

July 31, 2020

Mr. David M. Morton
Chair and CEO
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Mr. Morton:

**RE: British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Site C Clean Energy Project
PUBLIC Annual Report No. 4 and Quarterly Progress Report No 18, and
Quarterly Progress Report No. 19**

BC Hydro has voluntarily provided the BCUC with quarterly reports since the start of construction to be transparent about Site C's progress, accomplishments and challenges.

Today we are filing two reports: the 2019 Site C Annual Report No. 4, and Quarterly Progress Report No. 19.

As we did in 2018, we have combined the 2019 annual report and the quarterly progress report into one document for Annual Report No. 4, covering the period January 1 to December 31, 2019, including the quarterly results for the quarter ending December 31, 2019. The filing of Annual Report No. 4 was delayed due to Site C project team priorities shifting in recent months to actively respond to and manage the COVID-19 global pandemic.

We are also filing Quarterly Progress Report No. 19, covering the period January 1 to March 31, 2020. This report addresses some of the early impacts COVID-19 had on the project prior to March 31. Those impacts continue today and will do so for the foreseeable future.

Although the pandemic began at the end of the latest reporting period, it quickly became apparent that COVID-19 would result in significant impacts to the Site C project.

On March 18, 2020, BC Hydro announced it was substantially reducing certain work activities on the project in response to the increasing escalation of provincial measures to manage the COVID-19 pandemic.

Work at the dam site was scaled back to only those activities that were critical to achieve river diversion and essential services, such as site safety and security and environmental protection. This decision resulted in a reduction of people staying at site by about 50 per cent.

Work continued as planned in off-site project areas (i.e., Highway 29 realignment, transmission line and reservoir clearing work), as most of these workers don't stay in the camp and can more easily practice physical distancing on their work sites.

On May 14, 2020, BC Hydro announced it would begin safely increasing construction activities at the dam site in a gradual phased approach. The phased approach will see the number of workers staying at the worker accommodation increase over the summer and fall of 2020, as work continues to ramp up on the dam site. BC Hydro continues to closely monitor the situation so that any issues can be quickly addressed and compliance with current provincial guidance is maintained.

Prior to the escalation of the COVID-19 pandemic, the project remained on schedule for the first generating unit to go into service in late 2023 and a final in-service date in 2024.

While we remain on schedule to achieve river diversion in 2020, there is uncertainty with the project's schedule and in-service date. This is primarily due to our ability to re-start and accelerate work that was halted due to the pandemic.

BC Hydro has begun the process to re-baseline the project to determine the impact the COVID-19 pandemic has had on the project's schedule and budget.

Since the current project budget was approved in February 2018, and prior to scaling back work due to COVID-19, we acknowledge the project was already managing significant financial pressures due to:

- amendments to the main civil works contract;
- increased costs associated with reservoir clearing, transmission line construction and highway re- alignment work;
- additional labour resource requirements; and
- First Nations treaty infringement claims and an injunction application.

In addition to these financial pressures mentioned above, a project risk has materialized on the right bank. Towards the end of December 2019, investigations and analysis of geological mapping and monitoring activities completed during construction identified that some foundation enhancements would be required to increase the stability below the powerhouse, spillway and future dam core areas.

By the end of the March 31 reporting period, we had learned more about these geological challenges. Based on further engineering analysis of the proposed mitigation measures, the foundation enhancement costs are anticipated to be more substantial than initially expected in January.

BC Hydro continues to work with the independent Site C Technical Advisory Board and the Project Assurance Board to determine the appropriate enhancement measures. The estimated cost and schedule impacts will be better understood once the enhancement measures are selected.

Pandemic-related delays will present further cost pressures on the budget. As the evolution of the pandemic is uncertain and the date of resolution is unknown, various cost and schedule impact scenarios continue to be assessed and refined as part of the re-baselining process.

In these reports, we acknowledge specific areas of concern that have impacted the overall health of the project. For these reasons, in our Project Status Dashboard, we classified the overall health of the project in both reports as "red", or having serious concerns, specifically regarding schedule, scope and budget.

As noted earlier, work to re-baseline the project is underway to determine the impacts of COVID-19. Once this process is completed, we will provide the Commission an update later this fall.

Yours sincerely,



Chris O'Riley
President and Chief Executive Officer
BC Hydro

Enclosure

Site C Clean Energy Project

Annual Progress Report No. 4

(Combined with Quarterly Progress Report No. 18)

January 2019 to December 2019

PUBLIC

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1 Executive Summary

Site C will be the third dam and hydroelectric generating station on the Peace River in northeastern British Columbia (B.C.). Once complete in 2024, Site C will provide 1,100 megawatts of capacity, and produce about 5,100 gigawatt hours of energy per year – enough to power the equivalent of 450,000 homes per year in B.C.



After an extensive environmental assessment process, BC Hydro received an Environmental Assessment Certificate from the Province of British Columbia and an Environmental Decision Statement from the Government of Canada in October 2014. These approvals collectively contain more than 170 conditions and thousands of sub-conditions. In addition, BC Hydro is required to apply for multiple provincial permits, water licences, leaves to commence construction and federal authorizations related to the Project. In total, approximately 450 permits and authorizations will be required by the time the Project completes construction.

Construction on Site C began on July 27, 2015.

During the fourth full year of construction on the Project, dam-site construction activities accelerated substantially, particularly the roller-compacted concrete placement work on the spillways buttress and the tunnel excavations required in advance of river diversion in 2020. The roller-compacted concrete buttress for the Site C spillways was completed on October 31, 2019, seven months ahead of schedule. Breakthrough on the excavation in the first diversion tunnel occurred in June 2019, and in the second tunnel in July 2019. The excavation for both tunnels was completed in December 2019. The Project encountered some challenges through the year including excavation delays in the diversion tunnels, and lower than planned excavation rates in the left bank core trench. BC Hydro and the contractor were able to mitigate the schedule impacts by resequencing the work and are forecasting to meet the associated key milestones. The Project continues to be on track for river diversion in September 2020.

In Project areas away from the dam site, work accelerated on the Highway 29 realignment, in reservoir clearing activities and along the transmission line. The first of 405 transmission towers was stood up in February 2019, and by year-end, 101 towers had been raised.

BC Hydro continued to secure the appropriate permits, authorizations and leaves to commence construction required to begin and advance work on the Project. In addition, work continued to advance in the areas of environmental monitoring and assessment; fish, wildlife, habitat, vegetation management and heritage programs; and Indigenous and community engagement activities.

In March 2019, BC Hydro partnered with the Northern Lights College to develop carpentry trades training and supporting the development of skilled workers in northeast British Columbia. The BC Hydro Trades and Skilled Training Award program is designed to assist students with tuition and other expenses for their skilled trade studies at Northern Lights College.

In June 2019, BC Hydro completed work to enhance the Peace River fish habitat in select areas near the Site C dam site. The fish habitat enhancement meets Site C Environmental Assessment Certificate and Federal Decision Statement conditions and is part of the Site C Fisheries and Aquatic Habitat Management Plan.

In November 2019, BC Hydro, the City of Fort St. John and BC Housing officially opened 50 new affordable housing units in Fort St. John. BC Hydro is committed to providing legacy benefits for the residents of Fort St. John and other communities in the Peace Region. The provision of additional affordable rental housing in Fort St. John is a condition of the Site C project's environmental approval and BC Hydro's Community Agreement with the City of Fort St. John.

The City of Fort St. John, BC Hydro, ATCO and the Salvation Army launched an innovative Food Donation Initiative in November 2019 to feed the city's most vulnerable populations with over 100 meals per day.

In 2019, BC Hydro distributed \$151,046 to 17 non-profit organizations in the Peace Region, as part of the Generate Opportunities (GO) Fund. Created in 2016, the \$800,000 GO Fund is being distributed quarterly over an eight-year period to non-profit organizations that provide services to vulnerable populations including children, families and seniors. As of December 31, 2019, BC Hydro had distributed \$437,691 to 49 projects.

From the beginning of the project, approximately \$390 million in Site C procurement opportunities have been awarded to Indigenous-designated companies.

Overall agricultural production in the Peace Region is expected to benefit from mitigation measures, including a \$20 million agricultural compensation fund that will support agricultural programs and projects such as irrigation and drainage improvements. This fund is governed by a regional decision-making board, responsible for overseeing the management and disbursement of the fund. In

December 2019, the board approved the first intake of the year with a total fund allocation of \$250,000.

2 Annual Report Structure

Consistent with the 2018 reporting, we have combined the annual report and the quarterly progress report into one document for Annual Report No. 4, covering the period January 1 to December 31, 2019, including the quarterly results for the quarter ended December 31, 2019.

3 Summary of Project – January to December 2019

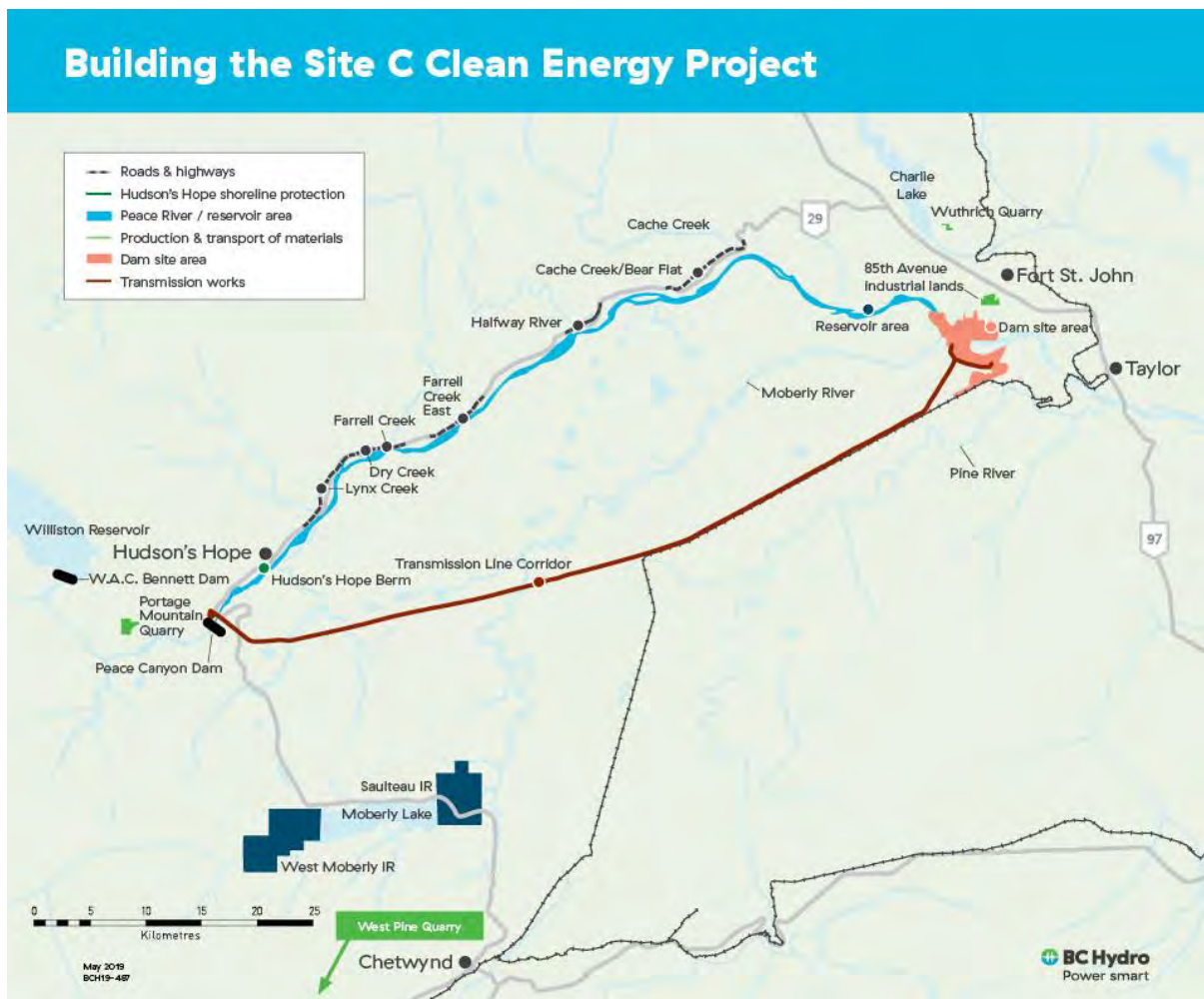
3.1 Overview and General Project Status

Construction began on July 27, 2015 and is ongoing. Since the commencement of construction, the following work has been completed:

- Site preparation, including on-site access roads;
- Clearing of the left and right banks at the dam site and clearing of the lower reservoir area is substantially complete;
- Cofferdams on the left and right banks of the river;
- Construction of the worker accommodation lodge and Peace River construction bridge;
- Powerhouse excavation, and placement of 414,000 cubic metres of roller-compacted concrete in the powerhouse buttress;
- Spillways excavation, and the placement of 586,000 cubic metres of roller-compacted concrete in the spillways buttress;
- Construction of dam site access public roads;
- Construction of the Site C viewpoint;

- Excavation of the diversion tunnel inlet (upstream) and outlet (downstream) portals, allowing for the commencement of diversion tunnel excavations;
- Excavation of the right bank drainage tunnel, which will be used to monitor and drain the remaining excavations for the spillway and dam buttresses and will eventually be connected to services within the powerhouse;
- Completion of the bulk excavation of the two river diversion tunnels, which will be used to reroute a short section of the Peace River to allow for the construction of the earthfill dam;
- Clearing activities in the lower reservoir;
- Completion of the Peace Canyon 500 kV gas-insulated switchgear expansion to enable connection of Site C to the BC Hydro electrical system;
- Fish habitat enhancements downstream of the dam site; and
- The completion of 50 affordable housing units in Fort St. John.

Figure 1 Site C Project Components



Significant Project updates that occurred between January 1 and December 31, 2019 include the following:

- At the end of January 2019, backfilling of adit 4 was completed. This is one of four tunnels and chambers located around the dam site that were excavated in the late 1970s and early 1980s during preliminary studies for the Project (a fifth adit was excavated in 2012). For more information, refer to section [3.2.1.1](#).
- The right bank drainage tunnel was completed in February 2019. Refer to section [3.2.1.1](#) for more information.

- In February 2019, the first of more than 400 transmission towers was raised. These towers will support the two new 500 kV transmission lines leading from the Site C substation to Peace Canyon generating station. By the end of 2019, 101 towers had been raised and transmission line stringing had begun. For more information, refer to section [3.2.1.5](#).
- The generating station and spillways contractor began fabrication of the Site C penstocks in Fort St. John in February 2019. The first penstock sections arrived on site in April 2019. Refer to section [3.2.1.2](#) for more information.
- The Site C heritage program entered its tenth year in February 2019. The heritage resources management plan describes how the Project mitigates adverse effects on heritage resources. Refer to section [3.7.3](#) for further information.
- In March 2019, care of water became a challenge earlier than anticipated. Unseasonably warm temperatures in mid-March 2019 had site crews successfully managing water flows that are not usually seen until April. For further information, refer to section [3.7](#).
- In March 2019, clearing activities were complete in the lower reservoir and substantially completed in the Moberly River drainage, north bank of the eastern reservoir and Cache Creek area, refer to section [3.2.1.7](#).
- The request for proposals for the balance of plant contract – the last major dam site contract to be awarded on the Project – was issued in April 2019. BC Hydro expects to award the contract in 2020. Refer to section [3.2.1.3](#) for further information.
- The first truss (roof structure) was installed in the main service bay in April 2019.
- Excavation of the spillways was completed in April 2019, with approximately 465,000 cubic metres of materials removed from the area since fall 2018. In

May 2019, roller-compacted concrete placements began on the spillways buttress, and the final placement took place in late October 2019 – seven months ahead of schedule. Refer to section [3.2.1.2](#) for more information.

- In April 2019, eight local Indigenous students completed the BC Hydro and Northern Lights College pre-carpentry skills pilot program, which was created to provide Indigenous candidates the necessary skills to pursue carpentry employment opportunities at Site C. Refer to section [3.8.3](#) for more information.
- In May 2019, the Site C community relations team in Fort St. John responded to the 10,000th public enquiry since construction began in July 2015. In total, BC Hydro has received more than 11,000 enquiries since August 2015. Refer to section [3.9.2.1](#) for more information.
- In June and November 2019, BC Hydro held community open houses in Hudson’s Hope to provide updates on Site C construction, as well as plans underway to help mitigate the impacts related to the Project.
- In late June 2019 and early July 2019, the Site C Project completed the successful breakthroughs on the upper half of the two river diversion tunnels (known as the “crown”). By the end of the year, the bulk excavations were also complete on the lower half of the tunnels (known as the “bench”). For more information, refer to section [3.2.1.1](#).
- The powerhouse bridge cranes were installed in the main service bay in June 2019. Refer to section [3.2.1.2](#) for more information.
- In July 2019, BC Hydro energized the new gas-insulated switchgear at the indoor substation at Peace Canyon, making it the first Site C asset placed into service. Refer to section [3.2.1.5](#) for further information.
- In July 2019, the phase 1 expansion of the worker accommodation lodge was completed, increasing the camp capacity from 1,600 beds to 1,750 beds.

- In December 2019, the first grant recipients of the BC Hydro Peace Agricultural Compensation Fund were announced, providing more than \$200,000 for Peace Region agricultural projects. For more information, refer to section [3.7.4](#).
- In August 2019, the total workforce peaked at 4,870 workers involved in the Project; the highest number to date since the start of the Project. Of these, roughly 76 per cent were residents of British Columbia. As of November 2019, there were 4,650 workers on the Project. For more information, refer to section [3.8.2](#).
- In September 2019, testing of the five-kilometre-long till conveyor system for Site C began. The conveyor, which runs from the 85th Avenue Industrial Lands to the dam site, will carry glacial till, an impervious clay-like material that will form the core of the Site C dam. Refer to section [3.2.1.1](#) for further information.
- In September 2019, site preparation began for the construction of the Highway 29 realignment at Cache Creek East, and in November 2019, the Ministry of Transportation and Infrastructure awarded the contract to realign the highway and build a new bridge at Halfway River. Construction of this segment is expected to begin in January 2020 with completion in fall 2022. Refer to section [3.2.1.6](#) for further information.
- The Cache Creek East embankment fill (early works) contract was awarded by the Ministry of Transportation and Infrastructure in October 2019. Refer to section [3.2.1.6](#) for further information.
- A First Nations directed procurement was initiated for an embankment fill at Lynx Creek East, with the contract awarded in December 2019. Construction started in December 2019 and is expected to be complete in the summer of 2020. Refer to section [3.2.1.6](#) for further information.
- In 2019, 18 Peace Region non-profit organizations projects received more than \$150,000 in funding from the Generate Opportunities (**GO**) Fund. To date, more

than half of the \$800,000 fund has been distributed to 49 projects that support community-enriching services in the Peace Region.

- Throughout the year, construction advanced at the Site C powerhouse.
- At the end of December 2019, a project risk materialized on the right bank when investigations and analysis of geological mapping and monitoring activities during construction identified that some foundation enhancements would be required to increase the stability below the powerhouse, spillway and future dam core areas. Refer to sections [3.2.1.1](#) and [3.2.2](#) for more information.

A dashboard based on the Project's status as of December 31, 2019 is provided in [Table 1](#) below. The Project team, with direction from the Project Assurance Board, is committed to delivering the Project without compromising on safety, scope, and quality. While the Project remains on schedule to achieve river diversion in September 2020 and the Project in-service date, BC Hydro continues to experience significant cost pressures.

Since the current Project budget was approved in February 2018, significant financial impacts have been realized and described in previous Quarterly Progress Reports and Annual Progress Reports. During and subsequent to the reporting period of this report, additional financial impacts have occurred in the following areas:

- Subsequent to the reporting period, a contract amendment was executed on March 6, 2020 to the main civil works contract that is retroactive to December 23, 2019 resulting in an increase in the contract value of up to \$332 million over the duration of the contract, including investments in equipment to reduce the schedule risk for dam construction and a series of performance-based at-risk incentives for the contractor with the objective of maintaining schedule for diversion and first power. For more details, refer to sections [3.2.1.1](#) and [3.10.4](#);

- Subsequent to the reporting period, the COVID-19 pandemic escalated significantly in British Columbia and has had a material impact on the Project. This Annual Report does not discuss the impacts of the COVID-19 pandemic as it is outside of the reporting period. BC Hydro's next Quarterly Progress Report, covering the period January to March 2020, will provide an update on the impacts of the COVID-19 pandemic on the Project;
- Additional labour resource requirements, the expansion and increased utilization of the on-site worker accommodations, as well as estimated site reclamation costs;
- First Nations treaty infringement claims and an injunction application which affected highways, transmission, and reservoir clearing work and impacted the planned sequencing of certain construction activities; and
- Costs associated with reservoir clearing, transmission line construction and highway re-alignment work are higher due to changes in scope as the designs have progressed.

As of December 31, 2019, BC Hydro had drawn approximately 71 per cent of Project contingency and continues to monitor and mitigate cost pressures. BC Hydro expects to request a draw on the Project reserve in fall 2020, as needed.

Table 1 Project Status Dashboard

● On Target ● Moderate Issues ● At Risk

Status as of:	December 2019	
Overall Project Health	●	Overall Project health is red due to identified cost pressures. The Project continues to be on schedule at December 31, 2019, however, significant cost pressures continue to be assessed and monitored.
Safety	●	In August 2019, the workforce peaked with almost 4,900 workers engaged on the Project. This is the highest number since the start of the Project and is a 54 per cent increase compared to 2018. As a result of the increase in construction activities, there has been an increase in serious and non-serious safety incidents, regulatory inspections and orders, and some decline in safety performance frequencies. BC Hydro and Contractors continue to invest significant effort in safety prevention programs, incident investigations, and safety training.
Scope	●	At the end of December 2019, a project risk materialized on the right bank when investigations and analysis of geological mapping and monitoring activities during construction identified the need for additional scope to enhance the foundations of the structures on the right bank including the powerhouse, spillway and future dam core areas. This information was shared with the Project Assurance Board in early January 2020. BC Hydro continues to work with the independent Site C Technical Advisory Board and the Project Assurance Board to determine the appropriate enhancement measures.
Schedule	●	As of December 31, 2019, the Project continues to be on track for river diversion (September 2020) and for the overall in-service date of 2024.
Cost	●	Significant cost pressures have been identified, and are being assessed, monitored and managed to the extent possible.
Quality	●	The overall quality rating for the Project continues to be good, indicating that the work generally conforms to the requirements of the drawings and specifications. While there were initial challenges with the quality of the main civil works diversion tunnel concrete linings, corrective actions were developed and are being implemented.
Regulatory, Permits and Tenures	●	Permits are on track and are meeting schedule requirements. To date, the Project has obtained 77 per cent of its major required authorizations and the remaining authorizations are anticipated to be received as required to meet the overall Project schedule needs. Environmental Assessment Certificate Amendment approvals are progressing well, with all requested amendments approved to date. Wildlife installations are proceeding.
Environment	●	Environment Canada initiated an investigation on October 10, 2018 with regards to a rain fall event in September 2018. BC Hydro has subsequently increased the system capacity along with other actions to reduce the potential of future similar events. This investigation is still ongoing. Focus remains on minimizing sediment and erosion across the dam site, care of water, hydrocarbon management, wildlife attractant management and invasive weed control.
Procurement	●	Procurement for the Project is proceeding as planned. Procurement for balance of plant is ongoing and BC Hydro continues to work with the Ministry of Transportation and Infrastructure for the work on the Highway 29 realignment.
Indigenous Relations	●	Six of 10 agreements are fully executed and in implementation. West Moberly First Nations withdrew from confidential discussions to seek alternatives to litigation related to Site C in August 2019 and filed an amended Notice of Civil Claim in September 2019. Discussions with Prophet River First Nation remain open.

Status as of:		December 2019
Litigation	●	In February 2019, the Province of British Columbia, BC Hydro, West Moberly First Nations and Prophet River First Nation agreed to enter into confidential discussions to seek alternatives to litigation related to Site C. West Moberly First Nations withdrew from the discussions in August 2019 and is continuing with its litigation. West Moberly First Nations filed an amended Notice of Civil Claim in September 2019, which, among other things, expands their original treaty infringement action, shifting the focus to all three Peace River facilities, not just Site C, and their alleged cumulative impacts. Confidential discussions with Prophet River First Nation to seek alternatives to its litigation related to Site C, filed in January 2018, remain open
Stakeholder Engagement	●	BC Hydro continues to work with the communities, regional district and stakeholder groups on the implementation of various community agreements.

3.2 Major Accomplishments, Work Completed, Key Decisions and Key Issues

3.2.1 Construction

Refer to [Appendix D](#) for the full construction schedule.

3.2.1.1 Main Civil Works

The scope of the main civil works contract includes the construction of the following major components:

- Diversion works, including two concrete-lined, 10.8 metre diameter tunnels. Tunnel No. 1 is 700 metres in length and Tunnel No. 2 is 790 metres in length;
- Diversion tunnel inlet and outlet portals, and approach channels;
- Excavation and bank stabilization;
- Relocation of surplus excavated material (including management of discharges);
- Dams and cofferdams (including a zoned earth embankment dam 1,050 metres long and 60 metres above the present riverbed, and stage 1 and 2 cofferdams);
- Roller-compacted concrete (including a buttress approximately 800 metres long made up of approximately 1.7 million cubic metres of concrete); and
- Haul roads.

Subsequent to the reporting period, a contract amendment was executed on March 6, 2020 to the main civil works contract that is retroactive to December 23, 2019 resulting in an increase in the contract value of up to \$332 million over the duration of the contract, including investments in equipment to reduce the schedule risk for dam construction and a series of performance-based at-risk incentives for the contractor with the objective of maintaining schedule for diversion and first power.

The contractual impacts will be reflected in subsequent quarters. While the amendment supports the project's ability to achieve river diversion in 2020, it also contributes to the significant cost pressures currently being managed.

Construction progress is taking place on the left bank, right bank and other areas described below. Main civil works is on track to meet river diversion in September 2020 and first power in-service milestone in December 2023.

Left Bank

In preparation for river diversion and construction of the earthfill dam, the significant work activities on the left bank are to stabilize the slope with a mass excavation associated with construction of the dam (complete), stabilize the diversion tunnel inlet and outlet portals (complete), excavate two diversion tunnels (complete), construct concrete diversion tunnel linings, construct inlet and outlet structures at the ends of the diversion tunnels to house the hydraulic gates, and construct the approach channels.

The activities currently underway or completed in 2019 on the left bank include:

Adit 4

Backfilling of adit 4 was completed at the end of January 2019. This is one of four tunnels and chambers located around the dam site that were excavated in the late 1970s and early 1980s during preliminary studies for the Project (a fifth adit was

excavated in 2012). Completion of backfilling of the adit removes the risk of the adit having any impact on the diversion infrastructure construction and performance.

Diversion Tunnels

Excavation of the two diversion tunnels commenced in the summer of 2018. In June 2019, the breakthrough on the upper portion (heading) of diversion Tunnel No. 1 occurred, and in early July 2019, breakthrough on the longer diversion Tunnel No. 2 occurred. The achievement of this milestone reduced the uncertainty related to the geological conditions around the tunnels.

In July 2019, access to continue excavation of the bottom portion (benching) of the tunnels was restricted due to a shotcrete delamination in Tunnel No. 1 that resulted in schedule delays in the tunnel excavation and lining. BC Hydro worked with the contractor and WorkSafeBC to resolve safety concerns and excavation recommenced in October 2019. At the end of December 2019, excavation of both tunnels was substantially complete. Roadheaders have been removed from the tunnels and minor excavation work remains.

At December 31, 2019, the gate segments and gate guides for the tunnel inlet structures were in the process of being delivered to site and the hydraulic cylinders were undergoing Factory Acceptance Testing, prior to shipping to site.

Core Trench Excavation (Left Bank)

Excavation work continued on the left bank dam core throughout 2019. Slope protection was added to the left bank excavated slopes to support continued excavation of the core trench which resulted in lower production in fall 2019. BC Hydro worked with the contractor to confirm the slope was safe and in November 2019 work recommenced in accessible areas.

The contractor has constructed additional infrastructure on site to facilitate more efficient material hauling routes. Foundation grout trials were completed, and production grouting is underway.

Diversion Tunnel Linings

Work on the tunnel lining started in April 2019 and has continued to progress through 2019. During the reporting period, progress on the concrete lining placements was temporarily halted so that the bottom excavation of the tunnels could be completed ahead of the lining work. The concrete lining was restarted in fall 2019. As of December 31, 2019, approximately 75 per cent of the concrete lining placements are complete for Tunnel No. 1 and approximately 29 per cent for Tunnel No. 2.

Diversion Tunnel Inlet and Outlet Structures

Construction of the inlet and outlet structures on both tunnels continues to progress. This work will continue through winter 2019/2020. As of December 31, 2019, the concrete works for Tunnel No.1 inlet structure is complete, and Tunnel No. 2 inlet structure is 87 per cent complete. Installation of hydraulic and mechanical systems for the inlet gates will begin in January 2020 and continue through to the spring 2020.

Right Bank

The right bank scope of work includes the excavation of the powerhouse, spillways and dam, and placing roller-compacted concrete for the foundations to support the powerhouse, dam and spillway structures.

The activities currently underway or completed in 2019 on the right bank include:

Right Bank Drainage Tunnel

Excavation of the right bank drainage tunnel was completed in February 2019.

Aggregate Production

Aggregate production continued through 2019 with the contractor producing the planned stockpile in advance of the 2020 construction season. Aggregate production stopped in November 2019 for winter and will recommence in spring 2020.

Core Trench Excavation (Right Bank)

The right bank dam core trench and dam buttress excavations continued during the reporting period and were completed in November 2019. Grouting of the core trench is ongoing. Planning is currently underway on the right bank for 2020 roller-compacted concrete placements at the dam core buttress; this includes effort to optimize production and reduce downtime during the roller-compacted concrete season. Roller-compacted concrete for the dam buttress is scheduled to commence placements in spring 2020 and is expected to be complete in fall 2020.

Spillway Roller-Compacted Concrete (Upper Spillway)

The main civil works contractor completed the placements of roller-compacted concrete for the spillways in October 2019, seven months ahead of schedule. The total volume of roller-compacted concrete placed in 2019 was 585,516 cubic metres. The completion of the spillway milestone allows the generating station and spillways contractor to have access to the work area ahead of schedule and reduces the interface risk with the main civil works contractor and other contractor's now that they will be able to complete the majority of their remaining scope of work independent of the main civil works contractor's progress.

Foundation Enhancements

Geotechnical issues on work fronts other than the left bank diversion tunnels has always been a risk, and this risk has materialized on the right bank.

At the end of December 2019, investigations and analysis of geological mapping and monitoring activities during construction identified that some foundation enhancements would be required to increase the stability below the powerhouse, spillway and future dam core areas.

These investigations and analysis were reported to the Project Assurance Board in early January 2020.

BC Hydro continues to work with the independent Site C Technical Advisory Board and the Project Assurance Board to determine the appropriate enhancement measures. The estimated cost and schedule impacts will be better understood once the enhancement measures are selected in the coming months.

River Diversion

Through 2019, BC Hydro continued to progress with the preparations for diverting the Peace River in September 2020. As a part of this work, operational and construction management, dam safety, emergency management, public safety, site safety, environmental, and commissioning plans have been developed. As part of the leadup to diversion, engagement with key stakeholders and Indigenous groups has been initiated and will continue into 2020.

Debris management

The design and procurement of debris retention structures were initiated on the Peace and Moberly Rivers. Works include piles on the Moberly River and debris booms on the Moberly and Peace Rivers.

Other Areas

Conveyor Belt System

In January 2019, construction of a five-kilometre long electric conveyor belt system began, which runs from the 85th Avenue Industrial Lands to the dam site. The conveyor belt will carry glacial till, an impervious clay-like material that will form the core of the Site C dam. The till conveyor system construction was completed and commissioned in September 2019. As of December 31, 2019, till trial placements are complete and under review by BC Hydro with early positive results.

In-River Work

When the river is diverted in 2020, upstream and downstream cofferdams will be in place in the Peace River to provide safe access for the main dam construction. In 2019, the in-river work included dredging in support of the stage 1 cofferdams.

Earthfill Dam

Work on the earthfill dam commenced in October 2018 and initial material placements for the earthfill dam continued through October 2019 and will recommence in spring 2020 when temperatures are conducive to earthfill material placement. While the left bank core trench excavation is behind schedule, BC Hydro expects to meet the key earthfill dam construction milestone in July 2023 for reservoir filling.

3.2.1.2 Generating Station and Spillways

The generating station and spillways scope of work includes the construction of the following major components:

- Generating station and spillways civil works, including:
 - ▶ Powerhouse: Concrete placements, installation of structural steel, and installing hydraulic gates;
 - ▶ Inlet headworks: Concrete placements, construction of the penstocks, and installing hydraulic gates; and
 - ▶ Spillways: Concrete placements and installing hydraulic gates.
- Cranes, which includes the supply and commissioning the powerhouse cranes, tailrace gantry crane, and headworks gantry crane; and
- Hydromechanical equipment, including the supply of all gates.

Generating Station and Spillways Civil Works

The generating station and spillways civil works contract is the second largest contract awarded for the Project and includes the delivery of civil works associated with the powerhouse, intakes, penstocks and spillways for the dam. Cumulative concrete placements for all work areas are proceeding ahead of plan.

Powerhouse

Concrete placements for the powerhouse finished in 2019 slightly ahead of schedule and are about 50 per cent complete. To December 31, 2019, the contractor has placed approximately 80,000 cubic metres of concrete of a total planned 155,000 cubic metres. Unit 1 is ready for the installation of the embedded turbine parts. The steel superstructure over the main service bay was completed in 2019 and the remaining superstructure will be completed in 2020.

Intakes Headworks

In April 2019, the contractor started working on the intake headworks. As of December 31, 2019, 18,500 cubic metres of concrete has been placed of a total of 88,000 cubic metres. Work is proceeding on Units 1, 2, 3, and 6 and is approximately 20 per cent complete.

Penstocks

In April 2019, the first of the penstock segments arrived on site. Penstocks are large steel pipe segments that will bring water from the reservoir to the generating units to produce power.

Penstock fabrication and installation is approximately ten weeks behind schedule as of December 31, 2019. The contractor is developing a robust plan to increase productivity in the future to ensure that the penstock milestones will be met.

The generating station and spillways contractor has fabricated a cumulative total of 601,055 kg of steel for the penstocks. As of December 31, 2019, the penstock work is 15 per cent complete.

Spillways

The contractor commenced working on the lower spillway in October 2019 and has placed 6,300 cubic metres of concrete as of December 31, 2019. This work was not planned to commence until 2020. Work on the upper spillway will start in June 2020.

Cranes

The powerhouse bridge cranes shipped to site in June 2019. Design work on the intake headworks crane continues.

Powerhouse bridge cranes were installed in the main service bay in June 2019. The cranes are important components in the Site C generating station with a lifting capacity of 320 tonnes. These cranes can lift the heaviest equipment in the powerhouse, including the major components of the turbine and generator units. The cranes are scheduled to be commissioned and operational by June 2020.

Hydromechanical Equipment

In 2019, the hydromechanical supplier delivered anchors and embedded parts for the intake operating gates and maintenance gates, and for the Unit 1 draft tube maintenance gate. Anchors for the spillway operating gates and spillway stoplogs were fabricated and shipped at the end of 2019. The supplier also fabricated the first intake operating gate to 75 per cent completion by the end of 2019 with the other five intake gates currently in fabrication. The generating station and spillways contractor completed installation of first stage embedded parts for Units 1, 2, and 3

draft tube maintenance gates and started on sill beam installation for Unit 1 at the end of the year.

