];

“**Fire Protection Design Basis Document**” is defined in and in accordance with Chapter 16 [Fire Protection for the Construction Site] of NFPA 850 [Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations];

“**Fire Protection Engineer**” has the meaning set out in the Association of Professional Engineers and Geoscientists of BC’s Guidelines for Fire Protection Engineering Services for Building Projects;

“**Fire Response and Rescue Services**” means the provision of services to control and extinguish fires and location of endangered persons in areas impacted by smoke and or fire and removing those persons from danger by an organization trained and equipped to safely do so, including the Industrial Fire Brigade and Wildfire Services;

“**Fire Safety Program**” has the meaning set out in Section 10.4 of this Schedule 10 [Safety];

“**Fire Safety Program Manager**” has the meaning set out in Section 10.1 of this Schedule 10 [Safety];

“**Fire Safety Related Plans**” has the meaning set out in Section 10.4 of this Schedule 10 [Safety];

“**Fugitive Emission**” means a gas, liquid, solid, vapour, fume, mist, fog or dust that escapes from process equipment, emission control equipment or from a product where Persons may be readily exposed;

“Hazardous Substance” means any substance, material, mixture of substances, chemical, dangerous good, product, organism, waste, pollutant, contaminant, constituent of any material or substance, or other material or substance, which is or becomes listed, regulated or addressed under any Law respecting the use, manufacture, importation, handling, transportation, storage, disposal, treatment or remediation of the substance, material, mixture of substances, chemical, dangerous good, product, organism, waste, pollutant, contaminant, constituent of any material or substance, or other material or substance;

“Hazardous Substances Procedures” has the meaning set out in Section 9.8 of this Schedule 10 [Safety];

“Identified Hazards List” has the meaning set out in Section 2.3(g) of this Schedule 10 [Safety];

“Incident Management System” means BC Hydro’s incident management system;

“Industrial Fire Brigade” means an organized group of Persons on Site and the firefighting tools, apparatus, equipment and supplies, all as described in Section 1 of Appendix 10-8 [Fire Brigade and Wildfire Response Requirements];

“Initial Identified Hazards List” means the list of BC Hydro identified Hazards attached as Appendix 10-6 [Initial Identified Hazards List];

“LOO” has the meaning set out in Section 3.1(a) of this Schedule 10 [Safety];

“Management of Change Process” has the meaning set out in Section 3.2 of this Schedule 10 [Safety];

“Multiple Employer Workplace” has the meaning set out in Section 118 of the *Workers Compensation Act* (British Columbia);

“Near Miss” means an incident that had a credible potential to injure a person;

“NFPA” means the National Fire Protection Association;

“Notice of Failure to Comply” has the meaning set out in Section 4.6(a) of this Schedule 10 [Safety];

“Occupational Health & Safety Management Program” or **“OHSMP”** has the meaning ascribed to it in Part 3.3 of the OHSR;

“OHSR” means the *Occupational Health and Safety Regulation* (British Columbia);

“OSH Standards” means BC Hydro’s Occupational Health and Safety Standards, as provided to the Contractor by Hydro’s Representative or posted under the heading “OSH standards” at <https://extranet.bchydro.com/sites/safety/default.aspx>, as they may be amended from time to time (individual OSH Standards referred to herein are also found at such location);

“Prime Contractor” has the meaning set out in Section 118 of the *Workers Compensation Act* (British Columbia);

“Prime Contractor’s Site Safety Coordination Plan” has the meaning set out in Section 3.1(f) of this Schedule 10 [Safety];

“Project Public Safety Management Plan” means BC Hydro’s public safety management plan for the Project, which is included as Section 5.3 of BC Hydro’s Construction Safety Management Plan;

“PSSP” has the meaning set out in Section 3.1(a) of this Schedule 10 [Safety];

“Public Hazards” has the meaning set out in Section 8.1(a) of this Schedule 10 [Safety];

“Public Safety Management Plan” has the meaning set out in Section 8.1 of this Schedule 10 [Safety];

“Qualified” has the meaning set out in Part 1 of the OHSR;

“Qualified Industrial Hygienist” means a certified Registered Occupational Hygienist or Registered Occupational Hygienist Technologist, registered with the Canadian Registration Board of Occupational Hygienists;

“Respirable Crystalline Silica Dust” or **“RCS Dust”** has the meaning set out in Part 6.110 of the OHSR;

“Safe Work Procedures” has the meaning set out in Section 3.5 of this Schedule 10 [Safety];

“Safety Area” has the meaning set out in Section 2.1 of this Schedule 10 [Safety];

“Safety Audits and Inspections” has the meaning set out in Section 6.1 of this Schedule 10 [Safety];

“Safety Certification” has the meaning set out in Section 2.8 of this Schedule 10 [Safety];

“Safety Incident” means an accident or other occurrence which results in, or has the potential to, cause an injury or occupational disease, whether or not reportable to WorkSafeBC;

“Safety Manager” has the meaning set out in Section 2.10 of this Schedule 10 [Safety];

“Safety Order” has the meaning set out in Section 7.2 of this Schedule 10 [Safety];

“Safety Regulations” has the meaning set out in Section 3.1(a) of this Schedule 10 [Safety];

“Safety Submittal Guidance Document” means the document located in the Data Room (Data Room ID #1016.REF.01218);

“Site Safety Coordinator” has the meaning set out in Section 2.4 of this Schedule 10 [Safety];

“Site Safety Management Plan” or **“SSMP”** has the meaning set out in Section 3.1 of this Schedule 10 [Safety];

“SOO” has the meaning set out in Section 3.1(a) of this Schedule 10 [Safety];

“Specialized Hazard” has the meaning set out in Section 9.9 of this Schedule 10 [Safety];

“SPR” has the meaning set out in Section 3.1(a) of this Schedule 10 [Safety];

“SSMP Implementation Schedule” has the meaning set out in Section 2.4.2(c) of this Schedule 10 [Safety];

“Wildfire Hazard Assessment and Abatement Plan” has the meaning set out in Section 10.4(c) of this Schedule 10 [Safety];

“Wildfire Response” means the wildfire response requirements described in Appendix 10-8 [Fire Brigade & Wildfire Response Requirements] of this Schedule 10 [Safety];

“WorkSafeBC” means the Workers Compensation Board of British Columbia; and

“WPP” has the meaning set out in Section 3.1(a) of this Schedule 10 [Safety].

2 GENERAL HEALTH AND SAFETY REQUIREMENTS

2.1 Safety Areas

BC Hydro may divide the Site into a number of areas (each a “**Safety Area**”) and designate itself or a specific contractor as the Prime Contractor for each Safety Area. A Safety Area may be comprised of the Contractor’s Work Area, Other Contractor’s work areas, an area of ancillary use such as a storage area or Laydown Area, and roads and access lands. The area(s) identified as ‘Safety Area – GSS Civil’ in Appendix 10-1 [Safety Areas] are, or will be, the Contractor’s Safety Area(s) for the time periods as indicated Appendix 10-1 [Safety Areas] (the “**Contractor’s Safety Area(s)**”). Any Safety Area may be a Multiple Employer Workplace such that more than one contractor, or BC Hydro, may be required to use, perform work in or pass through the Safety Area.

The Contractor will, prior to commencing Work and at any other time that BC Hydro requests, produce such documentation and evidence as may be required by BC Hydro and WorkSafeBC to demonstrate that the Contractor has all the knowledge, experience, training, competency, capability and willingness to fully perform the role of Prime Contractor with respect to the Contractor’s Safety Area(s). Upon being satisfied that the Contractor has demonstrated the knowledge, experience, training, competency, capability and willingness to fully perform the role of Prime Contractor, BC Hydro will designate the Contractor as Prime Contractor for the Contractor’s Safety Area(s) by written notice, substantially in the form attached as Appendix 10-4 [Prime Contractor Assigned/Rescission Form]. BC Hydro will also confirm any changes in the designated Prime Contractor for a Safety Area and modify any of the designated Safety Areas (including, as applicable, modifications to the size of any of the Contractor’s Safety Area(s) or the applicable time periods) by written notice, substantially in the form attached as Appendix 10-4 [Prime Contractor Assigned/Rescission Form].

BC Hydro may amend Appendix 10-1 [Safety Areas] (including the size of the Contractor’s Safety Area(s) or the applicable time periods) by written notice to the Contractor, provided that:

- (a) any reduction in the size of the Contractor’s Safety Area(s) or the time periods for which the Contractor is designated as the Prime Contractor will not be a Change and the provisions of Schedule 12 [Changes] will not apply to such reduction; and
- (b) any increase in the size of the Contractor’s Safety Area(s) will be a Change to which the provisions of Schedule 12 [Changes] will apply, if such increase is material.

Subject to any amendment of the Contractor’s Safety Areas, as set out in Appendix 10-1 [Safety Areas], in accordance with the preceding paragraph, the Contractor will not begin Work in a Contractor’s Safety Area until BC Hydro has designated the Contractor as Prime Contractor for the applicable Contractor’s Safety Area and BC Hydro may issue a “stop work order” if, at any time, BC Hydro is not satisfied that the Contractor has the demonstrated knowledge, experience, training, competency, capability and willingness to fully perform the role of Prime Contractor. For clarity, any delay resulting from the Contractor’s failure to demonstrate the knowledge, experience, training, competency, capability and willingness to fully perform the role of Prime Contractor will be a Contractor Delay.

Except as provided by Section 2.1(b) of this Schedule and the next paragraph of this Schedule 10 [Safety], the Contractor will not be entitled to, nor will the Contractor make, any claim for an adjustment to the Contract Price or the time for the performance of the Work on the basis of any change in the allocation of Prime Contractor responsibility, including, for clarity, any claims for additional cost or loss of productivity due to a stop work order, the designation of BC Hydro or an Other Contractor as Prime Contractor for a Safety Area in which the Contractor is required to perform Work, including the Contractor’s Safety Area(s), or the presence of additional contractors or workers within the Contractor’s Safety Area(s).

If at any time while the Contractor is the Prime Contractor the number of workers of BC Hydro and Other Contractors in the Contractor's Safety Area(s) materially exceeds 500, then the Contractor will be entitled to claim a Change pursuant to the provisions of Section 4.1 of Schedule 12 [Changes], except that the Contractor's notice obligation under Section 4.1 of Schedule 12 [Changes] will be to submit a Change Report to Hydro's Representative promptly upon the Contractor becoming aware of such exceedance.

2.2 General Duties of the Contractor

The Contractor will:

- (a) ensure the health and safety of all Contractor Personnel and any other workers present at a workplace at which Work is being carried out;
- (b) comply with the *Workers Compensation Act* (British Columbia), the OHSR and any applicable orders;
- (c) comply with all of the Safety Regulations;
- (d) remedy any workplace conditions that are hazardous to the health or safety of any Contractor Personnel or any other workers present at a workplace at which Work is being carried out;
- (e) ensure that the Contractor Personnel on the Site are made aware of all known or reasonably foreseeable health or safety Hazards to which they are likely to be exposed by their work, comply with all Safety Regulations, including the *Workers Compensation Act* (British Columbia), the OHSR and any applicable orders, comply with the Safety Regulations and are made aware of their rights and duties under the *Workers Compensation Act* (British Columbia) and the OHSR;
- (f) if the Contractor is not the Prime Contractor of a Safety Area, comply with, and ensure the Contractor Personnel comply with, the directions of the Prime Contractor of that Safety Area, and provide the Prime Contractor with the name of a Qualified person designated by the Contractor to be responsible for the Contractor's health and safety activities in the applicable Safety Area;
- (g) ensure that the Contractor Personnel are at all times aware of who the Prime Contractor for the particular Safety Area in which they are performing Work is and who the Prime Contractor is on adjacent Safety Areas;
- (h) provide to the Contractor Personnel the information, instruction, training and supervision necessary to ensure the health and safety of those workers in carrying out their work and to ensure the health and safety of other workers at the workplace;
- (i) maintain the Contractor's Work Area in a manner that ensures the health and safety of persons at or near the Contractor's Work Area;
- (j) provide written assurance that each of the Contractor Personnel assigned to the Work as a Qualified person has the necessary combination of education, experience and knowledge, and the authority necessary, to fulfill the position to which he or she has been appointed;
- (k) provide to BC Hydro, For Information Only, and to the Prime Contractor a complete copy of the Contractor's "Occupational Health and Safety Program", completed in accordance with the requirements of Part 3 of the OHSR, and generally in the form included in Appendix 2-5 [Proposal Extracts]; and
- (l) the Contractor will apply safe design principles to the construction methodology for the Work. The Contractor will carefully consider how the design will translate through to manufacture, installation and completion and will evaluate any reasonable design modification options and, to the extent

practicable, will implement such reasonable design modifications as necessary to facilitate safety during installation.

If a new version of the Safety Regulations is published BC Hydro will notify the Contractor in writing and the Contractor will have 30 days from the date of such notice to comply with such new requirements, and the Contractor will be entitled to claim a Change pursuant to the provisions of Section 4.1 of Schedule 12 [Changes], except that the Contractor's notice obligation under Section 4.1 of Schedule 12 [Changes] will be to submit a Change Report to Hydro's Representative promptly upon the Contractor being notified of the new version of the Safety Regulations.

