

**BC HYDRO SITE C CLEAN ENERGY PROJECT**

**GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT**

for the Site C Clean Energy Project

***Schedule 3***

***Roles and Representatives***

# GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

## SCHEDULE 3

### ROLES AND REPRESENTATIVES

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# GENERATING STATION AND SPILLWAYS CIVIL WORKS CONTRACT

## SCHEDULE 3

### ROLES AND REPRESENTATIVES

#### **1 INTERPRETATION**

##### **1.1 Definitions**

In this Schedule 3 [Roles and Representatives], definitions are as set out in Schedule 1 [Definitions and Interpretation]:

#### **2 HYDRO'S REPRESENTATIVE**

##### **2.1 Appointment of Hydro's Representative**

Hydro's Representative will be BC Hydro's single point of contact with respect to the Contract. BC Hydro will, at all times, have an individual appointed as Hydro's Representative. If, for any reason, the appointed Hydro's Representative's appointment is discontinued, then BC Hydro will appoint a replacement and give prompt written notice to the Contractor of such replacement. If, at any time, the Contractor's Representative, acting reasonably, objects to Hydro's Representative, then BC Hydro will give consideration to replacing Hydro's Representative with a person acceptable to the Contractor's Representative. Hydro's Representative may, at BC Hydro's election, be an employee of BC Hydro, or be a consultant or other third party.

##### **2.2 Authority of Hydro's Representative**

Hydro's Representative will have authority to act on behalf of BC Hydro only to the extent expressly set out in the Contract, including as described in Section 2.4 of this Schedule 3 [Roles and Representatives], but otherwise Hydro's Representative will not have the authority to execute or agree to any amendments to the Contract or to waive any of BC Hydro's rights under the Contract. Hydro's Representative's authority, as set out in the Contract, will not relieve the Contractor of any of its duties, obligations or responsibilities under the Contract to perform the Work in accordance with the requirements of the Contract, and Hydro's Representative will not be responsible for or have control of the performance of the Work. Hydro's Representative will not be responsible for or have control over the acts or omissions of the Contractor, other Contractor Persons or other Persons engaged by or through them. Hydro's Representative may consult with other representatives of BC Hydro before giving any response, direction or consent as may be required under the Contract.

##### **2.3 Delegation of Hydro's Representative's Authority**

Hydro's Representative may, by written notice to the Contractor with details of the nature and extent of the delegation, delegate to others some or all of Hydro's Representative's authority under the Contract.

##### **2.4 Role of Hydro's Representative**

The role of Hydro's Representative will be to:

- (a) provide administration of the Contract as described in the Contract;
- (b) provide the Contractor with additional instructions in the form of specifications, drawings, samples, models or other written instructions, to supplement the Contract, as may be necessary for the performance of the Work;

- (c) without derogating from or negating any of Hydro's Representative's other obligations set out in the Contract, act as BC Hydro's representative and agent to protect BC Hydro's interests under the Contract;
- (d) make all commercially reasonable efforts to respond promptly to the Contractor's requests for additional instructions, and, if it becomes apparent that a number of additional instructions will be required, then cooperate with the Contractor to establish a schedule for the issuance of such additional instructions;
- (e) in accordance with the requirements of the Contract, review and take appropriate action upon receiving Submittals, including:
  - (i) shop drawings, product data and samples; and
  - (ii) written guarantees, warranties and manuals to be provided by the Contractor;
- (f) except as expressly set out otherwise in the Contract, when required, set out or cause to be set out survey monuments or control points at the Site, sufficient to enable the Contractor to determine the required lines and grades for the performance of the Work;
- (g) prepare, sign and issue Preliminary Change Instructions, Change Orders and Change Directives in accordance with the requirements of Schedule 12 [Changes];
- (h) review supporting documentation as required to determine the amounts owing to the Contractor under the Contract and perform the tasks relating to payment as required by the Contract, including Schedule 11 [Prices and Payment];
- (i) perform inspections of the Work and the performance of the Work; and
- (j) undertake all other duties of Hydro's Representative as described in the Contract.