Engineering support to construction and vendor integration has been ongoing throughout 2019 for the hydromechanical contract and design will continue to progress in 2020.

3.2.1.3 Balance of Plant

The formal procurement process for the generating station and spillways balance of plant contract was launched in June 2018. The request for proposals for the balance of plant contract was issued in April 2019. Since that time, the proponent teams visited the site and participated in collaborative meetings to facilitate development of their competitive proposals. Proposals will be received in 2020 with a target contract award date of June 2020 and mobilization to site in September 2020.

All ten of the balance of plant equipment supply contracts were awarded in 2019. These include contracts for: generator terminal equipment; protection and control panels; AC station service; generator circuit breaker equipment supply; generator step up transformer; powerhouse cooling water and dewatering large valve; the DC station service; the high voltage equipment; the compressed air receiver; and the diesel generator supply.

3.2.1.4 Turbines and Generators

The scope of work for turbines and generators includes the complete design, supply, installation, testing and commissioning of six turbines, generators, governors and exciters. The design, procurement and manufacturing for the turbines and generators are on schedule.

The contractor continues the assembly and welding of embedded turbine components in its temporary manufacturing facility on the right bank at site. The contractor's São Paulo factory will supply most of the turbine generator components, and as of December 31, 2019, has produced all cast steel parts for the six turbines.

Initial meetings for various other turbine and generator components in the São Paulo factory have been held concurrently with visits to many of the contractor's subcontractors in the São Paulo area. Based on the powerhouse construction schedule, the contractor will commence turbine installation in the powerhouse by July 2020 after mobilizing to the area in May 2020.

Pre-production stator bars for the generators were shipped in March 2019 from the contractor's São Paulo facility to BC Hydro's subsidiary, Powertech Labs, for type testing, and the test results confirmed the design will meet contractual requirements.

3.2.1.5 *Transmission and Substation*

The transmission sub-project will connect the Site C Project to the BC Hydro transmission system. The scope of work includes the following major components:

- Two 75-kilometre-long, 500 kV transmission lines from the Site C substation to the Peace Canyon generating station;
- Three one kilometre long, 500 kV transmission lines from the Site C Generating Station to the Site C substation;
- A new 500 kV Site C substation; and
- Expansion of the existing Peace Canyon 500 kV Gas Insulated Switchgear to incorporate the two new 500 kV transmission line terminals.

Transmission Towers and Lines

Access Roads and Clearing

Following the dismissal of the West Moberly First Nations injunction application in October 2018, the clearing and access road construction on the western half of the transmission line right of way resumed in January 2019. Starting in July 2019, construction of these access roads was significantly impacted by unseasonable wet weather until October 2019, extending the expected completion date from October 2019 to January 2020. Access to all transmission tower sites for the

transmission line construction contractor was established at the end of December 2019. BC Hydro is working with the transmission line contractor to mitigate this delay.

Vegetation clearing on the transmission line right-of-way, including trees and vegetation felling, was substantially completed in March 2019. Some hand-felling could not be completed until road access was completed in December 2019. The removal and/or disposal of waste wood and merchantable timber was also impacted by weather and limited access and is expected to be completed in January 2020. This delay did not impact the transmission line construction.

Transmission Towers and Foundations

The final transmission tower steel delivery was received in January 2019 and the final transmission line conductor delivery was received in April 2019.

The installation of transmission towers on foundations started in February 2019 and the transmission line contractor was able to install 51 towers prior the end of March 2019 when work was suspended due to warm temperatures and spring melt.

Due to poor ground conditions, significantly more piles were required for the transmission tower foundations, which extended the completion of the foundations in both the eastern and western segments of the transmission line. To mitigate any delay, the transmission line contractor continued to work on foundations and tower assembly during the summer from July to September 2019. This work was impacted by unseasonable wet conditions in the summer and delayed freeze-up in the fall/winter. Access to some of the eastern foundation sites within the wet areas of the transmission line was not possible until December of 2019, and completion of all eastern foundations is expected in February 2020.

A total of 97 out of 200 transmission towers for transmission line 5L005 were installed on foundations by the end of December 2019.

Transmission Lines

In October 2019 the transmission line contractor resumed the installation of towers on foundations and began preparation for stringing operations. The first insulator assemblies were installed in early November 2019 and the stringing of the first of nine conductor segments on the eastern segment of the transmission line started in November 2019. The transmission line contractor was able to complete three out of nine conductor segments by December 2019. Tower installation and stringing on the eastern segment of the 5L005 transmission line is expected to be complete in March 2020.

Stringing of the western segment of the 5L005 transmission line is planned to be completed in September 2020, with the line being energized in October 2020. The existing 138 kV lines on the right-of-way will then be de-energized and removed, and installation of towers and conductors will begin on the second transmission line. In total, 405 towers will support the two new 500 kV transmission lines that will connect the Site C substation to the Peace Canyon generating station, over a distance of 75 kilometers. These lines will eventually connect Site C to the rest of the BC Hydro power system.

Substation

Substation construction continued throughout 2019 with the contractor substantially completing the installation of all 500 kV electrical equipment. This included foundation installation, steel supports for buswork, assembly and installation of electrical equipment including installation of the 500 kV shunt reactor, and equipment cabling/wiring. All of the insulating crushed rock surfacing was delivered to the substation, with over 70 per cent placed in the switchyard. Installation of all protection and control equipment in the control building was completed, along with installation of the substation telecom equipment.

There are some remaining construction activities related to substation fence work, roadways within the station, 500 kV buswork and signage. All construction activity is

on track to be completed by summer 2020 with the primary focus being on the testing and commissioning work required for energization.

Together with the upgrades at nine existing BC Hydro substations and telecommunication sites located between Site C and Prince George, the telecom system connects the new Site C substation to the BC Hydro Provincial control centre, enabling remote operation of the substation.

Substation construction remains on schedule for energization in October 2020.

Peace Canyon Gas-Insulated Switchgear Expansion

As part of the transmission sub-project, two new 500 kV lines will be connected to the BC Hydro electrical system at Peace Canyon. To accommodate these new lines, the Peace Canyon switchyard and 500 kV indoor gas-insulated substation were expanded. This work commenced in June 2018 and in July 2019 the 500 kV gas-insulated switchgear at Peace Canyon was energized, becoming the first Site C asset placed into service. Termination of the new 500 kV lines between Site C and Peace Canyon will occur when the first transmission line is complete in 2020 and the second line in 2022.

3.2.1.6 *Highway 29 and Hudson's Hope Shoreline Protection Berm*

The creation of the Site C reservoir requires realignment of six segments of Highway 29 totalling approximately 32 kilometres. The scope of the highway realignment includes relocation of existing 25 kV distribution lines adjacent to the highway and the decommissioning of the existing highway. The Highways sub-project also includes the construction of a shoreline protection berm within the District of Hudson's Hope to protect against bank erosion due to reservoir wind waves and water table rise, and the development and operation of Portage Mountain Quarry, which will supply riprap for highway and berm construction. The permanent highway realignment is planned to be completed by spring 2023 to ensure the

highway remains accessible once the reservoir is inundated and the dam is operational.

The Highways 29 sub-project is divided into the following components:

- Cache Creek highway realignment and bridge;
- Halfway River highway realignment and bridge;
- Farrell Creek highway realignment and bridge;
- Farrell Creek East highway realignment;
- Dry Creek highway realignment and bridge;
- Lynx Creek highway realignment and bridge;
- Portage Mountain Quarry development and operation; and
- Hudson's Hope shoreline protection berm.

Cache Creek

The Cache Creek highway segment has been divided into Cache Creek East (8.6 kilometers) and Cache Creek West (4.1 kilometers) to allow for the further realignment of Cache Creek East.

Cache Creek East

In 2018, BC Hydro worked with Treaty 8 First Nations and landowners on the redesign of the eastern portion of the Highway 29 realignment at Cache Creek East. BC Hydro and the Ministry of Transportation and Infrastructure explored the feasibility of three alternate route options for Cache Creek East to reduce its effects on potential Indigenous burial sites and areas of cultural importance as identified by Treaty 8 First Nations. The selected realignment option is located north of the original route and is approximately 240 metres away from a potential burial site and 370 metres from an area identified to be of cultural importance. This option is the second shortest route of the three considered, meets provincial design and safety

requirements, and includes a longer bridge at the Cache Creek crossing. The 50 per cent detailed design for the revised Cache Creek East alignment was completed in 2019 and is expected to be complete in March 2020.

An amendment to the Project's Environmental Assessment Certificate to reflect the revised realignment was received in December 2019.

A tender for the construction of the Cache Creek East embankment fill (early works) was issued by Ministry of Transportation and Infrastructure in August 2019 and closed in September 2019. The contract was awarded in October 2019. Site preparation works were completed by Ministry of Transportation and Infrastructure contractors in November 2019.

Cache Creek West

The procurement for services related to the four kilometres of the highway realignment at Cache Creek West started in summer 2018. A contract was issued for a partial scope of work in October 2018. The construction activities for this partial scope of work started in early October 2018 and most of the work was completed by December 2018 except for some drainage work which was completed in spring 2019. The invitation to quote for the remaining scope for Cache Creek West was issued in December 2018 and a contract was awarded in May 2019. Construction of the four-kilometre highway realignment commenced in June 2019 and continued through 2019. It is expected to be completed on schedule in summer 2020.

Halfway River

The Halfway River Bridge is one of the more significant components in the Highway 29 realignment and includes the realignment of 3.7 kilometres of highway and the construction of a new one-kilometre-long bridge crossing the Halfway River, approximately 500 metres north of the current structure.

The detailed design for this segment of the highway started in winter 2018 and was completed by June 2019.

The stripping and data recovery of archeological site materials was awarded to a First Nations contractor and work was completed in August 2019.

The contract for the grading, paving and bridge construction was tendered by the Ministry of Transportation and Infrastructure in July 2019 and was awarded in October 2019. Construction is expected to start in January 2020 with completion in December 2022.

Farrell Creek

The Farrell Creek segment includes the realignment of 1.9 kilometers of highway, including the construction of a new 411-meter long bridge.

The detailed design for Farrell Creek was completed to the 90 per cent level in 2019. Completion of the design is expected in early 2020.

A tender for the grading, paving and bridge construction will be initiated by the Ministry of Transportation and Infrastructure in early 2020.

Farrell Creek East

The Farrell Creek East segment includes the realignment of 8.4 kilometers of highway. Geotechnical studies in 2019 concluded that 5.7 kilometers of this segment could be removed from the scope of work and monitored following the creation of the Site C reservoir, reducing the length of Farrell Creek East realignment work to 2.7 kilometers.

The detailed design for Farrell Creek East was completed to the 90 per cent level in 2019. Completion of the design is expected in early 2020.

Procurement of the grading and paving will be initiated in 2021.

Dry Creek

The Dry Creek segment includes the realignment of 1.4 kilometers of highway, including the construction of a new 192-meter-long bridge.

The detailed design for Dry Creek was completed to the 70 per cent level in 2019. Completion of the design is expected in early 2020.

Procurement of the grading, paving and bridge construction will be initiated in early 2020.

Lynx Creek

The Lynx Creek segment includes the realignment of 9.1 kilometers of highway and the construction of a 169-meter-long bridge. The Lynx Creek segment has been split into two contract packages; Lynx Creek East and Lynx Creek.

Lynx Creek East

The design for Lynx Creek East was completed in the fall 2019.

A First Nations directed procurement was initiated for an embankment fill at Lynx Creek East, with the contract awarded in December 2019. Construction started in December 2019 and is expected to be complete in summer 2020.

Lynx Creek

The design for Lynx Creek was completed to the 50 per cent level in 2019. The design is expected to be complete in spring 2020.

A tender for the grading, paving and bridge construction is expected to be issued by the Ministry of Transportation and Infrastructure in spring 2020.

Portage Mountain Quarry and Hudson's Hope shoreline protection berm

Material from Portage Mountain will supply riprap materials for sections of Highway 29 realignment and construction of the shoreline protection berm for the District of Hudson's Hope. BC Hydro received the final report on assessments of yield production and rock quality, durability and geochemical testing indicating positive results in January 2019. Development of the quarry continued, with haul road construction completed in August 2019. The mine production permit for the

Portage Mountain Quarry was received in August 2019, and production blasting occurred in August and September 2019 to begin producing riprap materials.

Design of the Hudson's Hope Berm complete in November 2019. A First Nations directed procurement was initiated in December 2019 and contract award is planned for spring 2020.

3.2.1.7 Reservoir Clearing

In 2018, work was initially delayed in portions of the reservoir due to the injunction application. Following the dismissal of the injunction application, work resumed in fall 2018.

The reservoir clearing scope of work is divided into two main regions:

- Lower reservoir, Moberly River drainage and Eastern Reservoir including Cache Creek drainage; and
- Middle reservoir, Halfway River drainage and western reservoir.

Clearing in the lower reservoir, Moberly River drainage, eastern reservoir and middle reservoir is required to support river diversion in fall 2020. All other clearing is scheduled for completion by 2023, prior to reservoir inundation.

Lower Reservoir, Moberly River Drainage and Eastern Reservoir including Cache Creek Drainage

Clearing activities including waste wood disposal occurred in the lower reservoir, Moberly River drainage, north bank of the eastern reservoir and Cache Creek area over the winter 2019. All clearing was completed in these areas except for some floodplain debris removal and some trees temporarily retained for environmental or accessibility reasons. Some of the debris and trees were subsequently removed in summer 2019. Any remaining debris that will need to be disposed of in support of diversion will be addressed by summer 2020.

In June 2019 and September 2019 contracts were awarded for the road construction and clearing of the south bank of the eastern reservoir, respectively. Road construction commenced in July 2019. Clearing activities advanced throughout the fall 2019 and are anticipated to continue through to March 2020.

Middle Reservoir, Halfway River Drainage and Western Reservoir

Surveying and inventory work in the middle and western reservoir areas including Halfway River drainage progressed through early 2019. This work was used to develop preliminary access and clearing plans for these areas used in submissions for regulatory approvals and the development of contract packages.

Three contracts for the middle reservoir were awarded in August 2019, October 2019 and January 2020.

Clearing of the reservoir is scheduled to be complete up to the Halfway River by March 2020 with work occurring in the Halfway River drainage and further westward in subsequent clearing seasons.

3.2.2 Engineering

Engineering provides technical support across the Project with substantial focus given to the maintenance and achievement of the contractor's schedule for both the main civil works contract and the generating station and spillways civil works contract.

Main Civil Works

Over the past year, design for the main civil works has continued to focus on options for advancement of the river diversion schedule which included completion of constructability refinements for the inlet and outlet portal excavations. For the spillways roller-compacted concrete, design alternates were considered, and many were implemented for schedule advancement and hand-over to the generating station and spillways contractor.

Detailed geological mapping of the excavations and instrumentation monitoring continues during construction. This information is used to update the design parameters for the site geology and foundations, for the design of additional enhancements for the remaining excavations, and for future foundation enhancements for the right bank dam, core trench, powerhouse, and spillways roller-compacted concrete buttresses.

Large Cranes, Hydromechanical, Turbines and Generators

Engineering support to construction and vendor integration was ongoing throughout 2019 for the large cranes, hydromechanical equipment and turbines and generators contracts.

Generating Station and Spillways, Balance of Plant and Equipment Supply

Several batches of construction drawings for the generating station and spillways civil works contract were completed through 2019, in support of, and in accordance with the revised contractor's schedule for the release of remaining construction drawings. Following on the release of drawings for the powerhouse, significant progress was made on the issue for construction drawings for the spillways for which over 90 per cent had been released by December 2019.

The implementation design for the balance of plant and equipment supply packages for generating station and spillways has been advancing, which includes specifications and 3D modelling work. All ten equipment supply contracts were awarded in 2019 and review of design submittals for these contracts has commenced. The request for proposals for the balance of plant contract, including a first draft of the technical specifications and proposal drawings, was issued in April 2019. The final draft of the technical specifications and issued for proposal drawings was issued in December 2019.

Design continued to be advanced on the protection and control systems and is on schedule with various protection and control panels now under construction.

Transmission and Substation

Implementation design for the 500 kV lines between the Site C substation and the Site C powerhouse was completed to the 90 per cent level, including completing the design for the procurement of steel lattice transmission towers. Telecommunications design was also completed and implemented in 2019.

Highway 29

Designs for all highway segments were advanced to the detailed design level, with designs completed for Halfway River and Lynx Creek East. Designs for Dry Creek, Farrell Creek and Farrell Creek East were advanced to the 90 per cent level.

Designs for Cache Creek and Lynx Creek were advanced to the 50 per cent level.

Design of the Hudson's Hope shoreline protection berm is complete.

Technical Advisory Board

The twentieth Technical Advisory Board meeting was held from May 29 to May 31, 2019 in Fort St. John and Vancouver. The Technical Advisory Board was provided with a Project update and construction site tour, while also considering technical aspects of the main civil works and the generating station and spillway contracts. Several additional conference calls, a workshop and a field visit were conducted in 2019.

Refer to [Appendix E](#) for the reports on Technical Advisory Board activities in 2019.

3.2.3 Quality Management

The Project has a quality management plan that outlines activities to ensure materials, equipment and the constructed works meet contract quality requirements. The plan identifies resources and procedures necessary for achieving the quality objectives, roles and responsibilities, resource planning and establishment of a quality management program.

Following BC Hydro's internal assessment of quality practices across the Project in 2018, the Project team embarked on several key activities in 2019 to support the recommendations in the internal assessment report including: 1) updating the Project Quality Plan and its supporting plans; 2) re-establishing the quality audit program for site works; 3) hiring of a deputy quality manager dedicated to the generating station and civil works; 4) provision of training to site personnel on the Project's quality management system; and 5) continuing with monthly Quality Performance Indicator assessments for the engineering, manufacturing and construction activities across each sub-project.

Implementation and monitoring of quality control and quality assurance plans are requirements for all contractors. The Project tracks and manages quality nonconformances, which is an occurrence that does not conform to the quality requirements of the contract. [Table 2](#) identifies quality management nonconformity instances during the reporting period.

**Table 2 Quality Management Nonconformity Report Metrics Reporting Period –
January 2019 to December 2019**

Contract	Reported October 1, 2019 to December 31, 2019	Closed October 1, 2019 to December 31, 2019	Reported January 1, 2019 to December 31, 2019	Closed January 1, 2019 to December 31, 2019	Reported to Date	Closed to Date	Open as of December 31, 2019
Main Civil Works	227	93	405	256	1,481	1300	181
Turbines and Generators	37	19	98	55	126	67	59
Generating Station and Spillways Civil Works	64	38	255	207	308	257	51
Large Cranes	6	6	8	8	17	17	0
Hydromechanical Equipment	6	6	8	8	8	8	0
Transmission	6	4	35	24	102	88	14

During 2019, the quality of the roller-compacted concrete placed by the main civil works contractor on the right bank was good. On the left bank, the contractor raised a series of nonconformity reports to address the field observations made on the diversion tunnel concrete linings during the summer and fall of 2019. BC Hydro and the contractor will be collaborating to close these nonconformity reports in 2020. BC Hydro and the contractor continue to meet weekly to discuss and resolve open nonconformity reports, and quality steering committee meetings continue to be held to discuss broader topics related to the contractor's quality performance. BC Hydro will be working with the contractor in 2020 to assess operational readiness of its on-site materials testing laboratory in advance of the commencement of materials processing for the main dam.

For the turbines and generator contract, the quality of the components manufactured to date has been good. There was a significant increase in the manufacturing activities in 2019 and this is expected to continue through 2020 and 2021. BC Hydro and the contractor continue to meet on a weekly basis to discuss and resolve quality issues, and to resolve inspector-access protocols to the main manufacturing facilities. BC Hydro continues to assess its quality assurance surveillance resources as the number of manufacturing locations in Brazil increases.

The quality of the structures built to date by the generating station and spillways civil works contractor has been good. BC Hydro observed a significant improvement in the contractor's thermal control and curing of concrete procedures throughout 2019. As penstock manufacturing and installation activities accelerated during the reporting period, BC Hydro worked closely with the contractor to ensure its dimensional control and welding procedures are being followed. BC Hydro continues to meet with the contractor on a weekly basis to discuss and resolve quality issues.

The six nonconformities reported during the last quarter of the reporting period for the transmission contract were minor in nature; corrective actions and verifications to close them out were reviewed by BC Hydro. BC Hydro continues to perform quality

surveillance audits of the transmission contractors to verify that their quality management systems are being adhered to.

BC Hydro continues to have quarterly meetings with our quality assurance partners, regarding the Project's current and future resource-requirements for quality surveillance at off site manufacturing locations.

3.3 Safety and Security

With work well underway on all of the on-site and off-site sub-projects, BC Hydro and all contractors working on the Project remain committed to the safety of all workers and have their construction safety teams dedicating additional time in the field. The construction activities in 2019 continued to increase, and peaked at almost 4,900 workers working on the Project in August 2019 (representing approximately 100 contractors and sub-contractors). As a result, the Project continued to see an increased rate of both serious and non-serious safety incidents, as well as regulatory inspections and orders. The busy summer construction period eased off slightly in the winter period, although work continued on almost all work fronts through the fall and winter period. Several safety and regulatory performance metrics have trended up in 2019.

2019 Highlights

During 2019, the Project held 51 Senior Management Safety Incident Reviews where BC Hydro and Contractor Project leaders reviewed incident investigations and corrective actions for more serious (or potentially serious) safety incidents. Lessons learned are shared across Project teams.

In June 2019, work front 'Safety Walkdowns' were introduced. Safety Walkdowns are a collaborative effort between a Contractor and BC Hydro construction safety leads to identify and eliminate safety hazards.

Working around wildlife is a specific safety hazard for the Project, with an increase in bear encounters during the summer, including in the congested powerhouse work

area. Mitigations included Bear Awareness training for all workers, strong controls for bear attractants, and having wildlife conservation experts available on-site.

Muscular-skeletal incidents accounted for approximately 68 per cent of all injuries in 2019, primarily from slips and trips, lifting and pulling, overexertion, and repetitive motion. Mitigations included Move Smart training and on-site physiotherapist hours.

Technical Safety Inspection Program

Starting with a safety/technical assessment of on-site chiller plants, a formalized Technical Safety Program is now in place for the Project. The program focuses on independent technical safety specialists review of construction equipment, and high hazard systems to ensure they are installed, operated and maintained safely.

BC Hydro conducted five technical safety reviews in 2019 on tower cranes, chillers, electrical cable management, lock out/tag out procedures, and the till conveyor.

Security

During 2019, Site C security has been enhanced to meet the security demands related to the increased number of workers accessing the site. This includes working with our contractors to increase their communication to the workforce on gate search protocols and site ban reviews, as well as reviewing current processes to ensure that BC Hydro's commitments to providing a safe and secure workplace for everyone on a safety sensitive project continues to respect the privacy rights of workers.

BC Hydro is committed to providing all employees with a workplace where everyone is treated with dignity and respect and free from harassment, discrimination and offensive conduct and remarks. BC Hydro's Code of Conduct includes a Respectful Workplace Policy which promotes respectful behaviours in the workplace. We actively work with our contractors to ensure their contractual requirements to have and implement a respectful workplace policy, are implemented. Contractors are also

required to comply with our Contractors Standard for Ethical Conduct which is posted on line.

All Site C workers engaged with on and off dam site workfronts on the Project site — including employees, contractors, their workforce, and consultants — are also governed by the Site C Project Absolutes, which specifically include “no bullying and no harassment” expectations. Project Absolutes state that contraventions result in immediate removal from site and, subject to appeal, may lead to revocation of site access privileges. All workers are aware of Site C’s priority for an inclusive worksite as this is outlined in the New Worker Orientation which is required for all workers to access site, and posted in various locations on site.

In 2019, there was one formal respectful workplace incident at Site C involving a BC Hydro employee, which was investigated and addressed. To continue supporting an inclusive worksite, some initiatives planned for 2020 include repeating Respectful Workplace Training, introducing Bystander Training, support apprentices’ and new workers’ right to speak up, and offer training that provides women with skills to speak with courage and confidence. These initiatives are inclusive for BC Hydro employees, consultants, Site C contractors and the contractor workforce.

Summary of Safety and Regulatory Performance Metrics

As of the end of December 2019, all work fronts across the Project had completed more than 20 million work hours (53 months), with no fatalities and one permanent partial disabling injury in 2017. With the increase in work activity volume and safety hazards in 2019, the Project has seen a higher number of serious and non-serious safety incidents reported in 2019 compared to 2018.

In 2019 the Project reported 22 serious safety incidents consisting of eight near misses, and 14 injuries which either required medical attention or had the potential to be a serious injury. Refer to [Appendix B](#) for a listing of all serious safety incidents.

There were 1,021 non-serious safety incidents which includes 329 near misses and 692 minor injuries that may have required first aid and/or medical treatment.

Figure 2 Serious and Non-Serious Incidents

	Serious		Non-Serious	
	2018	2019	2018	2019
NEAR MISS	10	8	315	329
INJURY	2	14	401	692

A “near miss” is defined as an incident that could have resulted in an injury, but did not because of effective hazard barriers or the person was out of harm’s way/missed. BC Hydro considers near miss reporting as indicative of a stronger and improving safety culture, and is strongly encouraging all Site C contractors and employees to report near misses.

[Table 3](#) below reflects safety and regulatory performance results for the Project, including all contractors. The table summarizes results in a tabular format, with incident details provided below the table.

Table 3 Summary of Site C Safety and Regulatory Metrics

	Reported for Quarter October 1, 2018 to December 31, 2018 ¹	Reported for Quarter October 1, 2019 to December 31, 2019 ¹	Reported for 2018 (January to December) ¹	Reported for 2019 (January to December) ¹	Reported Since Inception (July 27, 2015 to December 31, 2019) ¹
Fatality ²	0	0	0	0	0
Permanently Disabling Injury ³	0	0	0	0	1 ⁴
Serious Incidents ⁵	3	10	12	22	54
Lost Time Injuries ⁶	2	1	11	6	25
All-Injury Incidents ⁷ (Lost Time Injuries ⁶ and Medical Attention requiring Treatment ⁸)	8	23	34	70	147
Regulatory Inspections	12	15	41	84	156
Regulatory Orders	16	26	65	125	250

Safety Performance Frequency Metrics

To assess safety performance over time, the Project considers key safety metrics in context of the total amount of hours worked (frequency) which corrects for the volume of work. [Table 4](#) below summarizes these key safety frequencies by quarter for a rolling 12-month average.

¹ Numbers are subject to change due to timing of when data is retrieved and when injury is categorized.
² Excludes any non-occupational incidents.
³ A permanently disabling injury is one in which someone suffers a probable permanent disability.
⁴ In June 2018, an injured worker received a permanent partial disability award from WorkSafeBC due to a lost time injury incident in August 2017. The worker was attempting to unload a light plant (tower) from a flatbed truck. The worker stepped on the light plant (tower) outrigger to gain enough height to reach the lifting attachment when the worker lost balance and fell approximately 7.5 feet to the ground. BC Hydro reclassified this incident as a permanent disabling injury after receiving an update on the WorkSafeBC award in June 2018. The incident is identified as a serious injury in the BC Hydro Incident Management System.
⁵ Serious incidents are any injury or near miss with a potential for a fatality or serious injury.
⁶ Lost time injuries are those where a worker (employee or contractor) misses their next shift (or any subsequent shift) due to a work-related injury / illness. If a worker only misses work on the day of the injury, it is not considered a lost time injury.
⁷ All-Injury incidents is a count of all work-related medical attention requiring treatment, lost time injuries, and fatalities.
⁸ Medical attention requiring treatment is where a medical practitioner has rendered services beyond the level defined as “diagnostic or first aid” and the worker (employee or contractor) was not absent from work after the day of the injury. Services beyond diagnostic / first aid include (but are not limited to) receiving stitches, a prescription, or any treatment plan such as physiotherapy or chiropractic.

**Table 4 Summary of Safety Performance
Frequency Metrics**

	Fiscal 2019 April 2018 – March 2019 (Rolling 12-Month Average)				Fiscal 2020 April 2019 – March 2020 (Rolling 12-Month Average)			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Serious Incident Frequency	0.95	0.56	0.44	0.36	0.43	0.39	0.53	n/a
Lost Time Injury Frequency	0.48	0.43	0.40	0.29	0.23	0.18	0.14	n/a
All Injury Frequency	1.67	1.47	1.25	1.01	1.03	1.43	1.68	n/a

Fiscal 2020 Q4 will be updated when information is available.

The Q3 results from Fiscal 2019 to 2020 for the serious incident frequency and all-injury frequency metrics (adjusted for work hours) have increased, and lost time injury results have decreased.

The serious incident frequency for October to December 2019 quarterly reporting period is 0.53, an increase compared to 0.44 for the same period in 2018. Lost time injury frequency this quarter is 0.14, down significantly from 0.40 from the same quarter last year. This result suggests contractors have effective return-to-work and/or recover-at-work programs. Finally, all-injury frequency is at 1.68 this quarter, a 34 per cent increase compared to 1.25 for the same quarter last year.

These safety frequency results are consistent with the noted increase in work activities, workforce numbers, and unique safety hazards associated with the Project works.

Although the Project has seen some decline in safety performance measures in 2019, Project results continue to significantly outperform WorkSafeBC’s safety performance comparators in the heavy construction and forestry industries.

Safety Regulatory Inspections and Orders

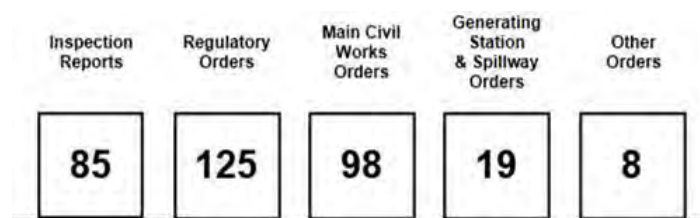
WorkSafeBC, under the authority of the *Worker’s Compensation Act*, is the primary regulator with jurisdiction over safety for the Project. WorkSafeBC oversees all

worker safety (employee and contractor) for the Project, both on the dam site and off the dam site. The Ministry of Energy, Mines and Petroleum Resources is the regulatory authority for worker safety on any work fronts subject to the *Mines Act*, specifically West Pine Quarry, Portage Mountain Quarry, and Wuthrich Quarry.

From October to December 2019, WorkSafeBC issued 15 regulatory inspection reports and 26 regulatory orders. The Ministry of Energy, Mines and Petroleum Resources did not conduct any regulatory inspections during this period.

For 2019, the Project was issued 85 regulatory inspection reports with 125 orders, including three stop work orders and six stop equipment use orders. Of this total, WorkSafeBC issued 83 inspection reports with 122 orders, and the Ministry of Energy, Mines and Petroleum Resources issued two inspection reports with three orders. The majority of these inspection reports were issued for the main civil works and generating station and spillways sub-projects (BC Hydro and contractor).

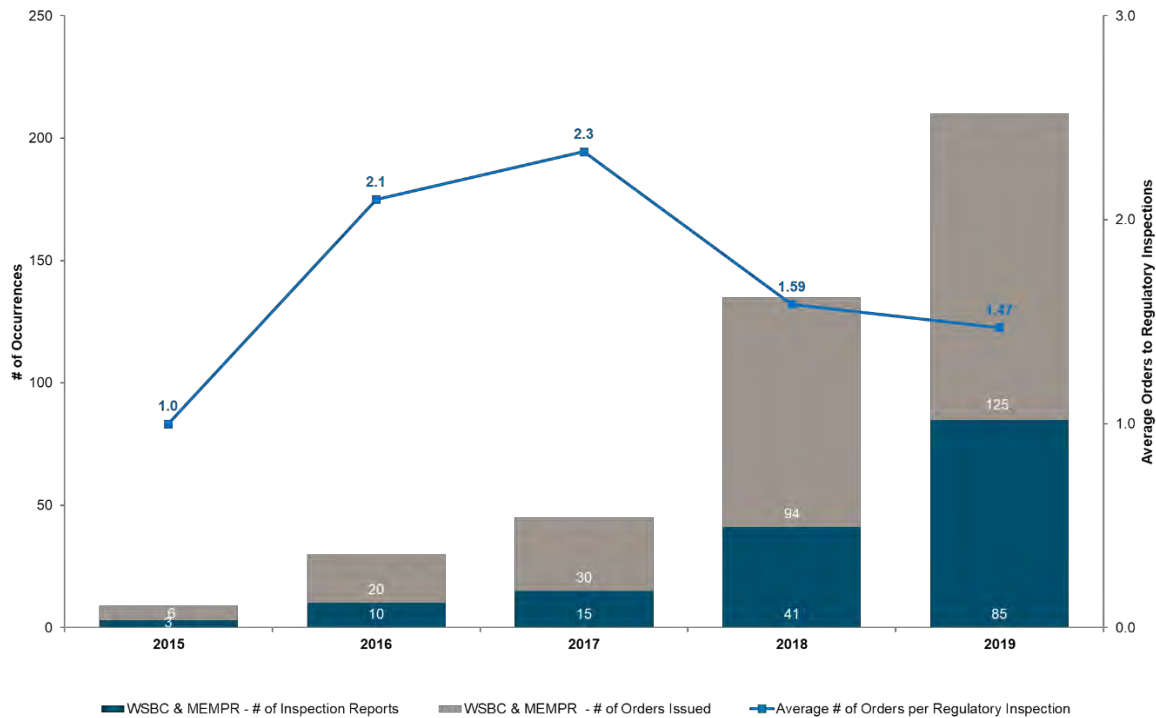
Figure 3 Regulatory Inspections in 2019



Of the 85 regulatory inspection reports, 38 (44.7%) were a ‘clean sheet’ with no orders. As of December 2019, the Project’s rolling 12-month ‘clean sheet’ result remained below WorkSafeBC benchmarks for the heavy construction and forestry industries.

To more broadly assess regulatory safety compliance, the Project monitors an additional metric – average number of orders per regulatory inspection – to help account for the higher volume of regulatory inspections expected at such a large construction project. For 2019, the average number of orders per regulatory inspection is 1.47, an improvement from 1.59 in 2018.

Figure 4 **Number of Orders to Regulatory Inspections, 2015 to 2018**



Refer to [Appendix B](#), for a list of safety regulatory inspections and orders received in 2019. The more significant regulatory inspections came from WorkSafeBC and were related to:

- roadheader incident in the diversion tunnel;
- tower crane incidents in the right bank cofferdam area;
- coordination of safety in multi-employer worksites;
- shotcrete falls in the left bank diversion tunnel and right bank drainage tunnel;
- grout plant incident in the right bank area;
- failed formwork in the left bank cofferdam fishway outlet structures;
- confined space violations; and
- poor air quality resulting from burning of forest clearing debris piles.

3.4 First Nations Consultation

Pursuant to the Environmental Assessment Certificate and Federal Decision Statement, BC Hydro is required to consult with 13 Indigenous groups with respect to the construction stage of the Project. This consultation includes provision of information on construction activities, support for the permit review process, and review and implementation of mitigation, monitoring and management plans, and permit conditions.

Accommodation offers were originally extended to ten First Nations communities. Six agreements have been fully executed and are in various stages of implementation. In February 2019, the Province of British Columbia, BC Hydro, West Moberly First Nations and Prophet River First Nation agreed to enter into confidential discussions to seek alternatives to litigation related to the Site C Project. West Moberly First Nations withdrew from the discussions in August 2019 and filed an amended Notice of Civil Claim in September 2019. Discussions with Prophet River First Nation remain open. To date, Impact Benefits Agreements with Doig River First Nation, Halfway River First Nation, Sauteau First Nation and McLeod Lake Indian Band, and a Project Agreement with Dene Tha' First Nation have been publicly announced.