2.3 Contractor as the Prime Contractor

While the Contractor is Prime Contractor in accordance with Section 2.1 of this Schedule 10 [Safety], the Contractor will:

- (a) take all steps or measures necessary, through such arrangements as are appropriate, to fulfill its obligations, functions and duties as the Prime Contractor;
- (b) file a notice of project in accordance with Section 20.2 of the OHSR;
- (c) coordinate the activities of all of the employers and workers in the Contractor's Safety Area(s) (including Other Contractors and BC Hydro Persons);
- (d) establish and implement a method of overseeing and coordinating the lockout procedures in use by all the employers in the Contractor's Safety Area(s) to ensure the lockout methods used by one employer do not pose any risk or Hazard to another employer;
- (e) establish and maintain a system or process that will ensure compliance with the Safety Regulations in respect of the Contractor's Safety Area(s);
- (f) identify and document any work activities within the Contractor's Safety Area(s) where there is a known or reasonably foreseeable risk to workers;
- (g) maintain and update a list of known Hazards that exist on the Site and which could be reasonably foreseen to present a safety risk to workers or the Public (the "**Identified Hazards List**"), including by ensuring that all pre-existing Hazards within the Contractor's Safety Area(s), as identified in the Initial Identified Hazards List, and any new Hazards that arise or can be reasonably foreseen to arise during the performance of the Work are identified and documented;
- (h) ensure that the Identified Hazards List is at all times up to date and electronically available to BC Hydro;
- (i) establish and maintain a system to monitor and document other employers' compliance with the Contractor's requirements for safety, including fire safety, within the Contractor's Safety Area(s);
- (j) maintain the Contractor's Safety Area(s) in a manner that ensures the health and safety of persons at or near the Contractor's Safety Area(s);
- (k) provide supervision necessary to ensure the health and safety of all workers within the Contractor's Safety Area(s);

- (l) ensure that the first aid equipment, first aid attendants, safety resources and certification levels are sufficient to comply with the WorkSafeBC requirements for first aid coverage for the Contractor's Safety Area(s), taking into account:
 - (i) the presence of multiple contractors and personnel in the Contractor's Safety Area(s);
 - (ii) work hazard ratings and risks arising from the performance of multiple work activities within the Contractor's Safety Area(s); and
 - (iii) the number of workers in the Contractor's Safety Area(s);
- (m) at all times have full regard for the safety of all persons within, or adjacent to, the Contractor's Safety Area(s) (whether such persons are present within, or adjacent to, the Contractor's Safety Area(s) lawfully or not) and keep the Contractor's Safety Area(s) in a manner and in an orderly state that ensures the safety of such persons and that is appropriate to the avoidance of danger to such persons;
- (n) at all times cooperate and coordinate with BC Hydro and any Other Contractors designated as Prime Contractor for a Safety Area to ensure the safety of all persons on the Site, including workers and the public;
- (o) provide Fire Response and Rescue Services in accordance with the provisions of this Schedule 10 [Safety] for all persons within, or adjacent to, the Contractor's Safety Area(s) (whether such persons are present within, or adjacent to, the Contractor's Safety Area(s) lawfully or not); and
- (p) the Prime Contractor's Site Safety Coordination Plan will be reviewed by the Contractor on a weekly basis and updated as necessary,
 - (i) in the case of all conflicts in Contractor's Safety Area(s) with Other Contractors, the Contractor will meet with the Other Contractor(s) to develop a recommendation for resolution. This will be submitted to BC Hydro for Review not less than seven days prior to Mobilization in the specific Safety Areas of conflict;
 - (ii) should a conflict be discovered during the course of construction, then the Contractor will immediately inform Hydro's Representative and promptly meet with the Other Contractor to develop a recommendation for resolution. This will be submitted to BC Hydro For Information Only; and
 - (iii) Hydro's Representative may, acting reasonably, accept, reject or modify any recommendation for resolution made by the Contractor in respect of Section 2.3(o)(i) or (i) above.

In the event that the Contractor and the Other Contractor(s) are unable to agree on a recommendation then Hydro's Representative will direct a resolution and the Contractor will be not be entitled to claim a Change pursuant to the provisions of Section 4.1 of Schedule 12 [Changes].

2.4 Site Safety Coordinator

2.4.1 Appointment

Prior to the commencement of any construction within the Contractor's Safety Area(s), the Contractor will appoint a Qualified person (the "**Site Safety Coordinator**") to coordinate health and safety activities

within the Contractor's Safety Area(s) and deliver to Hydro's Representative written notice of the designation of the Site Safety Coordinator.

2.4.2 Site Safety Coordinator's Duties

The Contractor will cause the Site Safety Coordinator to perform the following functions:

- (a) fulfill the roles and responsibilities of the Qualified coordinator as identified in Section 20.3 of the OHSR at all times when the Contractor is Prime Contractor;
- (b) establish and maintain working relationships with all applicable regulatory agencies (including WorkSafeBC) and BC Hydro;
- (c) prior to the commencement of any construction within the Contractor's Safety Area(s), prepare and submit to BC Hydro for Review a schedule of safety activities demonstrating implementation of the Site Safety Management Plan (the "**SSMP Implementation Schedule**");
- (d) ensure that all pre-existing Hazards on the Contractor's Safety Area(s) have been identified and communicated to the Contractor Personnel and all other employers and their workers in the Contractor's Safety Area(s);
- (e) prepare or cause to be prepared a site drawing showing the Site layout, including Contractor's Safety Area(s), first aid locations, emergency transportation provisions, incident command post, water supply locations, firefighting and rescue equipment locations, and the evacuation marshalling station;
- (f) maintain the Identified Hazards List and ensure that all such Hazards are addressed and reasonably mitigated throughout the duration of the performance of the Work;
- (g) identify and document any activities at the workplace that could create a known or reasonably foreseeable risk to workers and informing BC Hydro, Other Contractors and their workers who for any reason come into the Contractor's Safety Area(s) of the activities and the Hazards;
- (h) prepare or cause to be prepared all required Safe Work Procedures;
- (i) review the scopes of work, work procedures and physical work areas of the Other Contractors doing work within the Contractor's Safety Area(s) and when conditions or activities at any location or locations in the Contractor's Safety Area(s) affect the workers of more than one employer or where there are adjoining work activities by two or more employers, coordinate the health and safety activities throughout the Contractor's Safety Area(s) and alert all workers to all reasonably foreseeable Hazards to which they are likely to be exposed;
- (j) ensure that site safety and fire inspections are conducted and documented at a frequency that prevents the development of unsafe conditions or procedures in the Contractor's Safety Area(s), and in any event at least once each week;
- (k) notwithstanding any limitation in the OHSR regarding the number of workers in any work force, implement and at all times maintain a formal Joint Health and Safety Committee for the Contractor's Safety Area(s) as required by the *Workers Compensation Act* (British Columbia), and maintaining compliance with those duties and functions as required by the *Workers Compensation Act* (British Columbia);
- (l) advise BC Hydro immediately of any Safety Incidents or Near Misses that occur in the Contractor's Safety Area(s) using the incident report form set out in Appendix 10-2 [Contractor Safety Incident Report Form] or such other form as Hydro's Representative may from time to time

require, including those that must be reported to regulators (including WorkSafeBC), and provide reports of such to BC Hydro within 48 hours of the Safety Incident or Near Miss;

- (m) submit to all regulators under the Safety Regulations, within the time frames stipulated by such regulators, with copies to BC Hydro, notice of Safety Incidents or Near Misses required to be reported to such regulators as well as any required preliminary (typically 48 hours) and full (typically 30 days) incident investigation reports;
- (n) submit to BC Hydro a weekly site safety coordination compliance report, in a form acceptable to Hydro's Representative acting reasonably. The weekly site safety coordination compliance report will at a minimum include:
 - (i) a general description of the Work activities performed during the week;
 - (ii) a list of any Site safety coordination activities performed, including dates, times and a list of attendees or participants;
 - (iii) a list of Safety Incidents and Near Misses that have occurred during the week;
 - (iv) a description of each item identified on the SSMP Implementation Schedule that has been implemented during the week;
 - (v) copies of any updated drawings described in Section 2.4.2(e) of this Schedule;
 - (vi) copies of any updates to the Identified Hazards List; and
 - (vii) identification of any new or revised Safe Work Procedures produced during the week; and
- (o) inform all persons who enter the Contractor's Safety Area(s) of the health and safety requirements in the Contractor's Safety Area(s).

2.4.3 Qualifications and Experience

The Site Safety Coordinator will:

- (a) have no other managerial duties while performing such role;
- (b) have a minimum of five years' experience with equivalent projects of a similar scope and scale;
- (c) have one or more of the following levels of professional certification which must remain current throughout their period of time in this role (BC Hydro may, in its discretion, accept other comparable combinations of qualifications, training and experience after a review of the individual's combination of qualifications, training and experience):
 - (i) Occupational Health and Safety certificate or diploma from a recognized Post-Secondary Education Source;
 - (ii) Canadian Registered Safety Professional (CRSP);
 - (iii) Certified Safety Professional (CSP); or
 - (iv) Certified Utility Safety Professional (CUSP).
- (d) have to be accepted by Hydro's Representative prior to commencement of performing such role;

- (e) be familiar with the Safety Regulations, including Safety Regulations applicable to the performance of work in the Province of British Columbia;
- (f) be knowledgeable about the scope of the Work, the Hazards involved with the Work and the means to control or mitigate such Hazards; and
- (g) be knowledgeable about the Hazards of the work of Other Contractors.

2.4.4 Availability

The Site Safety Coordinator will be based at the Site and the Contractor will ensure that the Site Safety Coordinator or a delegate (acceptable to Hydro's Representative acting reasonably and having the qualifications and experience and otherwise meeting the requirements specified in Section 2.4.3 of this Schedule 10 [Safety]), is available on Site at all times while the Contractor is the Prime Contractor and on duty whenever Work is being performed.

2.5 Qualified Coordinator

At any time the Contractor is working in the Safety Area of another Prime Contractor, and prior to the commencement of any work within that Prime Contractor's Safety Area, the Contractor will appoint a Qualified person to coordinate the Contractor's health and safety activities with respect to the work with the Prime Contractor and deliver to Hydro's Representative written notice of the designation of the Qualified person. The name of the Qualified person will also be given to the Prime Contractor if working in another Prime Contractor's Safety Area.

The duties of the Qualified person will be to:

- (a) fulfill the roles and responsibilities of the Qualified person as identified in Section 20.3(2)(b) of the OHSR;
- (b) establish and maintain working relationships with WorkSafeBC, Prime Contractors and BC Hydro;
- (c) identify and document all new Hazards that arise during the performance of the Work for the Contractor's workers and informing BC Hydro, Other Contractors and their workers who for any reason come into the work areas of the activities and the Hazards;
- (d) prepare or cause to be prepared a set of written construction procedures designed to protect the health and safety of workers on Site;
- (e) conduct documented site safety and fire inspections at a frequency that prevents the development of unsafe conditions or procedures;
- (f) advise the Prime Contractor and BC Hydro, immediately of any Safety Incidents or Near Misses that occur in the Contractor's Safety Area(s) using the incident report form set out in Appendix 10-2 [Contractor Safety Incident Report Form] or such other form as Hydro's Representative may from time to time require, including those that must be reported to regulators (including WorkSafeBC), and providing reports of such to BC Hydro within 48 hours of the Safety Incident or Near Miss; and
- (g) submit to all regulators under the Safety Regulations, within the time frames stipulated by such regulators, with copies to BC Hydro, notice of Safety Incidents or Near Misses required to be reported to such regulators as well as any required preliminary (typically 48 hours) and full (typically 30 days) incident investigation reports.

2.6 Construction Safety Officers

The Contractor will appoint a sufficient number of Qualified construction safety officers (each a “**Construction Safety Officer**”), having responsibility for the identification and control of potential safety Hazards within the Contractor’s Work Area, in accordance with applicable Safety Regulations. The Contractor will ensure that during the performance of all construction activities on the Site, at least one Construction Safety Officer is at the Site and available for every 200 Contractor Personnel. The Construction Safety Officers will have no other duties.

All Construction Safety Officers must meet all applicable requirements established by WorkSafeBC and must have the following minimum levels of experience, training and qualifications:

- (a) a minimum of 4 years’ experience with equivalent projects of a similar scope and scale; and
- (b) either:
 - (i) CSO or RCSO designation, in good standing, by the Applied Science Technologists and Technicians of BC (up to a maximum of 15% of the total number of CSO’s on the Site can be provisional CSO’s e.g. CSO(P)); or
 - (ii) NCSO designation in good standing from the BC Construction Safety Alliance.

2.7 Refusal to Recognize the Prime Contractor

If WorkSafeBC refuses to recognize or accept the Contractor at any time as the Prime Contractor the Contractor will not be relieved of any obligations, duties and liabilities as the Prime Contractor, but will be responsible to BC Hydro as if the Contractor had been accepted by WorkSafeBC as the Prime Contractor for fulfilling all obligations to the same extent as if the Contractor undertook the obligations of a Prime Contractor for the Safety Area, provided however that the Contractor will additionally be required to comply with Section. 2.2(f) of this Schedule 10 [Safety].

2.8 Contractor Safety Certification Requirements

The Contractor must attain and maintain:

- (a) WorkSafeBC Occupational Health and Safety Certificate of Recognition (COR);
- (b) OHSAS 18001 certification;
- (c) ISO 45001 certification; or
- (d) an alternate safety system certification acceptable to Hydro’s Representative, in his or her discretion,

(collectively, the “**Safety Certification**”),

and, upon request, provide any and all records, and fully cooperate as may be necessary for Hydro’s Representative to perform verification of the Safety Certification. Such verification may, at Hydro’s Representative’s discretion include the use of third parties. During the course of the Work, the Contractor will provide BC Hydro with copies of all COR, OHSAS or ISO audit reports, as applicable, within 14 days of their being completed.

2.9 Subcontractor Safety Certification Requirements

The Contractor will ensure that all Subcontractors performing Work on the Site that:

- (a) is considered “H” or “M” hazard work, as defined by WorkSafeBC’s First Aid Assessment Assigned Hazard Rating in Part 3 Guidelines for Occupational First Aid; and
- (b) has:
 - (i) an aggregate value of more than \$5,000,000; or
 - (ii) a significant component of safety sensitive Work on Site,

attain and maintain the Safety Certification, as if they were the Contractor, or that such Subcontractors are fully covered by the Contractor’s Safety Certification.