## 2.5 Contract Interpretation

Hydro's Representative will be, in the first instance, the interpreter of the Contract and the judge of the performance of BC Hydro and the Contractor. Hydro's Representative's interpretations and judgments will be consistent with the Contract and, in making such interpretations and judgments, Hydro's Representative will act reasonably. With respect to interpretation of the Contract:

- (a) either party may, at any time, by written request, refer any question relating to the Contract, including questions regarding claims relating to the performance of the Work or questions regarding the interpretation of the Contract, to Hydro's Representative for a written direction, instruction or decision;
- (b) Hydro's Representative will, within ten days of a written request, or such other period of time (longer or shorter) as reasonably required in the circumstances, deliver a written direction, instruction or decision to each of BC Hydro and the Contractor's Representative; and
- (c) if a party disputes that a written direction, instruction or decision of Hydro's Representative is consistent with the Contract, then the disputing party may deliver a Dispute Notice to have the Dispute dealt with pursuant to Schedule 14 [Dispute Resolution Procedure].

The Contractor will proceed with the performance of the Work without delay in accordance with any written direction, instruction or decision given by Hydro's Representative with respect to a requested interpretation, without prejudice to the Contractor's rights to dispute the written direction, instruction or decision, pursuant to Section 2.5(c) of this Schedule 3 [Roles and Representatives].

### **3 CONTRACTOR'S REPRESENTATIVE AND KEY INDIVIDUALS**

#### **3.1 Appointment of Contractor's Representative**

If not included in Section 4 of the Agreement as of the Effective Date, the Contractor will, within 3 Business Days after the Effective Date, designate in writing a competent and qualified individual to be the Contractor's Representative and single point of contact with respect to the Contract. The Contractor will give prompt written notice of such appointment to Hydro's Representative for Consent. If, at any time, Hydro's Representative, acting reasonably, objects to the Contractor's Representative, then the Contractor will give consideration to replacing the Contractor's Representative with a person acceptable to Hydro's Representative. The Contractor's Representative may, at the Contractor's election, be an employee of the Contractor, or be a consultant or other third party.

#### **3.2 Authority of Contractor's Representative**

The Contractor's Representative will have full authority to act on behalf of and bind the Contractor under the Contract and be the Contractor's Representative and agent to protect the Contractor's interests under the Contract. The Contractor's Representative may consult with other representatives of the Contractor before giving any response, direction or consent as may be required under the Contract.

#### **3.3 Delegation of Contractor's Representative's Authority**

The Contractor's Representative may, by written notice to Hydro's Representative with details of the nature and extent of the delegation, delegate to others some or all of the Contractor's Representative's authority under the Contract.

#### **3.4 Project Manager**

The Contractor will designate in writing a competent and qualified individual to be primarily responsible for all Project Management responsibilities. The Project Manager must:

- (a) be a senior executive of the Contractor;
- (b) have at least 10 years' experience as a senior project manager on large scale hydro-electric or civil infrastructure projects with complex and integrated construction schedules, detailed safety and quality management programs and a multi-contractor work site; and
- (c) have held a senior project management position, involving management oversight of a labour force of at least 200 workers on large scale hydro-electric or civil infrastructure projects with complex and integrated construction schedules, detailed safety and quality management programs and a multi-contractor work site, within the past five years.

If, at any time, Hydro's Representative, acting reasonably, objects to the Contractor's Project Manager, then the Contractor will give consideration to replacing the Contractor's Project Manager with a person acceptable to Hydro's Representative.

#### **3.5 Construction Manager**

The Contractor will designate in writing a competent and qualified individual to be primarily responsible for detailed planning and execution of all construction activities. The Construction Manager must:

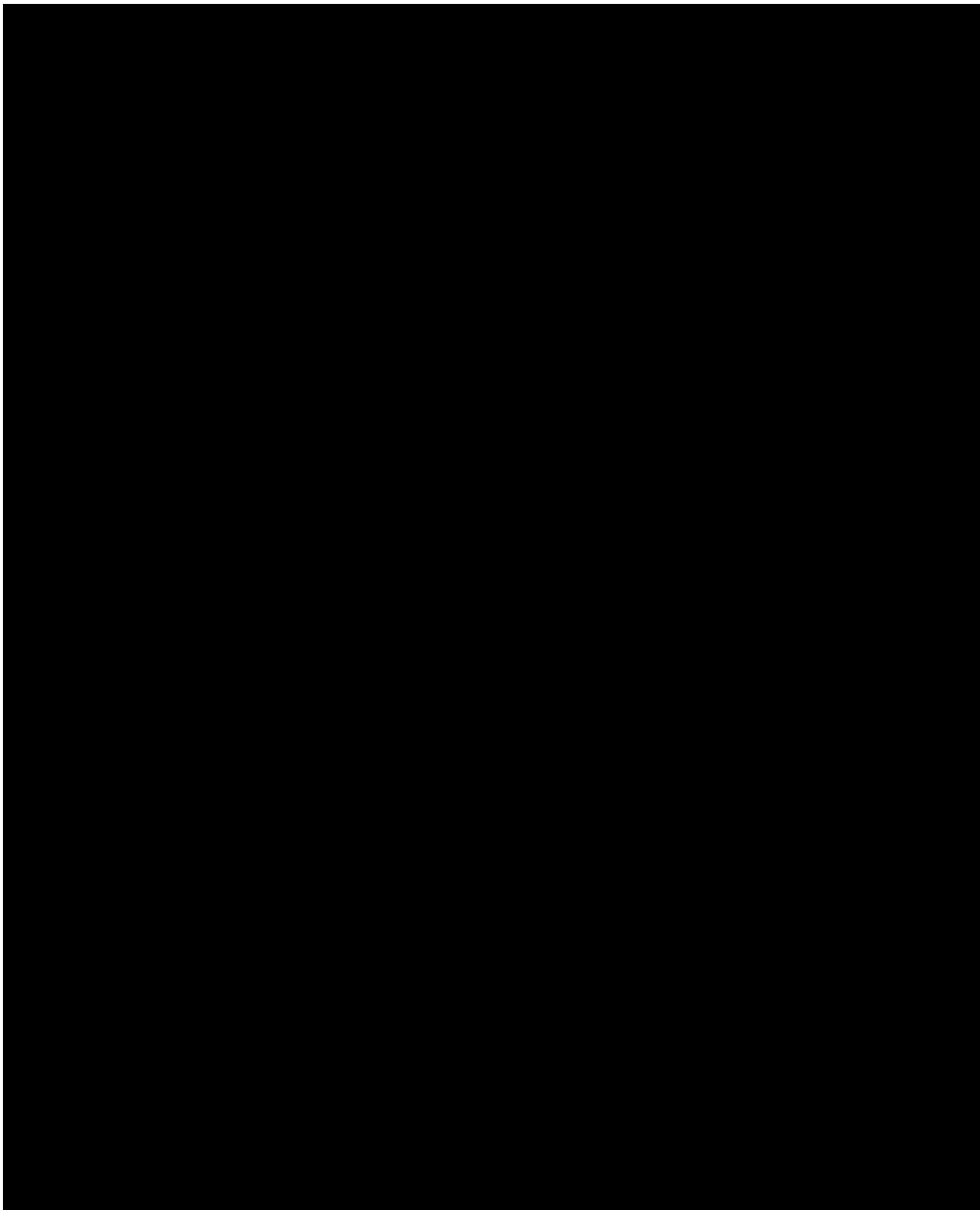
- (a) have at least 10 years' experience as a senior construction manager on large scale hydro-electric or civil infrastructure projects with complex and integrated construction schedules, detailed safety and quality management programs and a multi-contractor work site; and

- (b) have held a senior construction management position, involving direct management oversight of a labour force of at least 200 workers on large scale hydro-electric or civil infrastructure projects with complex and integrated construction schedules, detailed safety and quality management programs and a multi-contractor work site, in a jurisdiction with comparable safety and environmental requirements to British Columbia, within the past five years.

If, at any time, Hydro's Representative, acting reasonably, objects to the Contractor's Construction Manager, then the Contractor will give consideration to replacing the Contractor's Construction Manager with a person acceptable to Hydro's Representative. The Contractor's Construction Manager may, at the Contractor's election, be an employee of the Contractor, or be a consultant or other third party.

3.6 Key Individuals

- (a) The Contractor represents to BC Hydro that the following are the Key Individuals for the Work as at the Effective Date:



- (b) At least:
- (i) 90 days prior to commencement of any Work related to the installation of the Penstocks and Penstock Transitions, including the upper flexible couplings, the Contractor will submit to Hydro's Representative, for Consent, not to be unreasonably withheld, the Contractor's proposed Penstock Installation Superintendent;
  - (ii) 90 days prior to commencement of any Work related to construction of the spillways, the Contractor will submit to Hydro's Representative, for Consent, not to be unreasonably withheld, the Contractor's proposed Spillway Construction Superintendent;
  - (iii) 60 days prior to commencement of any Work related to the installation of the primary anchors, the Contractor will submit to Hydro's Representative, for Consent, not to be unreasonably withheld, the Contractor's proposed Embedded Parts Supervisor; and
  - (iv) 60 days prior to commencement of any Work related to the assembly of the Gates, the Contractor will submit to Hydro's Representative, for Consent, not to be unreasonably withheld, the Contractor's proposed Gates and Gate Hoists Supervisor.