Consultation and engagement with Indigenous groups is ongoing through the Cultural and Heritage Resources Committee, Environment Forum and Permitting Forum. Engagement through these forums and directly with Indigenous groups to prepare them for river diversion and reservoir inundation is ongoing and has included numerous boat, highway and site tours.

3.5 Litigation

A number of legal challenges to the Project have been filed by First Nations and other interests. In all cases where the courts have issued rulings, the legal challenges have been dismissed.

The treaty infringement claims filed by West Moberly First Nations and Prophet River First Nation in January 2018 remain active. West Moberly First Nations had concurrently filed an injunction application in January 2018 to stop construction of the Project pending the trial of their treaty infringement claim, but the interim injunction was denied by the court.

In February 2019, the Province of British Columbia, BC Hydro, West Moberly First Nations and Prophet River First Nation agreed to enter into confidential discussions to seek alternatives to litigation related to Site C. West Moberly First Nations withdrew from the discussions in August 2019 and is continuing with its litigation. Discussions with Prophet River First Nation remain open.

On September 25, 2019, the West Moberly First Nations filed an Amended Notice of Claim, which, among other things, expands their original treaty infringement action, shifting the focus to all three Peace River facilities, not just Site C, and their alleged cumulative impacts. The West Moberly First Nations are seeking an injunction against operating the Site C Dam, an order to remove the dam, and damages, including the payment of all revenues earned on the existing Peace River dams. BC Hydro's legal counsel are currently reviewing the amended claim. The trial is expected to occur sometime in 2022.

The details of open proceedings in 2019 are summarized in [Table 5](#) below. Other than the treaty infringement claims, the litigation listed in [Table 5](#) is either inactive, meaning no steps have been taken in litigation that require a response from BC Hydro, or do not present a material financial risk to BC Hydro.

Table 5 Litigation Status Summary

Description	Date	
B.C. Supreme Court: Treaty Infringement Claims		
West Moberly First Nations	Civil claim filed Injunction application filed Injunction hearing date Injunction denied (no appeal filed) Amended civil claim filed	January 15, 2018 January 31, 2018 July 23 to August 3, 2018 and September 4 to 7, 2018 October 24, 2018 September 25, 2019
Prophet River First Nation	Civil claim filed January 15, 2018	January 15, 2018
B.C. Supreme Court: Civil Claims		
Building Trades v. BC Hydro	Civil claim filed Response to claim filed	March 2, 2015 April 10, 2015
Aggregate Mining Process LLC and Reynolds Shipping LLC	Civil claim filed Response to claim filed Order granting security for BC Hydro's costs Application to dismiss filed after plaintiff failed to post security as ordered (later adjourned after plaintiff belatedly posted security)	November 16, 2018 December 6, 2018 June 17, 2019 July 31, 2019
Office of the Information and Privacy Commissioner (OIPC)		
Applicant requested review of Freedom of Information response	Request for review filed OIPC Order issued Application for judicial review of Order filed Hearing date OIPC Order set aside	August 17, 2017 December 11, 2018 January 18, 2019 September 17, 2019 and October 4, 2019 December 9, 2019

3.6 Permits and Government Agency Approvals

3.6.1 Background

Before the Site C Project could start construction, an extensive environmental assessment process was undertaken which resulted in the issuance of the Provincial Environmental Assessment Certificate and the Federal Decision Statement in support of the Project. In addition, the Project is required to apply for multiple provincial permits, water licences, leaves to commence construction and federal authorizations. Timing of the application for these permits and authorizations is staged and aligned with the construction schedule, availability of detailed design information, and by Project component. Permitting approaches and requirements are also determined through regular meetings with regulatory agencies and are subject to change throughout the Project. As at December 31, 2019, BC Hydro estimates that approximately 450 permits will be required throughout the life of the Project. Of these permits, 350 have been received and are actively being managed.

Multiple conditions are attached to each permit or authorization, which cover subjects such as air quality, water quality, fish and aquatics, wildlife, heritage, health and safety, construction environmental management and First Nations consultation. Each of the conditions must be implemented, audited and tracked to prove compliance or identify issues for follow-up with corrective actions. [Table 6](#) provides an overview of Provincial Environmental Assessment Certificate and Federal Decision Statement Conditions. BC Hydro has developed a comprehensive Construction Environmental Management Plan which outlines how we will comply with the Project Environmental Assessment Certificate, Federal Decision Statement, and provincial and federal permits and authorizations. As of December 31, 2019, all required conditions and submissions have been met in accordance with the schedule and requirements of the conditions.

Table 6 Overview of Provincial Environmental Assessment Certificate and Federal Decision Statement Conditions

Type	Number of Environmental Assessment Certificate Conditions	Number of Federal Decision Statement Conditions	Notes
AQUATIC ENVIRONMENT			
Hydrology, Water Quality	3	12	Monitoring and management of hydrology, fluvial geomorphology and sediment transport, and water quality.
Downstream Monitoring		5	Analysis of model predictions using existing data (Peace Athabasca Delta).
Fish and Fish Habitat	4	10	Protecting riparian zones, including fish passage in design, and managing total dissolved gas.
Vegetation and Ecological Communities	7	9	Updating mapping, conducting pre-construction surveys, analyzing wetland function and replacing lost wetlands, protecting rare plants.
Species at Risk		6	Ensuring that potential effects are addressed and monitored.
Wildlife Resources	10	17	Providing bird windows and identifying mitigation measures for migratory and non-migratory birds, bats, snakes, and fishers.
Current Use	4	4	Mitigating Indigenous plant use and ground truthing measures to inform additional measures.
LAND AND RESOURCE USE			
Harvest of Fish and Wildlife	1		Compensating guide outfitters and trap line holders.
Agriculture	2		Establishing a \$20 million fund and monitoring.
Other Resource Industries	3		Addressing surplus aggregate, and interface with oil and gas producers.
Transportation	5		Controlling access, providing carpool plans, monitoring traffic and delivering appropriate signage.

Type	Number of Environmental Assessment Certificate Conditions	Number of Federal Decision Statement Conditions	Notes
Outdoor Recreation and Tourism	3		Building boat launches and recreation fund, compensating camp ground owners, and informing downstream Alberta fishers.
COMMUNITY			
Community Infrastructure	6		Mitigating effects on waste management, sewage and water systems.
Housing	2		Building 50 rental units in Fort St. John and providing camp accommodation for workers.
Regional Economic Development	6		Providing funds for Hudson's Hope, non-profits, labour/training plans, and community recreation.
HUMAN HEALTH			
Air Quality/Noise	4	7	Monitoring of ambient air quality, noise and vibration.
Water Quality	1		Monitoring of potable and recreational water quality.
Methylmercury	1	7	Monitoring of accumulation in fish, including collection, timing and reporting requirements.
HERITAGE RESOURCES			
Visual Resources	1		Managing landscape views through design of facilities exteriors and landscaping.
Heritage	3	6	Developing a Heritage Management Plan and providing funding for storage.
ENVIRONMENTAL PROTECTION and MANAGEMENT			
Greenhouse Gas Monitoring	1		Monitoring greenhouse gas emissions.
Environmental Management Plans	4		Providing required plans and establishing requirement for an Independent Environmental Monitor.

Type	Number of Environmental Assessment Certificate Conditions	Number of Federal Decision Statement Conditions	Notes
Safety Management Plans	2		Developing and implementing Worker and Public Safety, Traffic Management, and Fire Protection Plans.
Dam Safety	2		Undertaking a dam breach assessment and supporting emergency management in Alberta.
Mitigation, Monitoring and Development Plans	4		Providing required mitigation Plans, Quarry Development, Communications and Business Participation Plans.
Accidents and Malfunctions		6	Providing required plan and consultation with Environment Canada on effects of potential accidents and malfunctions on the environment.
ADMINISTRATIVE			
General Conditions		4	Using science to inform plans and carry on consultation as appropriate.
Implementation Schedule		3	Providing an implementation schedule for conditions 90 days in advance of activity.
Record Keeping		2	Retaining records in a manner that facilitates compliance review.
TOTAL	79	98	

3.6.2 Federal Authorizations

Federal authorizations are required under the *Fisheries Act* (Fisheries and Oceans Canada) and the *Navigation Protection Act* (Transport Canada). All major federal authorizations for construction and operation of the Site C dam and reservoir were received in July 2016. At this time, no further *Fisheries Act* authorizations are anticipated. Additional *Navigation Protection Act* approvals for discrete works in the reservoir (e.g., shoreline works, debris booms and Highway 29 bridges) are anticipated to be issued at the regional level. As of December 31, 2019, a total of

53 federal approvals have been received and are actively being managed.

Six approvals were pending, and 15 future approvals planned.

3.6.3 Provincial Permits

Site C requires provincial permits primarily under the *Land Act*, *Water Sustainability Act*, *Forest Act*, *Wildlife Act*, *Heritage Conservation Act*, and *Mines Act*. These permits include investigative permits, licences to occupy land, water licence approvals, leaves to commence construction and leaves to construct, and licences to cut vegetation, among others. Permit applications are sequenced with the overall schedule of the Project to ensure the most current and factual information is included in the submissions.

Approximately 381 provincial permits and approvals will be required throughout the life of the Project. As of December 31, 2019, 297 permits have been obtained and are actively being managed. These have included permits for the dam site area (site preparation and clearing, as well as works for the main civil works and generating station and spillways, such as construction of cofferdams, excavation and construction of roller-compacted concrete buttress), worker accommodation (land tenure and water withdrawal), Highway 29 geotechnical investigations and construction, transmission line clearing and construction of access roads, and lower/eastern reservoir and Moberly River clearing. Future provincial permits are planned for the construction of the Highway 29 realignment, Hudson's Hope Berm, and middle and western reservoir clearing and filling. All future permits are anticipated to be issued in accordance with the Project construction schedule.

The majority of the provincial permits are administered by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development and the Ministry of Energy, Mines and Petroleum Resources. In addition, BC Hydro has developed a coordinated First Nations consultation process with the Ministry of Forest, Lands, Natural Resource Operations and Rural Development to assist with the government

permit workload. This coordinated consultation process was implemented in January 2018.

3.6.4 Environmental Assessment Certificate

Compliance with the Project conditions in the Environmental Assessment Certificate is regularly monitored, and evidence is collected by various federal and provincial regulatory agencies, the Independent Environmental Monitor, BC Hydro and contractors.

In 2019, the Environmental Assessment Office issued the following three amendments to the Project's Environmental Assessment Certificate.

- On February 12, 2019, the Environmental Assessment Certificate was amended to allow for selective use of machinery to clear in riparian zones during reservoir clearing when it is unsafe to undertake manual clearing;
- On February 12, 2019, the Environmental Assessment Certificate was amended to allow for the expansion of the worker accommodation to a peak capacity of 2,200 persons; and
- On December 13, 2019, the Environmental Assessment Certificate was amended to reflect design changes to the realignment of Highway 29 at Cache Creek. The revised realignment reduces impacts to cultural sites of importance to Indigenous groups.

All amendments and amendment requests are posted on the Environmental Assessment Office website at

<https://projects.eao.gov.bc.ca/p/site-c-clean-energy/docs>:

As with any large construction project, refinements to the design are expected. There are no material impacts to the cost of the Project as a result of the proposed amendment requests.

3.6.5 Permitting Improvement

In order to efficiently and effectively manage the large volume of permits required for the Project, BC Hydro continues to engage with regulators, First Nations communities and contractors to share information, seek feedback, and identify process improvements. Process improvements implemented include the following:

- BC Hydro continues to facilitate meetings with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, the Comptroller of Water Rights, the Department of Fisheries and Oceans and contractors to ensure permit applications are coordinated, timely and sufficient;
- Regular permitting forums are being held with Indigenous groups to share information on upcoming permit applications and to seek feedback before applications are submitted to regulators;
- BC Hydro has implemented a coordinated Indigenous groups consultation process with the Ministry of Forest, Lands, Natural Resource Operations and Rural Development to assist with the government permit workload; and
- Permitting Forum No. 13 was held on July 17, 2019, covering eight permit applications for works related to Highway 29 realignment at Lynx Creek East, middle reservoir clearing, Portage Mountain Quarry, and transmission line stringing. Permitting Forum No. 14 was held on September 11, 2019, covering six permit applications for debris boom facilities on the Moberly and Peace Rivers, groundwater use for Highway 29 construction, and construction of the realignment of Highway 29 at Cache Creek. Permitting Forum No. 15 was held on November 14, 2019, covering five permit applications for Highway 29 realignment for Farrell Creek, Farrell Creek East, in-river material sources for Highway 29 realignment, and the Peace River boat portage program.

3.7 Environment

3.7.1 Mitigation, Monitoring and Management Plans

The Environmental Assessment Certificate and Federal Decision Statement conditions require the development of draft and final environmental management, mitigation and monitoring plans, as well as the submission of annual reports on some of these plans.

Focus remains on minimizing sediment and erosion across the dam site, care of water, hydrocarbon management and invasive weed control. Given the size of the Project and the length of construction, wildlife is becoming less wary of the site. As such wildlife attractant management is becoming more of a focus.

On the left bank, construction of the sediment control features located at L3 (a gully on the left bank which contains a stream that flows for a portion of the year) is substantially complete and the control features effectively conveyed water during the spring rain events. Care of water systems are substantially complete within the till conveyor area and include directional ditching, sediment control devices and ponds.

On the right bank management of water that has contacted naturally occurring acidic rock has been substantially implemented. Works are substantially complete for the right bank downstream side channel fish enhancement project. This Project has created shallow, still backwaters that provide valuable habitat for fish within the Peace River.

Wildlife mitigation programs are progressing with further installations of summer bat boxes, fisher maternity boxes, eagle nest platforms and snake dens necessary in advance of reservoir clearing. Wildlife sweeps of the area for any potential project interactions continue regularly and appropriate mitigation or avoidance practices established; such as snake fencing and warning signs, no work zones, and limiting hours or days of work.

Wildlife and fisheries studies and monitoring continue to collect baseline usage data for comparison post dam construction.

Air quality, water, noise and light monitoring continue at various locations throughout the Project with only localized or sporadic elevated readings noted and appropriate mitigation taken.

As of December 31, 2019, all required submissions have been made in accordance with the schedule and requirements of the conditions, including all environmental protection plans required for the generating station and spillways contractor.

Also in 2019, there were 13 annual reports submitted in accordance with the conditions.

3.7.2 Environmental Compliance Inspections and Enforcement

Throughout 2019, the Project was inspected by provincial and federal regulators from the Water Comptrollers' Office, the B.C. Environmental Assessment Office, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, the Ministry of Energy, Mines and Petroleum Resources and the Canadian Environmental Assessment Agency.

Throughout the course of the on-site inspections, environmental compliance was focused on the following areas:

- Completing the channelization works at the areas of the dam site referred to as L3 and Garbage Creek. The stilling basin in the upper portion of L3 was damaged due to high flows during the 2018 freshet. This stilling basin was decommissioned, and the area cleared of debris. Repairs to the L3 upper stilling basin and channel were underway through the fall and winter of 2018 and were substantially completed in March 2019.
- Improving the care of water systems on the right bank. BC Hydro increased the holding capacity and effectiveness of these care of water systems by removing much of the weathered acidic rock, completing clean water bypass ditches,

increasing treatment pond holding capacity and increasing the overall water holding capacity.

- Selected over-greasing of equipment at the dam site area. BC Hydro is requiring any noncompliant contractors to immediately address the non-compliances and implement an action plan that requires equipment to be maintained going forward to prevent a re-accumulation of grease.
- Enhancing erosion and sediment control measures along the 85th Avenue conveyor corridor. BC Hydro is addressing these concerns through the installation of erosion and sediment control structures on the site. Hydroseeding of both contact and non-contact slopes took place within the deep cut portions of the corridor. In addition, the catchment located at the base of the L3 ravine is handling sediment releases and reducing turbidity in downstream reaches.
- Spill prevention and response plans. BC Hydro is addressing this concern by continuing to utilize spill pads and drip trays and monitoring of equipment with appropriate storage and disposal. This also includes replenishing/refreshing spill kits and continued spill kit inspections.
- Waste management plans with regards to bear proofing. BC Hydro is addressing this concern by actioning items to get bins repaired or replaced and ensuring best secure waste management practices are implemented.
- Enhancing erosion and sediment control measures along the dam site area and Portage Mountain Quarry. BC Hydro is addressing this with ongoing maintenance and installation of erosion and sediment control devices including specific maintenance at Portage Mountain Quarry and rock installation within the dam site area. Additionally, BC Hydro is working to improve contractors' road and ditch maintenance practices.

Inspectors from the B.C. Environmental Assessment Office, Department of Fisheries and Oceans Canada, Impact Assessment Agency of Canada, the Independent

Environmental Monitor, the Water Comptroller, Ministry of Energy and Mines, and Transport Canada performed over 1,800 hours of inspections between January 1 and December 31, 2019. The results of these inspections are listed below in [Table 7](#).

BC Hydro completed almost 45,000 environmental compliance inspections in 2019, with a compliant or partial compliant result of 98 per cent across all contractors and works areas.

Table 7 Warning Letters and Orders

Agency	Number of Warning Letters	Number of Orders
Water Comptroller’s Office	0	1
Environmental Assessment Office	0	0
Ministry of Forests, Lands, Natural Resource Operations and Rural Development	0	0
Ministry of Energy, Mines and Petroleum Resources	0	0
Canadian Environmental Assessment Agency	0	0

Site C Project staff met bi-weekly with provincial regulators to ensure ongoing focus and attention to the areas of most importance and concern for the regulators, and to proactively address any environmental or regulatory issues that may arise.

Issues continue to be observed for excessive greasing of equipment and hydrocarbon spills. BC Hydro is working with its on-site contractors to raise the awareness of both care of water and spill/leak prevention requirements.

Additionally, the Project has engaged both an Independent Environmental Monitor and an Independent Engineer that report directly to provincial regulators. The Independent Environmental Monitor provided weekly reports that have also demonstrated substantial compliance across the Project while continuing to identify areas of focus for sediment and erosion control, water management and spill

prevention. The Independent Engineer worked directly with site staff to proactively identify design issues that may impact the environment and develop mitigation plans to avoid or minimize impacts.

3.7.3 Heritage

In accordance with Environmental Assessment Certificate and Federal Decision Statement conditions, the Site C Heritage Resources Management Plan addresses the measures that will be used to mitigate the adverse effects of the Project on heritage resources.

The 2019 heritage field program is focused on field work that will meet regulatory requirements for pre-construction archaeological impact assessments, and systematic data recovery at selected archaeological sites. The field season was initiated in May 2019 and ended in December 2019.

Heritage works includes approximately 80 archaeologists and Indigenous community representatives and the submittal of 22 archaeological interim reports, one archaeological annual permit report, and one archaeological final permit report to the BC Archaeology Branch and Indigenous communities in accordance with *Heritage Conservation Act* permit terms and conditions.

Additionally, three archaeological interim reports and two archaeological annual reports for work conducted in 2019 are pending submission to the BC Archaeology Branch and Indigenous groups. One palaeontological report will be submitted to the B.C. Archaeology Branch and the B.C. Heritage Branch.

Heritage reviews of contract documents, contractor environmental plans and construction readiness plans, as well as field inspections, were performed to ensure compliance. Additionally, five heritage chance finds were reported in this period. A total of four new *Heritage Conservation Act* permits, and two *Heritage Conservation Act* permit amendments were received in support of the 2019 Heritage Program.

One *Heritage Conservation Act* permit closed on December 31, 2019 once the terms and conditions of this permit were met.

3.7.4 Agricultural Mitigation and Compensation Plan Framework

As part of the Site C Agricultural Mitigation and Compensation Plan, BC Hydro has established a \$20 million BC Hydro Peace Agricultural Compensation Fund to support agricultural production and related economic activity in the Peace Region. The fund is governed by a regional decision-making board made up of representatives from five regional agricultural organizations, the Peace River Regional District, three agricultural producer members-at-large and one Peace River Valley agricultural producer. Northern Development Initiative Trust was selected as the fund administrator and is managing the investment of the funds. The first grant intake of \$250,000 was held in fall 2019 and seven Peace Region agricultural projects received a total of \$209,086 in funding. A second grant intake of \$250,000 is currently open.

3.8 Labour, Employment and Training Initiatives and Building Capacity Initiatives

3.8.1 Labour

To date, unions that have participated in the construction of Site C are listed in [Table 8](#) below.

Table 8 Participating Unions

Union
Construction Maintenance and Allied Workers (CMAW)
Christian Labour Association of Canada (CLAC), local 68
Canada West Construction Union (CWU)
Construction and Specialized workers Union (CSWU), local 1611
International Union of Operating Engineers (IUOE), local 115
Ironworkers, local 97
International Brotherhood of Electrical Workers (IBEW)
MoveUP, local 378

Union
Pile Drivers 2402
The Boilermakers, lodge 359
The United Association of Journeymen & Apprentices of the Plumbing & Pipefitting Industry of the U.S. & Canada, local 170
Teamsters, local 213

In addition, ten unions affiliated with the BC Building Trades will be working on the installation of the turbines and generators.

The generating station and spillways contractor has signed a labour agreement for the generating station and spillways civil works with the IUOE Local 115, the CSWU Local 1611 and CMAW.

Further, the substation contractor has negotiated labour agreements with the IBEW for the electrical work on the Site C substation, and their civil subcontractor has been certified to the CMAW. The transmission contractor is performing transmission line work on the Project and is signatory to a labour agreement with the IBEW. The Teamsters have collective agreements with other contractors on the Project.

The labour approach for the Site C balance of plant contract will be for the contractor to retain the Construction Labour Relations Association to enter into an agreement, through negotiations, with the Bargaining Council of BC Building Trades Unions or another consortium of Building Trades Unions that covers an agreed set of labour requirements.

3.8.2 Employment

Contractors submit monthly workforce data electronically to BC Hydro. [Table 9](#) presents the monthly number of construction contractors, non-construction contractors, engineers, and Project team workers for this period. As with any construction project, the number of workers — and the proportion from any particular location — will vary month-to-month and also reflects the seasonal nature of construction work.

**Table 9 Site C Jobs Snapshot Reporting Period –
 January 2019 to December 2019**

Month	Number of B.C. primary residents ⁹	Number of total workers ¹⁰
January 2019	2,479	3,186
February 2019	2,760	3,494
March 2019	2,894	3,674
April 2019	2,950	3,775
May 2019	3,395	4,385
June 2019	3,521	4,634
July 2019	3,596	4,797
August 2019	3,701	4,870
September 2019	3,634	4,790
October 2019	3,637	4,823
November 2019	3,445	4,650
December 2019	3,197	4,330

In December 2019, 74 per cent (3,197 workers) of the workforce was made up of residents of British Columbia, while 19 per cent (689 workers) of the workforce lived in the Peace River Regional District. The on-site contractor workforce number also includes 12 per cent women (433 workers) and 162 workers who are working for various contractors as apprentice carpenters, welders, electricians, millwrights, ironworkers, mechanics, boilermakers and heavy equipment operators.

In August 2019, the total workforce peaked at 4,870, the highest number to date since the start of construction. In 2019, the Project reached record highs in the numbers for women and Indigenous workers on site, and contractors also reported the highest use of apprentices to date.

⁹ Employment numbers provided by Site C contractors and consultants are subject to revision. Data not received by the Project deadline may not be included in the above numbers. Employment numbers are direct only and do not capture indirect or induced employment.

¹⁰ Total workers include:

- Construction and non-construction contractors performing work on Site C dam site, transmission corridor, reservoir clearing area, public roadwork, worker accommodation and services.
- Engineers and Project team that is comprised of both on-site and off-site workers.
- The Project team, which includes, BC Hydro construction management and other offsite Site C Project staff. An estimate is provided where possible if primary residence is not given.

3.8.3 Training and Capacity Building Initiatives

In September 2017, the Contractors Labour Committee agreed to establish an Indigenous labour subcommittee. The purpose of the subcommittee is to support Indigenous training, labour and employment on Site C through communication, consultation, coordination and cooperation among contractors on the Project.

The committee meets quarterly, or on an as-needed basis. All major Site C construction contractors currently attend this meeting.

The committee has developed a number of initiatives, such as:

- Established a protocol for distribution of Indigenous candidate resumes;
- Developed and implemented the Indigenous Employment and Information Day;
- Participated in the development of the BC Hydro and Northern Lights College pre-carpentry skills pilot program on the Site C Project;
- Reviewed and assisted contractors in contract reporting requirements;
- Discussed communication of site-wide policies;
- Shared regional cultural events with Project contractors;
- Shared BC Hydro's Indigenous Employment and Business Development employment and training initiatives;
- Reviewed contractors' best practices;
- Shared success stories to assist in generating opportunities; and
- Reviewed Project status and upcoming labour requirements for contractors and how to meet labour demands.

BC Hydro has included apprentice targets in the generating station and spillways civil works contract, the transmission lines and the substation contracts, and the Highway 29 work to be procured by BC Hydro.

The generating station and spillways contractor has also committed to providing opportunities for apprentices. An apprentice target will also be included in the balance of plant contract.

In August 2013, Northern Lights College Foundation started distributing the BC Hydro Trades and Skilled Training Bursary Awards. As of December 2019, a total of 263 students had received bursaries, including 114 Indigenous students who have benefitted from the bursary in programs such as electrical, welding, millwright, cooking, social work, and many others. The bursary ended in October 2018, with remaining amounts still available. BC Hydro has worked with the Northern Lights College Foundation to extend the bursary and reserve the remaining bursary amounts for trades programs directly needed for Project work. Part of this agreement was to set aside funds for the BC Hydro and Northern Lights College pre-carpentry skills pilot program for Site C. This will be reviewed in October 2020.

BC Hydro continues to work with local employment agencies to ensure that as job opportunities become available, they are posted on the WorkBC website as well as on the Fort St. John Employment Connections website. With the announcement of the Louisiana Pacific Peace Valley Oriented Strand Board mill permanent curtailment, BC Hydro is working with Ministry of Forests, Lands, Natural Resource Operations and Rural Development and their worker transition initiative to assist the local community in responding to this closure. On July 30, 2019, WorkBC hosted a job fair at the Peace Valley Oriented Strand Board (OSB) mill to support the impacted workers. There were approximately 110 employees who attended the job fair. BC Hydro and six Site C contractors attended the job fair. The main civil works contractor hired approximately 30 people at the job fair. The generating station and spillways contractor hired approximately six employees, including three Indigenous workers. BC Hydro has also hired one employee from the mill since the announcement of the curtailment. BC Hydro's contractors continue to work with the local community to access available skilled and qualified workers impacted by the downturn in the forestry sector, including participating in local job fairs.

In October 2019, BC Hydro hosted a Site C Employment and Training Information session for local employment agencies and training organizations at Site. This session was an opportunity for local employment and training organizations to connect with Site C Contractors on their current and future employment and training needs. Contractors presented on their current and future employment needs, the scope of their work on the Project, the types of workers typically employed and their hiring requirements. The goal of this event was to assist in facilitating training as well as facilitating local employment on the Project. The BC Construction Association STEP program, WorkBC Chetwynd, WorkBC Fort St. John (Employment Connections), WorkBC Mackenzie, the Industry Training Authority, and Northern Lights College were all in attendance.

In December 2019, Site C contractors reported 689 workers on site from the Peace River Regional District. This is a total of 19 per cent of the construction and non-construction contractors' workforce.

Contractor Indigenous Employment and Training information session

In January and July 2019, BC Hydro hosted a Contractor Indigenous Employment and Training information sessions in Fort St. John. The purpose of these meetings were to assist in building relationships between employment and training professionals from the Indigenous communities and key Site C contractors.

Site C contractors have noted that certain trades will be in high demand over the next two to three years during peak project construction periods. As such, major on-site contractors are exploring opportunities for apprentice and other training to take place on-site. BC Hydro worked with Northern Lights College and Site C contractors to develop the BC Hydro and Northern Lights College on-site pre-carpentry skills pilot program. This program was successfully delivered in April 2019 and BC Hydro and Northern Lights College are currently planning on delivering the program again in spring 2020. The intent of this program is to provide an overview of the skills required for the carpentry trade (essential skills training),

general employment knowledge (employment readiness), overview of job requirements for carpenters, knowledge of B.C.'s apprenticeship system, and Site C Project-specific knowledge.

This is a 14-day program designed for local new workers or workers new to the trade with preference given to local Indigenous candidates. The course was partly run at the worker accommodation camp and the 14 days were intended to reflect a typical Site C schedule. Seven Indigenous students from this program were hired for Project work by contractors on the Project, with one student entering an apprentice program to become journey-person carpenter. Funding for this program was also provided through the North East Native Advancing Society and donations from the Construction Maintenance and Allied Workers.

The main civil works contractor has reported apprentices in the heavy equipment operator and labourer trades through a new training program in partnership with Christian Labour Association of Canada (CLAC) and the Industry Training Authority.

3.9 Community Engagement and Communication

3.9.1 Local Government Liaison

There are a number of Environmental Assessment Certificate conditions that are relevant to local communities in the vicinity of the Project. BC Hydro is implementing some of these conditions through community agreements offered to five local governments. Through these discussions BC Hydro has, in some instances, agreed to additional measures to address concerns about local community impacts from construction and operation of the Project.

BC Hydro has concluded four community agreements with respect to the Project: the District of Taylor (2013), the District of Chetwynd (2013), the City of Fort St. John (2016) and the District of Hudson's Hope (2017). BC Hydro and the City of Fort St. John established a Community Agreement Monitoring Committee to jointly oversee implementation of the community agreement. BC Hydro continues to work

cooperatively with the City of Fort St. John, District of Hudson's Hope, District of Taylor and the District of Chetwynd to ensure implementation of their respective agreements.

In 2019, the Regional Community Liaison Committee, which is comprised of local elected officials and local First Nations communities, met three times (March 13, June 19 and September 18). In addition, a site tour was conducted with the Regional Community Liaison Committee on September 19, 2019. Eight local governments and four local First Nations communities (McLeod Lake Indian Band, Doig River First Nations, Saulteau First Nations and Blueberry River First Nations) as well as the two MLAs for Peace River North and Peace River South, are invited to participate as committee members. Representatives from the Project's major contractors may also attend the meetings as invited guests.

3.9.2 Business Liaison and Outreach

BC Hydro continued to implement its business construction liaison and outreach by attending local chamber of commerce meetings in Fort St. John and Chetwynd. The Project team sent out 14 notifications in 2019, which includes five notifications in the final quarter of the year to the Site C business directory.

3.9.2.1 Community Relations and Construction Communications

BC Hydro continued to implement its construction communications program throughout 2019. The program includes updating and maintaining the Project website (www.sitecproject.com) with current information, and photos and videos of construction activities, and providing information to local and regional stakeholders as required.

In 2019, the Site C community relations team hosted 50 external site tours, which includes eight in the final quarter of the year, showing key stakeholders, local government officials and Indigenous groups how the Project is progressing.

Construction Bulletins

Bi-weekly construction bulletins continued to be issued throughout 2019. These bulletins are posted on the Project website and sent by email to the web-subscriber list. There were 26 construction bulletins and four quarterly construction notification letters issued in 2019, with seven and one, respectively, distributed in the final quarter of the year.

Public Enquiries

In total, BC Hydro received 2,056 public enquiries between January 1 and December 31, 2019, with 417 received in the last quarter of the year. The majority of these enquiries continued to be about business and job opportunities, with limited construction impact concerns from local residents. [Table 10](#) shows the breakdown of some of the most common enquiry types.

In total, BC Hydro has received more than 11,000 enquiries since August 2015.

Table 10 Public Enquiries Breakdown

Enquiry Type ¹¹	October 1, 2019 to December 31, 2019	2019
Job Opportunities	249	1,429
Business Opportunities	65	346
General Information	37	143
Construction Impacts ¹²	23	72
Other ¹³	43	66
Total	417	2,056

3.9.2.2 *Communications Activities*

Based on a search using the media database Infomart, there were 575 stories referencing the Site C Project in B.C. news media between January 1 and

¹¹ This table is a sample of enquiry types and does not include all enquiry types received.

¹² The nature of the construction impact inquiries is primarily air quality, noise and traffic conditions.

¹³ “Other” accounts for enquiries related to a variety of other topics, such recreation access near construction sites, property owner correspondence, or requests for site tours.

December 31, 2019. In the final quarter of the year, there were 135 media stories referencing the Project.

3.9.3 Housing Plan and Housing Monitoring and Follow-Up Program

BC Hydro and BC Housing Management Commission (BC Housing) signed a contribution agreement on July 19, 2016 related to the development, construction and operation of a building in Fort St. John comprised of 50 residential rental units. The agreement structured the financial contribution from BC Hydro to enable viable financial operation of the affordable housing units by BC Housing in the near-term and viable financial operation of all 50 units of affordable housing in the longer term.

BC Hydro completed a head lease with BC Housing in May 2019 for 20 units in the building. Any suites not utilized by BC Hydro are available to BC Housing to offer for public rental. The grand opening of the building was held jointly by BC Housing, BC Hydro and the City of Fort St. John in November 2019. BC Hydro currently rents 25 units in the building. The remaining units are used by BC Housing for affordable housing or rented to the public.

3.9.4 Labour and Training Plan

In accordance with an Environmental Assessment Certificate condition, a Labour and Training Plan was developed and submitted to the Environmental Assessment Office on June 5, 2015. This plan, as well as Environmental Assessment Certificate Condition 45, includes reporting requirements to support educational institutions in planning their training programs to support potential workers in obtaining Project jobs in the future. This report was issued to the appropriate training institutions in the northeast region of B.C. in July 2016, July 2017, July 2018 and July 2019. The next report will be issued in summer/fall 2020.

3.9.5 Human Health

3.9.5.1 Health Care Services Plan and Emergency Service Plan

The Project health clinic is contracted by BC Hydro with Halfway River International SOS Medical Ltd., a partnership between Halfway River First Nation and International SOS. The clinic continues to operate in its permanent location within the Two Rivers Lodge and based on camp occupancy was staffed 24/7 during this period with a nurse practitioner and advanced care paramedics. BC Hydro and the clinic operator continue to liaise with the local health care community.

The clinic provides workers with access to primary and preventative health care and work-related injury evaluation and treatment services and is currently open seven days a week, 24 hours a day. Since opening the health clinic, there have been a total of 13,223 patient interactions. During the last quarter of 2019, there were 1,370 patient interactions, of which 251 were occupational and 1,119 non-occupational. Several preventive health themes were promoted to workers including: influenza awareness and resiliency, mental health awareness and impact from fly-in/fly-out work schedules and HIV/AIDS awareness.

3.9.6 Property Acquisitions

In spring 2019, BC Hydro accessed private properties to inform design and mitigation options for the various components of the Site C Project. Throughout 2019, BC Hydro continued the property acquisition process for the re-alignment of three highway projects (Cache Creek East, Lynx Creek and Farrell Creek) and the Hudson's Hope shoreline protection berm project. BC Hydro also successfully negotiated several land acquisitions for other Project components to enable reservoir clearing and inundation.

3.10 Key Procurement and Contract Developments

3.10.1 Key Procurement

The procurement approach was approved by the board of directors in June 2012 for the construction of the Project. The procurement approach defined the scope of the major contracts and their delivery models, as summarized in [Table 11](#) below.

Table 11 Major Project Contracts and Delivery Models

Component	Contract	Procurement Model	Anticipated Timing
Worker Accommodation	Worker accommodation and site services contract	Design-Build-Finance-Operate-Maintain	Completed
Earthworks	Site preparation contracts	Predominantly Design-Bid-Build	Completed
	Main Civil Works contract	Design-Bid-Build	Completed
Reservoir/Transmission Clearing	Multiple reservoir clearing contracts to be awarded over seven to eight years	Design-Bid-Build	Eleven contracts completed (two transmission line, nine reservoir) Five contract packages remain to be procured; final number will depend on the scope of each package.
Generating Station and Spillways	Turbines and Generators contract	Design-Build	Completed
	Generating Station and Spillways Civil Works contract	Design-Bid-Build	Completed
	Hydromechanical Equipment contract	Supply Contract	Completed
	Balance of Plant Equipment Supply	Supply Contracts	All 10 major equipment supply contracts completed.