2.10 Safety Manager

- (a) The Contractor’s Safety Manager shall, irrespective of such person’s other responsibilities, have defined authority for ensuring the establishment and maintenance of the SSMP and for auditing and reporting on: (i) the implementation and performance of Work in accordance with the SSMP; and (ii) Contractor’s compliance with applicable safety Laws and the Safety Regulations;
- (b) The Safety Manager shall:
 - (i) be a Qualified person;
 - (ii) have at least eight (8) years safety management experience on projects with similar scope and complexity as the Project; and
 - (iii) either:
 1. possess a combination of education, qualifications and experience acceptable to Hydro’s Representative, acting reasonably; or
 2. be registered or certified as a:
 - Canadian Registered Safety Professional (CRSP);
 - Certified Industrial Hygienist (CIH); or
 - Certified Safety Professional (CSP).
- (c) The Safety Manager will be a Key Individual, subject to the requirements of Section 3.6 of Schedule 3 [Roles and Representatives]; and
- (d) Without limiting the generality of this Section 2.10 of this Schedule 10 [Safety], the job specifications and responsibilities of the Safety Manager will include the following:
 - (i) directing all aspects of Contractor’s implementation and compliance with the SSMP, including oversight of all workplace safety auditing;
 - (ii) ensuring occupational health and safety and public safety issues are addressed and requirements are met, in accordance with this Agreement, the Safety Regulations and Good Industry Practice;
 - (iii) preparation and maintenance of the Contractor’s Public Safety Management Plan;

- (iv) establishing and maintaining working relationships with WorkSafeBC and Other Contractors working in the Contractor's Safety Area;
- (v) taking a lead role in internal occupational health and safety reviews and audits;
- (vi) liaising with Hydro's Representative and acting as the single point representative for Contractor on all matters relating to occupational health and safety and public safety;
- (vii) preparing and submitting to Hydro's Representative all safety reports, including public safety reports, required pursuant to this Schedule 10 [Safety] and Schedule 4 [Work Program and Schedule];
- (viii) managing all occupational health and safety issues associated with the Project on a day-to-day basis; and
- (ix) ensuring the availability of the Fire Response and Rescue Services.

3 SITE SAFETY MANAGEMENT PLAN

3.1 Preparation and Submission

Within 60 days after the Effective Date, and in any event, at least 21 days before commencing any Work at the Site, the Contractor will prepare and submit to BC Hydro for Review the Contractor's Site Safety Management Plan ("**Site Safety Management Plan**" or "**SSMP**"), which will align with BC Hydro's Construction Safety Management Plan, a copy of which is included in the Data Room (Data Room ID# 1016.Z.01.001.PMO.00181.PLAN) and be in accordance with the Safety Submittal Guidance Document.

The SSMP will be prepared by a Qualified person who will be required to certify that the SSMP:

- (a) has been prepared in accordance with the requirements of all applicable Laws, the requirements of the Contract, including this Schedule 10 [Safety], the Safety Practice Regulations (**SPR's**), including BC Hydro's: (i) Local Operating Orders ("**LOOs**"); (ii) OSH Standards; (iv) System Operating Orders ("**SOOs**"); (v) Power System Safety Protection ("**PSSP**"); and (vi) Work Protection Practices ("**WPP**"), and lockout procedures, as may be applicable to the Site, and all applicable fire safety regulations, including the *Wildfire Act* (British Columbia) and regulations, and the BC Building Code (collectively, the "**Safety Regulations**");
- (b) meets the minimum standards of health and safety applicable for each specified component of the Work;
- (c) is in compliance with Good Industry Practice;
- (d) is focused on the prevention of actual or likely injuries, fatalities, and damage to property;
- (e) addresses overall management of occupational safety, health and wellness and addresses mitigation of any risks due to health and safety Hazards associated with the Project, the Contractor's Work Area and the performance of the Work. The SSMP will define the safety purpose, responsibilities, strategies and plans, focusing on the specific requirements of the Work, including addressing issues related to cooperation with Other Contractors, BC Hydro and other persons at the Site;
- (f) includes, in the Prime Contractor component of the SSMP, a strategy for coordination of health and safety activities within the Contractor's Safety Area(s), Hazard identification and control, ensuring provision of first aid, Fire Response and Rescue Services, strategy for ensuring training and competency, rules of conduct, and design, implementation, and maintenance of the system

to ensure compliance with the Safety Regulations, as well as the worksite rules of the Prime Contractor (the “**Prime Contractor’s Site Safety Coordination Plan**”);

- (g) addresses the development of an emergency action plan that aligns with BC Hydro’s Emergency Action Plan for the Site, in communication with BC Hydro;
- (h) addresses the development of the Fire Safety Related Plans including the provision of Fire Response and Rescue Services and any other plans required for the Site pursuant to applicable Law;
- (i) includes those parts of the Security Plan which outline the security measures in place to protect Contractor Personnel and other Persons within the Contractor’s Work Area;
- (j) outlines Safe Work Procedures for specified aspects of the Work;
- (k) includes a safe design process that is in compliance with the provisions of the Safety Submittal Guidance Document;
- (l) includes procedures for implementation of the Contractor’s drug and alcohol policy; and
- (m) includes a Management of Change Process.

3.2 Management of Change Process

The Contractor’s management of change process will:

- (a) identify and mitigate the impact of change on the occupational health and safety Hazards and risks presented by the Work, prior to the introduction of such changes;
- (b) generally conform to the requirements of section 4.3.1 of OHSAS 18001;
- (c) define and implement the controls needed to address the occupational health and safety Hazards and risks associated with changes caused by:
 - (i) organizational changes (e.g. personnel or staffing changes);
 - (ii) activity changes (e.g. introduction of new work, changes to process, procedures, infrastructure software);
 - (iii) material changes (e.g. new products, changes in uses of products);
 - (iv) modifications to the occupational health and safety management system, including temporary changes; and
 - (v) new information on existing Hazards (e.g. safety bulletins, recalls, results of incident investigations),

(collectively, the “**Management of Change Process**”).

3.3 Review and Amendment of SSMP

The Contractor will review and amend the SSMP from time to time as necessary, but no less than quarterly (including when Hazards change, BC Hydro’s Emergency Action Plan for the Site or referenced safety documents change, the scope of Work changes or the Work activities change materially), to ensure that the SSMP at all times complies with the requirements set out in Section 3.1 of this Schedule

10 [Safety]. Prior to implementation of any SSMP amendments, the Contractor will submit the proposed amendments to Hydro's Representative for Review.

3.4 Compliance to SSMP

The Contractor will implement and comply with the SSMP, and require all Contractor Persons to comply with the SSMP, prepared and as may be amended from time to time in accordance with the requirements of this Schedule 10 [Safety].

3.5 Safe Work Procedures

Prior to commencing any type of activity at the Site, the Contractor will prepare and submit a set of written instructions identifying the health and safety Hazards associated with the performance of that type of activity ("**Safe Work Procedures**") to BC Hydro (i) for Review in the case of Safe Work Procedures for Specialized Hazards; or (ii) For Information Only, in the case of any other Safe Work Procedures.

The Contractor will engage a Qualified person knowledgeable in the applicable Safety Regulations and work procedures to prepare each set of Safe Work Procedures. Each set of Safe Work Procedures will:

- (a) comply with the provisions of *OSH Standard 110* – "Hazard Identification and Risk Assessment", or an equivalent standard acceptable to Hydro's Representative;
- (b) address all site specific safety Hazards and work procedures necessary to address those Hazards for the safe performance of the specific type of Work activity;
- (c) include Safe Work Procedures and exposure control plans applicable to the Site and the performance of the specific type of Work activity;
- (d) include reference to hot work precautions, fire protection system impairment plans, and other work activities for which local work permits may be required (e.g. confined space entry, hazardous atmospheres, working with toxins, lockout or tag out, hot work);
- (e) be prepared in accordance with WorkSafeBC requirements and the applicable Safety Regulations;
- (f) be consistent with the Safety Regulations, as applicable;
- (g) specifically identify the applicable procedures in the event of a Safety Incident or safety violation;
- (h) for any work that may be done in or around rivers, lakes, reservoirs or other bodies of water under the following conditions:
 - (i) working in river environments;
 - (ii) construction project; or
 - (iii) working from boats or barges,

contain a specific requirement to comply with *OSH Standard 408* – "Operation of Boats" and include a mechanism for swift water rescue, if applicable;
- (i) for any work involving helicopters and fixed wing aircraft, meet the requirements of Appendix 10-5 [Aircraft Requirements];
- (j) contain a specific requirement to comply with the following OSH Standards:

- (i) OSH Standard 318 – “Crystalline Silica”;
 - (ii) OSH Standard 803 - “Working Safety In Wildlife Habitats”; and
 - (iii) OSH Standard 601 – “Personal Protective Equipment”, provided that from the time when the Project is electrically connected to the BC Hydro electrical system, all Contractor Personnel will be required to comply with BC Hydro’s personal protective equipment standards, including the use of arc-flash or fire retardant clothing in all areas of the powerhouse, spillway, intakes and all related facilities; and
- (k) comply with the OHSR Part 31 [Firefighting] and part 32 [Rescue], as applicable.

3.6 Amendment of Safe Work Procedures

The Contractor will review and amend the Safe Work Procedures from time to time as necessary but no less than quarterly (including when Hazards change, BC Hydro’s Emergency Action Plan for the Site or referenced safety documents change, the scope of Work changes or the Work activities change materially), to ensure that the Safe Work Procedures at all times comply with the requirements set out in Section 3.5 of this Schedule 10 [Safety]. Prior to implementation of any Safe Work Procedures amendments, the Contractor will submit the proposed amendments to Hydro’s Representative for Review.

3.7 Compliance to Safe Work Procedures

The Contractor will implement and comply with the Safe Work Procedures, and require all Contractor Persons to comply with the Safe Work Procedures, prepared and as may be amended from time to time in accordance with the requirements of this Schedule 10 [Safety].

3.8 Life Saving Rules

The Contractor will ensure: (i) training of Contractor Personnel in the following, as applicable; and (ii) compliance with the applicable life saving rules by all persons within the Contractor’s Work Area, as part of the Site Safety Management Plan:

- (a) limits of approach (LOA) will be maintained as required by BC Hydro’s SPRs;
- (b) ensure there is a safety protection guarantee or lock out in place and check that it is appropriate for the Work being undertaken;
- (c) test for hazardous energy;
- (d) ensure that worker protection grounding/bonding is applied;
- (e) use fall protection when working at heights;
- (f) maintain a safe atmosphere in a confined space and ensure each worker can be rescued;
- (g) prevent harmful exposure to known carcinogens, toxins and bio-hazards;
- (h) no work will be undertaken under the influence of alcohol or drugs; and
- (i) adjust driving performance to the weather and road conditions.

3.9 Safety Practice Regulation Training

The following training requirements will apply from and after the date that BC Hydro becomes Prime Contractor for the applicable Safety Area in accordance with Section 2.1 of this Schedule 10 [Safety]:

- (a) prior to connecting any station equipment to the electrical grid, other than the Construction Power System, all Contractor Personnel will be trained to a minimum of Category B under WPP or PSSP as required by the SPR, applicable SOOs or LOOs, or as otherwise required by Hydro's Representative;
- (b) BC Hydro will provide such training at the Site, by a Qualified trainer, up to one day per week on the dates specified by Hydro's Representative. Hydro's Representative will give the Contractor notice of the training schedule at least 90 days prior to the date on which the training will be offered;
- (c) the Qualified trainer will deliver the necessary training and administer all necessary testing. A BC Hydro Person may administer retesting, if required. The Contractor will be responsible for all costs and expenses for the Contractor Personnel's attendance at the training sessions, testing and any required retesting, but BC Hydro will provide the training, testing and any required retesting at no cost to the Contractor;
- (d) each training session will accommodate a maximum of 25 participants and take approximately six hours to complete. The Contractor acknowledges that training will be provided to Contractor Personnel and personnel of Other Contractors on a first come, first served, basis. The Contractor will provide the anticipated number of Contractor Personnel requiring training during each training session to Hydro's Representative at least 14 days prior to the date of the requested training session and Hydro's Representative will provide confirmation of the number of seats allocated to the Contractor at least 7 days prior to the date of the applicable training session; and
- (e) at least two Business Days in advance of each training session, the Contractor must:
 - (i) confirm the number, along with full names, of Contractor Personnel attending the training session; and
 - (ii) inform BC Hydro if any Contractor Personnel attending the training session has had previous PSSP or WPP training and provide the identification number given to the individual upon completion of such prior training.

All locks required for WPP, or tags required for PSSP, will be provided by BC Hydro. The Contractor is responsible for ensuring the locks or tags are maintained in good working order during the course of the Work and for returning them to BC Hydro in the same condition. All locks and tags will remain the property of BC Hydro and will be immediately returned to BC Hydro on request.

3.10 Isolation

Where BC Hydro has performed or caused to be performed an equipment isolation or lockout for the purpose of the Work and the Contractor requires a change to such equipment isolation or lockout procedures to accommodate the performance of the Work, the Contractor will submit a lockout procedure change request to Hydro's Representative a minimum of three days in advance of the required change. BC Hydro will perform the requested switching and isolation at no charge to the Contractor. Notwithstanding the foregoing, BC Hydro will not be responsible for any costs associated with any delays or interruptions of the Work arising from changes to isolation of equipment requested by the Contractor.

3.11 WorkSafeBC Requirements

The Contractor will deliver to BC Hydro:

- (a) within 60 days after the Effective Date but, in any event, before commencing any Work at the Site, at any time on written request from Hydro's Representative and within 14 days of each anniversary of the Effective Date, a statement from WorkSafeBC that the Contractor and each Subcontractor working on Site is registered and paying its premiums as required; and
- (b) within 60 days after the Effective Date, a statement from WorkSafeBC that a notice of project has been filed in accordance with Section 20.2 of the OHSR.