For each Key Individual position identified in this Section 3.6(b) as being proposed after the Effective Date, the individual appointed must be the same individual named in Section 3.6(a) of this Schedule 3 [Roles and Representatives] or a substitute reasonably acceptable to BC Hydro, provided that it will be reasonable for BC Hydro to object to any proposed individual who:

- (v) does not personally possess all of the necessary qualifications, experience and other credentials required for such role, as set out in this Contract; or
  - (vi) does not have comparable or superior qualifications, experience and other credentials to those of the applicable individual listed in Section 3.6(a) of this Schedule 3 [Roles and Representatives], as confirmed by BC Hydro's reference checks;
- (c) With respect to the Key Individuals:
- (i) the Contractor will provide the Key Individuals;
  - (ii) the Contractor will ensure that the Key Individuals will be available to provide the commitment specified in respect of each Key Individual and will give the performance of the Work sufficient priority over other work, tasks and assignments that they may otherwise have assigned to them in order to ensure performance of the Work in compliance with the Contract;
  - (iii) none of the Key Individuals will be changed without prior notice to, and the prior acceptance of, Hydro's Representative, not to be unreasonably withheld, pursuant to the Consent procedure. Hydro's Representative's acceptance may be subject to the Contractor satisfying Hydro's Representative, acting reasonably, that the proposed replacement personnel have comparable or superior qualifications, experience and other credentials to the personnel whom they are proposed to replace, as confirmed by BC Hydro's reference checks;
- (d) Notwithstanding Section 3.6(c)(iii) of this Schedule 3 [Roles and Representatives], if a Key Individual must be changed as a result of the death, serious illness or resignation of the Key Individual, the Contractor will:
- (i) use reasonable efforts to appoint a temporary replacement with comparable or superior qualifications, experience and other credentials to the unavailable Key Individual, as

confirmed by BC Hydro's reference checks, pending Hydro's Representative's acceptance of a permanent replacement; and

- (ii) seek the Consent of Hydro's Representative to a permanent replacement having comparable or superior qualifications, experience and other credentials to the unavailable Key Individual, as confirmed by BC Hydro's reference checks, as soon as practicable;
- (e) Any changes to Key Individuals made pursuant to Section 3.6(c)(iii) or 3.6(d) of this Schedule 3 [Roles and Representatives] will be at no extra cost or expense to BC Hydro; and
- (f) One individual may fulfill more than one of the Key Individual positions referred to in Sections 3.6(a)(i), 3.6(a)(ii) and 3.6(a)(iii) of this Schedule 3 [Roles and Representatives], if and to the extent only that:
  - (i) such individual personally possesses all of the necessary qualifications, experience and other credentials required for each such role; and
  - (ii) fulfilling such roles does not compromise the ability of such individual to effectively carry out the responsibilities of each role so undertaken.

### 3.7 Intake Construction Superintendent

#### 3.7.1 Qualifications and Experience:

The Intake Construction Superintendent will be a competent and qualified individual who has consistently held similar construction superintendent positions, involving management oversight of a labour force of at least 150 workers on large scale hydro-electric or civil infrastructure projects in a jurisdiction with comparable safety and environmental requirements to British Columbia, for at least the past five years.

#### 3.7.2 Intake Construction Superintendent's Responsibilities:

The Intake Construction Superintendent will:

- (a) be primarily responsible for overseeing, coordinating and managing all daily Site activities related to the construction of the intakes, including the transition block, in accordance with the requirements of the Contract, including Sections 03 10 00 [Concrete Forming and Accessories], 03 20 00 [Concrete Reinforcing], 03 30 00 [Cast-in-Place Concrete], 03 30 50 [Concrete Batch Plant], 05 50 10 [Miscellaneous Metals and Embedded Parts] and 35 20 16 [Installation of Hydromechanical Equipment] of Appendix 6-2 [Technical Specifications];
- (b) work with the Contractor's other superintendents to coordinate the construction of the intakes, including the transition block, with the other parts of the Work;
- (c) be accountable for safety compliance in relation to the construction of the intakes, including the transition block;
- (d) be accountable for quality in relation to the construction of the intakes, including the transition block;
- (e) work with the Lead Scheduler to ensure that the look-ahead schedules prepared in accordance with Section 2.10 of Schedule 4 [Work Program and Schedule] accurately reflect the planned construction of the intakes, including the transition block; and
- (f) be engaged full time, on Site, during the construction of the intakes, including the transition block.