Component	Contract	Procurement Model	Anticipated Timing
	Balance of Plant Contract	Design-Build/ Design-Bid-Build	Collaborative meetings with the proponents were held in November 2019. The final draft contract was sent to the proponents in December 2019. Technical proposals are due in February 2020 and financial proposals are due in March 2020.
Electrical and Transmission Infrastructure	Transmission Lines Construction contract	Design-Bid-Build	Completed
	Site C substation contract	Design-Bid-Build	Completed
	Peace Canyon Substation upgrade contract	Design-Build	Completed
Highway 29 Realignment	Cache Creek West 2018 and 2020 scope of work	Design-bid-Build	Completed
	Halfway River Bridge, Grade and Paving	Design-Bid-Build	Completed
	Cache Creek East Embankment	Design-Bid-Build	Completed
	Cache Creek East Grading, Paving and Bridge	Design-Bid-Build	June 2020
	Dry Creek Grading, Paving and Bridge	Design-Bid-Build	June 2020
	Farrell Creek Grading, Paving and Bridge	Design-Bid-Build	July 2020
	Lynx Creek West Grading, Paving and Bridge	Design-Bid-Build	August 2020
	Design Bid Build in coordination with B.C. Ministry of Transportation and Infrastructure with anticipated contracts being awarded from 2019 to 2022		

3.10.2 Major Construction Contracts Exceeding \$50 Million

Since inception of the Project, nine major construction contracts have been awarded that exceed \$50 million in value, as shown in [Table 12](#).

All of the construction contracts have been procured and awarded as per the BC Hydro procurement policies.

Table 12 Major Project Contracts Awarded

Work Package	Contract Value at December 31, 2019 ¹⁴ (\$ million)	Contract Execution Date
Site Preparation: North Bank	60	July 2015
Worker Accommodation	524	September 2015
Main Civil Works	2,163	December 2015
Turbines and Generators	464	March 2016
Transmission and Clearing	73	October 2016
Generating Station and Spillways Civil Works	1,644	March 2018
Hydromechanical Equipment	69	April 2018
Transmission Line Construction	114	May 2018
Highway 29	160	October 2019

3.10.3 Contracts Exceeding \$10 Million

For open contracts procured and awarded in excess of \$10 million, refer to [Appendix H](#).

3.10.4 Contract Management

3.10.4.1 Material Changes to the Major Contracts

The main civil works contract is a unit price contract and as such variations in quantities and design are expected over the term of the contract. Since contract award in December 2015, the main civil works contract value has increased by \$415 million to reflect approved changes to December 31, 2019.

¹⁴ Contract value reflects the current value including executed change orders to the end of the reporting period.

Subsequent to the reporting period, a contract amendment was executed on March 6, 2020 to the main civil works contract that is retroactive to December 23, 2019 resulting in an increase to the contract value of up to \$332 million over the duration of the contract, including investments in equipment to reduce the schedule risk for dam construction and a series of performance-based at-risk incentives for the contractor with the objective of maintaining schedule for diversion and first power.

The contractual impacts will be reflected in reporting in subsequent quarters.

3.10.4.2 Contingency and Project Reserve Draws

As a result of the change in timing for river diversion and other factors including an increase in direct and indirect costs, BC Hydro revised the Project budget to \$10.7 billion, which was approved by the provincial Treasury Board in January 2018 and the BC Hydro board of directors in February 2018. This revised budget includes an \$858.1 million contingency allowance and a \$708 million reserve that is subject to Treasury Board's discretion.

The Project has a risk management plan that establishes the risk management framework for the Project and describes specific processes, procedures, organization, tools and systems that guide and support effective risk management. Utilizing this plan, risks are identified, assessed and managed on a continuous basis. The output of the risk management process is documented in the risk register. The risk register is utilized as an input into Project forecasts and cost risk analysis is conducted periodically to inform contingency requirements. In 2019, cost risk analyses were completed and based on these analyses, subject to the approval of the Treasury Board, BC Hydro expects to request a draw on the Project reserve in fall 2020, as needed.

Refer to [Appendix J](#) for more detailed information regarding contingency and Project reserve draws.

3.11 Impacts on Other BC Hydro Operations

In the last quarter of 2019, operational planning considerations were initiated with GM Shrum and Peace Canyon Generating Stations and Williston Reservoir in order meet the target flow releases for Site C river diversion.

3.12 Site Photographs

Refer to [Appendix A](#) for Site Construction photographs.

4 Project Schedule

4.1 Project In-Service Dates

As filed with the British Columbia Utilities Commission Inquiry with respect to Site C on October 4, 2017, BC Hydro identified that the river diversion milestone will move from 2019 to 2020. This did not impact the overall in-service dates, as shown in [Table 13](#) below.

Table 13 In-Service Dates

Description	Final Investment Decision In-Service	Status
5L5 500 kV Transmission Line	October 2020	On track
Site C substation	November 2020	On track
5L6 500 kV transmission line	July 2023	On track
Unit 1 (first power)	December 2023	On track
Unit 2	February 2024	On track
Unit 3	May 2024	On track
Unit 4	July 2024	On track
Unit 5	September 2024	On track
Unit 6	November 2024	On track

4.2 Project Governance, Costs and Financing, and Risk

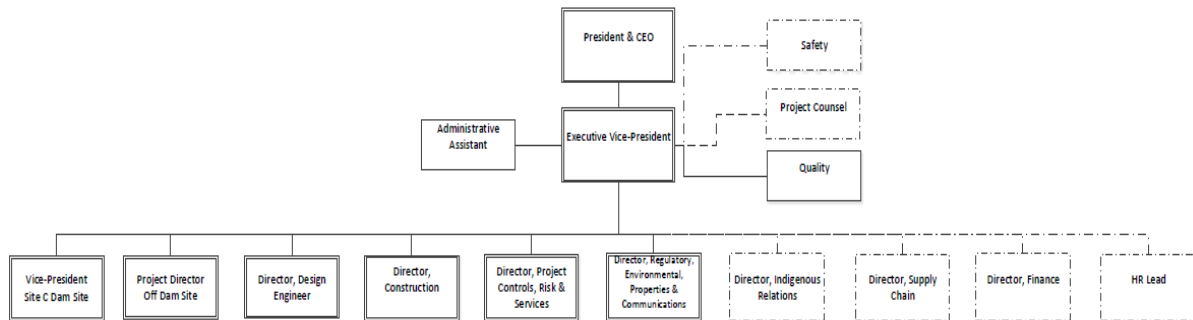
4.2.1 Project Governance

In December 2017, the provincial government announced their approval to continue with construction of the Site C Project. The approval to proceed included increased

external and internal oversight of Project performance. Refer to [Figure 5](#) for the current organization structure. Measures to improve Project governance in 2019 include:

- EY Canada continued to provide independent oversight for the Project including budget oversight, schedule evaluation and risk assessment analysis. BC Hydro and EY Canada are working collaboratively on enhancements to risk analysis and reporting;
- BC Hydro completed cost and schedule risk analyses in 2019. During these analyses BC Hydro worked collaboratively with EY Canada and implemented identified enhancements. Please refer to [Table 22](#) for more information;
- An Independent Construction Advisor was retained in summer 2019 to provide advice and opinions on construction planning by major contractors at the Dam Site;
- The Technical Advisory Board met numerous times through 2019. These meetings consisted of conference calls, workshops, tours and in person meetings. In February 2019, EY Canada attended a site visit with a member of the Project Advisory Board and a member of the Technical Advisory Board;
- Continued to increase the number of BC Hydro on-site representatives to effectively manage the construction contracts; and
- Changes were made to the Project Assurance Board membership as a result of resignations and appointments in BC Hydro Board and Project Assurance Board memberships.

Figure 5 Project Organizational Structure



4.2.2 Project Budget Summary

As a result of the change in timing for river diversion and other factors including an increase in direct and indirect costs, BC Hydro presented a revised cost estimate of \$10.7 billion which was approved by the board of directors in February 2018.

[Table 14](#) below presents the overall Project budget, based on the Project budget approved in February 2018, represented in nominal dollars.

Table 14 Overall Project Budget

Description	(Nominal \$ million)
Dam, Power Facilities, and Associated Structures	4,548
Offsite Works, Management and Services	1,845
Total Direct Construction Cost	6,393
Indirect Costs	1,456
Total Construction and Development Cost	7,849
Contingency	858
Interest During Construction	1,285
Project Budget, before Treasury Board Reserve	9,992
Treasury Board Reserve	708
Total Project Budget	10,700

4.3 Project Expenditure Summary

[Table 15](#) provides a summary of the updated budget and the actual costs for the calendar year 2019 and the variance between the two.

**Table 15 Project Expenditure Summary
(\$ million Nominal) Compared to Budget**

Description	Budget for Calendar 2019	Actuals for Calendar 2019	Variance
Project	1,280	1,485	(205)
Treasury Board Reserve	0	0	0
Total	1,280	1,485	(205)

[Table 16](#) provides a summary of the 2019/21 Service Plan and the actual costs for the calendar year 2019 and the variance between the two.

**Table 16 Project Expenditure Summary
(\$ million Nominal) Compared to 2019/21
Service Plan**

Description	2019/21 Service Plan Calendar 2019	Actuals for Calendar 2019	Variance
Project	1,466	1,485	(19)
Treasury Board Reserve	-	-	-
Total	1,466	1,485	(19)

Details of the variances between actual and plan are in [Appendix J](#).

4.4 Comparison of Cost Plan by Quarter to Actual Expenditures (F2019 Q4 to F2020 Q3)

**Table 17 Cost Plan for the Reporting Period:
January 2019 to December 2019
(\$ million Nominal) Compared to Budget**

Description	F2019 Q4	F2020 Q1	F2020 Q2	F2020 Q3	Total for Reporting Period
Planned Expenditures	266	267	442	306	1,281
Actual Expenditures	285	303	466	431	1,485
Variance	(19)	(36)	(24)	(125)	(204)

[Table 17](#) above presents a comparison of the planned total expenditures by quarter with the actual expenditures. Over the entire reporting period, actual expenditures were \$204 million more than plan, primarily due to spillway buttress construction activities ahead of plan and claims for main civil works; more powerhouse construction work being completed than planned, an earlier start on penstock work,

as well as change orders and claims for the generating station and spillways; higher than planned worker accommodation; and earlier than planned transmission expenditures. These are partially offset by timing differences for turbines and generators and property acquisitions.

**Table 18 Cost Plan for the Reporting Period:
 January 2019 to December 2019
 (\$ million Nominal) Compared to
 2019/21 Service Plan**

Description	F2019 Q4	F2020 Q1	F2020 Q2	F2020 Q3	Total for Reporting Period
Planned Expenditures	288	315	496	367	1,466
Actual Expenditures	285	303	466	431	1,485
Variance	3	12	30	(64)	(19)

[Table 18](#) above presents a comparison of the planned total expenditures by quarter with the actual expenditures. Over the entire reporting period, actual expenditures were \$19 million more than plan, primarily due to spillway buttress construction activities ahead of plan and claims for main civil works; work planned in prior years being completed in the current fiscal year and additional change orders and claims for generating station and spillways. There were also schedule advancement of highway early works and higher than planned worker accommodation expenditures. These are partially offset by timing differences for turbines and generators, property acquisitions and reservoir clearing expenditures.

4.5 Internal Project Financing versus External Borrowings to Date

To date, all Project funding has been from internal borrowings and there has been no Site C Project specific debt issued. As part of BC Hydro's debt management strategy, BC Hydro's exposure to variable debt is managed within a board-approved range of 5 per cent to 25 per cent and a target of 15 per cent. In addition, since fiscal 2017, BC Hydro has hedged \$10.0 billion of its future forecast long-term debt issuances through the use of derivative contracts to lock in interest rates. As at December 31, 2019, \$5.0 billion of hedges remained outstanding to hedge future

debt issuances, hedging approximately 75 per cent of BC Hydro’s forecast total borrowing requirements out to and including fiscal 2025.

4.6 Material Project Risks

Material Project risks are identified and reviewed on an ongoing basis. As the Project progresses through implementation phase, the material Project risks will evolve to reflect the current risks facing the Project. The following list of material Project risks does not include risks that are subject to confidentiality obligations or solicitor client privilege, or that disclose commercially sensitive information relating to matters that are currently outstanding, including procurements and negotiations that are in progress at the time of this report, the disclosure of which would be harmful to BC Hydro’s commercial interests.

Refer to [Table 19](#) below for a list of the material Project risks.

Table 19 Material Project Risks

Risk Description	Impact and Response Plan Summary
Risk of river diversion system delay if contractor productivity does not meet plan and/or differing geotechnical conditions	<p>Impact: Diversion delay could cause the schedule to slip by a year and increase costs.</p> <p>Response: BC Hydro closely monitors the development of design and construction plans, and labour and equipment productivity for critical construction activities (tunnel excavation/linings, inlet/outlet portals, and gates and cofferdam); provision of performance incentives for achievement of milestone dates.</p>
Risk of geotechnical issues on work fronts other than left bank diversion tunnel	<p>Impact: Potential schedule delay and increased cost.</p> <p>Response: Completed detailed geotechnical investigations prior to construction; close monitoring and quick intervention to manage construction risk if geotechnical issues arise.</p>
Risk of Highway 29 costs exceeding the approved budget	<p>Impact: Cost increases due to progression of detailed design, geotechnical conditions and direct award cost pressure.</p> <p>Response: Conduct value engineering and constructability reviews to optimize designs, use competitive tendering on Halfway River, Cache Creek, Farrell Creek and Lynx Creek West.</p>

Risk Description	Impact and Response Plan Summary
Risk of additional work to meet approach channel, powerhouse, and spillway roller-compacted concrete buttress requirements	<p>Impact: Increased costs for investigation and design changes.</p> <p>Response: Finalize engineering investigations and analysis; complete right bank foundation enhancements design evaluation.</p>
Risk that dam or approach channel is not completed on time for reservoir inundation	<p>Impact: Minor delay (days/weeks) to inundation milestones but able to inundate; major schedule delay/impact missing inundation seasonal window inundating following year.</p> <p>Response: Closely monitor/expedite contractors work and progress; include schedule lag time for minor delays; manage work interfaces between contractors.</p>
Risk of contractor labour rate increases in excess of budgeted amount	<p>Impact: BC Hydro has included provisions in major contracts that allow for labour escalation to a prescribed amount, as well as a cost/savings sharing formula based on general industry rates above or below the prescribed amount. Increased pressure on the labour market would likely drive labour wage rates higher, potentially resulting in general industry increases beyond the prescribed amounts.</p> <p>Response: BC Hydro has defined contract labour escalation formulas in all major contracts.</p>
Risk of a safety incident resulting in fatality or disabling injury	<p>Impact: Serious worker injury or fatality; Project delays and associated costs.</p> <p>Response: Continue with BC Hydro and contractor safety steering committee to address shared safety issues and opportunities; BC Hydro and contractors have implemented safety cultural leadership training; increase BC Hydro executive involvement and engagement with site safety leadership; regular on site safety conferences; contractor to bring in senior safety manager to prepare safety improvement plan for BC Hydro review; continue to include safety in BC Hydro and contractor on-boarding orientations; and continue to promote a strong safety culture.</p>
Risk of additional expenditures required for engineering support for the Project	<p>Impact: Exceed budget due to work required for as found site conditions, complete designs, and support schedule and construction activities; insufficient resources to complete, manage and/or oversee engineering work.</p> <p>Response: Optimize BC Hydro resources; optimize work front team structure and minimize duplication of activities. Work with contractors to increase their quality control staffing.</p>

Risk Description	Impact and Response Plan Summary
Risk that Indigenous groups do not support the Project	<p>Impact: Indigenous groups file legal challenges (e.g. injunction applications) or engage in protest actions that could delay or stop the Project work and/or increase costs.</p> <p>Response: Project team to continue to engage and consult with First Nations and ensure commitments to First Nations are met or exceeded; fully support the development of legal response documents; follow court order requirements, if applicable; continue to negotiate Impact Benefit Agreements.</p>
Risk that reservoir clearing costs are higher than budget	<p>Impact: Increased cost.</p> <p>Response: Review scope, modify approach, negotiate pricing, provide sufficient time to negotiate, work with Indigenous Relations on procurement of clearing services; develop alternative procurement options if planned procurements are not feasible.</p>
Risk that the Project cannot attract and retain sufficient skilled workers	<p>Impact: Contractors may not be able to adequately source, supply, attract, and retain sufficient Project labour due to workforce demographics, increased competition for labour from other major projects, and the requirement for specialized workers. This may result in potential impacts to schedule, safety, productivity and cost.</p> <p>Response: Contractors provide labour sourcing and supply plans, provide advance notice of foreign workers, and participate in local job fairs. BC Hydro encourages and facilitates capacity building initiatives and monitors employee turnover rates and labour conditions on other projects.</p>
Risk that Hydro's borrowing costs for the Project are higher than budgeted	<p>Impact: Rising interest rates increase the Project's interest costs above the amount budgeted.</p> <p>Response: BC Hydro has hedged interest rates on approximately 75 per cent of future debt placements through Fiscal 2025 to reduce the potential impact of rising interest rates.</p>
Risk of the stage 2 cofferdam overtopping or erosion	<p>Impact: Damage to upstream and downstream cofferdams; uncontrolled river flow; flooding and damage to dam and powerhouse while under construction.</p> <p>Response: Clear reservoir area before river diversion and install debris structures; utilize Williston reservoir to provide water storage; complete river flow forecasting and manage water.</p>
Risk of insufficient aggregate supply to meet demand on dam site.	<p>Impact: Decreased productivity, schedule delays and increased cost that could impact multiple contracts. Aggregate supply required for concrete production (roller-compacted concrete, cast-in-place concrete/conventional vibrated concrete and shotcrete) and dam (general fill, filter materials, drain material, and riprap).</p> <p>Response: Increase aggregate stockpiles; work with contractors to minimize waste and maximize aggregate production; release BC Hydro on-site contingency aggregate excavation sites and seek out additional aggregate on-site sources; procure off-site and haul in additional aggregate.</p>

Risk Description	Impact and Response Plan Summary
Risk that the river has been diverted but the stage 2 cofferdam is not completed on time.	Impact: Unable to release restrictions upstream; overtopping of the cofferdam; construction delays; BC Hydro system (GM Shrum generation, etc.) impacts. Response: Contractor performance incentives in place to meet milestone dates; contractor increases work force; BC Hydro and contractor evaluate schedule and optimize activities.

5 Look ahead – January 2020 to December 2020

5.1 Construction

The following is a look ahead of activities planned to take place in 2020:

5.1.1 Key Milestones

The Project is on track to achieve the Project completion date of November 2024.

The key milestones for 2020 are listed in [Table 20](#).

Table 20 Key Milestones

Milestone	Performance Measurement Baseline	Plan Date (Control Date ¹⁵)	Forecast ¹⁶	Status (Measured by Month)
Generating Station and Spillways				
Powerhouse bridge cranes commissioned and ready for travel load tests	December 2019	March 2020	March 2020	On track
Work Area W4 access to generating station and spillways	June 2020	June 2020	June 2020	On track
Unit 1 - Unit bay superstructure complete and powerhouse bridge crane ready	June 2020	June 2020	June 2020	On track
Intake operating gates and intake maintenance gates supplied	August 2020	August 2020	August 2020	On track
Unit 2 - Unit bay superstructure complete and powerhouse bridge crane ready	September 2020	September 2020	September 2020	On track
U3 - Unit bay superstructure complete and powerhouse bridge crane ready	November 2020	November 2020	November 2020	On track
Highways				
Contract Awarded - Grading, paving, & bridge Lynx Creek West	May 2019	July 2020	August 2020	At risk

¹⁵ Control date reflects plan, adjusted for approved changes to milestone dates.

¹⁶ As at December 31, 2019.

Contract Awarded – Hudson’s Hope berm	January 2021	April 2020	May 2020	At risk
Main Civil Works				
Diversion Tunnel No. 1 & No. 2 Construction Complete	November 2019	November 2019	May 2020 ¹⁷	At risk
Diversion tunnel inlet structure complete	January 2020	January 2020	February 2020 ¹⁷	At risk
Diversion tunnel outlet structure complete	February 2020	February 2020	February 2020 ¹⁷	On track
(M3.1) Diversion works stage 2 works complete, excluding portions to be completed in M3.2	March 2020	March 2020	March 2020 ¹⁷	On track
Diversion inlet portal & channel complete	March 2020	March 2020	May 2020 ¹⁷	At risk
Diversion outlet portal & channel complete	April 2020	April 2020	June 2020 ¹⁷	At risk
All diversion stage 2 works complete	June 2020	June 2020	July 2020 ¹⁷	At risk
Stage 2 upstream cofferdam abutments placement to elevation 433.9 metres complete	August 2020	August 2020	August 2020	On track
Diversion started	September 2020	September 2020	September 2020	On track
(M4.2) Upstream cofferdam to elevation 422 metres complete	October 2020	October 2020	October 2020	On track
Turbines and Generators				
Voith 1st component installed (draft tube liner)	July 2020	July 2020	July 2020	On track
Transmission				
Substation in-service date	October 2020	October 2020	October 2020	On track
5L5 in-service date	October 2020	October 2020	October 2020	On track
Balance of Plant				
Contract Award – Balance of plant	June 2020	June 2020	June 2020	On track
Reservoir Clearing				
Contract Awarded – Halfway River Drainage	September 2020	September 2020	September 2020	On track
Reservoir Prepared for Diversion	March 2020	March 2020	March 2020	On track

5.1.2 Main Civil Works

The next year will see significant activity on the main civil works work front as preparation and execution of river diversion and work on the right bank roller-compacted concrete dam buttress.

¹⁷ In response to some delays with the excavation of the diversion tunnels, the construction activities required to complete the diversion tunnels have been re sequenced, by advancing some activities and delaying others, to optimize the schedule. This optimized schedule still achieves the key schedule milestones associated with river diversion in fall 2020.

On the left bank, the completion of the diversion works including; concrete tunnel lining, intake and outlet towers and installation and commissioning of the gates, construction of the approach channels for the inlet and outlet portals, and the completion and commissioning of the temporary upstream fishway. Installation of hydraulic and mechanical systems for the inlet gates will begin in January 2020 and continue through to the spring 2020.

As a key component of diversion of the Peace River, the upstream and downstream cofferdams will be constructed in the fall of 2020. These structures allow for dry access to the central portion of the river for preparation of the dam foundation and construction of the earthfill dam.

On the right bank, final excavation of the roller-compacted concrete dam buttress foundation, and placement of approximately 490,000 cubic metres of roller- compacted concrete for the dam buttress. The commencement of the approach channel excavation is also scheduled for the fall of 2020.

At the end of December 2019, a project risk materialized on the right bank when investigations and analysis of geological mapping and monitoring activities during construction identified that some foundation enhancements would be required to increase the stability below the powerhouse, spillway and future dam core areas. These investigations and analysis were reported to the Project Assurance Board in early January 2020. BC Hydro continues to work with the independent Site C Technical Advisory Board and the Project Assurance Board to determine the appropriate enhancement measures.

Other works that are to be completed in the upcoming year include; installation of the debris management structures (pile structures and booms) prior to diverting the Peace River, and transportation of material from the 85th Avenue Industrial Lands to site via the conveyor system.

5.1.3 River Diversion

In the coming year, preparation for diversion will include, finalizing of the diversion commissioning and operation plans by March 2020. The debris management structures will be constructed in early 2020, with the Moberly pile structure beginning in January 2020, and the Moberly River and Peace River booms beginning construction in March 2020, with a forecast construction completion and commissioning by the end of June 2020. At the start of diversion, the Peace River will be closed to boat traffic at Site C, and the BC Hydro Portage Program will be operational. The temporary upstream fishway will be completed and commissioned in the summer of 2020 in advance of construction of the stage 2 cofferdams. The diversion tunnel liners and structures are forecast to be completed in early 2020, with the gates and electrical and mechanical components being completed by the summer of 2020. Once the gates and systems have been completed and commissioned, the inlet and outlet stage 1 cofferdams will be removed, and the Peace River will be able to flow through the tunnels, allowing for the stage 2 cofferdams to be constructed for full diversion of the Peace River. Construction of the upstream and downstream cofferdams are forecast to begin in the summer of 2020. There is a possibility of early placement of material into the river dependent on water storage levels in the upstream reservoirs and forecast unregulated inflows from the local basin.

5.1.4 Generating Station and Spillways

Over the next year, there are many key activities planned for the generating station and spillways. These activities include: placement of a cumulative total of over 300,000 cubic metres of concrete for the generating station and spillways; completing the first stage of powerhouse concrete; completing the steel super structure for the powerhouse; starting the construction of the spillway headwork; and commissioning the powerhouse bridge cranes.

Deliveries and installations will ramp up in 2020 beginning with deliveries of intake operating gate guides, gates and hydraulic systems, as well as the spillway gates and stoplog primary anchors, and draft tube maintenance gates.

5.1.5 Balance of Plant

Over the next year the balance of plant contract is expected to be awarded and the contractor will mobilize to site in the fall. After mobilization, the contractor will start the installation work for the cable trays and piping in the lower areas of the powerhouse unit one bay. With all equipment supply contracts completed and awarded in 2019, equipment deliveries to the Peace River region will commence in 2020, starting with the compressed air receivers. Factory integration testing of the protection and control panels will commence in the summer of 2020.

5.1.6 Turbines and Generators

Over the next year, design, procurement and manufacturing will continue for the turbines and generators contract. The turbines and generators contractor will continue to fabricate the large turbine-embedded parts at a temporary manufacturing facility on-site, including the draft tube cone and elbow, and the spiral case. The contractors' factory in São Paulo will continue production of the turbine runners, headcovers, stayrings and wicket gates, and will continue with fabrication of the generator components including stator, rotor, windings, and stator laminations.

Based on the powerhouse construction schedule, the contractor will commence installation of turbine components in the powerhouse by July 2020 after mobilizing to the area in May 2020.

5.1.7 Transmission and Substation

All clearing and access road construction on the transmission line will be completed in early 2020 and contracts closed out.

In 2020 the Site C substation will be substantially completed, testing and commissioning will be completed, and the substation will be energized and connected to the BC Hydro integrated system via Peace Canyon Generating Station.

In early 2020, the eastern segment of transmission line 5L005 will be completed, with the western segment completed in the fall of 2020. The line will be energized in the fall of 2020; connecting the Site C substation to the BC Hydro integrated system at Peace Canyon generating station.

5.1.8 Highways and Hudson’s Hope Shoreline Protection Berm

Design of all highway segments will be completed by the middle of 2020.

Procurement of construction contracts for Cache Creek East, Dry Creek, Farrell Creek and Lynx Creek will be completed and contracts awarded by the fall of 2020.

Construction will be completed at Cache Creek West, Cache Creek East embankment and Lynx Creek East embankment.

Construction contractors will mobilize, and construction will begin by the fall of 2020 for the Cache Creek East grading, paving and bridge; Dry Creek grading, paving and bridge; Farrell Creek grading, paving and bridge; and Lynx Creek grading, paving and bridge.

Procurement will be completed in the spring of 2020 and a contract awarded for the Hudson’s Hope shoreline protection berm, and construction will start in the summer of 2020.

Production of riprap and berm fill material will continue at Portage Mountain in May 2020 and will continue until September 2020.

5.1.9 Reservoir Clearing

Clearing design work will continue in 2020 for the western reservoir. Access and clearing will continue in the middle reservoir and start in the western reservoir in

winter 2020/2021. Initiating the clearing of the Halfway River drainage is a priority in 2020.

5.1.10 Worker Accommodation

The Site C worker accommodation camp was originally designed to house 1,600 workers with services and utilities to accommodate a total capacity of 2,200, should the need arise over the duration of the Project. In 2018, various scenarios were modelled to forecast required bed nights, and these indicated peaks in camp capacity greater than 1,600 beds occurring in 2020, 2021 and 2022 based on forecasted work volumes. As a result, in 2019 the first phase of a two-phase expansion was completed which added 150 beds. Phase 2, which will add a further 450 beds, is planned for construction in 2020.

5.2 Engineering

The engineering team will continue to provide technical and construction support to the Project through 2020, with focus given to the achievement of the contractor's schedule for both the main civil works contract, and the generating station and spillways civil works contract. Further, the engineering design team will continue to advance the implementation design for the generating station and spillways civil works contract including the ongoing issue of construction drawings in accordance to the current Project requirements, and the balance of plant work package with issuance of the first set of issued for construction drawings in the summer of 2020. Also, integration and review of the large cranes, hydromechanical, and turbine and generators will be ongoing throughout 2020.

Key areas on the main civil works contract will be supported including the ongoing construction of the Peace River diversion inlet structures and tunnels, the placement of roller-compacted concrete foundation for the dam buttress, and additional support on an as and when required basis for all other aspects required to achieve the works.

With respect to the Highway 29 re-alignment, activities will include the advancement and substantial completion of the implementation design and ongoing technical support for the construction activities.

The engineering team will continue to provide the Technical Advisory Board with Project and construction updates through 2020, while also considering technical aspects of the main civil works and the generating station and spillways contracts. The Technical Advisory Board will undertake two formal meetings in January and June 2020 which will be held in Fort St. John and Vancouver.

5.3 Quality Management

In 2020, the Quality team will continue to work with suppliers and contractors to ensure they are satisfying their obligations with regards to quality control of their work. Training will be provided to Project team members to enhance the quality auditing program at the site. Additional important areas of focus include collating quality documentation for completed work(s) to facilitate handover of work areas and the transition between construction and commissioning.

5.4 Safety and Security

Top priorities for BC Hydro in 2020 are public safety and security planning for diversion of the Peace River in September 2020 and working with the prime contractors on their worker safety plans for diversion and the start of construction of the earthfill dam. BC Hydro will continue to focus on all aspects of our Contractor Safety Program working with contractors to ensure they are fulfilling their safety responsibilities, including our completion of independent field safety verifications, prime contractor audits, and incident investigations. The Technical Safety Inspection program will prioritize fire prevention and response, traffic management, welding, heavy trucks and equipment, and hazardous materials for 2020.

5.5 First Nations Consultation

Efforts will continue in the next year to conclude Impact Benefit Agreements with the remaining First Nations communities who do not yet have agreements. In addition, BC Hydro will continue to consult with respect to the construction stage of the Project, and to work with Indigenous groups to prepare communities for river diversion.

5.6 Permits and Government Agency Approvals

Permits and licences are required for construction activity to be undertaken in 2020. Approximately 40 permit applications are anticipated to be submitted for approval in this time frame as well as two Environmental Assessment Certificate amendment requests related to the realignment of Highway 29 segments at Cache Creek, Dry Creek, and Farrell Creek; the location of material sources for construction and reservoir clearing; groundwater monitoring; the expansion of the worker camp; and hauling of material from 85th Avenue Industrial Lands.

Delays to these permits, licences or amendments may result in delays to the associated construction work. However, BC Hydro continues to consult with federal and provincial authorities, local government and First Nations communities to mitigate this risk and does not anticipate delays that will impact construction schedules. Specific actions to mitigate risk to permits and licences include:

- Early identification and submission of permit and licence applications through consultation with contractors (e.g., weekly meetings with main civil works contractor on permits/permitting plan);
- Weekly meetings with Ministry of Forests, Lands, Natural Resource Operations and Rural Development on permitting process, technical details and consultation status;
- Bi-weekly meetings with the Environmental Assessment Office;

- Leave to Commence Construction scoping meetings with the Comptroller of Water Rights, Independent Engineer, and Independent Environmental Monitor (and contractor, as appropriate);
- Weekly meetings and monthly on-site visits (and more, as required) with BC Hydro, Peace River Hydro Partners, Independent Engineer and Independent Environmental Monitor regarding Leave to Construct approvals;
- Joint development of permitting dashboards between the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Comptroller of Water Rights and BC Hydro to track permit risks and develop mitigation measures; and
- Proactive key stakeholder and First Nations community consultation on Environmental Assessment Certificate condition amendment requests.

5.7 Environment

Site environmental monitoring and survey work will continue through 2020. The Project team will continue to collaborate with Indigenous groups, stakeholders and regulators to ensure BC Hydro is adhering to the environmental conditions of both the Environmental Assessment Certificate and Federal Decision Statement and any other permits or authorizations.

On-site compliance resources continue to perform daily inspections and to work with the on-site contractors to ensure environmental compliance. Inspectors will continue to focus on the areas of sediment and erosion control, water management, hydrocarbon spill prevention and will increase focus on wildlife attractant management. Additionally, as new contractors mobilize to site, the site staff are working closely to ensure an immediate focus on environmental compliance.

Additionally, experts in wildlife mitigation and fish and aquatic mitigation will continue to collect field data and install wildlife mitigation features, such as bat and fisher houses, snake dens, coarse woody debris piles, and other habitat features as the

work progresses and undertake enhanced wildlife identification in the future headpond area.

5.8 Community Engagement and Communications

Increased focus on community engagement will occur through the Regional Community Liaison Committee, one on one community meetings, presentations and issue-specific technical meetings.

Site C public affairs will continue to promote local and B.C. business participation on the Project by encouraging businesses to sign up to the Site C Business Directory to receive information about the Project and notifications about procurements; posting procurement information on the Project website; and providing a copy of the Site C Business Directory to proponents during the competitive selection process to encourage partnering with local businesses.

The Site C public affairs team will attend business and chamber of commerce meetings in Fort St. John, Dawson Creek, Chetwynd and Prince George. In addition, Project update presentations will be provided to varying organizations as opportunities arise. Discussions will continue with the Peace River Regional District to reach a community measures agreement.

The Regional Community Liaison Committee will continue to meet at least three times to discuss Project progress and areas of community interest. In addition, a site tour will be conducted for the Regional Community Liaison Committee to view construction-related activities.

5.9 Property Acquisitions

Over the next year, BC Hydro will continue the property acquisition efforts for the remaining highway re-alignment projects and portions of middle and western reservoir clearing projects. BC Hydro will also continue negotiations with private property owners in relation to permissions for the further field investigations to inform design and mitigation options for the various Site C sub-projects.

5.10 Cost Plan by Quarter F2020 and F2021

Table 21 Annual Cost Plan (\$ million Nominal)
 Reporting Period: January 2020 to
 December 2020

Description	Final Investment Decision	F2020 Q4	F2021 Q1	F2021 Q2	F2021 Q3	Summary of Quarters
Total Project Costs (\$)	9,992	371	393	416	TBD ¹⁸	TBD
Treasury Board Reserve	708	0	0	0	TBD	TBD
Authorized Project Cost (\$)	10,700	371	393	416	416	1,596

5.11 Material Project Risks

Risk management is an ongoing, iterative process. As documented in the Site C Risk Management Plan, the ongoing risk management activities include risk identification, risk analysis and evaluation, risk response planning, and risk monitoring and control. Over the next year, the Project's risk registers will be regularly updated to identify new risks, refine risk evaluations and treatment plans, and monitor mitigation activities.

¹⁸ While a draw on the Treasury Board Reserve is anticipated in Q3 F2021, the amount of the draw cannot be estimated at this time.