3.12 Indemnity for WorkSafeBC Non-Compliance

If the Contractor or any Contractor Person does not comply with the requirements of the *Workers Compensation Act* (British Columbia), including payment and deduction and remittance of any and all contributions, premiums, fees, assessments and charges required to be made thereunder, the Contractor will indemnify and save harmless BC Hydro from any cost, loss, liability or obligation which BC Hydro may incur as a result.

3.13 Failure to Comply with WorkSafeBC Requirements

If at any time the Work or portion of the Work is stopped because the Contractor, or any Contractor Person fails or refuses to comply with an order issued pursuant to the *Workers Compensation Act* (British Columbia), then such failure or refusal will be deemed to be a failure to comply with the requirements of the Contract to a substantial degree, to which the provisions of Section 15.1 of Schedule 2 [General Conditions] will apply.

4 SAFETY REQUIREMENTS

4.1 Emergency Action Plan

The Contractor will prepare and submit a complete emergency action plan for the Contractor's Work Area and Contractor's Safety Areas (the "**Emergency Action Plan**") to BC Hydro for Review within 90 days after the Effective Date. If the Contractor intends to perform any Work activity on the Site prior to the Emergency Action Plan having been Accepted, then, prior to commencement of any Work activity by the Contractor and, as Work activities commence or change, the Contractor will prepare and submit an Emergency Action Plan with respect to such Work activities to BC Hydro for Review. The Emergency Action Plan is intended to be a living document, but at no stage can any activity commence without the Emergency Action Plan being sufficiently developed and acceptable to Hydro's Representative, acting reasonably, with respect to such activity. The Contractor will engage a Qualified person, knowledgeable in the applicable emergency regulations, systems and procedures, including specific expertise and experience with the BC Emergency Management System, to prepare the Emergency Action Plan which will:

- (a) comply with the provisions of Part 4 of the OHSR;
- (b) align with BC Hydro's Emergency Action Plan for the Site, a copy of which is included in the Data Room (Data Room ID# 1016.Z01.001.PMO.00228.PLAN.EAP);
- (c) outline the warning systems for evacuation that will be in place;
- (d) provide the Contractor's (including all Subcontractors) emergency response protocol and procedures for safely managing potential emergency situations within the Contractor's Safety Area(s);

- (e) define the detailed safe, effective and timely evacuation procedures in the event of an emergency;
- (f) identify who is to assume incident command of an incident and how to implement the incident command system described in BC Hydro's Emergency Action Plan for the Contractor's Safety Areas;
- (g) include a requirement to enter into a mutual aid agreement with Other Contractors on the Site to receive or render assistance in the event that a contractor's emergency provisions are insufficient to deal with the response requirements of a particular emergency situation;
- (h) include the provision of rescue services for the Contractor's Personnel in accordance with the requirements of the Part 4 of the OHSR.;
- (i) include provisions for coordinating with Other Contractors;
- (j) include provisions for practice drills;
- (k) include an overarching plan for coordination of emergency action plans of Other Contractors within the Contractor's Safety Areas; and
- (l) include the provision of the Fire Response and Rescue Services.

4.2 Compliance to the Emergency Action Plan

The Contractor will implement and comply with the Emergency Action Plan, and require all Contractor Persons to comply with the Emergency Action Plan, prepared and as may be amended from time to time in accordance with the requirements of this Schedule 10 [Safety].

4.3 Amendment of the Emergency Action Plan

The Contractor will update the Emergency Action Plan as required during the performance of the Work so that it at all times covers the Work being performed. Prior to implementation of any Emergency Action Plan amendments, the Contractor will submit the proposed amendments to Hydro's Representative for Review.

4.4 First Aid Responsibility

When BC Hydro designates the Contractor as the Prime Contractor, the Contractor will be responsible for meeting the requirements of the *Workers Compensation Act* (British Columbia), to provide, operate and maintain first aid resources, supplies, equipment and facilities on the Site in accordance with first aid requirements in the OHSR.

The Contractor will at all times during the performance of the Work provide Qualified first aid attendants within the Contractor's Work Area as required by first aid requirements in the OHSR for all Contractor Personnel on Site, including their guests. The Contractor will monitor and manage the adequacy and effectiveness of its first aid program, processes and personnel during the performance of the Work on the Site.

The Contractor's first aid responsibilities include:

- (a) completing a first aid Hazard assessment for the Contractor's Work Area, including an analysis of the length of time it will take to transport a worker to a hospital (the Clinic will not meet the requirements for a hospital or medical treatment facility);

- (b) complying with the first aid requirements for total head count for the Contractor's Work Area;
- (c) providing all equipment, safety resources, first aid attendants and certification levels required to comply with the WorkSafeBC requirements for first aid coverage for the Contractor's Work Area; and
- (d) where the Contractor is Prime Contractor, providing any additional equipment, safety resources, first aid attendants and certification levels required to comply with the WorkSafeBC requirements for first aid coverage for the applicable Contractor's Safety Area in accordance with Section 2.3(l) of this Schedule 10 [Safety].

Notwithstanding the requirements in the OHSR Part 3, Schedule 3-A, the Contractor will provide an on-Site Automated External Defibrillator (AED) at strategic locations throughout the Contractor's Work Area to provide the recommended response time for AED application to all Contractor Personnel, personnel of Other Contractors and BC Hydro Persons within the Contractor's Work Area, and an emergency transport vehicle (ETV) or mobile treatment centre (MTC) that complies with WorkSafeBC's OHS Guidelines and is capable of safely transporting an injured worker on a stretcher. In addition, if evacuation from the Site is expected to take more than an hour, the Contractor will develop a plan to evacuate workers by the fastest reasonable method with a goal of reducing evacuation time to an hour or less.

The Contractor will cooperate with Northern Health Authority to establish a protocol for the emergency transportation of patients to Northern Health Authority facilities.

The Contractor will have the option of entering into a mutual aid agreement for the use of the Clinic's staff of advanced care paramedics and nurse practitioners to provide assistance in the event of medical emergencies classified by the Contractor's first aid attendants as requiring rapid transport to a medical facility.

4.5 Safety Training

The Contractor will, with respect to the performance of the Work on Site, develop, implement, monitor and update any and all training programs required to train Contractor Personnel in the Hazards of the Site and Work and the safe and proper performance of the Work. The safety training program will:

- (a) comply with all requirements of Safety Regulations;
- (b) be delivered by Qualified persons;
- (c) include orientation of all Contractor Personnel;
- (d) include training of supervisors in the implementation of the Contractor's drug and alcohol policy and related procedures;
- (e) include training on life-saving rules;
- (f) identify and address both general and task specific Hazards;
- (g) address the rights, obligations and duties of all persons engaged in the performance of the Work with respect to health and safety;
- (h) address the potential consequences of non-compliance with the Site Safety Management Plan;
- (i) be tailored to the tasks, duties and responsibilities of each person engaged in the performance of the Work;

- (j) include references to applicable training documentation for trades apprentices;
- (k) include mechanisms for participants to evaluate and provide feedback with respect to the safety training sessions;
- (l) be modified as and when required to respond to participant evaluations and feedback;
- (m) be provided free of charge to all persons engaged in the performance of the Work during normal working hours; and
- (n) include such written tests as may be necessary to ensure that participants understand the material, including with respect to life saving rules, covered in the safety training sessions.

The Contractor will maintain a list or database of all required and completed training by each of the Contractor Personnel performing Work at the Site, available at reasonable intervals for examination by BC Hydro and, where applicable, the Prime Contractor.

4.6 Failure to Comply

If the Contractor determines in its discretion that any employer or an employer's worker performing work within the Contractor's Safety Area(s) is creating an unsafe or harmful condition or is doing or failing to do something that constitutes an unsafe or harmful act, or has failed to comply with Safety Regulations, the OHSR or the SSMP, and that on written notice from the Contractor to the employer responsible for such condition, act or failure that the employer has failed or refused to take action to correct the condition, act or failure, including any condition, act or failure of a worker, then:

- (a) the Contractor may issue a written notice ("**Notice of Failure to Comply**") to the applicable employer stipulating in reasonable detail the basis for the issuance of the Notice of Failure to Comply, with a copy to Hydro's Representative;
- (b) on receipt of a Notice of Failure to Comply, BC Hydro may, in reliance on the Notice of Failure to Comply, take whatever action it deems necessary to reduce or eliminate risk to workers;
- (c) on rectification of the condition, act or failure set out in a Notice of Failure to Comply issued by the Contractor, the Contractor will withdraw the Notice of Failure to Comply by endorsing on a copy thereof confirmation of the rectification, and the Contractor will deliver a copy of the endorsed Notice of Failure to Comply to the applicable employer and to Hydro's Representative, and in reliance on such receipt BC Hydro may take steps to permit the resumption of work; and
- (d) BC Hydro will be deemed to have relied on the terms of and the reasons set out in the Notice of Failure to Comply, and a subsequently endorsed notice that the condition has been rectified, notwithstanding any subsequent investigation or inquiry of the matter by BC Hydro, which BC Hydro may but will not be obligated to undertake, and the Contractor will indemnify and save harmless BC Hydro in connection with any and all Claims arising in connection with the issuance of any Notice of Failure to Comply by the Contractor, or the subsequently endorsed notice, and any acts or omissions of BC Hydro in reliance on such notices.

5 SAFETY MEETINGS

5.1 Compliance, Participation, Attendance and Documentation

The Contractor will provide all documents, attend all meetings and conduct activities as required by the Safety Regulations.

The Contractor will cause all Other Contractors doing work within the Contractor's Safety Area(s) to hold, and maintain minutes or records of, daily safety tailboard meetings. The Contractor will cause representatives of the Contractor Personnel, including management staff and hourly employees, to attend the combined BC Hydro weekly safety meetings.

5.2 General Meetings

The Contractor's Representative and the Contractor's Site Safety Coordinator will regularly attend any Site meetings, including:

- (a) Joint Health and Safety Committee meetings required under the *Workers Compensation Act* (British Columbia);
- (b) Site safety coordination meetings; and
- (c) meetings with the safety coordinators of all other Prime Contractors to share information regarding Site Hazards and risk reduction.

In addition, the Contractor will provide advance notice, For Information Only, of all such meetings to Hydro's Representative. Representatives of BC Hydro will be permitted, but will not be obligated to, attend all such meetings.

5.3 Special Safety Related Meetings

At the commencement of the Work and at a minimum of once per calendar quarter during the term of the Contract, senior representatives of the Contractor will meet with senior representatives of BC Hydro to:

- (a) review the safety with respect to the Work, the Contractor's Work Area and the Contractor's Safety Area(s), including statistical reports, incident reports, investigations, audits and inspection results including both lagging and leading indicators and any other material relevant to the level of safety performance in the Contractor's Work Area and Contractor's Safety Area(s);
- (b) discuss learnings and identify opportunities for improvement of safety with respect to the on-going performance of the Work; and
- (c) define Corrective Action plans to proactively enhance the safety environment and safety performance for the Project and all workers.

6 AUDITS AND INSPECTIONS

6.1 Access to Contractor's Work Area, Contractor's Safety Area(s), Personnel and Records

The Contractor will allow BC Hydro Persons unrestricted access to carry out inspections and audits of the Work, worksite conditions and all pertinent fire, health and safety performance records to determine adherence to fire, safety and health objectives ("**Safety Audits and Inspections**"). BC Hydro Persons may carry out Safety Audits and Inspections without prior warning or notice to the Contractor. The Contractor will, during Safety Audits and Inspections, provide evidence of, or establish demonstrated compliance with, the Safety Regulations, the Site Safety Management Plans and Good Industry Practice.

6.2 Workplace Safety Audits

The Contractor will conduct workplace safety audits in accordance with Good Industry Practice at least once each month during the period between the Effective Date and the date of Total Completion.

Workplace safety audits will be conducted by the Contractor's Site Safety Coordinator or one of the Contractor's Construction Safety Officers. The Contractor will provide advance written notice, For Information Only, of each workplace safety audit to BC Hydro and Hydro's Representative may, but will not be obligated to, attend such audits. Workplace safety audits will measure the effectiveness of the Contractor's health and safety systems and determine the Contractor's compliance with the OHSMP, SSMP, Safe Work Procedures and Safety Regulations.

The Contractor will review all workplace safety audit findings with the Contractor's representative responsible for the area being audited and will determine and implement Corrective Action for all identified Nonconformities.

On or before the last day of each month, the Contractor will prepare and submit to Hydro's Representative, For Information Only, a completed audit report.

The Contractor will promptly remedy all unsafe conditions and procedures and provide a written report, For Information Only, to BC Hydro confirming that the applicable issue has been remedied.

6.3 Response to Safety Deficiencies

If, in the opinion of BC Hydro, the Contractor's Work or operations pose an undue Hazard, Hydro's Representative may shut down the Work or any portion of the Work until such time as the conditions are corrected. BC Hydro may verbally order the Contractor's Representative to shut down the Work or any portion of the Work effective immediately, and deliver notice in writing of the order to the Contractor's Representative within 48 hours after giving the verbal order. The Contractor will not be entitled to, nor will the Contractor make any claim for, an adjustment to the Contract Price or the time for the performance of the Work as a result of any such shutdown, or the implementation of corrective safety measures.

On or before the last day of each month the Contractor will prepare and submit to Hydro's Representative a statistical report for the month, in the form provided by Hydro's Representative, of all safety related Nonconformities. The Contractor will maintain such reports in accordance with Schedule 8 [Quality Management] and Schedule 15 [Records]. The Contractor will document the implementation of all Corrective Actions and will, on a monthly basis, provide proof of the implementation of all Corrective Actions to BC Hydro.