Whenever the Intake Construction Superintendent is not on Site for any reason, including “turn around” or other shift change, illness or vacation, the Contractor will ensure that another superintendent, having comparable or superior qualifications, experience and other credentials as the Intake Construction Superintendent and acceptable to Hydro’s Representative acting reasonably, is on Site and performing the Intake Construction Superintendent’s responsibilities.

### 3.8 Materials Superintendent

#### 3.8.1 Qualifications and Experience:

The Materials Superintendent will be a competent and qualified individual who has consistently held similar materials superintendent positions, involving management oversight of a labour force of at least 20 workers on aggregate processing for large scale hydro-electric or civil infrastructure projects in a jurisdiction with comparable safety and environmental requirements to British Columbia, for at least the past five years.

#### 3.8.2 Materials Superintendent’s Responsibilities:

The Materials Superintendent will:

- (a) be primarily responsible for overseeing, coordinating and managing all daily Site activities related to the aggregate processing in accordance with the requirements of the Contract, including 03 30 50 [Concrete Batch Plant], 03 40 00 [Concrete Aggregates] and 31 70 00 [Earthworks] of Appendix 6-2 [Technical Specifications];
- (b) work with the Contractor’s other superintendents to coordinate the aggregate processing with the other parts of the Work;
- (c) be accountable for safety compliance in relation to the aggregate processing operations;
- (d) be accountable for quality in relation to the aggregate processing;
- (e) work with the Lead Scheduler to ensure that the look-ahead schedules prepared in accordance with Section 2.10 of Schedule 4 [Work Program and Schedule] accurately reflect the planned aggregate processing operations; and
- (f) be engaged full time, on Site, during the aggregate processing operations.

Whenever the Materials Superintendent is not on Site for any reason, including “turn around” or other shift change, illness or vacation, the Contractor will ensure that another superintendent, having comparable or superior qualifications, experience and other credentials as the Materials Superintendent and acceptable to Hydro’s Representative acting reasonably, is on Site and performing the Materials Superintendent’s responsibilities.

### 3.9 Penstock Installation Superintendent

#### 3.9.1 Qualifications and Experience:

The Penstock Installation Superintendent will be a competent and qualified individual who has consistently held similar steel fabrication and installation superintendent positions, involving management oversight of a labour force of at least 50 workers on large scale hydro-electric or civil infrastructure projects in a jurisdiction with comparable safety and environmental requirements to British Columbia, for at least the past five years.

### 3.9.2 Penstock Installation Superintendent's Responsibilities:

The Penstock Installation Superintendent will:

- (a) be primarily responsible for overseeing, coordinating and managing all daily Site activities related to the installation of the Penstocks and Penstock Transitions, including the upper flexible couplings, in accordance with the requirements of the Contract, including Section 35 20 10 [Penstocks and Couplings] of Appendix 6-2 [Technical Specifications];
- (b) work with the Contractor's other superintendents to coordinate the installation of the Penstocks and Penstock Transitions, including the upper flexible couplings, with the other parts of the Work;
- (c) be accountable for safety compliance in relation to the installation of the Penstocks and Penstock Transitions, including the upper flexible couplings;
- (d) be accountable for quality in relation to the installation of the Penstocks and Penstock Transitions, including the upper flexible couplings;
- (e) work with the Lead Scheduler to ensure that the look-ahead schedules prepared in accordance with Section 2.10 of Schedule 4 [Work Program and Schedule] accurately reflect the planned installation of the Penstocks and Penstock Transitions, including the upper flexible couplings; and
- (f) be engaged full time, on Site, during the installation of the Penstocks and Penstock Transitions, including the upper flexible couplings.

Whenever the Penstock Installation Superintendent is not on Site for any reason, including "turn around" or other shift change, illness or vacation, the Contractor will ensure that another superintendent, having comparable or superior qualifications, experience and other credentials as the Penstock Installation Superintendent and acceptable to Hydro's Representative acting reasonably, is on Site and performing the Penstock Installation Superintendent's responsibilities.

### 3.10 Powerhouse Construction Superintendent

#### 3.10.1 Qualifications and Experience:

The Powerhouse Construction Superintendent will be a competent and qualified individual who has consistently held similar construction superintendent positions, involving management oversight of a labour force of at least 150 workers on large scale hydro-electric or civil infrastructure projects in a jurisdiction with comparable safety and environmental requirements to British Columbia, for at least the past five years.