6 Risk and Cost Management Assessment Summary and Independent Oversight

Table 22 EY Findings, Recommendations and BC Hydro Action Plan from June 2019

Area	EY Findings	Recommendation	BC Hydro Action Plan
Cost Risk Analysis (CRA)	EY and BC Hydro have now agreed on cost risk measurement and analysis practices that support active and effective risk management and verification by Project oversight and technical advisors. This will be achieved by BC Hydro through these recommendations.	Involving EY throughout the planning, development and review of the cost risk analysis to allow for a shared understanding and identification of any gaps between the risk register and the cost risk analysis. To facilitate, EY and BC Hydro will develop a work plan including key touch points based on estimating, stakeholder input, periodic cost risk analysis progress updates and the review of cost risk analysis reports	Complete. Cost risk analysis process was documented and agreed to with EY prior to the commencement of the cost risk analysis.
		Continuing to improve traceability through enhancement of the documentation of risks (from the risk register) used as inputs to the cost risk analysis.	Complete. Reconciliation between risk register and cost risk analysis.
		Freezing risk data as of the data date by continuing the practice of capturing copies of the risk register at the end of each month and storing them on SharePoint	Complete. Each month a snapshot of the risk register is captured and saved on SharePoint.
		Tracking risk treatment plans and action items at the program level (rather than just within the risk register) for Project Assurance Board level risks (10.5 and higher risk level) and evaluating, at a future date, extending the approach to the remaining risks	Complete. Track and evaluate all Project Assurance Board level risks. Risk treatment plans are updated periodically.
		Continuing to prepare a monthly high-level Monte Carlo Analysis of the risks in the Risk Register and present it to EY and the Risk Management Committee	Complete. Done on a monthly basis and presented to EY and the Risk Management committee monthly.
		Continuing to provide Project Assurance Board members periodic access to Risk Register information (including presentations on risks, including commercial risks)	Complete. Provided in September 2019 and will provide again in spring 2020 (twice per year).
		Providing the Technical Advisory Board members with the opportunity to review the Project's technical risks on a regular basis (twice yearly)	Complete. Provided to the Technical Advisory Board in May 2019 and January 2020.

Area	EY Findings	Recommendation	BC Hydro Action Plan
Earned Value	EY and BC Hydro have agreed on Earned Value reporting relative to baselines that reflect material approved plan changes to schedule and cost.	EY and BC Hydro will jointly select a date and capture a secondary performance measurement baseline (i.e. from a Prior Month Forecast Baseline) to calculate alternate earned value information to be used to compare to performance measurement baseline -based results. EY and BC Hydro will assess the results of this alternative earned value analysis and determine if the benefits from this type of earned value are justified based on the effort required to prepare it	Complete. April 2019 secondary performance measurement baseline captured and used for earned value reporting and analysis. Results reviewed at Project monthly Accountability meetings.
		BC Hydro will take a new performance measurement baseline for any major Project changes (in accordance with BC Hydro's Project & Portfolio Management project change control sub-practice)	On track. Followed along with the criteria, no performance measurement baseline was required for 2019.
		BC Hydro will provide the basis of the Integrated Master Schedule (Primavera P6) input data that drives the overall Project earned value and review how this earned value is calculated with EY	Complete. BC Hydro met with EY and reviewed the basis for the earned value calculations.
		BC Hydro will give EY direct access to the scheduling software and reporting systems.	Complete.
Critical Path Analysis	EY and BC Hydro have agreed on the importance of access to critical path schedule snapshots that clearly illustrate any cause and effect relationships, the development of trend reporting, and tracked mitigation plans that are relevant to specific areas of focus in the progress update has been achieved.	Show month to month changes of float for near critical path milestones, by using historical data reports to identify changes over time	Complete. Reporting developed and reviewed monthly at Project Accountability meetings.
		When key activities are delayed, identify for EY what other activities that may be impacted using the detailed (Level 1) schedule to highlight key dependencies and/or interfaces	Complete. Provided EY with a copy of the Level 1 schedule.

7 Project Objective

The strategy being employed on the Site C Project related to balancing the Project objectives of scope, quality, schedule, and cost is shown in [Figure 6](#), and is as follows:

- First, implement the Project scope, consistent with the quality specifications; in other words, do not compromise on scope or quality. BC Hydro is building Site C for the long-term, and it does not make sense to undermine the quality of the asset;
- Second, mitigate schedule risk and build schedule float. The rationale for this is due to the very significant impacts associated with missing the river diversion schedule milestone. There is a relatively narrow window to complete river diversion in fall 2020, and if that window is missed, the Project is delayed by a full year. As a result, the Project team has completed a number of activities to increase schedule float to further reduce the risk of missing river diversion when unplanned events occur that delay the schedule; and
- Third, complete the Project within the approved budget at the lowest reasonable cost.

BC Hydro's goal is to achieve all of these objectives. However, as unplanned events occur, they put pressure on meeting all of the Project objectives, and the Project team has utilized the above strategy to balance how best to meet these objectives.

Figure 6 Site C Project Objective



8 Technical Advisory Board

The Technical Advisory Board is a global panel of engineering and construction experts appointed by the board of directors. Its mandate includes:

- Advising the Executive Vice President, the President, Chief Executive Officer and the Site C Project Assurance Board regarding the engineering and technical decisions related to Project design consistent with best practices and current international guidelines;
- Provide technical review of key design milestones and ongoing external advice to supplement existing engineering and design and procurement expertise;
- Report out to the Project Assurance Board and management following each meeting and provide a report of key findings and recommendations; and
- Prepare and submit technical reports as required to management and the board of directors.

The twentieth Technical Advisory Board meeting was held in June 2019 with site visits and meetings in Fort St. John and Vancouver. Presentations and discussions were held on a range of topics, including schedule risks and planning for river diversion; remaining excavations for the final stages of roller-compacted concrete placements; for the earthfill dam; quality management; debris management; dam foundation grouting; and long-term dam safety management. The Technical Advisory Board also met via conference call in January and March 2019. A multiday field workshop was also carried out in September 2019 with a focus on the results and analysis of mapping and instrumentation monitoring of the foundation of the roller-compacted concrete buttress and related design reviews. Discussions and inspections also involved the remaining excavations, underground works, foundation grouting, concrete structures and the diversion works.

The twenty-first Technical Advisory Board meeting occurred in early January 2020 with a focus on diversion planning, final design for the dam and core roller-compacted concrete buttress, foundation grouting, earthfill dam trial placement and the ongoing assessment of the foundation performance of the roller-compacted concrete buttress and related design review.

Refer to [Appendix E](#) for reports on Technical Advisory Board activities in 2019.

9 Annual Compliance Report

As per the Environmental Assessment Certificate, the Project is required to submit an annual compliance report describing the status of compliance with the conditions of the certificate. To date, the Project has met all required conditions and submitted its third annual compliance report on time on March 29, 2019, which can be found in [Appendix G](#).

Site C Clean Energy Project

**Annual Progress Report No. 4
(Combined with Quarterly Progress Report No. 18)**

Appendix A

Site Photographs

Figure A-1 Overhead Cranes in the Workshop in Fort St. John where the Penstock Parts are Assembled. Penstocks are Ten-Metre-Wide Pipes that Move Water from the Reservoir Intakes to the Turbines (January 2019)



Figure A-2 A Welder Works on Part of the Spiral Case in the On-site Turbines and Generators Manufacturing Facility (January 2019)



Figure A-3 Hoarding and Heating Protects Concrete from the Cold as it is Placed at the Generating Station's Double Chamber Walls (January 2019)



Figure A-4 Inspector Reviewing and Certifying that Scaffolding is Safe and Complies with Regulations. All parts of the Project are Regularly Monitored by Environmental and Safety Inspectors (January 2019)



Figure A-5 On-site Concrete Batch Plant is used to Mix Concrete for the Generating Station and Spillways (February 2019)



Figure A-6 A View of the Unit #3 Draft Tube Formwork (February 2019)

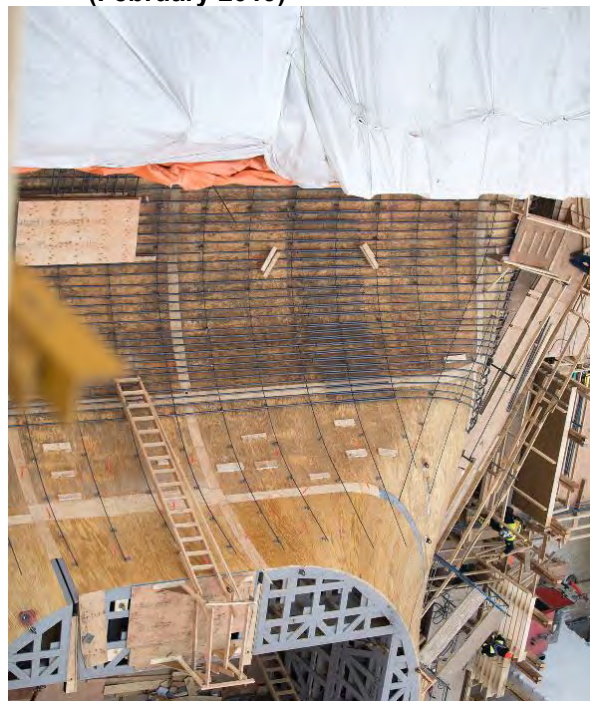


Figure A-7 As of March 31, 2019, 51 Towers had been Raised along the 75-Kilometre-Long Transmission Line Corridor. In Total, 405 Towers will Hold Up Two New 500 kV Transmission Lines, which will Connect Site C Power to the Rest of BC Hydro's Grid (February 2019)



Figure A-8 This Photograph shows Work Underway on the Five-Kilometre-long Electric Conveyor System that will Move Excavated till Material from the 85th Avenue Industrial Lands to the Dam Site for Construction of the Site C dam. Piles have Concrete Caps with Bolt Settings onto which the Conveyor Structure is Bolted (March 2019)



Figure A-9 Twenty-two New Protection and Control Panels at Peace Canyon have been Added and/or Upgraded in Preparation to Receive the Transmission from Site C (April 2019).



Figure A-10 Two New 500 kV Gantries (5L5, 5L6) have been Installed at the Peace Canyon Substation to Receive the 500 kV Lines from Site C. A Gantry is where the Transmission Lines Tie onto and Anchor at the Substation (April 2019).



Figure A-11 Environmental Scientists Release Weevils to Control Dalmatian Toadflax, an Invasive and Noxious Weed near the Dam Site. This Release is an Extension of the Province’s Biocontrol Program for Toadflax, which has been in Place since 1991 (April 2019)



Figure A-12 We will be Building and Assembling 84 of these Penstock Sections over the Next few Years, to Create the Six Penstock Pipes for Site C’s Generating Station (May 2019)



Figure A-13 Grading and Levelling Occurring on the New Alignment of Highway 29 at Cache Creek West (June 2019)



Figure A-14 Newly Built Side Channels on the Peace River which Provide Fish Habitat (June 2019)



Figure A-15 Crews Inspect the Opening that Connects both Ends of the Diversion Tunnel Excavations Shortly after Breakthrough in Tunnel No. 1 (June 2019)



Figure A-16 Diversion Tunnel No. 2 Breakthrough (July 2019)



Figure A-17 View of Inside the Unit 1 Draft Tube in the Powerhouse. Once Site C is Operational, Water will Enter the Penstocks, Move through the Turbines and then be Released into the Draft Tubes prior to Exiting through the Tail Race (July 2019)



Figure A-18 Assembly of a Multi-plate Culvert that will Provide Drainage under a Realigned Segment of Highway 29 in the Cache Creek Area. A variety of Culverts are Being Installed as Part of the Highway 29 Realignment (July 2019)



Figure A-19 A Worker Conducts Archaeological Excavations Near Farrell Creek, in Support of the Highway 29 Realignment Work (July 2019)



Figure A-20 To Compensate for the Loss of Wetland Habitat Resulting from the Project, we are Working with Ducks Unlimited to Construct and Restore over 500 Hectares of Wetlands. The First of these is at a 50-Acre Wetland Project at Golata Creek, a Complex System of 15 Ponds Retained with a Dam and Berms. (September 2019)



Figure A-21 The Five-km Conveyor System, which Runs from the 85th Avenue Industrial Lands to the Dam Site (September 2019)



Figure A-22 Construction Starting on a Temporary Bridge to an Island in the Peace River Near Halfway River, as Part of Clearing Activities for the Project. (September 2019)



Figure A-23 Levelling of Sheet Piles for the Water Control Structure in the Main Basin of the Golata Creek Wetland (October 2019)



Figure A-24 Looking South at the Spillways Buttress (Left) and the Construction of the Site C Powerhouse (Right) (October 2019)



Figure A-25 A North West Panorama View of the Dam Site (October 2019)



Figure A-26 The Halfway River Segment of the Highway 29 Road Alignment is Four-km Long, Including a One-km-Long Bridge. Preparation Work Began in 2019 and Completion is Scheduled for 2022 (October 2019)



Figure A-27 Back Channel Enhancement Project Created Approximately Two Hectares of Permanent New Wetted Fish Habitat. Areas with Water Fluctuations are Filled in to Prevent Fish Stranding. Engineered Logjams Provide Rearing Habitat for Juvenile Fish (October 2019)



Figure A-28 A Worker Insulates the Steps and Slope of the Powerhouse Buttress. As it Gets Colder Outside it is Necessary to Reduce the Temperature Difference Between the Core and the Surface of the Concrete to Prevent Cracking (October 2019)



Figure A-29 Rebar is being Delivered at the Intake Area where it will be Used to Reinforce the Concrete Intake Structures. More than 5,000 tons of Rebar will be Installed in the Six Intake Structures (October 2019)



Figure A-30 Penstock Units 1, 2 and 3 in Varying Stages of Construction (October 2019)



Figure A-31 Workers Walk through a Segment of One of the Diversion Tunnels, Recently Lined with Concrete (November 2019)



Figure A-32 Excavation of the Lower Half of a Diversion Tunnel (November 2019)



Figure A-33 Inside One of Two Diversion Tunnels where a Slip form Places Concrete (November 2019)



Figure A-34 View of the Tunnel Inlet Portal with the Inlet Bypass Road and Diversion Structures under Construction (November 2019)



Figure A-35 Construction of the Powerhouse Continues with Installation of Penstock Units (Top Right) at the Top of the Structure (November 2019)

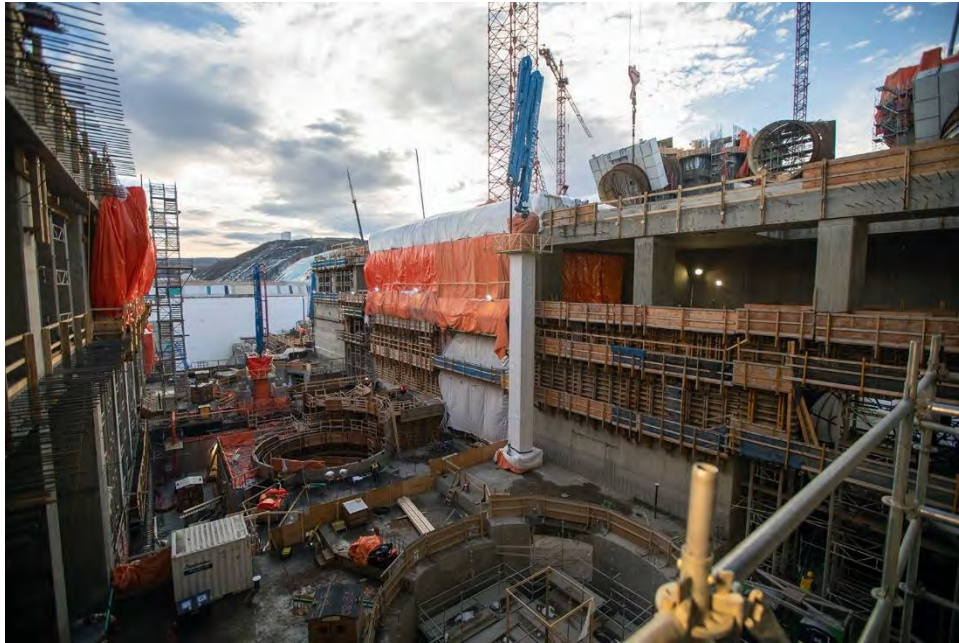


Figure A-36 Scaffolding is Installed Inside a Penstock to Allow Access Around the Circumference of the Init to Weld Sections together (November 2019)



Figure A-37 Preparing Rebar Dowels for Grouting in the Spillway Stilling Basin, which will Anchor the Slabs to the Roller-compacted Concrete. About 8,000 Dowels will be Installed at Depths between Four to 13 metres in the Concrete below (November 2019)



Figure A-38 Construction of the intake gate of penstock Unit 3 (November 2019)



Figure A-39 In Late December 2019, we Substantially Completed Excavations in the Two Peace River Diversion Tunnels. The Tunnels are Temporarily Coated with Shotcrete until the Permanent Concrete Liner is Installed (December 2019)



Figure A-40 As Part of our Reservoir Clearing Program, Spruce and Pine Logs are Stacked for Shipment to Lumber Mills (December 2019)



Figure A-41 Towers with Stringing Complete, as Part of the New 75 km Transmission Line (December 2019)



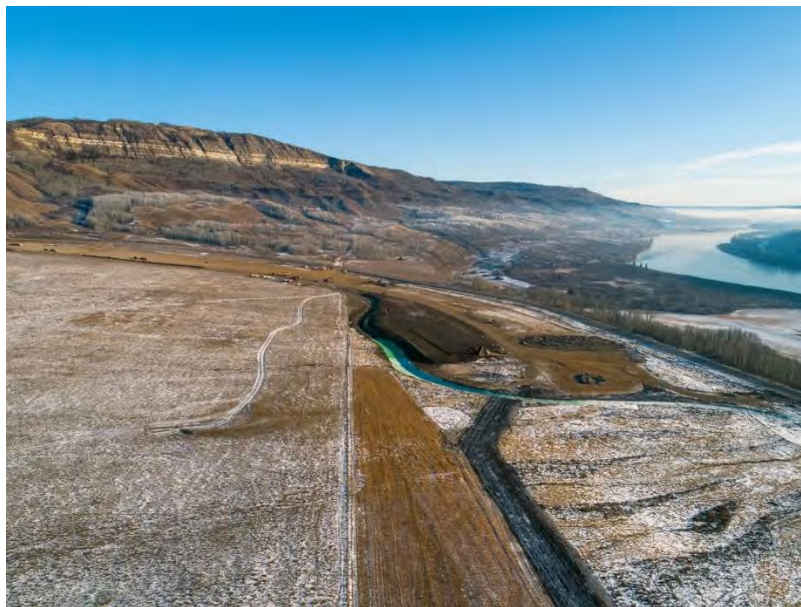
Figure A-42 Power Line Technicians Clip Conductors into the New Transmission Line Insulator Assembly (December 2019)



Figure A-43 The Portion of Highway 29 at Cache Creek West is Four-kilometers Long and will be Paved by July 2020. Combined, the Cache Creek Highway Segments Total 8.6 kilometers (December 2019)



Figure A-44 The Eastern end of the Cache Creek Segment of Highway 29 will be Replaced with a New Two-lane, 4.6 km Highway, Including a 600-metre-long Bridge (December 2019)



Site C Clean Energy Project

**Annual Progress Report No. 4
(Combined with Quarterly Progress Report No. 18)**

Appendix B

Safety and Security

In 2019, the Project reported: 22 serious safety incidents consisting of eight near misses, and 14 injuries which either required medical attention or had the potential to be a serious injury; and 70 all-injury incidents consisting of six lost time injuries and 64 medical attention injuries.

Following is a listing of serious safety incidents and all-injury incidents reported in 2019.

Serious Safety Incidents

The 22 serious incidents include:

1. A worker did not isolate the energy to the 600v cable prior to start of work;
2. A worker received a high voltage electric shock involving a roadheader in the diversion tunnel;
3. A worker was removing a tarp in the ice with a jackhammer when it contacted a buried 600v electrical cable;
4. A worker was struck by a log during cable yarding;
5. A worker's fall arrest lanyard was attached to a formwork that shifted. The worker immediately unhooked their lanyard and climbed off the formwork;
6. A worker was travelling down a steep path in rugged terrain when they lost their footing, fell, and sustained a fracture;
7. A worker was affected by a sudden pressure release when the side wall of a loader's rear tire failed;
8. Sloughing of material from the spillway buttress excavation slope struck a worker and carried the worker down the slope for approximately 2.5 metres;
9. While inspecting cables on a tower crane, a worker was struck by a pin assembly that fell from approximately 51 metres above;

10. A rock truck operator started the vehicle while the fuel and lube attendant was still positioned under the truck. This was a near miss as there were no injuries.
11. A worker was struck by a metal hook weighing between 15 and 20 pounds when the hook disengaged from one of the steel sets and fell approximately five to six feet above striking the worker's head and shoulder. The worker was assessed by a medical professional and returned to work with no injuries.
12. A worker tripped over a wooden plank while walking backwards and sustained fractures to major bones.
13. A worker was using their fall arrest incorrectly while working at height.
14. Workers were not wearing respiratory protection or water suppression when they were observed using a gas-powered concrete cut-off saw to cut a portion of a concrete lock block.
15. A worker's hand contacted a damaged section of cable resulting in the worker receiving an electrical shock.
16. A worker received a minor injury when a formwork failed during a concrete pour causing a release of approximately 80 cubic metres of concrete onto the ground.
17. While a contractor vehicle was waiting to merge on to road, a truck in motion from the adjacent side of the contractor vehicle sped through the yellow traffic light and collided with another SUV that was about to cross the road, then crashed into the contractor vehicle.
18. A worker was cleaning a grout plant when they sustained an injury to their thumb.
19. A worker was using a 3-foot piece of coil rod as a roller handle when they lost their grip causing the rod and roller to fall approximately 88 feet to the zero deck.

20. A worker injured their leg when they slipped on icy ground conditions and sustained a fracture.
21. A worker was hit on the side of their face by a shotcrete hose and shotcrete when the hose they were using became blocked and then cleared itself.
22. A worker was stripping a panel from a bulkhead when the bar they were using slipped out of the workers hand, falling approximately 15 feet. The bar grazed the hard hat of another worker assisting in the task.

All Injury Incidents

The 70 injury incidents that occurred in 2019 include six lost time injury and 64 medical attention injuries:

Lost Time injury

1. A section of a conveyor dropped on a worker's foot and the worker suffered a fractured foot.
2. A worker was hosing off a concrete mix truck, when they tripped on a curb behind them and fell backwards, landing their right shoulder.
3. A worker was travelling down on a steep path in rugged terrain when they turned to speak to another worker, lost their footing, fell, and sustained a fracture
4. A worker was working on a concrete pour when concrete backed up on the telebelt above and fell 15 feet onto the worker's back, dropping them to one knee.
5. A worker tripped over a wooden plank while walking backwards and sustained fractures to major bones.
6. A worker was connecting a heater sock to a heater unit, slipped on icy ground conditions, and injured their leg.

Medical Attention requiring Treatment

1. A worker bumped their forearm against a stay-form resulting in a 4"x 1" laceration.
2. A worker was struck by woody debris in the eye from their chainsaw while cutting.
3. A pry bar slipped and contacted the side of the workers head, just below the workers hard hat. The worker sustained a small laceration.
4. Workers were offloading a pressure washer when the pressure washer slipped, pinching and lacerating a finger of one of the workers.
5. A worker was wearing gloves using a box cutter to cut tape and received a laceration that required stitches.
6. A worker was affected by a sudden pressure release when the side wall of a loaders rear tire failed.
7. A worker was widening a hole in a girder when a drill bit caught; the worker sustained a fracture.
8. A worker using a palm drill sustained a puncture that required staples.
9. A worker was cutting a piece of rope. The knife blade went through the rope and cut through the worker's leather glove. The worker sustained a laceration that required stitches.
10. A worker was cutting steel with an oxyacetylene torch when a piece of metal fell off the table, struck the worker, and the worker sustained a fracture.
11. A worker was stepping over a small pile of rebar, lost their footing and received a laceration that required stitches.
12. A worker was pre-loading core tubing into a drill rod, when the tip of their thumb became pinched between the core tubing and drill rod. The worker required stitches.

13. A worker was cleaning construction debris out of water that had been used for green-cutting concrete. Their hand showed signs of peeling from concrete irritation.
14. A worker was drilling anchors for coil rod in-beds. The worker filled a hole with epoxy, started to hammer a piece of coil rod into the hole, and hit an air pocket causing the epoxy to splatter up under their safety glasses and contacted their eye.
15. A worker slipped at the end of plywood access path then tried to catch themselves and received a laceration on their arm on a horizontal rebar.
16. A worker inhaled fire retardant fumes in an enclosed space while extinguishing a fire in the manifold of the rock truck.
17. A worker pinched their finger and sustained a laceration, while adjusting scaffolding.
18. A worker slipped on some loose gravel and fell forward hitting their left shoulder against a steel beam.
19. A worker lost their footing, slipped, and strained their back while unloading the vacuum hoses from the back of a light duty vehicle.
20. A worker stepped into fresh concrete during a mud slab pour, causing it to overflow into the workers boots. The worker sustained concrete burns to both legs.
21. A worker felt discomfort in both eyes after welding work.
22. A worker was adjusting a hydraulic jack when a space plate dislodged and the worker received a laceration to their upper lip.
23. A worker lost their footing, fell forward and received a laceration on their hand.
24. A worker stepped onto an unmarked pin flag and strained their hip and lower back.

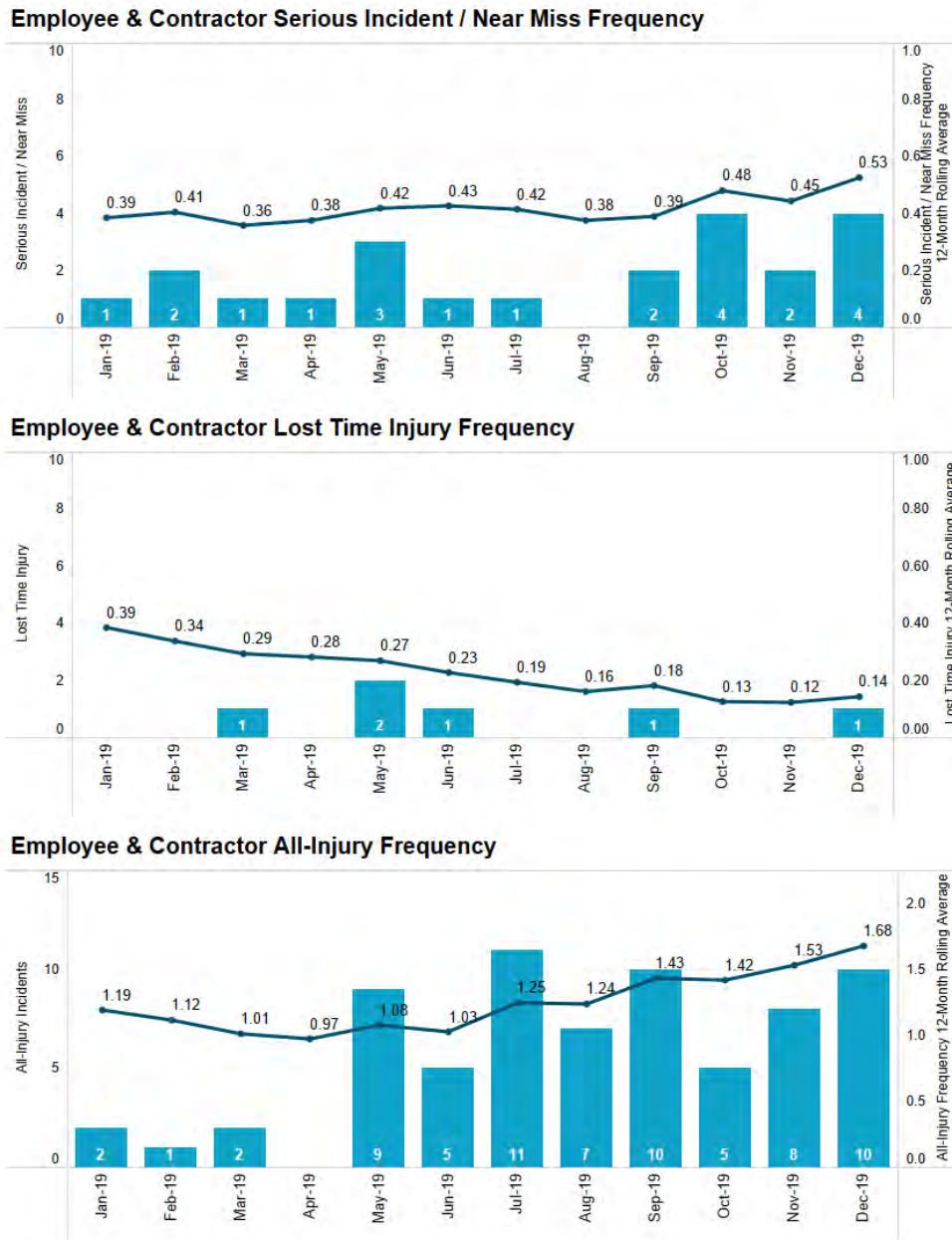
25. A worker slipped on uneven ground and strained their lower back.
26. A worker stepped on a power cable and strained their knee.
27. A worker stepped on a rock and rolled their ankle.
28. A worker felt discomfort in both eyes after grinding work.
29. A worker stepped into a hole and rolled their ankle.
30. A worker strained their shoulder while lifting a cutlery holder.
31. A worker received concrete burns while raking concrete.
32. A worker pinched their finger and received a laceration, while working on formwork.
33. A worker stepped backwards on a rebar mat and their foot went through the mat; worker fell onto the vertical form savers causing a laceration on their back.
34. A worker sustained a laceration to their lip and earlobe while installing stay-form.
35. A worker installing bracing disturbed some metal debris and experienced discomfort in their eye.
36. A worker drilled through formwork and punctured another worker's hand.
37. A worker cut their hand on the inner perimeter flange of an electrical panel.
38. A worker caught their finger between the ball and hitch of their equipment, and received a laceration.
39. A worker pinched their thumb between two plates and received a laceration.
40. A worker stumbled on the steps of a crew bus and their arm got stuck between the handrail and bulkhead and received a shoulder injury.
41. A worker injured their knee while using a pry bar.
42. A worker climbing through rebar had a tie wire poke the worker.

43. A worker was laying decking when they grabbed a used piece of plywood with an un-removed nail, which contacted their chin, and received a laceration.
44. A worker was falling a 24 cm spruce when a dead limb about 14 cm broke off from the tree and struck the worker on their shoulder.
45. A worker was cutting a zip tie with a utility knife when the knife slipped and cut through their glove. The worker received a laceration on their finger.
46. A worker bent over to move a 4" x 6" piece of lumber when they lost their footing. The worker slipped and twisted their knee at the same time.
47. A worker was placing a box on a lower shelf, they suddenly felt a squeezing pain in their leg as they squatted down.
48. A worker was climbing a scaffold ladder when they struck their head on a concrete header that was not visible due to it being covers by tarps.
49. A worker was shoveling tracks on heavy equipment when their hand contacted a plant thorn and they received a small puncture.
50. A worker was working on a haul truck replacing a hydraulic cylinder bushing and pin. The cylinder slipped off the jack and pinched the worker's finger between jack and the cylinder.
51. A worker was cleaning the grout plant after a concrete pour, when they placed their hand inside the pump box while power was engaged, causing an injury to their thumb.
52. A worker was attempting to remove a form from a wall. While prying a panel towards themselves with the pry bar, the bar slipped and contacted the lip and the worker received a laceration.
53. A worker was removing a coil rod in the process of pre-stripping forms. Worker had a pipe wrench on the coil rod and the wrench slipped and contacted the lip and the worker received a laceration.

54. A worker was carrying a sheet of plywood causing a splinter to enter the wrist.
55. A worker pinched their finger between two slicklines and the worker received a laceration.
56. A worker slipped while holding a scaffold tube and strained their shoulder.
57. A worker pulled hard on a loose bolt with a torque wrench which contacted the lip and the worker received a laceration.
58. A coil rod contacted a worker's earlobe while the coil rod was being pushed up from the bottom of a pre-built form.
59. A worker suffered from back pain after performing bolt torque checks.
60. A worker fractured their finger when the bush hammer accidentally engaged and contacted their hand.
61. A worker stepped and fell 4-5 feet from single section of the scaffold deck onto the stairs below the scaffold.
62. A worker pinched their finger between a bracket and hook.
63. A worker rolled their ankle while a worker was retrieving a clamp.
64. A worker suffered from eye irritation after their work shift in diversion outlet structure area.

[Figure B-1](#) below provides information on Employee and Contractor Serious Incidents/Near Miss Frequency, Lost Time Injury Frequency and All Injury Frequency as at December 31, 2019.

Figure B-1 Employee and Contractor Serious Incidents/Near Miss Frequency, Lost Time Injury Frequency and All Injury Frequency



[Table B-1](#) lists the Regulatory Inspections and Orders received from January 2019 through December 2019.

Table B-1 Regulatory Inspections and Orders

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
Inspection #1: WorkSafeBC conducted an inspection in the contractor's maintenance shop.			
Low Risk	Safety Documentation	Order #1: Brake cleaner is used in the maintenance shop and being applied using a spray bottle. The contractor failed to ensure that the container has a workplace label applied to it.	January 4, 2019
Low Risk	Safety Documentation	Order #2: The contractor acquired brake cleaner for use, handling or storage at a workplace and provided the inspector a safety data sheet for brake cleaner. The contractor failed to ensure that all the safety data sheets are available for acquired products used in the workplace.	
Low Risk	Safety Documentation	Order #3: The contractor failed to ensure that a hazardous product is not used, stored or handled in a workplace unless all the applicable workplace hazardous materials information system requirements concerning labels, product identifiers, safety data sheets and worker education and training are complied with.	
Low Risk	Safety Documentation	Order #4: The contractor failed to ensure effective local exhaust ventilation is used at any fixed work station to minimize worker exposure to harmful air contaminants produced by welding, burning or soldering.	
Low Risk	Safety Documentation	Order #5: The contractor failed to ensure the inspection and maintenance of the weld fume extraction system (smoke eater) is being carried out in accordance with the manufacturer's instructions and standards. The contractor was conducting pre-use checks but could not provide any information or proof that other regular maintenance had been conducted.	
Low Risk	Safety Documentation	Order #6: The contractor failed to ensure the health and safety of all workers present at the workplace.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #2: WorkSafeBC conducted an inspection on the underground workings and set up times to inspect the right bank drainage tunnel, the inlet diversion tunnels 1 and 2 and the outlet diversion tunnel portal area.</p> <p>Inspection: The contractor reported in the meeting that they are performing quality and assurance inspections to ensure the health and safety of all workers.</p> <p>Respirators: As dust levels vary due to the activity being conducted in the tunnel, different levels of respiratory protection are used. The occupational hygienist provided a list of activities and the level of respirator protection required.</p>			
		No Orders	January 16, 2019
<p>Inspection #3: WorkSafeBC conducted a site inspection in the inlet portals of the diversion tunnels.</p>			
Low Risk	Safety Documentation	<p>Order #1: The contractor failed to ensure that an effective tag-in method of accounting for all workers entering and leaving the underground working is established and maintained.</p>	January 17, 2019
<p>Inspection #4: WorkSafeBC inspection was conducted on the outlet diversion tunnel portal area. There are several workers working on the slope above the portal and other workers installing the infrastructure on the surface that is required to support the underground.</p> <ul style="list-style-type: none"> • Above portal entrance: At the time of the inspection there were rock climbers working on the slopes above the portal area installing mats. As part of the safe work process, a control zone was set up below the area to prevent workers from entering into the hazard area. • Acceptance: The inspection was also conducted to gather information for the prevention practices and quality group of WorkSafeBC that are working on AR201800122 (the acceptance for the heating equipment and ventilation for the diversion tunnel (outlet portal)). 			
		No Orders	January 17, 2019
<p>Inspection #5: WorkSafeBC conducted an inspection on the right bank drainage tunnel. At the time of the inspection the underground crew were installing rock bolts.</p> <p>Topics of discussion with the contractor included but were not limited to the following:</p> <ul style="list-style-type: none"> • Dust collection – the contractor must ensure that the mechanical ventilation system is operated in accordance with good engineering practice, maintained in good working order as per the manufacturer and capable of supplying sufficient fresh air to the underground working. • Ground failure – On December 10, 2018 an electrician noticed that a portion of the east wall, in the gallery to the cofferdam had failed. The electrician notified supervision immediately. The accumulation of water behind the shotcrete may have been one of the contributing factors into the failure of the wall. When the engineer of record and the contractor create safe work procedures and ground support details they must ensure that suitable systems are installed to remove the water to prevent an incident like this from happening again. All remedial engineering documentation and a safe work procedure must be submitted to WorkSafeBC engineering for review, prior to re-entering the drainage gallery and initiating remedial work. 			