6.4 Annual Audit

The Contractor will cause an independent third party, acceptable to BC Hydro, to conduct audits of the Contractor's OHSMP, the SSMP and other health and safety related activities on Site, including the Contractor's performance as Prime Contractor, in order to assess the Contractor's compliance with, and implementation of, the OHSMP, SSMP and related health and safety management processes and the Contractor's performance of its obligations as Prime Contractor, as required by the Safety Regulations and this Schedule 10 [Safety]. Any such audits will include an assessment of the effectiveness of the Contractor's continuous improvement process and will otherwise be performed to one of the following external audit standards:

- (a) BC Construction Safety Alliance COR audit;
- (b) OHSAS 18001; or
- (c) ISO45001.

The Contractor will cause an independent third party to conduct an audit, as described in this Section 6.4, within six months after the Effective Date, and every three months thereafter until the Contractor has obtained passing scores on two successive audits. Thereafter, the Contractor will cause an independent third party to perform such audits not less than once each calendar year until the Total Completion date.

The Contractor may propose minor adjustments to the timing of such audits, acceptable to BC Hydro, to better align with the requirements of the Work Program and Schedule or to accommodate other significant annual reporting cycles on the Project.

The Contractor will submit the independent auditor's report for each such audit to BC Hydro within one week of the anniversary of the completion of the previous annual audit, for Review, and in any event within 14 days after receipt.

6.5 Self-Reporting

The Contractor will implement and maintain an appropriate system of health and safety management documentation, sufficient to demonstrate compliance with all applicable Safety Regulations and the requirements of this Schedule 10 [Safety]. Without limiting the preceding, the Contractor will:

- (a) report to BC Hydro weekly and monthly health and safety statistics in a form acceptable to BC Hydro;
- (b) ensure that all health and safety reporting is prepared and maintained in a format that is consistent with BC Hydro's then current health and safety reporting systems; and
- (c) provide statistical information calculated in accordance with the definitions contained in the Canadian Electricity Association (CEA) Standard *CEA A-2-2012: Standard for Recording & Measuring Occupational Injury/Illness Experience and Transportation Incidents*, including the base data from which they were derived, on a monthly basis as per the requirements of Section 7.1 of this Schedule 10 [Safety]:
 - (i) Recordable Injury Frequency Rate;
 - (ii) All Injury Frequency Rate;
 - (iii) Lost Time Injury Rate;
 - (iv) Lost Time Injury Severity Rate;
 - (v) Restricted Work Severity Rate;
 - (vi) Exposure Hours itemized according to category of worker;
 - (vii) Number of Near Misses reported; and
 - (viii) Drug test failure numbers and rates for each of Pre-employment Testing, Post Incident Testing, Reasonable Cause Testing and Return to Work Testing.

7 SAFETY INCIDENTS

7.1 Safety Incident and Near Miss Reporting

The Contractor will:

- (a) comply with all reporting requirements in Section 2.4 of this Schedule 10 [Safety], including in respect of Safety Incidents and Near Misses;
- (b) prepare and deliver to BC Hydro an investigation to determine if there were causative coordination or compliance issues with the Safety Incident or Near Miss reported in accordance with Section 2.4 of this Schedule 10 [Safety];

- (c) provide to BC Hydro, in a form acceptable to Hydro's Representative, the full particulars (including any follow-up investigations or inspections that either: (i) further describe the Safety Incident or Near Miss; or (ii) confirm that the circumstances that gave rise to the Safety Incident or Near Miss have been dealt with), of any Safety Incident or Near Miss that would not normally be reportable to WorkSafeBC;
- (d) in any event where alcohol or drug testing is performed as a result of a Safety Incident or Near Miss, the Contractor will inform BC Hydro of the outcome of that testing in a form that maintains the confidentiality of the individuals involved, and provide to Hydro's Representative, in a form acceptable to BC Hydro, a statistical report on the overall number of tests conducted, the number of non-negative results for each category of testing, and the substances responsible for the non-negative result; and
- (e) with respect to Safety Incidents and Near Misses involving a fire:
 - (i) immediately notify BC Hydro of all fires that cause damage to property, cause injury or fatalities or require firefighting resources to suppress, regardless of potential or actual injury to Contractor Personnel or the public;
 - (ii) immediately notify BC Wildfire Service of all fires involving forested or grasslands, including those that have been extinguished;
 - (iii) immediately notify WorkSafeBC of all workplace fires or explosions that had the potential to cause serious injury to a worker; and
 - (iv) will in the event of a safety incident with a moderate to major severity rating according to the Incident Management System (IMS) require the Contractor's Representative and Safety Manager to attend a meeting with senior representatives of BC Hydro within 3 days of the incident to inform BC Hydro of the progress of the incident investigation and any Corrective Actions that have been implemented.

On or before the last day of each month, the Contractor will include in the statistical report described in Section 6.3 of this Schedule 10 [Safety] all Safety Incidents and Near Misses and such report will be maintained in accordance with Schedule 15 [Records]. The Contractor will document the implementation of all Safety Incidents and Near Miss related Corrective Actions and will, on a monthly basis, provide proof of implementation of all Corrective Actions to BC Hydro, For Information Only.

7.2 Orders

The Contractor will ensure that if it or any Subcontractor receives an order issued by WorkSafeBC or any other authority having jurisdiction over safety issues on the Site (a "**Safety Order**"), the Contractor will, as soon as practicable, and in any event within 24 hours of receiving the Safety Order, notify Hydro's Representative in writing of the Safety Order.

The Contractor will copy Hydro's Representative on any correspondence between the Contractor and WorkSafeBC, including any Notice of Compliance delivered to WorkSafeBC and any inspection reports.

8 PUBLIC SAFETY

8.1 Public Safety Management Plan

The Contractor will prepare and submit for Review within 90 days of the Effective Date a plan (the “**Public Safety Management Plan**”) that:

- (a) outlines the measures, procedures and processes that the Contractor will ensure that all Contractor Persons implement, to protect the public from any Hazards associated with or generated by the performance of the Work that could affect the public (the “**Public Hazards**”);
- (b) identifies, documents, tracks and evaluates potential Public Hazards; and
- (c) documents and manages the control measures implemented by the Contractor to eliminate, control or mitigate the Public Hazards, with response priority based on BC Hydro’s Risk Ranking, as defined in the Project Public Safety Management Plan and response profile.

The Contractor will implement and comply with the Public Safety Management Plan and will revise and update the Public Safety Management Plan from time to time as necessary, but no less than quarterly (including when Hazards change, BC Hydro’s Emergency Action Plan for the Site or referenced safety documents change, the scope of Work changes or the Work activities change materially) and as required to document the control measures implemented by the Contractor to eliminate, control or mitigate Public Hazards. The Contractors’ Public Safety Management Plan will align with the Project Public Safety Management Plan.

If the Contractor becomes aware of a Public Hazard that places the public at risk, the Contractor will act immediately to eliminate, control or mitigate the Public Hazard. If the Contractor is unable to take immediate action to eliminate, control or mitigate such Public Hazard, the Contractor will immediately stop the performance of the Work, and immediately notify BC Hydro of the Public Hazard and await further notice and direction.

The Contractor acknowledges BC Hydro may release the Public Safety Management Plan to the public in full.

9 HAZARDOUS SUBSTANCES AND DANGEROUS GOODS

9.1 Hazardous Substances

- (a) The Contractor will use, transport, store, remove and dispose of Hazardous Substances on the Site in accordance with all Laws, Permits and the Contract.
- (b) Prior to the Contractor’s commencement of any Work at the Site, the Contractor will request from BC Hydro, and BC Hydro will provide to the Contractor, information concerning any Hazardous Substances at the Site of which Hydro’s Representative is aware and that might present risks to health, safety and the environment in the Contractor’s performance of the Work. The Contractor will comply with BC Hydro’s directions with respect to the removal and disposal of any such Hazardous Substances.

9.2 Contractor Hazardous Substances

- (a) The following Hazardous Substances are “**Contractor Hazardous Substances**” for all purposes of this Contract:

- (i) any Hazardous Substances that are brought onto, or created at, the Site by the Contractor or any other Contractor Person and that are not authorized for incorporation into the permanent Work in accordance with the Contract; and
 - (ii) any pre-existing Hazardous Substances or other Hazardous Substances the Contractor discovers or encounters on the Site, but only to the extent the Contractor or another Contractor Person directly or indirectly aggravates, exacerbates, migrates or otherwise increases the area or cost of dealing with such Hazardous Substances through their negligence or breach of their obligations under the Contract, including any failure to comply with the CEMP.
- (b) Without limiting the obligations of the Contractor under any other provision of this Section 9 or any other provision of the Contract, the Contractor will promptly at any time, if requested by BC Hydro or by any Governmental Authority pursuant to Environmental Laws, remove all Contractor Hazardous Substances from the Site and any adjacent lands and waters in accordance with this Schedule 10 [Safety] and the requirements of any Governmental Authority pursuant to Environmental Laws. Any request by BC Hydro for the Contractor to remove Hazardous Substances where such removal would not otherwise be required under the Contract will entitle the Contractor to claim a Change pursuant to the provisions of Section 4.1 of Schedule 12 [Changes], except that the Contractor's notice obligation under Section 4.1 of Schedule 12 [Changes] will be to submit a Change Report to Hydro's Representative promptly upon the Contractor's receipt of such request.
- (c) Notwithstanding the foregoing, the Contractor will, prior to the completion of the Work, remove from the Site and any adjacent lands and waters all Contractor Hazardous Substances that will not remain part of the permanent Work.

9.3 Discovery of Hazardous Substances

- (a) If, in the performance of the Work, the Contractor discovers or encounters material on the Site which is, or which appears to be, a Hazardous Substance that has not been identified in the Contract or is in receipt of information, which a reasonable person would consider reliable, that a Hazardous Substance may be encountered in the performance of the Work on the Site, and such Hazardous Substance might present risks to health, safety or the environment in the Contractor's performance of the Work, then the Contractor will immediately stop its activities in the affected area and give notice to Hydro's Representative and the Contractor will comply with BC Hydro's directions with respect to the removal and disposal of any such Hazardous Substances.
- (b) Not Used.
- (c) The circumstances described in this Section 9.3, when encountered by the Contractor, will, except to the extent such Hazardous Substance is a Contractor Hazardous Substance, entitle the Contractor to claim a Change pursuant to the provisions of Section 4.1 of Schedule 12 [Changes], except that the Contractor's notice obligation under Section 4.1 of Schedule 12 [Changes] will be to submit a Change Report to Hydro's Representative promptly upon the Contractor becoming aware of such Site conditions, or, in any event, promptly after the date when the Contractor should reasonably have become aware of such Site conditions.
- (d) Nothing in this Section 9.3 will be construed as imposing any liability on the Contractor with respect to Hazardous Substances that existed at the Site prior to the commencement of the Contractor's Work at the Site, including for the disposal of such Hazardous Substances, except to the extent that such pre-existing Hazardous Substances are Contractor Hazardous Substances.

9.4 Use of Hazardous Substances in the Permanent Work

The Contractor will not use or permit any other Contractor Person to use any Hazardous Substance that will remain part of the permanent Work except in accordance with the Contract and, if any Hazardous Substance is used in the permanent Work not in accordance with the Contract, the Contractor will remove that Hazardous Substance and replace it with a suitable alternative.

The Contractor may request Hydro’s Representative for an exception to this Section 9.4 if the Contractor has identified the presence of a Hazardous Substance in the permanent Work and no suitable alternatives are available.

9.5 Use of Hazardous Substances not part of the Permanent Work

If any Hazardous Substance that will not remain part of the permanent Work is used by the Contractor or any other Contractor Person other than in accordance with the Contract, the Contractor will:

- (a) if practicable remove that Hazardous Substance and replace it with a suitable alternative; or
- (b) implement an exposure control plan as described in Section 5.54 of the OHSR.

9.6 Use of Hazardous Substances in Protective Coatings

Without limiting Section 9.4 of this Schedule 10 [Safety], where protective coatings are used and will remain part of the permanent Work, the Contractor:

- (a) will ensure that the heavy metals concentrations in the coatings will under no circumstances exceed the levels outlined in Table 9.5 below; and
- (b) will, no less than 90 days prior to the use of any coatings that will remain part of the permanent Work, submit to Hydro’s Representative for Review a metals content analysis, the manufacturer’s specifications, material safety data sheets, and any other related information, including formulation information with respect to colour tint where applicable, for each such coating.

For certainty, this Section 9.6 will apply to all coating systems that the Contractor proposes for use with respect to the permanent Work.

Table 9.5 – Maximum acceptable heavy metals concentrations in protective coatings.

	Arsenic	Beryllium	Cadmium	Cobalt inorganic	Lead	Mercury	Nickel
Maximum concentration in paint mg/kg dry sample	6	0.5	0.3	15	2	2	2

9.7 Banned Products or Hazardous Substances

Notwithstanding anything in Sections 9.4, 9.5 and 9.6 of this Schedule 10 [Safety], the Contractor will ensure that no substances, materials or coatings:

- (a) containing any of the substances identified in Appendix 10-7 [Banned Products] or regulated by Environment and Climate Change Canada;
- (b) that contain detectable quantities of mercury, asbestos, polychlorinated biphenyls (PCBs), or lead; or

- (c) that have a radiation dose at the surface exceeding 0.5µSv/h as measured by a Geiger Muller detector, without the prior written consent of Hydro's Representative,

are used or incorporated into the Work, or brought on to the Site, irrespective of whether such use or incorporation into the Work, or bringing on to the Site of such substances, materials or coatings, is permitted by Laws.