#### 3.10.2 Powerhouse Construction Superintendent's Responsibilities:

The Powerhouse Construction Superintendent will:

- (a) be primarily responsible for overseeing, coordinating and managing all daily Site activities related to the construction of the powerhouse in accordance with the requirements of the Contract, including Sections 03 10 00 [Concrete Forming and Accessories], 03 20 00 [Concrete Reinforcing], 03 30 00 [Cast-in-Place Concrete], 03 30 50 [Concrete Batch Plant], 05 12 00 [Structural Steel], 05 50 10 [Miscellaneous Metals and Embedded Parts], 26 32 10 [Work Associated with Turbine Generator Installation] and 35 20 16 [Installation of Hydromechanical Equipment] of Appendix 6-2 [Technical Specifications];

- (b) work with the Contractor's other superintendents to coordinate the construction of the powerhouse with the other parts of the Work;
- (c) be accountable for safety compliance in relation to the construction of the powerhouse;
- (d) be accountable for quality in relation to the construction of the powerhouse;
- (e) work with the Lead Scheduler to ensure that the look-ahead schedules prepared in accordance with Section 2.10 of Schedule 4 [Work Program and Schedule] accurately reflect the planned construction of the powerhouse; and
- (f) be engaged full time, on Site, during the construction of the powerhouse.

Whenever the Powerhouse Construction Superintendent is not on Site for any reason, including "turn around" or other shift change, illness or vacation, the Contractor will ensure that another superintendent, having comparable or superior qualifications, experience and other credentials as the Powerhouse Construction Superintendent and acceptable to Hydro's Representative acting reasonably, is on Site and performing the Powerhouse Construction Superintendent's responsibilities.

### 3.11 Spillway Construction Superintendent

#### 3.11.1 Qualifications and Experience:

The Spillway Construction Superintendent will be a competent and qualified individual who has consistently held similar construction superintendent positions, involving management oversight of a labour force of at least 150 workers on large scale hydro-electric or civil infrastructure projects in a jurisdiction with comparable safety and environmental requirements to British Columbia, for at least the past five years.

#### 3.11.2 Spillway Construction Superintendent's Responsibilities:

The Spillway Construction Superintendent will:

- (a) be primarily responsible for overseeing, coordinating and managing all daily Site activities related to the construction of the spillways in accordance with the requirements of the Contract, including Sections 03 10 00 [Concrete Forming and Accessories], 03 20 00 [Concrete Reinforcing], 03 30 00 [Cast-in-Place Concrete], 03 30 50 [Concrete Batch Plant], 03 41 00 [Precast Structural Concrete], 05 50 10 [Miscellaneous Metals and Embedded Parts] and 35 20 16 [Installation of Hydromechanical Equipment] of Appendix 6-2 [Technical Specifications];
- (b) work with the Contractor's other superintendents to coordinate the construction of the spillways with the other parts of the Work;
- (c) be accountable for safety compliance in relation to the construction of the spillways;
- (d) be accountable for quality in relation to the construction of the spillways;
- (e) work with the Lead Scheduler to ensure that the look-ahead schedules prepared in accordance with Section 2.10 of Schedule 4 [Work Program and Schedule] accurately reflect the planned construction of the spillways; and
- (f) be engaged full time, on Site, during the construction of the spillways.

Whenever the Spillway Construction Superintendent is not on Site for any reason, including "turn around" or other shift change, illness or vacation, the Contractor will ensure that another superintendent, having

comparable or superior qualifications, experience and other credentials as the Spillway Construction Superintendent and acceptable to Hydro's Representative acting reasonably, is on Site and performing the Spillway Construction Superintendent's responsibilities.

### 3.12 Formwork Manager

#### 3.12.1 Qualifications and Experience:

The Formwork Manager will be a competent and qualified individual who has at least 10 years' experience managing design engineers, draft-persons and outside consultants with respect to formwork and falsework design on hydroelectric or similar heavy civil projects, including:

- (a) selecting the appropriate form systems; and
- (b) collaborating with field supervision to deliver safe, productive and high quality formwork and falsework designs.

#### 3.12.2 Formwork Manager's Responsibilities:

The Formwork Manager will be primarily responsible for management, oversight and coordination of the design of formwork and falsework systems in accordance with the requirements of the Contract, including Section 03 10 00 [Concrete Forming and Accessories] of Appendix 6-2 [Technical Specifications].