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
		No Orders	January 18, 2019
Inspection #6: WorkSafeBC conducted an inspection on aerial work platform. The inspection area is at the new warehouse building that is under construction.			
Low Risk	Safety Documentation	Order #1: The contractor failed to ensure suitable ladders, work platforms or scaffolding were provided for roofing activities requiring position at elevations above a grade. In addition, the contractor to provide supporting documentation from the manufacturer for the utilization of the aerial work platform equipment for access on location.	January 21, 2019
Inspection #7: WorkSafeBC conducted an inspection on aerial work platforms. The inspection area is at the new warehouse building that is under construction. The sub-contractor is to provide the exterior wall and roof panel installation services at the warehouse project. At the time of the inspection the contractor was installing three-part sheet metal clad and insulating roof material on the northern roof elevation above the main entrance of the warehouse.			
Low Risk	Safety Documentation	Order #1: The contractor failed to ensure each elevating work platform (aerial work platform) in use at a workplace, the equipment manufacturer's operation manual, including specific instructions for enter and exit at elevations, to be available at the workplace.	January 21, 2019
Low Risk	Safety Documentation	Order #2: The contractor failed to ensure each elevating work platform in use at a workplace, the equipment manufacturer's operation manual, including specific instructions for enter and exit at elevations, to be available at the workplace.	
Low Risk	Safety Documentation	Order #3: The contractor failed to ensure the s-fork hoisting hook attachments installed on the forks of the all-terrain fork lift to be installed on the equipment as specified by the equipment manufacturer or certified by a professional engineer for use on the equipment.	
Inspection #8: WorkSafeBC conducted site inspection as a result of an incident that involved a high risk of serious injury to a worker on the roadheader equipment #084 in the left bank diversion tunnel #2 – inlet. This inspection report contains a stop use order.			

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
High Risk	General Conditions	Order #1 OSH 2.12: Cable ties were installed on the electrical cabinet door safety interlock switches, rendering them ineffective on the roadheader equipment #084. The contractor must not intentionally remove, impair, or render ineffective any safeguard provided for the protection of workers, except as permitted by the Occupational Health and Safety Regulation.	February 17, 2019
High Risk	Stop Use Order	Order #2 WCA 190 (1): WorkSafeBC has reasonable grounds to believe that a thing that is being used or that may be used by a worker in this workplace is either not in safe operating conditions or does not comply with this part or the regulations. Pursuant to Section 190(1) of the Workers Compensation Act, the main civil works contractor is ordered to immediately stop use of the roadheader equipment #084.	
Low Risk	Rights and Responsibilities	Order #3 OSH 3.7 The employer is directed to perform a special inspection of the roadheader equipment #084 involved in the electrical incident on February 17, 2019. A malfunction occurred when a worker was in the process of resetting the equipment's main circuit breaker and a 1000-volt electrical discharge occurred, the employer is directed to conduct an inspection prior to use.	
Inspection #9: WorkSafeBC conducted site inspection as a result of an incident that involved a high risk of serious injury to a worker on the roadheader equipment #025 in the left bank diversion tunnel #1 – inlet. This inspection report contains a stop use order.			
High Risk	General Conditions	Order #1 OHS 4.12: The roadheader equipment #025 equipment's electrical cabinet door safety interlock switches had been rendered ineffective by use of electrical tape. The contractor must not intentionally remove, impair, or render ineffective any safeguard provided for the protection of workers, except as permitted by the Occupational Health and Safety Regulation.	February 17, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
High Risk	Stop Use Order	Order #2 WCA 190 (1): WorkSafeBC has reasonable grounds to believe that a thing that is being used or that may be used by a worker in this workplace is either not in safe operating condition, or does not comply with this part of the regulations. Pursuant to Section 190(1) of the Workers Compensation Act, the main civil works contractor is ordered to immediately stop use of the roadheader equipment #025.	
Low Risk	General Conditions	Order #3 OHS 4.11(a): Prior to the operation of the roadheader equipment #025, the contractor is responsible to ensure the safeguards are in place and functioning.	
Inspection #10: WorkSafeBC conducted site inspection as a result of an incident that involved a high risk of serious injury to a worker on the roadheader equipment #026 in the left bank diversion tunnel #2 – outlet. This inspection report contains a stop use order.			
High Risk	General Conditions	Order #1 OHS 4.12: Cable ties were used on the electrical cabinet door safety interlock switches, rendering them ineffective on the roadheader equipment #026. The contractor must not intentionally remove, impair, or render ineffective any safeguard provided for the protection of workers, except as permitted by the Occupational Health and Safety Regulation.	February 17, 2019
High Risk	Stop Use Order	Order #2 WCA 190(1): WorkSafeBC has reasonable grounds to believe that a thing that is being used or that may be used by a worker in this workplace is either not in safe operating condition, or does not comply with this Part of the regulations. Pursuant to Section 190(1) of the Workers Compensation Act, the main civil works contractor is ordered to immediately stop use of the roadheader equipment #026.	
Low Risk	General Conditions	Order #3 OHS 4.11(a): Prior to the operation of the roadheader equipment #026, the contractor is responsible to ensure the safeguards are in place and functioning.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #11: WorkSafeBC conducted site inspection as a result of an incident that involved a high risk of serious injury to a worker on the roadheader equipment #023 in the left bank diversion tunnel #1 – outlet. This inspection report contains a stop use order.</p>			
High Risk	General Conditions	<p>Order #1 OHS 4,12: Cable ties were used on the electrical cabinet door safety interlock switches, rendering them ineffective on the roadheader equipment #023. The contractor must not intentionally remove, impair, or render ineffective any safeguard provided for the protection of workers, except as permitted by the Occupational Health and Safety Regulation.</p>	February 17, 2019
High Risk	Stop Use Order	<p>Order #2 WCA 190 (1): WorkSafeBC has reasonable grounds to believe that a thing that is being used or that may be used by a worker in this workplace is either not in safe operating condition, or does not comply with this part of the regulations. Pursuant to Section 190(1) of the Workers Compensation Act, the main civil works contractor is ordered to immediately stop use of the roadheader equipment #023.</p>	
Low Risk	General Conditions	<p>Order #3 OHS 4.11(a): Prior to the operation of the roadheader equipment #023, the contractor is responsible to ensure the safeguards are in place and functioning.</p>	
<p>Inspection #12: WorkSafeBC conducted site inspection as a result of an incident that involved a high risk of serious injury to a worker on the roadheader equipment #084 in the left bank diversion tunnel #2 – inlet. The incident occurred during the start-up phase for the underground roadheader equipment. The main circuit breaker had been accessed through the equipment's high voltage electrical cabinet, in order to perform a complete reset of the equipment and computer system. A worker received an electrical shock from this 1000-volt energy release.</p> <p>An observation of the roadheader equipment on location revealed that main electrical cabinet exterior door handles were not functioning as per the manufacturer; this had been clearly labeled on the electrical cabinet door via felt marker. Upon further inspection of the equipment, it was noted that electrical cabinet door safety interlock switches to de-energize the cabinet had been rendered ineffective by way of cable ties. Further observation and review of the main circuit breaker switch box revealed two missing isolation covers that were not installed to protect the worker from inadvertent contact to the energized parts.</p>			
High Risk	Rights and Responsibilities	<p>Order #1 – OHS 3.9 The contractor failed to ensure the missing breaker extension in the roadheader electrical cabinet must be remedied without delay.</p>	February 17, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
Low Risk	Rights and Responsibilities	Order #2 – OHS 3.10: The contractor must investigate after receiving the report of unsafe condition and ensure that any necessary corrective action is taken without delay.	
Low Risk	General Conditions	Order #3 – OHS 4.3(1)(b)(i): The contractor failed to ensure that each tool, machine and piece of equipment in the workplace is capable of safely performing the functions for which it is used and is selected, used and operated in accordance with the manufacturer's instructions, if available.	
Low Risk	Mobile Equipment	Order #4 - OHS 4 16.4(1)(a): The manufacturer developed a contractor specific training program for the use of the roadheader equipment on location, but the contractor failed to ensure the injured worker took part in this instructional training.	
High Risk	De-Energization and Lockout	Order #5 – OHS 10.2: The contractor failed to ensure the energy is isolated and effectively controlled the unexpected release of electrical energy that could cause an injury.	
Low Risk	General Duties of Employers	Order #6 – WCA 115(2)(e): The contractor failed to provide adequate information, instruction, training and supervision at the workplace to ensure the workers can work without undue risk.	
Inspection #13: WorkSafeBC conducted a site inspection on the tower crane erection and use in L2 powerhouse area.			
Low Risk	Safety Documentation	Order #1 OHS 15.59: The contractor failed to have a nameplate or other permanent marking for the hook lifting devices that displays the manufacturer's name and address, serial number, weight of the device, if more than 45kg and working load limit.	February 20, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #14: WorkSafeBC conducted the site inspection on the concrete pump and concrete placing boom. The contractor has three concrete pumps trucks and four concrete placing booms that either have been or will be erected / operating on the Site C Clean Energy Project.</p> <p>The contractor is the subcontractor of the generating station and spillways prime contractor to place concrete on the generation station, powerhouse and spillway projects.</p> <p>WorkSafeBC reviewed and discussed the content of a Concrete Pump Inspection Checklist that included the following:</p> <ul style="list-style-type: none"> • Qualification of the supervisor • Qualification of the operator • Evaluation of the set-up location • Periodic (annual) inspection requirements as per CSA Z151-09 • Frequent (monthly) inspection requirements as per CSA Z151-09 • Daily pre-use inspection by the operator documented • Short rigging outriggers as per the manufacturer's instruction • Outrigger cribbing under all float pads as per the manufacturer's instruction • Guarding installed at the hopper supply elbow • Controls and emergency stops functioning correctly. 			
		No orders	February 21, 2019
<p>Inspection #15: WorkSafeBC conducted an inspection on the procedures for checking well-being of a worker which includes following:</p> <ol style="list-style-type: none"> 1. Working alone policy 2. Time intervals / emergency rescue 3. Recording results 			
		No orders	March 11, 2019
<p>Inspection #16: WorkSafeBC attended an information session at the contractor's site. The discussions included Canadian Standards Association standards, various engineering aspects, definitions and regulatory requirements for the proposed tunnel lining formwork to be operated and set for concrete placement within the diversion tunnels.</p>			
		No orders	March 13, 2019
<p>Inspection #17: WorkSafeBC conducted an inspection to provide clarifications to questions with the rigging, lifting devices, chain spreaders and plate clamps.</p>			
		No orders	March 18, 2019
<p>Inspection #18: WorkSafeBC conducted an inspection at 240 Road till conveyor road crossing site.</p>			
Low Risk	Traffic Control	Order #1 OHS 18.2: The contractor failed to ensure that effective traffic control is provided and used whenever traffic could be hazardous to a worker.	March 25, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #19: WorkSafeBC conducted a general inspection and focused on the lockout and safety program at the Peace Canyon Generation Station. At the time of the inspection, the Peace Canyon Generation Station was undergoing an upgrade to support Site C Dam. The current project entails the erection of two new 500 kV lines supplying power to the Site C Dam. The 500 kV lines will be terminated into gas insulated switch gear. Gas insulated switch gear uses sulfur hexafluoride to insulate the switch, replacing the need for oil filled circuit breakers.</p>			
No Orders			April 4, 2019
<p>Inspection #20: The Inspector of Mines examined the Mines Rescue Equipment at the West Pine Quarry. It was noted that while Mine Rescue equipment is in place, it is deficient in some areas. Examples of this are the unknown age of the ropes and the amount of ropes. Additionally, there is only one harness available for the whole team. This is not sufficient.</p> <p>As per 3.7.5 of the Health, Safety and Reclamation Code of BC: The manager of an open pit mine employing more than 25 persons per shift shall ensure that: (1) one fully trained and equipped mine rescue team, and (2) on every shift where more than 10 persons are working, there are four persons trained in mine rescue procedures.</p>			
High Risk	Open Pit	<p>Order 1# MA 3.7.5: The contractor failed to ensure the adequate equipping of the Mine Rescue Cache to have an equipped mine rescue team. This should be in conjunction with the Mine Rescue Trainer.</p>	May 6, 2019
<p>Inspection #21: WorkSafeBC conducted an inspection on physical or mental impairment and impairment by alcohol, drug or other substance.</p> <p>The following excerpt has been provided for clarification purposes:</p> <p>Note: In the application of sections 4.19 and 4.20, workers and employers need to consider the effects of prescription and non-prescription drugs, and fatigue, as potential sources of impairment. There is a need for disclosure of potential impairment from any source, and for adequate supervision of work to ensure reported or observed impairment is effectively managed.</p>			
No Orders			May 9, 2019
<p>Inspection #22: WorkSafeBC attended the workplace as a result of an incident that involved an injury of a worker in the left bank diversion tunnel 1 outlet.</p>			
No Orders			May 9, 2019
<p>Inspection #23: During a regular inspection the WorkSafeBC Officer discussed the effects of prescription and non-prescription drugs, and fatigue, as potential sources of impairment.</p>			
No Orders			May 9, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #24: WorkSafeBC conducted an inspection on the electrical distribution; qualified personnel and high voltage limits of approach were discussed but not limited to.</p>			
		No Orders	May 14, 2019
<p>Inspection #25: WorkSafeBC conducted an inspection on the Spillway where there was a slide of material.</p> <p>Topics of discussion with the sub-contractor and the prime contractor included, but not limited to, the following.</p> <p>Slide of Material: At 4:00 a.m. on Wednesday, May 29, 2019, there was a slide of material in an area referred to as block 8. The size of the slide was reported to be 5 metres horizontal length by 2 metres vertical length by 0.4 metres to 0.5 metres deep. There was a worker that was struck by the slide and has undetermined injuries.</p>			
Low Risk	Special Inspections	<p>Order #1 OHS 3.7: A special inspection must be made when required by malfunction or accident.</p>	May 29, 2019
<p>Inspection #26: WorkSafeBC conducted an inspection as a result of a slide of material that occurred at the roller-compacted concrete spillway buttress excavation that was approximately 5 metres horizontal by 2 metres vertical and 0.5 metres in depth and involved an injury to a worker.</p> <p>That incident is currently under investigation by WorkSafeBC and may result in order being issued, in addition to any orders that are included in this inspection report. This may also be subject to further enforcement action arising out of the orders cited in this inspection report, or in subsequent inspection reports that relate to the incident referred to in this inspection report.</p> <p>The orders cited in this report are to address roller compacted concrete spillway excavation block 8 section to elevations 383.0 to 396.0 material slide, observed at the workplace, that need attention prior to conducting all work within the hazardous area of the roller compacted concrete block 8 slope excavation and correspond to written instructions on site.</p>			
Work Stoppage	Orders to stop work	<p>Order #1 WCA 191(1): Based upon the violation cited in this inspection report, WorkSafeBC has reasonable grounds to believe there is a high risk of serious injury, serious illness or death to a worker at this workplace.</p>	May 29, 2019
High Risk	Work standards	<p>Order #2 OHS 20.78(1)(a): Excavation work was not done in accordance with the written instructions of a qualified registered professional if the excavation is more than 6 metres (20 ft.) deep.</p>	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #27: WorkSafeBC conducted an inspection on the spillway where there was a slide of material. On May 29, 2019, there was a slide of material in an area referred to as block 8. The size of the slide was reported to be 5 metres horizontal by length by 2 metres vertical length by 0.4 metres to 0.5 metres deep. There was a worker employed by the contractor was struck by the slide and has undetermined injuries.</p> <p>At the time of the inspection the contractor was using written instructions by a qualified registered professional as the means of protection of the worker while working on the slope of the excavation.</p>			
High Risk	Sloping shoring requirements	<p>Order #1 - OHS20.81(1): The contractor failed to ensure that the sides of the excavation were sloped as specified in writing by a qualified registered professional and sloped at angles, dependent on soil conditions, which will ensure stable faces.</p>	May 29, 2019
<p>Inspection #28: WorkSafeBC conducted an inspection on the Safety Data Sheets (SDS) chemical exposure.</p>			
		No Orders	May 30, 2019
<p>Inspection #29: WorkSafeBC conducted an inspection of the contractor's right bank maintenance shop.</p>			
		No Orders	May 30, 2019
<p>Inspection #30: WorkSafeBC conducted an inspection in Area 33 - generating stations and spillways. discussions held with the contractor for submitting Employer Incident Investigations Reports occurred on June 6, 2019.</p> <p>An inspection of the provided documentation has revealed that the contractor has had approximately 100 incidents between February 24, 2019 to May 18, 2019, verification of the Claims Management Solution system of submitted claims by this officer indicates approximately 70 to 80 incidents in 2019, required submission to the WorkSafeBC board within 30 days.</p> <p>An updated (June 20, 2019) search of the WorkSafeBC Employer Incident Investigations Reports submission portal for contractor has shown two investigations being uploaded to date.</p> <p>The requirement to submit investigations to the WorkSafeBC Board within 30 days has not been followed by the contractor.</p>			
Low Risk	Safety Documentation	<p>Order #1 WCA176(2)(b): The contractor failed to submit all the remaining outstanding incidents to the WorkSafeBC Employer Incident Investigations Reports portal, and advise this officer when they uploaded to the system.</p>	June 6, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #31: This incident (IMS# 186015) resulted from the attempted towing of a disabled 14M grader by means of the all terrain forklift and tractor trailer, a failure to negotiate a 90-degree corner and slight decline grade on left bank haul road L5 intersection. The all terrain forklift inadvertently flopped over on its right-hand side onto the gravel road surface, which subsequently caused injury to a worker.</p> <p>The orders cited in this report are to address items, noted at the workplace, that need attention prior to conducting more work with respect to responsibilities, transportation, inspection, and work practices noted on location. Refer to orders 1, 2, 3, 4, 5, 6 & 7</p>			
Low Risk	Rights and Responsibilities	Order #1 - OSH3.7: A special inspection must be made when required by malfunction or accident.	June 6, 2019
High Risk	Safe Machinery and Equipment	Order #2 - OHS4.3(1)(b)(i): The contractor failed to ensure that the tow/winch line in the workplace is used in accordance with the manufacturer's instructions.	
High Risk	Rigging Slings	Order #3 - OHS15.39: The contractor failed to ensure the edge or the sling must be protected to prevent damage to the sling when a sling is applied to a sharp edge of a load.	
High Risk	Operator's Responsibilities	Order #4 - OHS16.5: The operator of the mobile equipment failed to ensure to operate the equipment safely, maintain full control of the equipment, and comply with the laws governing the operation of the equipment.	
High Risk	Supervisor's Responsibilities	Order #5 - OHS16.6: A supervisor has knowingly permitted the workers to conduct a towing practice of the disabled 14M grader that created undue hazard to the health or safety of the workers.	
Low Risk	Standards	Order #6 - OHS16.7(e): The contractor failed to ensure the design, fabrication, use, inspection and maintenance of mobile equipment must meet the requirements of the following applicable standard: (e) Rough Terrain Forklifts: ANSI/ITSDF B56.6 2001, Safety Standard for Rough Terrain Forklift Trucks.	
Low Risk	Standards	Order #7 - OHS16.7(j): The contractor failed to ensure the design, fabrication, use, inspection and maintenance of mobile equipment must meet the requirements of the standard: Lift Truck Operator training: Canadian Standards Association Standard	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
		B335-94, Industrial Lift Truck Operator Training.	
<p>Inspection #32: WorkSafeBC conducted an inspection at the till conveyor excavation for the Old Fort Road crossing.</p> <p>A worker and foreman could not provide the written instructions for the excavation, a power pole and sheet pile that cut through the Old Fort Road. Therefore, a stop work order was issued.</p>			
Low Risk	Excavation – Work Standards	<p>Order #1 - OHS20.78(1)(b): Excavation work was not done in accordance with the written instructions of a qualified registered professional where the excavation was adjacent to a road, sheet pile and power pole.</p>	June 26, 2019
Work Stoppage	Orders to stop work	<p>Order #2 - WCA191(1)(a): WorkSafeBC has reasonable grounds to believe there is a high risk of serious injury, serious illness or death to a worker at this workplace. Therefore, WorkSafeBC orders that work inside the excavation stop at this workplace is immediately stopped.</p>	
<p>Inspection #33: WorkSafeBC conducted an inspection at SS2 Site 24 Compartment 1B to verify that the horizontal life lines were inspected and certified by a professional engineer.</p> <p>The contractor verified that the horizontal life lines are managed within a preventive maintenance program and that the preventive maintenance for the life lines is current.</p>			
		No Orders	June 26, 2019
<p>Inspection #34: WorkSafeBC conducted an inspection at the generating station & spillways powerhouse construction worksite due to a crane misadventure while the contractor was in the process of erecting the tower crane. Items discussed and areas of inspections included, but were not limited to the following: crane misadventure, manufacturer's erection instructions, and incident investigation.</p> <p>Crane misadventure - "misadventure" means a contact with a high voltage electrical source, a shock load, a loss of a load, a brake failure, a collision or upset, or any other circumstance that may impair the safe operation of the crane or hoist.</p>			

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
High Risk	Certification following misadventure	<p>Order #1 – OHS14.16.1(2): The tower crane was subject to a misadventure and due to the impact between the jib end, hoist cable and the jib boom, there may have been unknown damage to the tower crane. The contractor failed to remove the tower crane from service until a professional engineer has:</p> <p>a) supervised an inspection of, and supervised any necessary repairs to, the equipment; and certified the equipment as safe for use at the manufacturer's rated capacity for the equipment or as provided by section 14.16 if the manufacturer's rated capacity is not available.</p>	July 2, 2019
Low Risk	Tower crane erection	<p>Order #2 – OHS 14.73(2): The tower crane erection was not done in accordance with the instructions of the crane manufacturer or professional engineer</p>	
<p>Inspection #35: WorkSafeBC conducted an inspection at the generating station and spillways powerhouse construction worksite due to a crane misadventure while the contractor was in the process of erecting the tower crane. Items discussed and areas of inspections included, but were not limited to the following: system to ensure compliance</p>			
Low Risk	Tower crane erection	<p>Order #1 – WCA118 (2)(b): The prime contractor of a multiple-employer workplace must do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the <i>Workers Compensation Act</i> Part 3 and the regulations in respect of the workplace.</p>	July 2, 2019
Low Risk	Safety documentation	<p>Order #2 – OSH20.3(4)(c): BC Hydro failed to have a set of construction procedures designed to protect the health and safety of workers at the workplace.</p>	
<p>Inspection #36: WorkSafeBC conducted an inspection at the generating station and spillways powerhouse construction worksite due to a crane misadventure while the contractor was in the process of erecting the tower crane 3.</p> <p>Crane misadventure - "misadventure" means a contact with a high voltage electrical source, a shock load, a loss of a load, a brake failure, a collision or upset, or any other circumstance that may impair the safe operation of the crane or hoist.</p>			

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
High Risk	Certification following misadventure	<p>Order #1 – OHS14.16.1(2): The tower crane was subject to a misadventure and due to the impact between the jib end, hoist cable and the jib boom, there may have been unknown damage to the tower crane. The contractor failed to remove the tower crane from service until a professional engineer has</p> <ul style="list-style-type: none"> a) supervised an inspection of, and supervised any necessary repairs to, the equipment; and b) certified the equipment as safe for use at the manufacturer's rated capacity for the equipment or as provided by section 14.16 if the manufacturer's rated capacity is not available. 	July 2, 2019
<p>Inspection #37: WorkSafeBC conducted an inspection at the generating station and spillways powerhouse construction worksite due to a crane misadventure while the contractor was in the process of erecting the tower crane 3. Items discussed and areas of inspections included, but were not limited to the following: system to ensure compliance</p>			
		No Orders	July 2, 2019
<p>Inspection #38: WorkSafeBC conducted an inspection at the generating station and spillways powerhouse construction worksite due to a crane misadventure while the contractor was in the process of erecting the tower crane 3.</p> <p>Crane misadventure - "misadventure" means a contact with a high voltage electrical source, a shock load, a loss of a load, a brake failure, a collision or upset, or any other circumstance that may impair the safe operation of the crane or hoist</p>			
		No Orders	July 2, 2019
<p>Inspection #39: WorkSafeBC conducted a general inspection at the quality control lab at the Project. A goal of the inspection was to verify crystalline silica management as part of the high-risk strategy.</p>			
Low Risk	Safety Administration	<p>Order #1 – WCA 138(B): The contractor failed to post or kept the posted report of the three most recent joint committee meetings. A worker produced a set of minutes from January and the committee meets bi-weekly.</p>	July 4, 2019
Low Risk	Safety Administration	<p>Order #2 – WCA 138(a): The contractor failed to post and keep posted the names and work locations of the joint committee members.</p>	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<i>Rescinded</i>	Safety Documentation	Order #3 – OHS 5.14(2): When a supplier safety data sheet obtained under subsection (1) for a hazardous product that is three years old, the contractor failed to obtain from the supplier an up-to-date supplier safety data sheet in respect of any of the hazardous project in the workplace at that time.	
<i>Rescinded</i>	Exposure Control Plan	Order #4 – OHS 5.57(2): The contractor failed to implement an exposure control plan for 600 sulfur cement to maintain worker exposures to designated substances as low as reasonably achievable below the exposure limit established under section 5.48.	
High Risk	Occupational First Aid	Order #5 – OHS 5.85: The contractor failed to ensure that appropriate emergency washing facilities are provided within a work area where a worker's eyes or skin may be exposed to harmful or corrosive materials or other materials which may burn or irritate.	
Low Risk	Occupational First Aid	Order #6 - OHS5.88: The contractor failed to ensure that the selection of emergency washing facilities is based upon an assessment of the risks present in the workplace.	
High Risk	Workplace label for decanted products	Order #7 – OHS 5.10(1): The contractor had various products in containers other than the supplier container and the contractor failed to ensure that the container has a workplace label applied to it.	
Low Risk	Occupational First Aid	Order #8 – OHS 5.93(2): The contractor failed to ensure that a plumbed emergency eyewash or shower facility is full flow tested at least once per month, for a sufficient length of time to completely flush the branch of the water line supplying the eyewash.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
Low Risk	Ventilation	Order #9 – OHS 5.67(2): The exhaust ventilation system used to control air contaminants at the 600 sulfur cement pots and the sieve testing machines has not been regularly inspected or monitored to ensure that it remains effective.	
Low Risk	Ventilation	Order #10 – OHS 5.61: The ventilation system for controlling airborne contaminants from the molten 600 sulfur cement in the workplace has not been designed and/or installed using established engineering principles as there one round collection point that does not cover the area of both pots.	
High Risk	Exposure Control Plan	Order #11 – OHS 5.54(2)(e): The contractor failed to ensure the exposure control plan incorporates hygiene facilities and decontamination procedures, when required.	
High Risk	Noise Exposure	Order #12 – OHS 7.7(1)(b): If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor failed to post warning signs in the noise hazard areas.	
High Risk	Noise Exposure	Order #13 – OHS 7.3(1): The contractor failed to measure the noise exposure for the use of the diamond coring tool where a worker is, or may be, exposed to potentially harmful levels of noise, or if information indicates that a worker may be exposed to a level exceeding 82dBA Lex.	
High Risk	General Duties	Order #14 – WCA 115(1)(a)(i): The contractor failed to ensure the health and safety of all workers working for the contractor.	
Inspection #40: A near miss incident resulted from two 50mm shotcrete support layers at heading section failed within a newly constructed left bank diversion Tunnel No. 1 outlet area.			
Low Risk	Reporting and Investigation	Order #1 – WCA 172(1)(b): The contractor failed to immediately notify WorkSafeBC of the occurrence of a shotcrete failure incident that involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation.	July 8, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
Low Risk	Reporting and Investigation	Order #2 – WCA 172(2): The contractor disturbed the scene of an incident that is reportable.	
High Risk	Special Inspection	Order #3 – OHS 3.7: The contractor failed to conduct a special inspection when required by malfunction or accident.	
Inspection #41: A near miss incident resulted from two 50mm shotcrete support layers at heading section failed within a newly constructed left bank diversion Tunnel No. 1 outlet area.			
Low Risk	Reporting and Investigation	Order #1 – WCA 172(1)(b): The contractor failed to immediately notify WorkSafeBC of the occurrence of a shotcrete failure incident that involved a major structural failure or collapse of a building, bridge, tower crane, hoist, temporary construction support system or excavation.	July 9, 2019
Low Risk	Reporting and Investigation	Order #2 – WCA 172(2): The contractor disturbed the scene of an incident that is reportable.	
High Risk	Special Inspection	Order #3 – OHS 3.7: The contractor failed to conduct a special inspection when required by malfunction or accident.	
Inspection #42: WorkSafeBC was on site during the installation of a new, 34 mm x 600-meter load line onto the tower crane, the wire mesh grip device used to attach the lead-line to the load line failed. The failure allowed the new load line to be dropped uncontrolled approximately 90 metres from the jib trolley sheave area to the ground.			
		No Orders	July 16, 2019
Inspection #43: The Portage Mountain Quarry is being developed by the contractor with the material destined for BC Hydro's Site C Project. The mine is located on a hillside, and the working face has been narrowed due to wildlife issues. This has resulted in a steep switchback ramp going up the face.			
Low Risk	Fire Fighting Equipment	Order #1 Mines Act Section 3.9.1: The contractor failed to ensure the fire extinguishers on the contract drills parked in the laydown area have an up-to-date inspection records.	July 25, 2019
High Risk	Haulage Road Width	Order #2 Mines Act Section 6.9.1: The contractor failed to ensure that the haul roads for single lane traffic must be twice the width of the largest haul truck running on that road and berms must be 3/4 height of the largest tire running the road.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #44: The contractor requested a pre-construction meeting to comply with the requirements of section 22.5 for the left bank drainage adit. The contractor stated that it planned to commence construction on September 17, 2019.</p> <p>The left bank drainage adit will be constructed using a drill and blast method of excavation. Due to the two left bank diversion tunnels being directly below, the contract must meet the requirements of OSH section 22.68</p> <p>The contractor that is constructing the entrance to the left bank drainage adit adjacent to the outlet of the left bank diversion tunnels, is being asked to provide a traffic review to WorkSafeBC.</p> <p>The contractor is requested to provide the following to WorkSafeBC:</p> <ul style="list-style-type: none"> • Engineering documents that outline the evaluation of blasting above the left bank diversion tunnel and the required measures to meet section 22.68; and • An evaluation of the potential impacts from traffic and ventilation equipment operation (normal and upset conditions) at the left bank drainage adit on ventilation equipment at the left bank diversion tunnel outlets and any measures, if any to address impacts. <p>Prior to the documents and measures (if any are required) being in place, no work may commence for the left bank drainage adit.</p>			
		No Orders	July 26, 2019
<p>Inspection #45: WorkSafeBC conducted an inspection at Gate B on the Site C Project. The inspection was requested due to an employee refusing unsafe work.</p>			
Low Risk	Safe Buildings and Structures	<p>Order #1 – OHS4.2: The contractor failed to ensure that each building and temporary or permanent structure in a workplace is capable of withstanding any stresses likely to be imposed on it.</p>	July 29, 2019
Low Risk	Working Alone	<p>Order #2 – OSH 4.20.2(1): Before a worker is assigned to work alone or in isolation, the contractor failed to identify any hazards to that worker.</p>	
Low Risk	Safety Equipment	<p>Order #3 – OHS 4.3(1)(b)(i): The contractor failed to ensure that each tool, machine and piece of equipment in the workplace is capable of safely performing the functions for which it is used and selected, used and operated, in accordance with the manufacturer's instructions. The extension cords at Gate B are being used to supply power where hardwired connections should be used.</p>	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #46: WorkSafeBC conducted a site inspection in the right bank drainage tunnel. The excavation of the tunnel has been completed and the contractor is working on finishing the floor area as per design. At the time of the inspection the air operated chipping hammer did not have a restraint on the air line.</p>			
Low Risk	Restraining device	<p>Order #1 - OHS12.15(a): The air operated chipping hammer did not have a restraint between the tool and the airline. The contractor failed to have an effective means of restraint on a connection of a hose or a pipe if inadvertent disconnection could be dangerous to a worker.</p>	July 31, 2019
<p>Inspection # 47: WorkSafeBC conducted an inspection in the left bank diversion tunnels. Topics of discussion with the contractor included but were not limited to the following:</p> <ul style="list-style-type: none"> - Ventilation - Diversion Tunnel 2 Outlet: Lightning, tunnel inspections, shotcrete machine - Diversion Tunnel 1 & 2 Inlet: Liner, concrete for liner, elevated work platform 			
No Orders			July 31, 2019
<p>Inspection #48: The purpose of this inspection is to document the contractor's request to extend the date for submitting their final investigation report for an incident that occurred on July 8, 2019 in the main civil works area.</p>			
No Orders			August 8, 2019
<p>Inspection #49: WorkSafeBC conducted an inspection to verify concerns expressed in a discriminatory action complaint.</p> <p>A worker expressed concerns about the operation of rock trucks at the Site C Dam Project. Specifically, the excavation of the core trench on the right bank. The worker had concerns about the height of the berm/curb where trucks could dive over an edge. The worker expressed concerns about communication amongst drivers and other equipment operators, the worker had concerns about orientation and training and the lack of wheel chock use.</p> <p>The worker expressed these concerns to the general foreman and later a member of the health and safety team. The same evening that the concerns were expressed, the worker was told their employment was being terminated.</p> <p>It was confirmed from discussions with the contractor that the worker's concerns were not fully investigated, and it was observed at the time of inspection they had not been remedied without undue delay.</p>			