9.8 Hazardous Substances Procedures

- (a) The Contractor will engage a Qualified Industrial Hygienist to develop systems, procedures and methods (the "**Hazardous Substances Procedures**") for handling, containing, transporting and disposing of Hazardous Substances, as required for the performance of the Work in compliance with Laws, Permits and the Contract.
- (b) The Contractor will, prior to the commencement of the use of a Hazardous Substance on the Site, submit to Hydro's Representative, For Information Only, a list of such Hazardous Substances. The Contractor will provide to Hydro's Representative on request a sample of any Hazardous Substance proposed to be used at the Site, for testing.
- (c) The Contractor will implement and comply with the Hazardous Substances Procedures, subject to the provisions of this Schedule 10 [Safety].
- (d) During the performance of the Work, the Contractor will provide notice to Hydro's Representative and, where applicable, the Prime Contractor, of any additional Hazardous Substances generated or encountered by the Contractor, or brought on to the Site by the Contractor in the performance of the Work.

9.9 Specialized Hazards

BC Hydro has identified the potential for exposure in the performance of the Work to specialized hazards, including silica, other hazardous substances and confined spaces (each, a "**Specialized Hazard**"). In some circumstances, the potential exposure to Specialized Hazards may arise due to the Work of Other Contractors within and adjacent to the Contractor's Safety Area. The Contractor will retain a Qualified Industrial Hygienist to address all known Specialized Hazards by preparing Safe Work Procedures, including, as applicable, testing, sampling and air monitoring using equipment, devices, methods and procedures that meet the requirements of all applicable Safety Regulations, including the OHSR requirements. The Contractor will ensure any such Safe Work Procedures are implemented and that the documentation necessary to verify compliance is collected and kept as part of the project records. For clarity, potential exposure to respirable crystalline silica dust produced by Other Contractors is one such Specialized Hazard for which the Contractor will be required to produce Safe Work Procedures.

9.10 Dangerous Goods

All Dangerous Goods used, stored, transported, removed, disposed of or destroyed will be dealt with in accordance with Law and the Contract. The Contractor will bring on to the Site only those Dangerous Goods that are required for the performance of the Work on the Site. Dangerous Goods will not be brought on to, used or stored on the Site without the prior written consent of Hydro's Representative. The Contractor will make material safety data sheets for all Dangerous Goods immediately accessible at all times, on the Site, for all Contractor Personnel and Hydro's Representative.

9.11 Dangerous Goods Occurrence

If, during the performance of the Work or in the course of transporting Dangerous Goods to or from the Site, the Contractor is involved in a Dangerous Goods occurrence, the Contractor will promptly notify Hydro's Representative in writing.

9.12 Cooperation and Collaboration

The Contractor will cooperate with, and cause all Contractor Persons, to cooperate with, all incident investigations led by the Contractor's Qualified investigator, Hydro's Representative, the Prime Contractor's representative, WorkSafeBC or any other authority having jurisdiction over the Site. The Contractor will comply with all legal requirements associated with any incident investigation, including any orders, penalties, prosecutions or appeals arising from such incident investigation.

9.13 Respirable Crystalline Silica Dust

The Contractor can expect to encounter Respirable Crystalline Silica Dust and other nuisance dusts in the Contractor's Safety Area that originate from both natural sources and Fugitive Emissions from the activities of other Persons outside of the Contractor's Safety Area. The Contractor can expect to encounter RCS Dust originating from outside of the Contractor's Safety Area at levels exceeding 0.025 milligrams per cubic metre (mg/m³), calculated as a time weighted average over a period of 8 hours, up to 30 working days per calendar year.

The Contractor will, prior to any activity or process that may expose Persons to RCS dust, in accordance with the OHSR and Section 9.9 of this Schedule 10 [Safety], engage a Qualified Industrial Hygienist to prepare a risk assessment and silica exposure control plan, for each Work activity and submit such assessments and plans to BC Hydro for Review.

The Contractor will control all sources of RCS Dust to reduce exposure to Persons anywhere on the Site to levels that are As Low As Reasonably Achievable (ALARA) in accordance with Part 5 of the OHSR, Measures required to control RCS Dust and other nuisance dusts will include watering, applying chemical suppressant, limiting travel speed of construction vehicles, containment or implementing other dust control measures, as required. Increased application of control measures will be required whenever conditions cause Fugitive Emissions and Work activities may have to be curtailed during times of high winds.

The Contractor will use high efficiency particulate (HEPA) cabin air filters on all earthmoving equipment. Stationary equipment such as aggregate crushing, sorting or conveying will use dust containment measures, watering, or operator enclosure air filtration systems in accordance with the OHSR requirements, manufacturer's instructions or as otherwise required to reduce exposure to Persons anywhere on Site to ALARA levels. Persons exposed to levels of RCS Dust that exceed the levels permitted by the OHSR, and who are not otherwise protected, will be required to wear appropriate personal protective equipment in accordance with the OHSR and the Contractor's silica exposure control plan.

10 FIRE SAFETY

10.1 General Requirements

The Contractor will:

- (a) be responsible for all fire protection, fire prevention and fire response rescue services for its Work and for the provision of Fire Response and Rescue Services for all persons in the Contractor's Safety Area;
- (b) appoint a Qualified person, acceptable to Hydro's Representative acting reasonably, as the fire safety program manager in accordance with NFPA 241 where the role is described as a "Fire Prevention Program Manager" (the "**Fire Safety Program Manager**"). The Fire Safety Program Manager will:

- (i) have the authority with respect to Contractor Persons to enforce the provisions of the applicable Fire Codes;
 - (ii) have the necessary experience, qualification, certifications and knowledge of the Fire Codes, available fire protection systems, fire protection procedures and Good Industry Practice to fully administer the Fire Safety Program, including at least 10 years' experience in a combination of industrial fire safety and industrial fire engineering or at least 5 years' experience with a post-secondary degree or diploma in fire safety;
 - (iii) ensure the maintenance of inspection records, incident investigation records and any other documentation required to demonstrate compliance with the Fire Safety Program and the Fire Codes;
 - (iv) be responsible for ensuring that proper training in the use of protection equipment has been provided to all persons that may be called upon to use it;
 - (v) be responsible for ensuring the presence of adequate numbers and types of fire protection devices and appliances and for their proper maintenance in the Contractor's Safety Area (s);
 - (vi) be responsible for supervising the permit system for hot work operations within the Contractor's Safety Area;
 - (vii) be responsible for authorizing impairments to the fire protection and life safety systems within the Contractor's Safety Area; and
 - (viii) be responsible for providing and managing the Fire Response and Rescue Services;
- (c) ensure that, for construction-specific fire Hazards and risks, all Work in the Contractor's Safety Area is carried out in accordance with the Safety Regulations, including:
- (i) the BC Fire Code;
 - (ii) the BC Building Code;
 - (iii) the BC Wildfire Act and Regulations;
 - (iv) NFPA 51B [Standard for Fire Prevention During Welding, Cutting, and Other Hot Work];
 - (v) NFPA 241 [Standard for Safeguarding Construction, Alteration, and Demolition Operations];
 - (vi) NFPA 600 [Standard on Facility Fire Brigades];
 - (vii) NFPA 850 [Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations];
 - (viii) NFPA 1081 [Standard for Industrial Fire Brigade Member Professional Qualifications];
 - (ix) NFPA 1720 [Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Department];
 - (x) OSH Standard 501 – [Fire and Safety Plans for Buildings];

- (xi) OSH Standard 505 – [Fire Protection Program];
- (xii) OSH Standard 509 – [Fire Extinguisher Maintenance]; and
- (xiii) British Columbia Fire Service Minimum Training Standards – Structure Firefighters Competency and Training Playbook, Second Edition Amended: May 2015

(collectively, the “**Fire Codes**”).

10.2 Local Authority

Wherever the Fire Codes (except for the BC Wildfire Act & Regulations) refer to the “Local Authority” or authority having jurisdiction, it will mean the BC Hydro Fire Marshal.

10.3 Contractor’s Fire Protection Design Basis Document

The Contractor will retain a Fire Protection Engineer, acceptable to Hydro’s Representative acting reasonably, to prepare and submit to BC Hydro, for Review, no more than 90 days after the Effective Date, the Contractor’s Fire Protection Design Basis Document for the performance of the Work. This document must identify the fire and life safety hazards and risks associated with all Work in the Contractor’s Safety Area and the measures the Contractor will implement in the form of fire prevention, protection or response as required by the Fire Codes. The document will also be required to specifically address any requirements for Fire Response and Rescue Services as described in Section 10.16 of this Schedule 10 [Safety]. The Contractor will update the Contractor’s Fire Protection Design Basis Document and submit to BC Hydro for Review as necessary (but at least annually) to ensure that all onsite activities to be performed within the Contractor’s Safety Area are fully considered by the report.

10.4 Fire Safety Program

The Contractor will prepare and submit to BC Hydro, for Review, no more than 90 days after the Effective Date, a fire safety program prepared by a Qualified person in accordance with NFPA 241 [Safeguarding, Construction, Alteration, and Demolition Operations] and NFPA 850 [Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations] and the FireSmart Canada guidelines (the “**Fire Safety Program**”). The Fire Safety Program must be reviewed by the Fire Safety Program Manager who will be required to verify that the Fire Safety Program complies with the OHSR, the Fire Codes, the Safety Submittal Guidance Document, the provisions of this Schedule 10 [Safety] and which will align with BC Hydro’s Construction Safety Management Plan. The Contractor will implement the Fire Safety Program, which will be updated and submitted to BC Hydro for Review as necessary (but at least annually) to ensure that all onsite activities to be performed within the Contractor’s Safety Area are fully considered.

The following fire safety related plans are required to be included in the Fire Safety Program:

- (a) fire safety plans, as required by the BC Fire Code and *OSH Standard 501* – “Fire and Safety Plans for Buildings” for all Contractor-designed buildings, structures and facilities within the Contractor’s Safety Area all of which will, at a minimum, include the content outlined in the BC Hydro Fire Safety Plan template, a copy of which is included in the Data Room (Data Room ID# 1016.Z.06.001.ENZ.00028.TEMP) and, for the fire safety plans specific to construction Hazards, comply with NFPA 241 [Standard for Safeguarding Construction, Alteration, and Demolition Operations] and NFPA 850 [Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations];
- (b) pre-fire incident plans as required by NFPA 1620 [Standard for Pre-Incident Planning], including a description of any response limitations and a program for rescue, firefighting or fire safety personnel to become familiar with buildings, structures, stationary operating plant and facilities

within the scope of their service, through pre-incident planning and fire safety inspections, for each occupied building, structure or facility and each building, structure or facility housing critical fire protection equipment, within the Contractor's Safety Area;

- (c) a wildfire hazard assessment and abatement plan (the "**Wildfire Hazard Assessment and Abatement Plan**") as required by the *Wildfire Act* (British Columbia) and regulations, which will be completed by a Registered Professional Forester or Registered Forest Technician registered and in good standing with the Association of BC Forest Professionals and who has applicable wildfire behaviour experience and training;
- (d) an impairment control plan for responding to planned and unplanned impairments of any fire and life safety system or equipment, including procedures for promptly notifying Contractor Personnel, personnel of Other Contractors and BC Hydro Persons within the area impacted by the impairment of the nature and extent of the impairment and appropriate mitigating measures to manage the impairment and limit impacts to workers as a result of the fire and life safety system or equipment impairment;
- (e) a plan for managing hot work operations as such are described in Section 10.11 of this Schedule 10 [Safety];
- (f) the specific plans described in Sections 10.4(h), 10.4(i), and 10.4(j) below; and
- (g) a fire response and rescue plan in accordance with the requirements of Part 4 of the OHSR.

(collectively, the "**Fire Safety Related Plans**").

The Contractor will submit to BC Hydro for Review:

- (h) a fire safety plan for each Contractor-designed building, structure or facility within the Contractor's Work Area, as described in Section 10.4(a) of this Schedule 10 [Safety], at least 30 days prior to use or occupancy;
- (i) pre-fire incident plan for each occupied building, structure or facility and each building, structure or facility housing critical fire protection equipment, within the Contractor's Work Area, as described in Section 10.4(b) of this Schedule 10 [Safety], at least 30 days prior to use or occupancy; and
- (j) a Wildfire Hazard Assessment and Abatement Plan and the fire and life safety system impairment control plan, as described in Section 10.4(c) of this Schedule 10 [Safety], within 90 days after the Effective Date, and in any event prior to the commencement of the Work on the Site.

The Contractor will update each of the relevant Fire Safety Related Plans and, to the extent necessary, the Fire Safety Program, prior to any change in use, occupancy or hazard assessment, or as required during the performance of the Work so that the Fire Safety Related Plans and Fire Safety Program at all times fully address the Work being performed.

The Contractor acknowledges BC Hydro may share the Fire Safety Program, or any of the Fire Safety Related Plans, with municipal, regional or other Governmental Authorities at BC Hydro's discretion.

10.5 Annual Fire Risk Management Audit

The Contractor will retain an independent Fire Protection Engineer, acceptable to Hydro's Representative acting reasonably. The Fire Protection Engineer will conduct audits of the Contractor's Fire Safety Program, the Fire Response and Rescue Services capabilities, overall fire code compliance, fire safety, prevention, and response related plans and activities for all Work in the Contractor's Safety Area. This

audit will provide an assessment the Contractor's compliance with, and implementation of, the OHSMP, SSMP, the Fire Safety Related Plans and any related fire risk management processes, as required by the Fire Codes, the Safety Regulations and this Schedule 10 [Safety]. The Fire Protection Engineer will be required to prepare a report, within 21 days of the completion of each audit, on the results of each audit performed. The first such audit will take place within 6 months of the Effective Date. Thereafter, the Contractor will cause the audits to take place not less than annually until the Total Completion date. The Contractor may propose minor adjustments to the timing of such audits, acceptable to BC Hydro, to better align with the requirements of the Work Program and Schedule or to accommodate other significant reporting cycles on the Project.

The Contractor will submit the Fire Protection Engineer's audit report for each such audit to BC Hydro For Information Only within 7 days after receipt.

10.6 Fire Inspector

Fire inspections of all work in Contractor's Safety Area will be conducted on at least a weekly basis by a Qualified fire inspector acceptable to Hydro's Representative acting reasonably (the "**Fire Inspector**"). A monthly fire safety inspection report for the Work will be produced in a format acceptable to Hydro's Representative and provided to Hydro's Representative on or before the last day of each month.

The Fire Inspector must attain and maintain:

- (a) Fire Inspector Level II in accordance with NFPA 1031[Standard for Professional Qualifications for Fire Inspector and Plan Examiner];
- (b) a minimum 5 years' experience in industrial and construction fire safety in Canada; and
- (c) working knowledge of BC Fire Code, Building Codes and of the management of wildfire risks in BC.

Hydro's Representative, in their discretion, may accept an alternate equivalent set of knowledge, experience and qualifications.

10.7 Fire Prevention

The Contractor will:

- (a) take all reasonable precautions in accordance with the Fire Codes required to protect:
 - (i) all persons within the Contractor's Safety Area, including Contractor Personnel, personnel of Other Contractors and BC Hydro Persons;
 - (ii) the buildings, structures, facilities and systems provided as part of the Work;
 - (iii) other equipment, buildings, structures and facilities, including equipment and systems such as turbine and generator equipment and auxiliary equipment located within the powerhouse; and
 - (iv) adjacent property including forests, grasslands and assets on those adjacent properties.
- (b) to the extent the Contractor is responsible for design in accordance with Clause 2.1.1.10 of Appendix 6-1 [Scope of Work], ensure the Work complies with the Fire Codes;

- (c) include in the Fire Safety Program, the Fire Safety Related Plans and the Fire Protection Design Basis Document, plans to manage all sources of fuel and combustible materials that are required for performance of the Work, specifically including:
- (i) removal and safe disposal of flammable and combustible waste materials, dust and debris from the Contractor's Work Area at the end of each shift, or more frequently as necessary;
 - (ii) storage of materials susceptible to spontaneous ignition, such as oily rags, in listed disposal containers;
 - (iii) bringing combustible forms, or form lumber, into the powerhouse only when needed for performance of the Work;
 - (iv) prompt removal upon stripping or dismantling from any enclosed work areas of any combustible formwork, scaffolds or other temporary structures. Under no circumstances will stripped formwork, scaffolds or other temporary structures be allowed to accumulate in any enclosed areas;
 - (v) separation of combustible materials in Laydown Areas by clear space to allow access for the types of fire-fighting equipment expected to be deployed;
 - (vi) measures to mitigate fire risk whenever combustible materials are used for temporary structures such as weather enclosures or walkways;
 - (vii) at all times, maintain free and unimpeded access to all fire extinguishers and associated equipment, and means of egress (temporary or permanent), including fire escapes, stairways, and passageways within the Contractor's Work Area; and
- (d) comply with the Fire Safety Program, the Fire Safety Related Plans and the Fire Protection Design Basis Document.

10.8 Wildfire Prevention

With respect to the prevention of wildfires within the Contractor's Safety Area, the Contractor will:

- (a) ensure that all Work is carried out in accordance with the *Wildfire Act* (British Columbia) and regulations and the Wildfire Hazard Assessment and Abatement Plan;
- (b) implement the FireSmart guidelines, as described in the *FireSmart Guidebook for the Oil and Gas Industry*, and in accordance with the Wildfire Hazard Assessment and Abatement Plan;
- (c) ensure accumulations of dry fuel, including non-merchantable or non-restoration related clear vegetation, are managed in accordance with the *Wildfire Act* (British Columbia) and the Wildfire Hazard Assessment and Abatement Plan and do not constitute undue fire risks; and
- (d) ensure that the Contractor's Safety Area is protected by a wildfire response capability in accordance with Appendix 10-8 [Fire Brigade and Wildfire Response Requirements] and with the Wildfire Hazard Assessment and Abatement Plan prepared in accordance with Section 10.4(c) of this Schedule 10 [Safety].

10.9 Use of Vehicles and Equipment

Notwithstanding any exceptions or exemptions contained in the Fire Codes, and unless specifically otherwise permitted by the Fire Safety Related Plans and the Fire Protection Design Basis

Document and all mitigative measures required by these plans are in place and unimpaired the Contractor will:

- (a) use only electrically operated material handling machinery inside any enclosed portions of the powerhouse or spillway structures;
- (b) not use vehicles or equipment requiring gasoline, liquefied petroleum gas, and other hydrocarbon fuels inside any enclosed portions of the powerhouse or spillway structures;
- (c) ensure that service areas for any construction equipment are not located inside the powerhouse or spillway structures;
- (d) ensure that fuel storage for any internal combustion engines is not located inside the powerhouse or spillway structures;
- (e) not park any vehicles or other mobile equipment in the powerhouse or spillway structures nor in areas where there is tall, dry vegetation;
- (f) not leave any vehicles or equipment idling when parked for any extended period of time, except under extreme cold winter conditions and in controlled areas; under no circumstances will vehicles or equipment be left idling inside the powerhouse or enclosed areas of the spillway structures;
- (g) not use temporary buildings, including shipping containers, within the enclosed areas of the powerhouse or spillway structures; and
- (h) use only fire rated panels, tarps, plastic films and similar products to construct temporary enclosures in accordance with Section 5.2 of the Construction Safety Management Plan.

10.10 Egress Routes

Notwithstanding any exceptions or exemptions contained in the Fire Codes, and unless specifically otherwise permitted by the Fire Safety Related Plans and the Fire Protection Design Basis Document and all mitigative measures required by these plans are in place and unimpaired, the Contractor will ensure that:

- (a) all construction work areas have at least two egress routes in different directions;
- (b) all egress routes have the lighting and signage required by the Fire Codes; and
- (c) egress routes are kept clear of obstructions at all times.

10.11 Hot Work Operations

The Contractor will only conduct hot work in accordance with the BC Fire Code, NFPA 51B and NFPA 241. The Contractor will submit to BC Hydro For Information Only Safe Work Procedures for managing all work involving welding, cutting, brazing, soldering, grinding, thawing pipe, torch applied roofing, temporary heating or any other activity described as hot work in the Fire Codes or any similar activity.

The Contractor will appoint a Qualified person to prepare and issue, or cause to be prepared, issued and recorded, hot work permits for all hot work including hot work done by Other Contractors within the Contractor's Safety Area, and will document all such hot work permits.

10.12 Training

The Contractor will develop and implement a training program for fire prevention, fire safety planning, fire hazards and the safe and effective use of portable firefighting equipment. The Contractor will administer the training program to each of the Contractor Personnel prior to permitting them to commence Work on the Site and will re-administer the training program to all Contractor Personnel annually. The Contractor will document all training and drills and ensure such documentation is available to BC Hydro on request.

10.13 Fire Protection

The Contractor will ensure that all Contractor-designed buildings, structures and facilities with a fire alarm or fire sprinkler system are connected to a central Site fire alarm monitoring system that includes an alphanumeric site paging and air raid style area signalling.

The Contractor will provide fire extinguishers in quantities, types and sizes appropriate for the fire related risks within the Contractor's Work Area and in compliance with *OSH Standard 505* – "Fire Protection Program", the BC Fire Code, and NFPA 10 [Standard for Portable Fire Extinguishers].

Fire extinguishers that are used or removed for inspection, maintenance or servicing will be immediately replaced.

Where the Contractor provides temporary fire sprinkler systems, the Contractor will provide a water supply in accordance with the provisions of part 16.7 of NFPA 850. The Contractor will submit an engineering design of the water supply system for each temporary fire sprinkler system, to BC Hydro For Information Only prior to commencing installation of the applicable fire sprinkler system.

10.14 Inspection, Testing and Maintenance of Fire Protection and Life Safety Systems

For the purpose of this Schedule 10 [Safety], the following definitions will apply to all regular fire protection and life safety system inspections, testing and maintenance requirements of the Fire Codes:

- (a) "check" means a visual observation by a knowledgeable person to ensure that devices or systems are in place, and no obvious damage or obstructions to proper operation exist;
- (b) "inspect" means a physical examination to determine that a device or system will apparently perform in accordance with its intended function; and
- (c) "test" means operation of a device or system to ensure that it will perform in accordance with its intended operating functions.

The Contractor will ensure that all inspections, testing or maintenance of fire protection and life safety systems or equipment, are provided by a Qualified person with appropriate certification from the Applied Science Technicians and Technologist of BC.

The Contractor will establish procedures, schedules and notification to occupants, external agencies (as applicable) and BC Hydro for the testing, inspection and maintenance of fire protection and life safety systems and equipment.

Prior to any planned impairment of a fire protection and life safety system, the Contractor will prepare and submit to BC Hydro For Information Only a documented impairment control plan for such planned impairment. The documented impairment control plan will include procedures for notification of all Contractor Personnel, personnel of Other Contractors and BC Hydro Persons within the area impacted by the impairment.

Within 12 hours of discovering any unplanned impairment of a fire protection and life safety system, the Contractor will prepare and submit to BC Hydro For Information Only a documented impairment control plan for the unplanned impairment.

10.15 Use of Shipping Containers

The Contractor will ensure its use of shipping containers on Site complies with Appendix A of the Fire Chief's Association of British Columbia's Intermodal Shipping Container Fire Safety and BC Hydro's Fire Marshal's Bulletin: Shipping Container, a copy of which is available in the Data Room (Data Room ID# 1016.REF.01008). The use of trailers, combustible rooms, buildings or shipping containers within the powerhouse or any other building or enclosed space will only be considered based on acceptance of a design proposal sealed by a Fire Protection Engineer, and accepted by BC Hydro.

10.16 Fire Response and Rescue Services

The Contractor will provide, or cause to be provided in whole or in part through an agreement(s) with a municipal fire department and/or an Other Contractor, the Fire Response and Rescue Services including the Industrial Fire Brigade and Wildfire Response (or equivalent) that:

- (a) is staffed with trained and qualified members (including "support members" (as defined in NFPA 1081)), equipped and managed in accordance with the Fire Codes, the Safety Regulations, Appendix 10-8 [Fire Brigade and Wildfire Response Requirements] of this Schedule 10 [Safety] and Good Industry Practice;
- (b) provides "Full Service" as defined by the British Columbia Fire Service Minimum Training Standards – Structure Firefighters Competency and Training Playbook (second edition, amended May 2015);
- (c) is in place in accordance with the Fire Safety Program and the Fire Safety Related Plans, but no later than the commencement construction of the permanent works until Total Completion (unless otherwise accepted by Hydro's Representative, acting reasonably).

To the extent that the Contractor retains a local fire department to provide some or all of the Industrial Fire Brigade, the Contractor will not be required to treat the fire department as a Subcontractor nor will the fire department be required to have a Drug and Alcohol Testing Policy that is in accordance with the Site C Contractor's Drug and Alcohol Testing Policy requirements.

The Contractor will ensure an adequate supply of water for firefighting purposes in accordance with Part 16.7 [Underground Mains, Hydrants and Water Supplies] of NFPA 850 or as otherwise required by the Fire Department or the Contractor's Fire Protection Design Basis Document, Fire Safety Program or the Fire Codes.

GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

APPENDIX 10-3

AIR QUALITY

TABLE OF CONTENTS

1	INTERPRETATION.....	1
1.1	Definitions	1
2	GENERAL AIR QUALITY REQUIREMENTS	1
2.1	Containment of Airborne Contaminants	1
2.2	Discovery or Release of Airborne Contaminants.....	1
3	AIR QUALITY MONITORING PLAN.....	2
3.1	Preparation and Submission.....	2
3.2	Review and Amendment of AQMP	2
3.3	Compliance with AQMP	3
4	COMPLIANCE AND REMEDIATION.....	3
4.1	Independent Measurements	3
4.2	Remediation of Non-Compliance.....	3
4.3	Remediation of Contaminated Equipment or Surfaces	3

GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

APPENDIX 10-3

AIR QUALITY

1 INTERPRETATION

1.1 Definitions

In this Appendix 10-3 [Air Quality], in addition to the definitions set out in Schedule 1 [Definitions and Interpretation]:

“**Air Quality Monitoring Plan**” or “**AQMP**” has the meaning set out in Section 3 of this Appendix 10-3 [Air Quality];

“**Airborne Contaminant**” means a harmful or irritant material, or nuisance dust, foreign to the normal composition of a substance, or a material that varies the normal proportions of components in a mixture such as air;

“**Airborne Contaminant Producing Work**” means any Work at the Site, including grinding, painting, cleaning and welding, that has the capacity to generate or disturb any contaminants; and

“**Enclosed Area**” mean any area on the Site that is enclosed, whether temporary, permanent or naturally occurring, including the powerhouse.

2 GENERAL AIR QUALITY REQUIREMENTS

2.1 Containment of Airborne Contaminants

The Contractor will at all times contain all Airborne Contaminants including debris, dirt, particulates and fumes, generated by Airborne Contaminant Producing Work, in order to prevent:

- (a) contamination of equipment that is part of the Work including mechanical and electrical equipment;
- (b) contamination of the equipment, including the generating units;
- (c) contamination of adjacent work areas and equipment under control of Other Contractors or BC Hydro;
- (d) fire and explosion risks associated with Airborne Contaminants; and
- (e) Hazards to workers, specifically the requirement that workers in any adjacent work area wear dedicated PPE to stay within OHSR exposure limits.

All Airborne Contaminant Producing Work will only be performed outdoors or within an Enclosed Area that complies with the containment requirements specified in Section 01 51 01 [Construction Heating and Ventilation] of Appendix 6-2 [Technical Specifications].