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
Low Risk	Reporting unsafe conditions	Order #1 - OHS3.10: Whenever a person observes what appears to be an unsafe or harmful condition or act, the person must report it as soon as possible to a supervisor or to the contractor, and the person receiving the report must investigate the reported unsafe condition or act and must ensure that any necessary corrective action is taken without delay.	August 9, 2019
High Risk	General Conditions	Order #2 - OHS4.63: The contractor failed to install a curb, where practicable, whenever there is a danger of a vehicle or other equipment running off the edge of an elevated area.	
High Risk	General Conditions	Order #3 - OHS4.3(1)(b)(i): The contractor failed to ensure that each tool, machine and piece of equipment in the workplace is capable of safely performing the functions for which it is used and is selected, used and operated in accordance with the manufacturer's instruction, if available.	
Low Risk	Safety Documentation	Order #4 - OHS3.25: The contractor failed to keep records of all training proved under sections 3.23 and 3.24 as the contractor does not have written records of the on-the-job-training (e.g., ride along/competency verification)	
High Risk	General duties of employers	Order #5 - WCA115(2)(e): The contractor failed to provide the workers 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.	
High Risk	General duties of employers	Order #6 - WCA115(1)(a): The contractor failed to ensure the health and safety of all workers working for that contractor and any other workers present at a workplace where the contract is being carried out.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #50: WorkSafeBC attended the workplace as a result of a shotcrete failure incident that involved the potential for serious injury to workers. The contractor noted a failure of fibre reinforced shotcrete at station 0+672 to 9+690. Work was stopped, and WorkSafeBC was notified. No workers were present at the time of failure.</p>			
Work Stoppage	Orders to stop work	<p>Order #1 - WCA191(1): Pursuant to section 191(1) of the Workers Compensation Act, the Board orders that all work in the right bank drainage tunnel is immediately stopped, and that the workplace or any part of the workplace be cleared of persons and isolated by barricades, fencing or any other means suitable to prevent access to the area until the danger is removed.</p>	August 14, 2019
Low Risk	Special inspection	<p>Order #2 - OHS3.7: A special inspection must be made of the right bank drainage tunnel due to a failure of the shotcrete between stations 0+670 and 0+690.</p>	
<p>Inspection #51: This inspection report contains an order for BC Hydro to complete a special inspection of the right bank drainage tunnel following a shotcrete collapse. BC Hydro is pursuing completion of this activity. This had been immediately reported to WorkSafeBC by the responsible prime contractor (not BC Hydro). BC Hydro's involvement is related to engineering and design.</p>			
Low Risk	Special inspections	<p>Order #1 - OHS3.7: A special inspection must be made when required by malfunction or accident.</p>	August 14, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #52: Due to some questions being posed by BC Hydro, the following comments are from WorkSafeBC.</p> <p>The remediation procedures accepted for the left bank diversion tunnel outlet #1 may need to be revisited for the following reasons:</p> <ul style="list-style-type: none"> • The outlet portal has been excavated, leaving a 20 to 30-foot drop to ground level that has changed the access; • The rock/tunnel conditions may have changed since the original incident; and • Due to the above two items procedures may need to be adjusted to reflect the current situation and ensure all of part 22 and other parts of the regulation are being followed. <p>After the verification and potential re-submission of the remediation plan, WorkSafeBC would expect to see the following steps:</p> <ul style="list-style-type: none"> • Remediation; • Assurance in writing that the tunnel is now safe; • Apply the updated inspection/verification process as occurred in left bank diversion tunnel outlet #2. After work is fully completed an updated package signing off the changes by a qualified professional; and • In left bank diversion tunnel outlet #1 apply potential changes that align with CO275 as completed in left bank diversion tunnel outlet #2. Same sign off as the line above. Across site apply the updated inspection/verification process and resulting work. 			
		No Orders	August 23, 2019
<p>Inspection #53: Due to some questions being posed by BC Hydro, the following comments are from WorkSafeBC.</p> <p>The remediation procedures accepted for the left bank diversion tunnel outlet #1 may need to be revisited for the following reasons:</p> <ul style="list-style-type: none"> • The outlet portal has been excavated, leaving a 20 to 30-foot drop to ground level that has changed the access; • The rock/tunnel conditions may have changed since the original incident; and • Due to the above two items procedures may need to be adjusted to reflect the current situation and ensure all of part 22 and other parts of the regulation are being followed. <p>After the verification and potential re-submission of the remediation plan, WorkSafeBC would expect to see the following steps:</p> <ul style="list-style-type: none"> • Remediation; • Assurance in writing that the tunnel is now safe; • Apply the updated inspection/verification process as occurred in left bank diversion tunnel outlet #2. After work is fully completed an updated package signing off the changes by a qualified professional; and • In left bank diversion tunnel outlet #1 apply potential changes that align with CO275 as completed in left bank diversion tunnel outlet #2. Same sign off as the line above. Across site apply the updated inspection/verification process and resulting work. 			
		No Orders	August 23, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #54: The contractor has provided inspection results as part of the incident immediate compliance inspection report on August 14, 2019. This inspection report revealed that there are known hazard areas in the right bank drainage tunnel. Through meetings and conversation, it has been revealed that the contractor intends to proceed to the failure area unless significant hazards are discovered following their entry procedures. The contractor report risk ranked known hazards and an area (670 m to 690 m) highlighted in orange failed while working on area further into the tunnel system. This indicates that the contractor has previously been traveling past known hazard areas to conduct work.</p>			
Low Risk	Emergency Requirements	<p>Order #1 OHS22.53(1): Only workers trained for emergencies may enter or remain in any underground working dangerous to life or health by virtue of other hazardous conditions, and no other work may be performed until the hazardous condition has been eliminated or controlled.</p>	August 27, 2019
<p>Inspection #55: WorkSafeBC conducted an inspection on the sub-contractor's river boat vessel.</p>			
Low Risk	Vessel design	<p>Order #1 - OHS17.10(1)(h): The contractor failed to equip the vessel with the appropriate first aid equipment, under Occupational Health and Safety Regulation section 3.16 or 3.2, and with appropriate fire extinguishers in good working order.</p>	August 28, 2019
Low Risk	Seating design	<p>Order #2 - OHS17.2(a): The contractor failed to equip the vessel with seats that are safely located and securely attached to the vehicle, with a width of at least 41cm (16 in) for each passenger and an upholstered seat and seat back which provide normal and comfortable seating for passengers.</p>	
Low Risk	Maintenance and inspection	<p>Order #3 - OHS17.24(1): The contractor failed to ensure the vessel is inspected before initial use that is fit for safe operation, and after that at intervals that will prevent the development of unsafe conditions.</p>	
<p>Inspection #56: The purpose of this inspection report is to document the contractor request to extend the date for submitting their final investigation report for an incident that occurred on July 8, 2019.</p> <p>This incident resulted from two 50mm shotcrete support layers at heading section failed within a newly constructed left bank diversion Tunnel No. 1 outlet area.</p>			
		No Orders	August 29, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #57: WorkSafeBC contacted the contractor via telephone as a result of a reported incident that presented a risk of injury to a worker. The incident (IMS# 188779) occurred on August 31, 2019 in the diversion inlet tunnel #2. It was stated that concrete was being displaced from a small infill section (200mm x 400mm) of the stopend formwork onto the floor of the tunnel. It is estimated that between 3-5 cubic metres of concrete were displaced. The pump operating pressure was reduced to allow crews to safely make the necessary repairs and resume normal pumping operations. No workers were in the immediate area and no injuries were reported.</p>			
		No Orders	August 31, 2019
<p>Inspection #58: WorkSafeBC conducted an inspection as part of the 2019 WorkSafeBC Forestry High Risk Strategy.</p> <p>The contractor is in a multiple employer workplace which have the responsibility to coordinate activities relating to occupational health and safety.</p>			
Low Risk	Coordination at multiple-employer workplaces	<p>Order #1 - WCA 118(2)(b): The prime contractor of a multiple-employer workplace failed to do everything that is reasonable practicable to establish and maintain a system or failed to ensure compliance with the <i>Workers Compensation Act</i> Part 3 and the regulations in respect of the workplace.</p>	September 5, 2019
<p>Inspection #59: WorkSafeBC conducted an inspection as part of the 2018-2020 WorkSafeBC Forestry High Risk Strategy.</p> <p>The contractor has been contracted to conduct hand falling, bucking, and slashing operations. The job-site (Block OLTC7) has been established as boat access only and is located approximately 7 km up river from the Site C main boat launch.</p> <p>Due to the isolated location and high risk of work activities, the following was discussed:</p> <ul style="list-style-type: none"> • Emergency Response Plan; • Falling cuts and maintaining control of the tree being felled; • Avoiding unnecessary brushing of standing trees and timber; and • Falling plan and active falling area. 			
Low Risk	Access to work areas	<p>Order #1 - OHS4.32: The contractor failed to ensure a safe way of entering and leaving each place where work is performed and a worker must not use another way, if the other way is hazardous.</p>	September 5, 2019
<p>Inspection #60: WorkSafeBC conducted an inspection in the left bank diversion tunnels as a result of an incident that resulted in an injury to a worker. The orders cited in this report are to address items that need attention prior to conducting more work within the left bank diversion tunnels and work procedures noted on site. The ventilation hanger bracket weld failed causing it to fall to the work platform located below.</p>			

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
Low Risk	Special Inspection	Order #1 - OHS3.7: A special inspection must be made when required by malfunction or accident.	September 8, 2019
<p>Inspection #61: This inspection report is related to a July 16, 2019 tower crane misadventure that included contractor worker dropping, uncontrolled a new, 34 mm X 600-meter load line approximately 90 metres from tower crane 3 jib to the ground during installation. This was the final assembly of the tower crane before placing it into service at this workplace.</p>			
Low Risk	Modifications	Order #1 OHS14.15(1): Each crane or hoist must be erected, dismantled, operated, adjusted, inspected and maintained as specified by the manufacturer's manual unless otherwise approved by the original equipment manufacturer or a professional engineer.	September 9, 2019
High Risk	Tower Crane Erection	Order #2 OHS14.73.2: The erection, climbing and dismantling of a tower crane must be done by qualified persons and in accordance with the instructions of: (a) the crane manufacturer; or (b) a professional engineer; if the installation varies from the crane manufacturer's instructions.	
<p>Inspection #62: This inspection report is the result of discussions between WorkSafeBC and BC Hydro. The Inspection report contains one order to BC Hydro. The order is a Directive Order and is not a regulatory non-compliance order. The order directs BC Hydro, as owner of the Site C Project, to provide certain technical information to the prime contractor on the Project.</p>			
Low Risk	General duties of owner	Order #1 WCA119(b): Every owner of a workplace must give the prime contractor at the workplace the information known to the owner that is necessary to identify and eliminate or control hazards to the health or safety of persons at the workplace. The Prime contractor responsible for tunneling work does not have the information they require to make decisions.	September 10, 2019
<p>Inspection #63: WorkSafeBC contacted the contractor via telephone as a result of a reported incident that presented a risk of injury to a worker. This incident resulted in the inadvertent contact between the tower crane 3 ladder access and a water tote stationed on the ground. A spotter was deployed to ensure no obstructions that could cause contact with the tower crane 3 while moving along the rails. No injuries were reported. (IMS# 189224)</p>			
		No Orders	September 17, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #64: WorkSafeBC conducted an inspection in the new rebar laydown area within the left bank cofferdam area above the tunnel outlet portal as part of the 2019 Construction High Risk Strategy. WorkSafeBC discussed with the contractor's health and safety responsibilities with regards to preventing falls from heights.</p>			
High Risk	Specifications for guards and guardrails	Order #1 – OHS 4.58(2): The contractor failed to install complaint guardrails to ensure the workers are protected from the fall hazard.	September 18, 2019
<p>Inspection #65: WorkSafeBC conducted an inspection as part of the WorkSafeBC's 2018-2020 Construction High Risk Strategy Initiative.</p> <p>The goal of this initiative is to prevent unsafe acts or conditions that cause workplace serious injuries and fatalities by addressing identified shortcomings in planning and supervision and by ensuring a proper selection of tools, equipment, or processes.</p> <p>At the time of the inspection, scaffolding and formwork was being erected and maintained at the left bank diversion tunnels for the purpose of constructing various inlet and outlet structures.</p>			
Low Risk	Scaffold stability	Order #1 - OHS 13.17(2): The contractor failed to ensure the base of the scaffold at the base of the Fishway entrance pool formwork have sills resting on a solid surface and are sufficient to support the weight of the scaffold.	September 18, 2019
Low Risk	Manufactured components	Order #2 - OHS 13.15(a): The contractor failed to ensure the major components of scaffolds are used in accordance with the technical data provided by the manufacturer, or in writing by a professional engineer, that shows the rated load, erection procedures and compliance with an applicable standard under section 13.2.	
Low Risk	Inspections	Order #3 - OHS 13.3: The contractor failed to ensure the stair tower at the left bank diversion Tunnel No. 2 inlet is inspected before use on each shift, after any modification, and any condition that might endanger workers that must be remedied before the equipment is used.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
		<p>Inspection #66: WorkSafeBC conducted a follow-up meeting with the contractor. The purpose of the conversation was in part to review the progress towards submission of the final investigation report for the 50 mm shotcrete support layers at the heading section failed within a newly constructed left bank diversion Tunnel No. 1 outlet area.</p> <p>Following a meeting on September 20, 2019, the contractor sent an email to WorkSafeBC to formally request an extension until November 4, 2019.</p> <p>The original due date for the contractor 30 day 'full investigation' report was August 8, 2019 as per inspection report issued by the Occupational Safety Officer.</p> <p>An extension had been previously granted which was documented within an inspection report to extend the due date.</p> <p>A further extension had been granted by the Occupational Safety Officer.</p> <p>After considering the most recent explanation and progress report provided by the contractor and further verified by BC Hydro, another extension has been granted until November 4, 2019 to complete and submit the incident investigation report.</p>	
		No Orders	September 20, 2019
		<p>Inspection #67: WorkSafeBC has learned that a misunderstanding has occurred in regards to roles, responsibilities and compliance requirements.</p> <p>BC Hydro, the owner of the Site C Project has conducted the engineering and is the official engineer of record for the design on the main civil works contracts for the Site C Clean Energy Project. The contractor has entered into a contract from the owner that identifies them as the prime contractor for main civil works, the contract provides for the construction activities to execute the work process to complete to the final design as per the engineer of record.</p> <p>During previous inspection activities, the contractor has been requested, advised or directed, through inspectional text or orders, to provide assurances relating to some of the construction activities. In order to clarify those expectations, the following parameters are being provided to identify who is expected to provide the assurances.</p> <p>Where the requested/directed assurance is related to: safe workplace, safe for entry, (etc.), the assurance must be provided by the engineer of record. Where the requested/directed assurance is related to confirming work practices or standards, conformity to design or field instruction, the assurance is to be provided by the contractor or the engineer of record.</p> <p>BC Hydro was previously directed to provide information to the prime contractor information in their possession, as per the requirements of WCA 119, to date this has been substantially complied. The opportunity has been provided to the contractor to review the design criteria and modelling. The contractor's responsibility for the design is limited to the implementation of the design or any field instructions which have been prepared in accordance with good engineering principles.</p>	
		No Orders	September 26, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #68: The inspection report cancels and replaces inspection report that was issued on August 23, 2019 to the contractor and suggested specific revisions to safe work procedures for the remediation of a shotcrete failure in diversion tunnel one at Site C. This updated inspection report specifies that written safety assurances are expected to come from the engineer of record.</p>			
		No Orders	September 26, 2019
<p>Inspection #69: The inspection report cancels and replaces inspection report that was issued on August 23, 2019 to BC Hydro and suggested specific revisions to safe work procedures for the remediation of a shotcrete failure in diversion Tunnel No. 1 at Site C. This updated inspection report specifies that written safety assurances are expected to come from the engineer of record.</p>			
		No Orders	September 26, 2019
<p>Inspection #70: WorkSafeBC conducted an inspection as a result of an incident that involved a serious injury of a worker. The incident occurred during the worker accessing the frosty flat deck trailer to maneuver a load to be picked up by the all-terrain forklift, when exiting the trailer deck the worker lost their footing and fell to grade approximately 4 to 5 feet. (IMS #189547)</p>			
		No Orders	September 30, 2019
<p>Inspection #71: WorkSafeBC contracted the contractor via telephone as a result of a reported incident that presented a risk of injury to a worker. The incident occurred on October 5, 2019 (IMS#189740) and resulted from the re-fueling of a contractor vehicle on location. It was stated that a worker pulled into the fuel bay at the left bank office complex and proceeded to fuel the contractor pickup truck, after the re-fueling process the worker started the engine. A popping noise was heard and flames were observed coming from under the vehicle's hood. Note: The Fort St. John Fire Investigator has been requested to engage in an inspection of the vehicle in attempt to determine cause(s) for the fire. No injuries were reported and no orders issued.</p>			
		No Orders	October 6, 2019
<p>Inspection #72: WorkSafeBC attended the site as a result of an incident (IMS#189981) that presented a high risk of serious injury to a worker. The orders cited are to address berm/curb placement, noted at the right bank haul road that need attention prior to continuation with the hauling activities at the present location.</p> <p>The incident resulted when a haul truck contacted the soft shoulder of the right bank haul road that have been created by the grading activity proceeding ahead of the haul truck, this caused the haul truck to roll over on to its side adjacent to the road way.</p>			
Low Risk	Special Inspection	Order #1 - OHS3.7: A special inspection of the haul truck must be made.	October 18, 2019
High Risk	Vehicle travel areas	Order #2 - OHS4.63: The contractor failed to install curb, whenever there is a danger of a vehicle or other equipment running off the edge of an elevated area.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
<p>Inspection #73: WorkSafeBC attended the site as a result of a reported incident (IMS#190183) that presented a high risk of serious injury to a worker. The incident resulted in the inadvertent contact to a damaged section of the 600V 3-phase underground trailing cable utilized to power a control switch box for a de-watering pump in the underground location. The order cited are to address items that need attention prior to moving the electrical trailing cables within the left bank diversion tunnels and corresponding safe work procedures noted on site.</p>			
Low Risk	General Requirement	<p>Order# 1 - OHS3.5: The contractor failed to ensure regular inspections are made of the underground de-watering equipment, trailing cable and safe work practices, at intervals that would prevent the development of unsafe working conditions.</p>	October 25, 2019
High Risk	Electrical	<p>Order #2 - OHS19.10(2): The low voltage underground portable electrical control switch box and de-watering pump had not been disconnected and the relocation work was not performed by qualified / authorized workers, in accordance the contractor's written safe work procedures.</p>	
High Risk	Electrical	<p>Order #3 - OHS19.11(1): The contractor failed to place visible conspicuous signs close to the equipment stating 'danger, energized equipment' for the workers before completing installation and after energizing low voltage electrical equipment.</p>	
<p>Inspection #74: WorkSafeBC conducted an inspection at the left bank cofferdam fishway outlet structures area on the gravity block formwork system failure incident (IMS# 190295) that occurred on October 28, 2019. The orders cited in this report are to address items that need attention prior to conducting formwork installation, concrete placement and inspection procedures noted on site. The manufactured formwork system installed at the fishway gravity block failed while placing the concrete within the formwork, this released approximately 80 cubic metres of unconsolidated concrete mix striking a worker.</p>			
High	Transportation of workers	<p>Order #1 - OHS20.17(2)(b): The contractor failed to ensure that a professional engineer certifies any changes in the worksite-specific plans in accordance with section 20.18</p>	October 28, 2019
High	Worksite Plans	<p>Order #2 - OHS20.17(4)(b): The contractor failed to ensure that any changes to the certified worksite-specific plans are available at the worksite before the inspection required for placement of concrete or other intended loading of formwork, falsework and reshoring.</p>	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
High Risk	Certification of Worksite Plans	Order #3 - OHS20.18(b): A professional engineer failed to certify that any changes to the worksite-specific plans met the requirements of section 20.20 of the regulation.	
High Risk	Supervision	Order #4 - OHS20.23(a): The contractor failed to ensure that a qualified supervisor supervised the erection of the formwork.	
High Risk	Equipment requirements	Order #5 - OHS20.24: The contractor failed to ensure that materials or hardware used in the erection, meet the requirements specified in up-to-date worksite-specific plans.	
High Risk	Inspections	Order #6 - OHS20.26(1)(b)(ii): The contractor failed to ensure that, immediately before placement of concrete, a professional engineer issues a certificate that certifies that the formwork have been erected in accordance with up-to-date worksite-specific plans.	
High Risk	Entry/Exit of Excavation	Order #7 - OHS20.87(1): The contractor failed to ensure a safe means of entry and exit are provided for an excavation slope a worker enters.	
Low Risk	Special inspections	Order #8 - OHS3.7: A special inspection must be made when required by malfunction or accident.	
<p>Inspection #75: While conducting a regular compliance inspection in the right bank cofferdam area where BC Hydro is the prime contractor, the WorkSafeBC Officer noted that the first aid assessment for the area was not accurate. It was also noted that the first aid services provided did meet the requirements indicated by the actual site conditions. The assessment document will be updated to current conditions.</p>			
		No Orders	November 8, 2019
<p>Inspection #76: WorkSafeBC conducted an inspection on the general work activities taking place at the time of inspection which included concrete preparation / placement, respirator use and scaffold erection.</p>			
Low Risk	Supervisor Responsibilities	Order #1 - OHS8.8 (a): the contractor supervisor failed to ensure that appropriate personal protective equipment is available to workers	November 13, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
High Risk	Personal Protective Equipment	Order #2 - OHS8.32(b): the contractor failed to provide an appropriate respirator and failed to ensure a worker uses an appropriate respirator in accordance with section 8.3 where the worker might be exposed in a workplace to an air contaminant that exceeds a limit that is otherwise determined by the Board under section 5.48 for the air contaminant.	
<p>Inspection #77: WorkSafeBC contacted the contractor via telephone as a result of a reported incident that presented a risk of injury to a worker. The incident (IMS#190816) resulted from falling ice and snow at the left bank diversion inlet transition chamber area while workers were in the process of refueling heaters below. Emergency response protocol was initiated by the employer and minor injuries were reported. The contractor has committed to ensure the hazard area is re-scaled and additional insulated tarps added to contain any further snow and ice accumulation in the area.</p>			
		No orders	November 25, 2019
<p>Inspection #78: WorkSafeBC conducted an inspection on land clearing site located in Bear Flats area. The contractor is the prime contractor at this OLTC 16 causeway and bridge crossing construction. Two new temporary single span bridge structures consisting of 70.1m and 12.1m in length are being erected to access the Peace River Island, the bridges will be utilized to transport logging equipment to and from the island location during the clearing activities.</p>			
		No Orders	November 26, 2019
<p>Inspection #79: WorkSafeBC attended the workplace to conduct a dispute resolution. As per the guideline BC Hydro requested guidance with respect to a dispute about the definition of confined spaces. Specifically, the portion dealing with designed for continuous human occupancy around the penstock tubes. No orders issued.</p>			
		No Orders	November 27, 2019
<p>Inspection #80: WorkSafeBC conducted an inspection on the grout plant machine as a result of an incident that presented a high risk of serious injury to a worker (IMS#190988).</p>			
High Risk	De-energization and Lockout	Order #1 - OHS10.3(1)(b): The grout plant equipment was shut down for maintenance, and work was done before a hazard has been effectively controlled.	November 27, 2019
High Risk	De-energization and Lockout	Order #2 - OHS10.4(1): Lockout of energy isolating devices was required; such procedures had not been made available to all workers required to work on the machinery or equipment.	
Low Risk	Tools, Machinery and Equipment	Order #3 - OHS12.24(2): The suction housing plate guards on a screw-type conveyor tube is not secured by fasteners requiring a tool for removal.	

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
Low Risk	Tools, Machinery and Equipment	Order #4 – OHS12.13: The physical hazards for the grout plant was not marked in a manner that clearly identifies the hazard to the affected workers.	
Low Risk	Documentation	Order #5 – OHS3.25: The contractor did not keep records of training for the operation, maintenance and cleaning practices for the new worker.	
High Risk	General Duties	Order #6 – WCA115(2)(e): The contractor has not provided their workers with adequate information, instruction, training and supervision to ensure the health and safety of those workers in carrying out their work.	
Inspection #81: WorkSafeBC conducted an equipment inspection at the right bank cofferdam generating station and spillways civil works. This inspection report contains a stop use order.			
High Risk	Tools, Machinery and Equipment	Order #1 – OHS12.2(b): The contractor had not ensured that the grout plant unit was fitted with adequate safeguards which, ensures that a worker cannot access a hazardous point of operation.	November 27, 2019
High Risk	Stop Use	Order #2 – WCA190(1): The contractor was ordered to immediately stop use of the grout plant equipment. Based upon the violation cited in this inspection report, WorkSafeBC has reasonable grounds to believe that a thing that is being used or that may be used by a worker in this workplace is either not in safe operating condition or does not comply with this Part or the regulations.	
Inspection #82: WorkSafeBC conducted an equipment inspection at the right bank cofferdam generating station and spillways civil works. This inspection report contains a stop use order.			
High Risk	Tools, Machinery and Equipment	Order #1 – OHS12.2(b): The contractor has not ensured that the grout plant unit is fitted with adequate safeguards which, ensures that a worker cannot access a hazardous point of operation.	November 27, 2019

Risk Level	Theme	Inspection reports and orders received	Date of Inspection
High Risk	Stop Use	<p>Order #2 – WCA190(1): The contractor was ordered to immediately stop use of the grout plant equipment. Based upon the violation cited in this inspection report, WorkSafeBC has reasonable grounds to believe that a thing that is being used or that may be used by a worker in this workplace is either not in safe operating condition or does not comply with this part or the regulations.</p>	
<p>Inspection #83: WorkSafeBC and the contractor had a pre-tunneling meeting and the contractor has met all the requirements.</p> <p>The contractor was required to assess the impact of adjacent work on the ventilation system in the diversion tunnel outlets. The work has been done and revealed no concerns.</p> <p>The contractor also required to investigate the impacts of drill and blast on the diversion tunnels. BC Hydro had to provide the analysis and assurance to the contractor that it has been done.</p> <p>The final measure to ensure safety is review of all drill and blast patterns by BC Hydro prior to the contractor setting off the charges. This also includes schedule of workers and set back.</p>			
No Orders			December 5, 2019
<p>Inspection #84: WorkSafeBC conducted an inspection to verify wood smoke impacts at the site. This inspection report contains one order written to BC Hydro primarily as owner at Site C. The order cites failure to implement measures to protect workers from smoke generated by prime contractors who were burning logging debris as part of reservoir clearing operations.</p>			
Low Risk	Planning and conducting a forestry operation	<p>Order #1 - OHS26.2(1): The owner of a forestry operation must ensure that all activities of the forestry operation are both planned and conducted in a manner consistent with is Regulation and with safe work practices acceptable to WorkSafeBC.</p>	December 6, 2019
<p>Inspection #85: WorkSafeBC contacted the contractor via telephone as a result of an injury that involved a worker having a suspected lower leg injury, when worker proceed to access a heater at a new work location to connect a heater sock for an erected hoarding during a snowfall and slipped on a snow-covered icy spot, resulting in a fall to the ground. The contractor has ensured additional sand has been applied and further restricted access to the area for the evening, until permanent measures are implemented (IMS#191540).</p>			
No Orders			December 27, 2019

Site C Clean Energy Project

**Annual Progress Report No. 4
(Combined with Quarterly Progress Report No. 18)**

Appendix C

Workforce Review

**Table C-1 Current Site C Jobs Snapshot
(January 2019 to December 2019)¹⁹**

	Number of BC Workers and Total Workers	Construction and Non-construction Contractors ²⁰ (Including some Subcontractors). Excludes Work Performed outside of B.C. (e.g., Manufacturing)	Engineers and Project Team ²¹	TOTAL
January 2019	BC Workers	1,927	552	2,479
	Total Workers	2,579	607	3,186
February 2019	BC Workers	2,185	575	2,760
	Total Workers	2,855	639	3,494
March 2019	BC Workers	2,293	601	2,894
	Total Workers	3,020	654	3,674
April 2019	BC Workers	2,305	645	2,950
	Total Workers	3,066	709	3,775
May 2019	BC Workers	2,722	673	3,395
	Total Workers	3,648	737	4,385
June 2019	BC Workers	2,870	651	3,521
	Total Workers	3,930	704	4,634
July 2019	BC Workers	2,925	671	3,596
	Total Workers	4,070	727	4,797
August 2019	BC Workers	3,060	641	3,701
	Total Workers	4,177	693	4,870
September 2019	BC Workers	2,949	685	3,634
	Total Workers	4,057	733	4,790
October 2019	BC Workers	2,954	683	3,637
	Total Workers	4,092	731	4,823
November 2019	BC Workers	2,769	676	3,445
	Total Workers	3,903	747	4,650
December 2019	BC Workers	2,518	679	3,197
	Total Workers	3,582	748	4,330

¹⁹ Employment numbers are direct only and do not capture indirect or induced employment.

²⁰ Construction and Non-Construction Contractors includes work performed on Site C dam site, transmission corridor, reservoir clearing area, public roadwork, worker accommodation and services.

²¹ Engineers and Project Team are comprised of both on-site and off-site workers. The Project Team includes BC Hydro construction management and other offsite Site C Project staff. An estimate is provided where possible if primary residence is not given.

Employment numbers provided by Site C contractors are subject to revision. Data not received by the Project deadline may not be included in the above numbers.

BC Hydro has contracted companies for major contracts, such as main civil works, who have substantial global expertise. During the month of December 2019 there were nine workers in a specialized position working for Site C construction and non-construction contractors, which were subject to the Labour Market Impact Assessment process under the Federal Temporary Foreign Worker Program. Additionally, there were 58 management and professionals working for Site C construction and non-construction contractors through the Federal International Mobility Program.

**Table C-2 Preliminary Site C Apprentices Snapshot
(January 2019 to December 2019)**

Month	Number of Apprentices
January 2019	102
February 2019	93
March 2019	118
April 2019	144
May 2019	173
June 2019	189
July 2019	204
August 2019	184
September 2019	185
October 2019	209
November 2019	162
December 2019	158

Data is subject to change based on revisions received from the contractors.

Table C-3 Current Site C Job Classification Groupings

Biologists and laboratory	Carpenters and Scaffolders	Inspectors	Construction managers/supervisors	Crane operators	Electricians	Engineers
Foresters	Health care workers	Heavy equipment operators	Housing staff	Heating, ventilation, and air conditioning	Kitchen staff	Labourers
Mechanics	Millwrights	Office staff	Pipefitters	Plumbers	Sheet metal workers	Truck drivers
Underground mining	Welders	Surveyors	Security guards	Boilermakers	Cement Masons	Crane Operators
Ironworkers						

Table C-4 Indigenous Inclusion Snapshot (January 2019 to December 2019)

Month	Number of Indigenous Workers
January 2019	293
February 2019	313
March 2019	333
April 2019	283
May 2019	346
June 2019	361
July 2019	377
August 2019	418
September 2019	401
October 2019	428
November 2019	376
December 2019	336

The information shown has been provided by BC Hydro's on-site²² construction and non-construction contractors and their subcontractors that have a contractual requirement to report on Indigenous inclusion in their workforce.

²² On-site includes work performed on Site C dam site, transmission corridor, reservoir clearing area, public roadwork, worker accommodation and services.

Employees voluntarily self-declare their Indigenous status to their employer and there may be Indigenous employees that have chosen not to do so; therefore, the number of Indigenous employees may be higher than shown in the table.

As with any construction project, the number of workers, and the proportion from any particular location, will vary month-to-month and also reflects the seasonal nature of construction work. The number of workers will also vary as a contract's scope of work is completed by the contractor.

Women

In 2019, the number of women working for the Site C construction and non-construction contractors increased throughout the year peaking in August 2019. At the peak the number of women working on site was 14 per cent. The number of women was provided by on-site construction and non-construction contractors and engineers that have a contractual requirement to report on the number of women in their workforce. The following table shows the number of women working on site at the end of each quarter for the 2019 calendar year.

Table C-5 Number of Women Working for Site C Construction and Non-Construction Contractors

	Number of Women Working for Site C Construction and Non-Construction Contractors
March 31, 2019	400
June 30, 2019	538
September 30, 2019	517
December 31, 2019	433

Site C Clean Energy Project

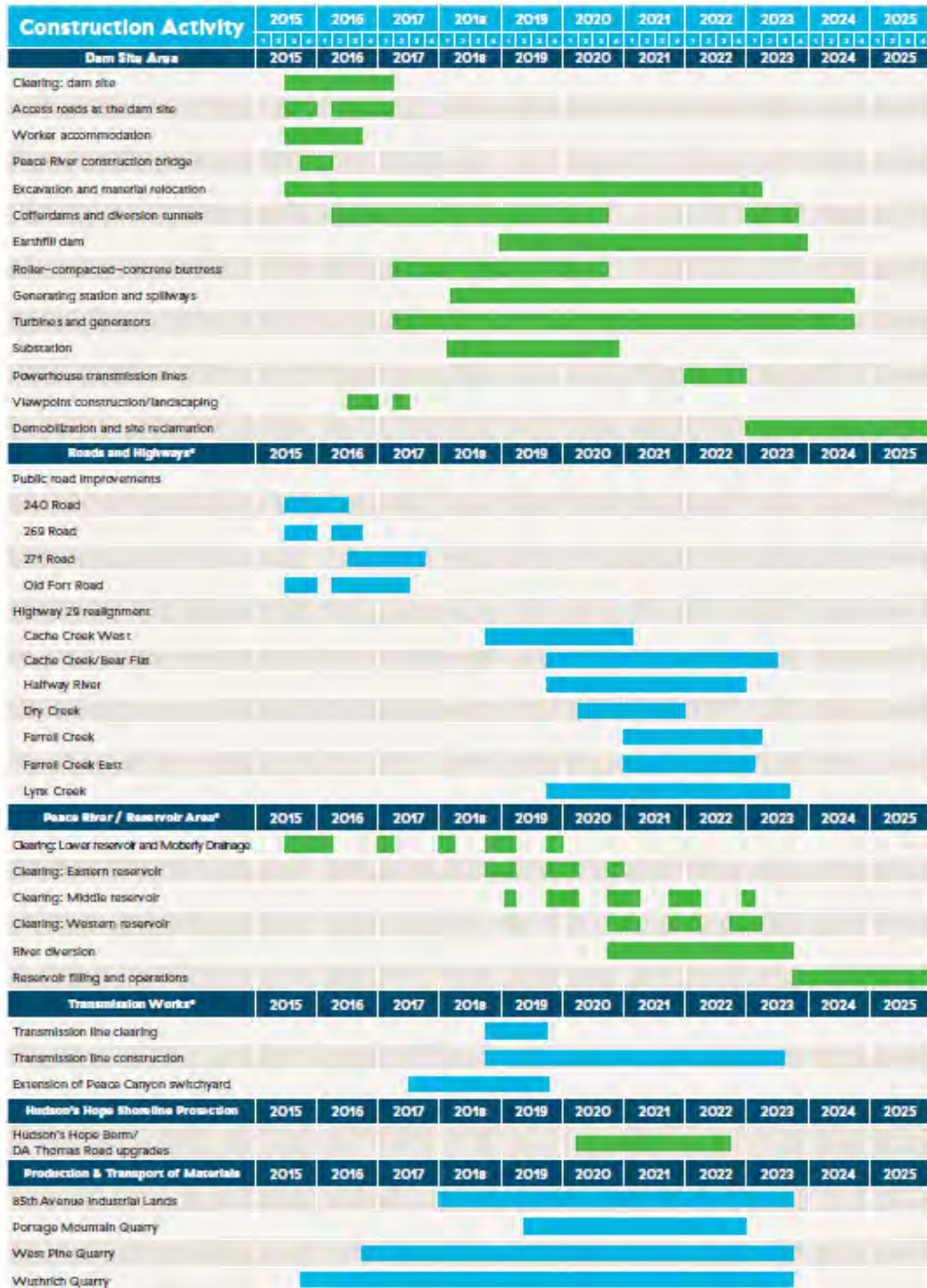
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Appendix D

Site C Construction Schedule

Site C Construction Schedule

May 2019
s30-02



The construction schedule is indicative only and subject to change. The purpose of the schedule is to illustrate the general sequence of construction activities, but the dates and schedule may change.
* Timelines do not include site preparation or road disposal.

Site C Clean Energy Project

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(Combined with Quarterly Progress Report No. 18)**

Appendix E

**Technical Advisory Board Meeting
Report No. 20**

Site C Clean Energy Project

Technical Advisory Board Meeting No. 20

Report

(May 28 to 31, 2019)

May 2019

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- Attachment A – Meeting Agenda
- Attachment B – List of Meeting Attendees

1. Introduction

The 20th meeting of the Site C Technical Advisory Board (TAB) was convened in Fort St. John and Vancouver between May 28 and May 31, 2019. A briefing and site tour took place on May 28. The remainder of the week entailed meetings, presentations and discussions in Vancouver. The primary objectives of the meeting were to assess progress and performance of the Project, as well as design-related risks. Technical considerations focussed primarily on the Main Civil Works (MCW).

The agenda for the meeting is included as Attachment A. Attachment B is a list of attendees during the meeting. A debriefing was conducted with the executives of BC Hydro (BCH) and the Project Assurance Board on May 31, 2019.