2.2 Discovery or Release of Airborne Contaminants

If, in the performance of the Work, the Contractor discovers, encounters, releases or permits the release of any Airborne Contaminants within an Enclosed Area, then the Contractor will:

- (a) immediately stop its activities in the affected area;
- (b) give notice to Hydro's Representative of the location and type of Airborne Contaminant; and
- (c) comply with BC Hydro's directions with respect to the mitigation, removal and disposal of such Airborne Contaminants.

3 AIR QUALITY MONITORING PLAN

3.1 Preparation and Submission

Concurrently with submission of the Construction HVAC Plan pursuant to Section 01 51 01 [Construction Heating and Ventilation] of Appendix 6-2 [Technical Specifications], and in any event, at least 30 days before commencing any Airborne Contaminant Producing Work, the Contractor will prepare and submit to BC Hydro for Review an air quality monitoring plan (the "AQMP"). The AQMP will be prepared, or approved, by a Qualified Industrial Hygienist who will be required to certify that the AQMP has been prepared in accordance with the requirements of this Section and all applicable Safety Regulations. The AQMP will include:

- (a) schedule, type and method of air quality measurements to be made as a function of the type and schedule of Airborne Contaminant Producing Work being performed and the air quality thresholds, as described in Section 01 51 01 [Construction HVAC] of Appendix 6-2 [Technical Specifications];
- (b) the location of all measurements in the Contractor's Work Area, including the Operating Zones;
- (c) a requirement that, prior to handover of the each Operating Zone to the TG Contractor, the Contractor will take a series of powerhouse air quality and powerhouse cleanliness measurements which will:
 - (i) be used as part of the basis of acceptance of the Work and will be repeated until air quality is within acceptable limits;
 - (ii) once accepted, be used to form a baseline of acceptable levels of both air quality and cleanliness during construction; and
 - (iii) be made available to all contractors on Site; and
- (d) The Contractor will take routine air quality measurements in accordance with the Contractor's AQMP. These measurements will be:
 - (i) compared to the baseline acceptable air quality levels measurements; and
 - (ii) made available to the Hydro's Representative within three days.

3.2 Review and Amendment of AQMP

The Contractor will review and amend the AQMP from time to time as necessary, but no less than annually, to ensure that the AQMP at all times complies with the requirements set out in Section 3.1 of this Appendix 10-3 [Air Quality]. The Contractor will not implement any proposed amendments to the AQMP until the applicable amendments have been submitted for Review and returned with an endorsement confirming that BC Hydro has no objection to the amendments in accordance with Schedule 5 [Submittals Procedure].

3.3 Compliance with AQMP

The Contractor will implement and comply with the AQMP, and require all Contractor Persons to comply with the AQMP, and it as may be amended from time to time in accordance with the requirements of this Appendix 10-3 [Air Quality].

4 COMPLIANCE AND REMEDIATION

4.1 Independent Measurements

Hydro's Representative may take routine air quality measurements within Enclosed Areas at the discretion of the Hydro's Representative during the Work.

4.2 Remediation of Non-Compliance

If the Contractor fails to maintain the air quality in Enclosed Areas within the air quality thresholds described in Section 01 51 01 [Construction Heating and Ventilation] of Appendix 6-2 [Technical Specifications], the Contractor will remediate such to the satisfaction of the Hydro's Representative. Repeated measurements of air quality or plant cleanliness above acceptable limits will be cause for cessation of the Work until remedial measures are implemented to the satisfaction of the Hydro's Representative. The Contractor will not be entitled to, nor will the Contractor make any claim for, an adjustment to the Contract Price or the time for the performance of the Work as a result of any such cessation of the Work, or the implementation of remedial measures.

4.3 Remediation of Contaminated Equipment or Surfaces

If the equipment provided as part of the Work, including equipment in Enclosed Areas, is contaminated by Airborne Contaminants generated by the Work, the Contractor will restore the contaminated equipment and any other equipment or surfaces to their pre-contaminated states or replace the affected equipment if restoration is not possible.

GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

APPENDIX 10-5

AIRCRAFT REQUIREMENTS

1.1 Compliance with BC Hydro Aviation Safety Requirements

All Contractor use of charter helicopter and charter fixed-wing aircraft when working under the Contract must meet the requirements *OSH Standard 407* – “Helicopter and Fixed-Wing Aircraft Safety” and BC Hydro’s Aircraft Operations Program (“**AOP**”), as updated and amended from time to time. Copies of *OSH Standard 407* – “Helicopter and Fixed-Wing Aircraft Safety” and the AOP are included in the Data Room (Data Room ID# 1016.REF.01028 and ID# 1016.REF.01027).

1.2 Approved Service Providers

The Contractor will only use charter helicopter and charter fixed-wing aircraft service providers in the performance of the Work that are either:

- (a) “Pre-Approved Helicopter Service Providers” on BC Hydro’s Approved Aircraft Service Provider List (as referred to in *OSH Standard 407* – “Helicopter and Fixed-Wing Aircraft Safety”) for the particular type of aviation work required;
- (b) “Contract-Specific Approved Helicopter Service Providers” that are accepted in writing, in advance, by Hydro’s Representative and in accordance with AOP program requirements, as eligible to perform the particular type of aviation work required; or
- (c) “Pre-Registered Fixed-Wing Aircraft Service Providers” that are pre-registered with BC Hydro, in accordance with AOP program requirements.

All use of charter helicopter and charter fixed-wing aircraft must follow BC Hydro’s flight booking and approval process as documented in the AOP, and utilize only pre-approved pilots and aircraft types. Flights must be authorized by an approved BC Hydro authorizing manager and BC Hydro’s aircraft operations department.

1.3 Contract-Specific Approval Process (Helicopter Service Providers)

In order to be accepted as a Contract-Specific Approved Helicopter Service Provider, a helicopter service provider must demonstrate to BC Hydro’s satisfaction that it meets BC Hydro’s minimum safety and operational standards. The Contractor must make a formal application to nominate a helicopter service provider under the “Sub-Contracted Helicopter Operators” approval process, as described in the AOP. Under this process, the proposed helicopter service provider, its systems, pilots and aircraft are audited to validate that they meet or exceed BC Hydro’s approval criteria. The costs of such audit are the responsibility of the Contractor. BC Hydro reserves the right to:

- (a) reject a proposed helicopter service provider without performing an audit if that service provider does not meet the requirements of a pre-audit evaluation or has failed an earlier audit within the previous 6 months; and
- (b) revoke a Contract-Specific Approved Helicopter Service Provider’s eligibility at any time following initial acceptance if, in BC Hydro’s judgment, the service provider no longer meets BC Hydro’s minimum safety and operational standards.

1.4 Approval Limitation

Acceptance as a Contract-Specific Approved Helicopter Service Provider will be for purposes of this Contract only, and will not automatically entitle the helicopter service provider to perform work directly for BC Hydro or to perform work as a subcontractor under any other BC Hydro contract.

1.5 Changes to Approved Aircraft Service Provider List

The Contractor acknowledges that BC Hydro's Approved Aircraft Service Provider List may change from time to time, and the Contractor is responsible for ensuring that any pre-approved helicopter service providers or pre-registered fixed-wing aircraft service providers that it is using continue to be on the Approved Aircraft Service Provider List. If the Contractor's helicopter service provider or fixed-wing aircraft service provider ceases to be approved for work under this Contract, the Contractor will immediately replace that service provider with a service provider on the Approved Aircraft Service Provider List, at no additional cost or expense to BC Hydro.

1.6 Compliance with Regulations and Standards

The Contractor will comply, and will ensure that any helicopter or fixed-wing aircraft service provider to which it subcontracts any part of the Work complies, with all pertinent regulatory requirements and aviation safety standards that are applicable to the Work, including without limitation Transport Canada Canadian Aviation Regulations, the OHSR and *OSH Standard 407* – "Helicopter and Fixed-Wing Aircraft Safety".

1.7 Acceptance of Written Work Procedure(s) Before Start of Work

The Contractor will, not less than 14 days before the scheduled start date for any helicopter or fixed-wing aircraft Work, submit to Hydro's Representative a written work procedure(s) specific to the Work and applicable flight operation. The Contractor's written work procedure(s) must be compliant with relevant regulatory requirements and meet or exceed the requirements and standards of BC Hydro's own applicable Standard Operating Procedure(s), which will be made available, where appropriate, by Hydro's Representative on request.

Notwithstanding Schedule 5 [Submittals Procedure], BC Hydro's review and acceptance of the Contractor's written work procedures will be in accordance with the process described in the AOP. No helicopter or fixed wing aircraft work may begin until the written work procedure(s) has been accepted by BC Hydro.

As part of the work procedure review and acceptance process, BC Hydro may require a copy of the training program for any referenced training program such as, but not limited to, training for helicopter and fixed-wing safety awareness training, long line training, hover-exit training, etc. If the training program is developed by the Contractor or its helicopter service provider, BC Hydro may also require a copy of the program materials.

GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

APPENDIX 10-8

FIRE BRIGADE & WILDFIRE RESPONSE REQUIREMENTS

1. INDUSTRIAL FIRE BRIGADE

The Industrial Fire Brigade will be responsible to provide services to the Contractor's Safety Area and it will include:

1.1 a minimum of 6 fully trained and certified firefighters available at all times including a minimum of 1 fire leadership position (Fire Captain). These 6 fire fighters will have the following minimum training/certification and experience:

- (a) trained and certified in accordance with:
 - (i) The requirements for full service operations and interior operations level team leader as defined by with the British Columbia Fire Service Minimum Training Standards Structure Firefighters Competency and Training Playbook, second edition, amended May 2015;
 - (ii) NFPA 472 Hazardous Materials for Emergency Responders – Awareness level (accredited by ProBoard and IFSAC);
 - (iii) Incident Command System (ICS) level 100;
 - (iv) Class 3 Drivers License with Airbrake endorsement valid in British Columbia; and
 - (v) Emergency Vehicle Operator certificate;
- (b) have at least 3 years of experience as a full time professional fire fighter or 5 years as a volunteer or an Industrial firefighter;
- (c) additional firefighters with lesser qualifications and experience may be added to the Industrial Fire Brigade but all such firefighter's will be trained and certified in accordance with NFPA 1081 and will only be assigned firefighting or support duties that are within the scope of that training and certification and under the supervision of a Fire Captain;
- (d) the Fire Captain to have at least Fire Officer Level II Certificate (or other equivalent qualifications acceptable to BC Hydro), and shall have at least 3 years' experience as a fire officer in a full time professional department or 5 years as a fire officer in a volunteer or Industrial Brigade/department; and
- (e) Hydro's Representative may, in their discretion, accept other comparable combinations of qualifications, training, certification and experience after a review of the individual's combination of qualifications, training, certification and experience;

1.2 firefighting tools, apparatus, equipment and supplies will include at least the following :

- (a) a 1500 gpm triple combination fire apparatus with a 1500 gallon water tank and a 500 gallon Class A foam system which meets the current requirements of NFPA 1901 Standard for Automotive Fire Apparatus or Underwriter's laboratories of Canada (ULC) S515 Automobile Fire Fighting Apparatus and is ULC approved and will be no more than 15 years old at any stage of the Contract;

- (b) a 2500 gallon tender pumper with a 625 gpm pump which meets the current requirements of NFPA 1901 Standard for Automotive Fire Apparatus or Underwriter's Laboratories of Canada (ULC) S515 Automobile Fire Fighting Apparatus and will be no more than 20 years old at any stage of the Contract provided it meets the annual pump testing requirements;
- (c) complete structural firefighting personal protective equipment for each individual Fire Brigade member assigned firefighting duties but in no case will this be less than 18 full sets of equipment. Thermal barrier clothing and SCBA to meet NFPA standards;
- (d) an onsite stock of foam concentrate to include at least 500 gallons of Class A foam & 500 gallons of Class B foam;
- (e) the Industrial Fire Brigade will have onsite access to a full complement of ladders, hose, nozzles, fittings, wrenches, heavy rescue equipment auto extrication equipment, personal hand tools clamps, etc. to provide the Fire Response and Rescue Services;
- (f) an all-weather heated fire hall structure complete with concrete floor suitable for the above equipment including the storage and maintenance of that equipment, and well located to provide an appropriate response time. The fire hall will have a sprinkler system and a remotely monitored fire alarm;
- (g) the Industrial Fire Brigade will have access to facilities as required for training and management activities; and
- (h) all vehicles shall have current vehicle and mechanical certifications;

1.3 each of the following:

- (a) staffing and response times will be in accordance with Table 4.3.2 [Staffing and Response Time] of NFPA 1720 where the Authority Having Jurisdiction (AHJ) has determined that the Demand Zone will be Special Risks and that a minimum number of staff to respond will be 6, the response time defined as the time by which fire suppression or rescue activities could be initiated will be within 15 minutes of receiving the alarm and that these objectives are to be met 90% of the time;
- (b) ability to recall off-shift firefighters or provide similar resources for additional capacity on larger or extended fire events;
- (c) provide mutual aid agreements for 2nd tier/back up response capacity; and
- (d) comply with WSBC OHS Regulations Part 31 Firefighting, and Part 32 Evacuation & Rescue requirements.

2. **WILDFIRE RESPONSE**

In addition to Fire Response and Rescue Services, the Contractor shall ensure that the Contractor's Safety Area is protected, in accordance with the Wildfire Act and Regulations and, in any case from 1 March to 31 October of each year, by a wildfire response capability that includes, at a minimum:

- 2.1 a 4x4 rapid attack wildfire vehicle with road rescue capabilities with a 300 gallon tank and compressed air foam system on a F650 chassis, or equivalent;
- 2.2 wildfire suppression equipment including hand tools & pump tanks for 40 people, four water delivery systems including 1000 gallon portatanks; and

- 2.3 a complement of adequate numbers of properly trained and organized staff to fight such fires as required by the Wildfire Act.