Four questions were put to the TAB:

1. *Does the Board have any comment on construction quality?*
2. *Does the Board have any comment on debris management plans for diversion?*
3. *Does the Board have any comment on the Spillway final design details?*
4. *Does the Board have any comment on the Project's assessment and characterization of technical risks? With respect to risks/challenges that may be identified by the Board in relation to the current construction plan and status (over and above what BC Hydro has identified), does the Board have any recommendations?*

Detailed responses to these questions are presented below.

The TAB has also provided some additional comments in Section 6.

The TAB wishes to acknowledge the excellent overview and presentations that it received. It recognizes the substantial effort that goes into preparation for the TAB meeting and it appreciates the frank and informative discussions that took place during the meeting.

2. Site Visit

The site visit took place under hot and dry summer conditions. It concentrated on locations of special technical and productivity challenges. In particular the diversion tunnel inlet area was viewed; the tight conditions associated with tunnel lining equipment were recognized and preparation for Inlet Structure construction was noted. In general, the TAB was favourably impressed with the progress of the works at both Inlet and Outlet locations on the Left Bank. This was also true for the appearance of the work of the Generating Station and Spillways (GSS) Civil Works contract at the powerhouse, which was proceeding rapidly.

The GPS track for the site visit is shown on Figure 1.



Figure 1: GPS track of the site visit.

3. Action List

The Project maintains a TAB Comments and Recommendations Tracking Log to record its response to past recommendations made by the TAB. This was reviewed and the TAB is content that the Project has responded or is in the process of responding to all past recommendations in an appropriate manner.

4. Project Update

The TAB received a brief Project update. River diversion in September 2020 remains a critical milestone. Diversion tunnel construction has progressed to the extent that tunnel excavation is forecast to meet schedule requirements. Roller Compacted Concrete (RCC) placed volume requirements to September 2020 remains challenging. However, production at the end of last season was encouraging. The major challenges associated with meeting the diversion deadline appear to be achieving promised productivity with tunnel lining and the construction of both the Inlet and Outlet Structures in a timely manner. Productivity for these elements remains untested which is identified as a risk by the Project team and a focus of schedule risk mitigation activities.

5. Technical Commentary

5.1 Response to Question 1

Does the Board have any comment on construction quality?

All large projects should prioritize the objectives of Safety, Quality, Schedule and Budget. Second only to Safety, Quality is the most important feature of any construction project.

The BC Hydro Quality Management System operates under a Project Quality Plan. This plan functions under three sub-plans, namely 1) Engineering, 2) Manufacturing Quality, and 3) Resident Engineering. The Site C Field Quality Performance Team operates under Resident Engineering. The Quality Control (QC) function is the Contractor's responsibility; the Quality Assurance function is generally the Owner's responsibility. An updated quality rating and dashboard reporting program was initiated in July of 2018 and is divided into sub-projects and activities with an Assessor assigned to each activity. Threats to quality are assessed against risk to asset performance. Schedule should not influence the quality of the Project.

The Construction Quality inputs and tools used to measure and record performance are:

- Design Change Notices (DCN's)
- Non-Conformance Reports (NCR's)
- Quality Issue Findings
- Corrective Action Reports
- Subject Matter Expert Observations

During previous TAB meetings there were quality concerns as indicated by numerous open NCR's and subject matter experts' observations regarding QC and duration to close NCR's. These concerns have been addressed and now there are several procedures and processes put in place to manage and deliver the quality necessary for the Project. For example, there are monthly Quality Steering Committee meetings with the Contractors. These meeting are effective in identifying concerns and developing corrective actions. There has also been good collaboration between QC and the various production teams, where the quality aspects of the work are most important; at the ground level.

The MCW Contractor has recognized the need for quality and have made several quality improvements:

- MCW Contractor QC staff are more embedded with their construction teams and are seen as a resource and not a hindrance
- Reduction in NCR's are closed out in a timely manner

- There are regular weekly NCR meetings held among BCH/ MCW Contractor QC to discuss close-out of NCR's
- Issues are addressed in the field as opposed to being elevated; good collaboration between BCH/ MCW Contractor QC

Regarding the GSS Civil Works Contractor there was early reluctance to raising issues, such as NCR's; however now they are recognized as helpful indicators of need for quality concerns. There has been good teamwork in utilizing quality steering committee meetings attended by senior leaders from GSS Civil Works Contractor and BCH.

Given all the above quality improvements, there are still some quality concerns that need to be recognized and addressed. Namely, the MCW earthworks department is still the largest offender with 36% of the MCW NCR's. Multiple trials of the diversion tunnel concrete lining placement were conducted. These trials revealed some quality issues remained after lining installation and procedures for managing quality issues have been established. The lining production is on the critical path. Adequate QC staffing is a concern for the GSS Civil Works Contractor.

As described above the TAB recognizes an improved Quality Program at the Site. Maintaining quality and implementing such an extensive program such as Site C is a monumental task. The existing Quality Program seems to be functional and effective. The TAB looks forward to our next visit to the site where we can observe the quality of several features first hand.

With respect to Quality Assurance (QA), the TAB wishes to reemphasize the central role of the as-built construction record as a deliverable of the QA team. Past experience with respect to typical as-built records has revealed their inadequacy and they have been under-valued with respect to their contribution to future dam safety evaluations. The aim should be a construction report that synthesizes the history of the project and captures all critical elements in a GIS framework. This is not just a matter of QC laboratory but more importantly all QA aspects where the specifications reference field approval based on the judgement of the Engineer. All performance observations during construction should also be included. The TAB requests an outline of the intended As-Built Report at the next meeting.

5.2 Response to Question 2

Does the Board have any comment on debris management plans for diversion?

For a period of approximately three years, flood flows arriving at the dam site will pass through two large diversion tunnels sited though the left bank. During this period construction of the main permanent works in the main river will continue behind cofferdams across the river. One perceived project risk at this time would be Diversion

Tunnel inlet blockage due to timber debris mats. This could lead to cofferdam overtopping and extensive delays and costly recovery works for the main construction. A further perceived risk is operational interference of the tunnel intake gates by timber debris at the time of final closure and reservoir impoundment. Both of these potential risks are being mitigated by the provision of debris control measures upstream of the Diversion Tunnels and many possible measures, options and locations were initially proposed.

Following an earlier recommendation from the TAB, a risk analysis was made of the various debris handling options and their likelihood of success against a range of flood events. This has guided the designers towards the current proposals which were summarised to the TAB as follows:

- Provide primary and secondary booms on the Peace River just upstream of the Diversion Tunnel intakes.
- Provide a boom as well as a piled debris barrier, on the Moberly River at its exit into the Peace River.
- Cease work on debris control structure designs at the Halfway River much further upstream.
- Actively pursue the clearance of existing debris throughout the upstream catchment and in particular along the Moberly and Halfway river banks.

The TAB fully concurs with this approach. At the same time the TAB notes that a number of design and operational uncertainties remain concerning the Peace River Booms. The primary boom is being designed by BCH and the TAB would recommend the use of some focused flume modelling of current proposals to guide decisions on remaining uncertainties. This should be coupled with an overview of boom failures elsewhere, including at other BCH projects, to benefit from any applicable lessons learned.

The secondary Peace River boom is planned to be provided by the PRHP but in view of the complexities emerging from the design of the primary boom the TAB considers that BCH should recognize the possibility of having to assume the responsibility for the design and operation of the secondary boom.

The TAB also recommends that particular attention be given to access and to future maintenance and operability of the booms, reflecting any lessons learned from elsewhere. The TAB recommends that this be brought together in an Operations Manual for the booms based around a pro-active approach including alarm trigger levels and required responses for upstream water management.

5.3 Response to Question 3

Does the Board have any comment on the Spillway final design details?

Over two hundred concrete and reinforcement drawings have now been issued for construction of the spillway works. These reflect first stage embedded parts for the gates which are being developed in parallel by the selected gate Contractor. A representative selection of the concrete outline and rebar drawings produced to date were viewed by one member of the TAB who was satisfied with the details proposed and the standard being achieved.

At the previous TAB meeting some early analyses of spillway elements were presented and discussed. The sophistication of design methods and assumptions used had marginally increased concrete and rebar requirements for the spillway headworks. However similar analytical refinements and assumptions permitted significant reductions in the anchoring to the main spillway slab. At the same meeting, analyses by the Designers had indicated that the massive, faced RCC central and side walls to the stilling basin might need to be anchored into the foundations to satisfy the seismic stability criteria required under Canadian Dam Association guidelines. The TAB considered that, *“a more sophisticated dynamic time-history analysis would show the walls to displace slightly but still fulfil the DBM requirement of stilling basin operability after an MDE event”*. The TAB then recommended that the Designers review the designs of the various walls where seismicity has proved to be the factor controlling stability.

The Designers have now done that and presented their latest results to the TAB. The time history analyses showed that the walls would undergo only minor displacements under earthquake loading and so would certainly remain operable for flood passage. This has allowed an RCC counterweight block to be eliminated from the stilling basin right side wall and for the reduction or elimination of anchoring in other spillway walls. Analyses are continuing and further reductions in anchoring requirements are expected.

After its last meeting the TAB was also asked to comment on the initial analyses of the massive stilling basin end weir. These indicated the need for high levels of internal rebar coupled with extensive foundation anchoring. The TAB recommended a more refined assessment of the hydro-dynamic loadings on the weir based on the earlier hydraulic model testing. The results were presented at the current TAB and have produced a 60% reduction in foundation anchor requirements and a considerable reduction in rebar requirements.

Finalization of the spillway design and details continues, and the TAB is satisfied that this is being carried out to a good standard, with details and arrangements typical for this type of work.

Lastly, in the previous TAB report, the TAB noted areas of stilling basin wall where conventionally vibrated concrete (CVC) facing zones incorporating rebar could perhaps be placed concurrently with RCC. Constructing the spillway walls in such a combined, single operation should be simpler, theoretically less expensive and produce a superior

end-product as compared to forming and anchoring them separately as shown on the RFP. As before the TAB is not advocating such a change at Site C but notes that the matter is currently under active review. The TAB confirms that such a change would receive their support. The TAB also notes a suggested change in internal shutter finish requirements for the stilling basin walls from F4 to F3 and would confirm their agreement to such a change in these locations.

5.4 Response to Question 4

Does the Board have any comment on the Project's assessment and characterization of technical risks? With respect to risks/challenges that may be identified by the Board in relation to the current construction plan and status (over and above what BC Hydro has identified), does the Board have any recommendations?

5.4.1 General

The process whereby the Project develops a risk register was summarized and the TAB was favourably impressed by the outcomes. An extract of the risk registry was provided summarizing the technical risks in the registry. The risk management perspective is understandably concentrated on Project delivery safely, with quality, on schedule and on time. In the experience of the TAB, this perspective can sometimes be unmindful of others, later stakeholders in the Project such as operations and long-term dam safety considerations. The TAB is aware that the Project team consults other stakeholders systematically and appreciates that broad consultation is imbedded in the organization of the design team. For example, early geotechnical data gathering of ground response might have significant long-term benefit for future dam safety evaluation. An example of an investment at this stage that would contribute to long-term safety evaluation would be early experience with newly developed monitoring tools such as InSAR and ground based radar.

5.4.2 Technical Risk

The Project has identified six significant technical risks. The TAB agrees with this selection and it has not identified any others of similar ranking. Detailed commentary follows below:

i. Debris and Diversion Flood Mitigation

The views of the TAB related to this risk are presented under Question 2 above.

ii. Right Bank Foundation

The hazards associated with various ground defects affecting stability have been correctly identified as have risk mitigation efforts based on seepage control and drainage. While

the broad strategy is correct, the TAB is of the view that a greater effort is required to explore the implications of this strategy in the short term.

To this end, the TAB is of the view that it is a high priority to develop a hydrogeological model of the right bank; to calibrate it to existing conditions and to forecast recharge into the right bank following reservoir filling when significant mounding will be expected. This will facilitate a re-evaluation of drainage measures and the effectiveness of the planned grout curtain. The optimal location of the grout curtain should be evaluated together with the drainage requirements essential to maintain stability. The TAB looks forward to an update on this task at its next meeting.

Another aspect of the Right Bank Foundation is the need to construct a geological model with a focus on this location but that is extendable elsewhere on the site. A considerable effort is being expended in mapping the geology, but the effort will not be fully utilized unless the data is integrated in to a 3D site-wide data retrievable model. To this end, the TAB recommends that a task force be assembled to design this model, structured on the geological units that have been established sometime ago. This can also be regarded as an important contribution to the creation of the as-built record.

iii. Stability of Earthfill Dam and Tailrace Wall

The TAB agrees that this is a significant risk and the hazards associated with the weak foundation have been adequately recognized. To respond to this risk assessment the TAB is of the view that the current design should be checked by conducting the following steps:

1. Quantify the pore pressure generation/consolidation behaviour for RSEM/L5 and any other loaded areas such as the cofferdams.
2. Using the item 1 above, forecast the construction pore pressures associated with dam construction.
3. Calculate the Factor of Safety at the end of construction.
4. Estimate the boundary loads and pore pressure response during reservoir filling assuming undrained conditions.
5. Calculate the Factor of Safety at the end of filling.
6. If the above is less than 1.5, evaluate the strategy to meet service conditions.
7. Develop instrumentation plans for the above assuming that performance assessments based on observing deformations will be necessary.

The TAB requests an update on this issue at its next meeting.

Another consideration related to this identified technical risk is the preliminary material balance that is currently under evaluation. The Demand/Capacity Ratio of available fill for the dam may only be about unity depending upon various assumptions. In the experience of the TAB for a Project at this stage, it should be about 1.5 or greater. The TAB supports the various activities underway to evaluate material utilization and expand the volume of available construction material. It seeks an update at its next meeting.

iv. Left Bank: Diversion and Dam Abutment

The TAB received an instructive presentation on the observed performance and the geotechnical analysis and assessment of the left bank. A rapid visual inspection of the slopes in the rock exposed along the toe of the left bank and in the diversion portals and core trench excavations conveyed a favourable impression. There was no significant, uncontrolled seepage from the rock, condition of the shotcrete was satisfactory and also the areas of the cuts left without shotcrete or membrane protection did not indicate significant raveling.

The piles installed for enhanced stabilization of the inlet cut are taking load, movements are attenuating and currently virtually stopping the creep of the ground.

An inclinometer and an extensometer to the left of Tunnel No. 2 continue to indicate local movements in the rock mass. According to the inclinometer, the displacements are directed towards the earlier wedge failure at the portal cut. On the other hand, the monitoring of the slope surface at the portal does not show any deformations in this sector. Moreover, there is an irregular performance of the inclinometer, which could result from a defective behavior of the instrument. A loosened area in the rock mass, having created a connection with the wedge failure at the surface, and an ongoing adjustment in the interior of the slope may explain the phenomenon. Additional instrumentation is being installed to provide a consistent interpretation. For the time being, no further action is required.

At the inlet portal, stability has been assessed and drainage measures introduced to enhance it both under normal conditions as well as rapid drawdown.

Within the inlet channel the effects of drawdown on the colluvium and bedrock are considered utilizing conservative design criteria, as adopted in earthfill dam design. The TAB agrees that this a conservative basis for assessing this risk. As a favourable circumstance in this context, the geological mapping of the channel cut shows the bedding planes to be discontinuous.

Surface monitoring shows deformations of the rock nose left between the two tunnels. The need for strengthening the support of this nose should be checked to prevent deterioration in the long term.

The tunnels could not be inspected but information on geological logging was provided. The Contractor experienced overbreak in the crown, related to bedding planes in the first 60 metres from the outlet portal. BCH presented a photo showing such feature (see Figure 2). The shale may have locally buckled into the tunnel. As a remedial measure, BCH has required installation of additional stressed rock bolts in the crown. As a further precaution contact grout holes could be extended into the rock in selected locations to stiffen any local soft zones.



Figure 2: Buckling of shale in the crown of Diversion Tunnel No. 2

The upper reaches of the left bank slope, cut in soils, received local protection by hydroseeding and first results are evident. Nevertheless, severe erosion gullies were cut into the slope (see Figure 3) and rainwater infiltration will unnecessarily raise the groundwater levels with adverse effect on local stability. The hydroseeding will not interfere with any other work and should be completed without further delay.



Figure 3: Gullying in unprotected glacio-lacustrine soils of left bank slope

v. Earthfill Dam Foundation: Grouting

As the observed performance of the valley flanks emphasizes, hydrogeological conditions and phenomena have the potential of decisively affecting the stability of slopes and foundations at the dam site. Simple flushing of a borehole has immediately raised the groundwater levels in an extensive section of the right abutment and has caused displacements on bedding planes. Rainfall has triggered similar effects.

In the current situation, drainage has favourably lowered the groundwater levels and the load of the buttress has compressed the rock mass. However, reservoir filling will raise the groundwater levels and the combination of sealing and drainage measures will have to guarantee safe levels of pore pressures and hydraulic gradients for the downstream slopes.

Making use of the additional information collected with the ongoing construction works, BCH is developing a hydrogeological model, which will allow to probe the hydrogeological scenarios potentially materializing with the reservoir filling, their effect on the geotechnical performance of slopes and foundation of structures, and the efficiency and adequacy of measures to be adopted.

The drainage tunnels, as foreseen in the design, allow the implementation of drains with the possibility for adjustments to effects developing with reservoir filling. Thus, with controlled raising of the lake level, adjustments in the drainage system can be implemented to assist in managing potentially risky conditions.

Concerning the grout curtain, the options for responses to approaching risks are more limited. Especially in the right abutment, groundwater levels rising with the lake are

capable of jacking open the existing stress relief features and in this process not only raising the hydraulic load on the curtain but also, in the worst case, damaging the curtain by hydrojacking. As a precaution, grouting could be performed such that a safe pre-stressing of the rock mass against the hazard of hydrojacking is obtained. Such measure has positive precedent but meets with difficulties imposed by the geological and geotechnical conditions prevailing at Site C, which demand careful application of grouting pressures. In this situation, the TAB supports the following considerations:

- Analysis of the maximum grouting pressures that can be admitted, on the basis of data from field tests and model simulation. BCH already took a first step in this direction by evaluating the Lugeon tests. Additional information can probably be obtained from this study by relating the jacking pressures to the gravitational stresses at the test section. Further tests should be carried out in connection with the grouting test.
- Widening of the curtain to reduce the seepage gradient where appropriate.
- Constructing a multiple-line curtain. The outer rows of the curtain with a limited reach of grout penetration would have to serve as containment for a central row to be grouted at higher pressure with highly penetrative grout.

BCH has presented first results of tests on cement based grout slurries but properties are not yet optimized and it may still take time to arrive at suitable batching. Therefore, the Contractor should be urged to intensify activities in this regard.

In the grouting operation, particular care will have to be given to jacking effects, which implies that pressure as well as volume have to be controlled and monitored. Accordingly, suitable parameters of pressure and grout consumption should be developed in the course of grouting tests.

A specific aspect for the grouting works at Site C derives from a dual porosity of the rock:

1. The sound rock, as now mapped in the excavations, has a notable fracture density but these fractures are barely opened and will be difficult to penetrate by a particulate slurry.
2. The stress relief cracks may be opened several millimetres and loss of grout on such features may be difficult to control.

With this condition, a single type of grout may not suffice to cope with the contrast in groutability. Therefore, up to three grouts may have to be developed:

1. A slurry for sealing of open stress relief cracks, with the reach limited by cohesion.
2. A stable grout with low viscosity and cohesion and a high-Blaine cement.

3. A grout with ultra-fine cement for treatment of fine fissures.

The geological mapping of the excavations documents a well developed fracturing of the rock mass, with reaches distinguished by different patterns. The boreholes for the grout curtain should be oriented such that an optimal intersection of the dominant fractures is obtained.

The grouting is intended to reduce the permeability with the objective of controlling the seepage from the lake and abating the gradients and uplift pressures generated downstream. But the permeability and the grout takes are not correlated. A major limiting factor for the grout take is the aperture of the fracture, which needs to be large enough to allow a particulate slurry to enter. Thus, a number of fine fissures in the rock to be grouted may give a high permeability but may be too tight for passing the slurry. Therefore, in running the grouting test, the density of fractures in addition to the permeability could be used for assessing the suitability of the applied slurry and methodology. Laminar flow between parallel plates follows a cubic law. Accordingly, the following equation would give an equivalent of the representative aperture of the fissures:

- equivalent aperture $\approx \text{const} \times \sqrt[3]{(K \times Z)}$
with K=permeability, Z=fracture spacing

Utilization of televiewer data will facilitate this characterization.

vi. RCC Thermal Performance and Cracking

The development of thermal cracking, apparent in the RCC placed to date, has been recognized and studies are underway to evaluate their extent and significance. These studies range from measures to mitigate thermally-induced strains in the RCC to mechanical treatment of cracked zones by grouting. In addition, the TAB encourages these activities underway to reduce the peak temperature and regards them as comprehensive. The significance of the observations to date are under evaluation and the TAB is content that the Project has a good understanding of the issues involved. If, ultimately, substantial grouting is necessary to repair such cracks, a complex and costly program could result.

The TAB wishes to be informed on the progress associated with managing this risk and suggest that this be undertaken by means of teleconference update.

6. Additional Comments

6.1 Tailrace Channel Invert Protection

The tailrace channel is bounded on either side by concrete walls. The channel invert starts as a concrete lined rock trap at the exit from the powerhouse draft tube and then proceeds upwards to the river channel first as a short length of 500 mm thick concrete lining. It then

continues through three units of shale beds comprising Silty Shale, Poorly Bonded Shale and Siltstone/Sandstone. The TAB was asked to comment on current proposals to line the invert over this second area against erosion using 500 mm of rip-rap bedded on a thick filter fabric. The rip rap size proposed was typically 380 mm but with a range up to 500 mm.

Erosion testing on samples of the underlying bed material were carried out by [REDACTED] at the Texas A&M University. However, these were to assess the intrinsic erodibility of the intact rock and do not really apply to considerations of likely erodibility of jointed rock masses. The methods proposed by [REDACTED] or [REDACTED] may be more applicable to that. However, the applicability of erodibility under flow falls away if the bed is to be armoured.

A consideration should be the guaranteed reliability of whatever protection layer is used against surging currents and local reverse current under partial turbine operation. Clearance and/or repairs to any tailrace channel bedding protection once the power facility is operating would be difficult and costly and so the potential need should be avoided. The system proposed should be simple and robust.

If rip rap is adopted, then in the view of the TAB a single 500 mm layer bedded on a thick filter fabric may be too unstable. It should be noted that in the main spillway and power intake approach channel, rip-rap thickness of 900 mm or more is foreseen plus 350 mm of underlying granular bedding to ensure its stability. It's recommended that the current review be expanded and include alternates similar to those shown on the main spillway. The continuation of the initial 500 mm thick concrete lining up to a suitable end sill would be another option. An updated memo to the TAB should be prepared outlining the design, constructability and operations considerations with the potential alternatives.

6.2 Diversion Tunnel No. 2 – Internal Orifices

In the final stages of diversion before reservoir impounding, four internal steel orifices will be fitted into Diversion Tunnel No. 2 and that tunnel will then be used to pass and throttle all river flows until the tunnel is eventually closed, and reservoir impoundment begins. The hydraulic load differentials across the orifice plates under flow can be high. At a flow of 535 cumecs the mean load on orifice plate No. 1 will exceed 800 tonnes. When subject to high levels of hydro-dynamic turbulence and pressure oscillations the instantaneous peak load differentials on orifice plate No. 1 will exceed 1,000 tonnes.

The reliable operation of the orifices is imperative if final reservoir impounding is to proceed in a controlled manner. The orifice rings are fabricated in steel and will be backfilled with concrete when in place. At present these steel rings are indicated as being placed against the concrete tunnel lining and secured in place by single linear welds to upstream and downstream steel rings embedded in the tunnel concrete. These welds would have to transmit all hydro-dynamic loads into thickened sections of surrounding

concrete liner and thence via shear keys into the surrounding rock. The construction of these orifices needs to occur in the constrained window before reservoir filling. The TAB believes that this detail could be made more robust in terms of shear load transmission with some relatively simple changes. This may also have advantages by adopting a belt-and-braces approach and less reliance on welding details for the rapid construction work required in 2023. Options could include forming an annular shear key between the orifice and tunnel concretes or by embedding rebar with surface couplers in the tunnel liner to facilitate rebar connections between orifice and tunnel concretes. Other options will also likely be available and should be considered and studied by the design team and discussed with the Contractor. The TAB recommends a conference call once the design team has considered the potential for these additional design measures.

7. Future Meetings

The TAB has scheduled a field workshop September 12 and 13, 2019.

The TAB recommends that the next TAB meeting be held in Vancouver January 7 to 10, 2020.

Respectfully submitted,

[Redacted Signature]

[Redacted Title]

[Redacted Signature]

[Redacted Title]

[Redacted Signature]

[Redacted Title]

[Redacted Signature]

[Redacted Title]

Attachment A – Meeting Agenda



**Site C Clean Energy Project
 Technical Advisory Board Meeting No. 20
 May 27 - 31, 2019**

Location: 745 Thurlow Street, Vancouver, BC and Construction Site near FSJ

Day 1 (Monday, May 27, 2019) Workshop with Peter Mason, Meeting Room 12-046 and Travel to Construction Site

Time	Title	Presenter / Time Allocated
8:30 to 10:30	Peter Mason: Debris Management Workshop and Update	NorthWest Hydraulic / BC Hydro
10:30 to 11:00	Break	
11:00 to 14:00	Peter Mason: Spillway Design Update and Response to TAB Recommendations	[REDACTED]
14:00 to 15:00	Peter Mason: Powerhouse Tailrace Protection Design Brief Update	[REDACTED]
16:30	Arrive at YVR and remaining members of TAB	
17:35 to 19:16	Depart for FSJ AC8197	
19:16 to 20:00	Travel to Northern Grande and check-in	

Day 2 (Tuesday, May 28, 2019) Construction Site, Travel to Vancouver

Time	Title	Presenter / Time Allocated
6:00 to 7:00	Breakfast at Hotel and check-out	
7:00 to 7:30	Travel to Site Office	
7:30 to 7:50	Meet in the Site Office	
7:50 to 8:30	Agenda, Project Update and Schedule	[REDACTED]
8:30 to 9:00	Geological Mapping	[REDACTED]
9:00 to 9:30	Debris Management Update	[REDACTED]
9:30 to 10:00	RCC Update	[REDACTED]
10:00 to 10:30	Left Bank Update	[REDACTED]
10:30 to 11:15	Construction Quality Update	[REDACTED]
11:15 to 12:00	Lunch and Safety Orientation	
12:00 to 15:50	Site Visit	[REDACTED]
15:30 to 16:15	Travel to FSJ Airport	
17:15 to 19:00	AC8186 to YVR	
19:00 to 20:00	Travel to Four Seasons Hotel	



**Site C Clean Energy Project
 Technical Advisory Board Meeting No. 20
 May 27 - 31, 2019**

Location: 745 Thurlow Street, Vancouver, BC and Construction Site near FSJ

Day 3 (Wednesday, May 29, 2019) Meeting Room 05-005

Time	Title	Presenter / Time Allocated
8:00 to 8:20	Review Agenda and Tracking Log	[REDACTED] /
8:20 to 8:50	Report from Independent Engineer	[REDACTED]
8:50 to 10:30	Right Bank Performance Updates and Design Basis	[REDACTED]
10:30 to 10:45	Break	
10:45 to 11:30	Core Trench, Grouting and Earthfill Dam Update	[REDACTED]
11:30 to 12:30	Diversion Tunnels and Portals, Structures and Lining Update	[REDACTED]
12:30 to 13:00	Lunch	
13:00 to 13:45	Risk Overview	[REDACTED] /
13:45 to 14:30	Schedule and Cost Risk Analysis Update	[REDACTED]
14:30 to 14:45	Break	
14:45 to 15:15	Generating Station and Spillways Design Update	[REDACTED]
15:15 to 15:45	Offsite Manufacturing and Offsite Quality Mgmt.	[REDACTED]
15:45 to 16:15	Balance of Plant Design Update	[REDACTED]
16:15 to 17:30	Open Discussion	

Day 4 (Thursday, May 30, 2019) Meeting Room 12-046

Time	Title	Presenter / Time Allocated
8:00 to 12:00	Open Discussion / TAB prepare Report	
12:00 to 13:00	Lunch	
13:00 to 17:00	TAB prepare Report	
18:30 to 20:00	TAB dinner	TBD



**Site C Clean Energy Project
Technical Advisory Board Meeting No. 20
May 27 - 31, 2019**

Location: 745 Thurlow Street, Vancouver, BC and Construction Site near FSJ

**Day 5 (Friday, May 31, 2019) Meeting Room 12-046, and 333 Dunsmuir 18th floor for
Report out**

Time	Title	Presenter / Time Allocated
8:00 to 12:00	TAB prepare Report	
12:00 to 13:00	Lunch	
13:00 to 14:00	Travel to 333 Dunsmuir	
14:00 to 16:00	TAB Report out 333 Dunsmuir 18 th floor	

Attachment B - List of Meeting Attendees

[Redacted list of meeting attendees]

Site C Clean Energy Project

Annual Progress Report No. 4 (Combined with Quarterly Progress Report No. 18)

Appendix F

Environmental Management Plans and Report

As a result of the Environmental Assessment Certificate and the Federal Decision Statement conditions, the Site C Clean Energy Project is required to submit a number of plans and reports to various agencies. These plans and reports are posted on the Site C Project website at www.sitecproject.com as they are issued. This appendix contains a list of all issued documents as at December 31, 2019.

Table F-1 Mitigation, Management and Monitoring Plans

Aboriginal Plant Use Mitigation Plan	https://www.sitecproject.com/sites/default/files/Aboriginal_Plant_Use_Mitigation_Plan.pdf
Aboriginal Training and Inclusion Plan	https://www.sitecproject.com/sites/default/files/Aboriginal_Training_and_Inclusion_Plan.pdf
Accidents and Malfunctions Plan	https://www.sitecproject.com/sites/default/files/Accidents_and_Malfunctions_Plan.pdf
Agricultural Mitigation and Compensation Plan	https://www.sitecproject.com/sites/default/files/site-c-agricultural-mitigation-compensation-plan-final-september-2017.pdf
Agricultural Mitigation and Compensation Plan Framework	https://www.sitecproject.com/sites/default/files/SiteC-Agriculture-Mitigation-Compensation-Framework.pdf
Agricultural Monitoring and Follow-up Program	https://www.sitecproject.com/sites/default/files/Agricultural%20Monitoring%20and%20Follow-up%20Program.pdf
Business Participation Plan	https://www.sitecproject.com/sites/default/files/BPP-20150605.pdf
Construction Environmental Management Plan	https://www.sitecproject.com/sites/default/files/Construction%20Environmental%20Management%20Plan%20%28CEMP%29.pdf
Construction Safety Management Plan	https://www.sitecproject.com/sites/default/files/Construction%20Safety%20Management%20Plan.pdf
Cultural Resources Mitigation Plan	https://www.sitecproject.com/sites/default/files/Cultural_Resources_Mitigation_Plan_0.pdf
Del Rio Pit Development Plan	https://www.sitecproject.com/sites/default/files/Del%20Rio%20Pit%20Development%20Plan.pdf
Emergency Services Plan	https://www.sitecproject.com/sites/default/files/Emergency_Services_Plan.pdf
Fisheries and Aquatic Habitat Management Plan	https://www.sitecproject.com/sites/default/files/Fisheries_and_Aquatic_Habitat_Management_Plan.pdf
Fisheries and Aquatic Habitat Monitoring and Follow-up Program	https://www.sitecproject.com/sites/default/files/Fisheries-and-Aquatic-Habitat-Monitoring-and-Follow-up-Program.pdf

Health Care Services Plan	https://www.sitecproject.com/sites/default/files/Health_Care_Services_Plan.pdf
Heritage Resources Management Plan	https://www.sitecproject.com/sites/default/files/Heritage_Resources_Management_Plan_0.pdf
Housing Plan and Housing Monitoring and Follow-up Program	https://www.sitecproject.com/sites/default/files/Housing-Plan-Housing-Monitoring-and-Follow-up-Program-Rev2.pdf
Labour and Training Plan	https://www.sitecproject.com/sites/default/files/Labour_and_Training_Plan.pdf
Outdoor Recreation Mitigation Plan	https://www.sitecproject.com/sites/default/files/site-c-outdoor-recreation-mitigation-plan_0.pdf
Recreation Program	https://www.sitecproject.com/sites/default/files/Recreation%20Program.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan	https://www.sitecproject.com/sites/default/files/Veg_and_Wildlife_Mit_and_Mon_Plan.pdf
Vegetation Clearing and Debris Management Plan	https://www.sitecproject.com/sites/default/files/Veg_Clearing_and_Debris_Mgmt_Plan.pdf
West Pine Quarry Development Plan	https://www.sitecproject.com/sites/default/files/West_Pine_Quarry_Development_Plan.pdf
Wuthrich Quarry Development Plan	https://www.sitecproject.com/sites/default/files/Wuthrich_Quarry_Development_Plan.pdf
85th Avenue Industrial Lands Detailed Operations Plan	https://www.sitecproject.com/sites/default/files/Final-Detailed-Operations-Plan-85th%20Ave%20Industrial%20Lands-20161122.pdf

Table F-2 Site C Project Reports

Aboriginal Group Communication Plan 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/Report-annual-Aboriginal-Group-Communication-Plan-2015-2016-20160705.pdf
Aboriginal Group Communications Plan 2016-2017 Annual Report	https://www.sitecproject.com/sites/default/files/aboriginal-group-communications-plan-2016-2017-annual-report.pdf
Aboriginal Group Communications Plan 2017-2018 Annual Report	https://www.sitecproject.com/sites/default/files/Aboriginal-Group-Communications-Plan-2017-2018-Annual-Report.pdf
Aboriginal Plant Use Mitigation Plan 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/Report-annual-Aboriginal-Plant-Use-Mitigation-Plan-2015-2016-20160705.pdf
Aboriginal Plant Use Mitigation Plan 2016-2017 Annual Report	https://www.sitecproject.com/sites/default/files/aboriginal-plant-use-mitigation-plan-2016-2017-annual-report.pdf
Aboriginal Plant Use Mitigation Plan 2017-2018 Annual Report	https://www.sitecproject.com/sites/default/files/aboriginal-plant-use-mitigation-plan-2017-2018-annual-report_0.pdf
Aboriginal Training and Inclusion Plan 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/Report-annual-Aboriginal-Training-Inclusion-Plan-2015-2016-20160705.pdf
Aboriginal Training and Inclusion Plan 2016-2017 Annual Report	https://www.sitecproject.com/sites/default/files/aboriginal-training-inclusion-plan-2016-2017-annual-report.pdf

Aboriginal Training and Inclusion Plan 2017-2018 Annual Report	https://www.sitecproject.com/sites/default/files/Aboriginal-Training-and-Inclusion-Plan-2017-2018-Annual-Report.pdf
Accidents and Malfunctions Plan 2015 Annual Report	https://www.sitecproject.com/sites/default/files/Annual-Update-Accidents-and-Malfunctions-Plan-2015.pdf
Accidents and Malfunctions Plan 2016 Annual Update	https://www.sitecproject.com/sites/default/files/accidents-malfunctions-plan-2016.pdf
Accidents and Malfunctions Plan 2017 Annual Update	https://www.sitecproject.com/sites/default/files/accidents-malfunctions-plan-annual-update-2017_0.pdf
Acid Rock Drainage and Metal Leachate Management Plan – Water Quality Annual Report 2015	https://www.sitecproject.com/sites/default/files/Annual-Update-Water-Quality-2015-FDS-Condition-7-5_0.pdf
Acid Rock Drainage and Metal Leachate Management Plan – Water Quality Annual Report 2016	https://www.sitecproject.com/sites/default/files/acid-rock-drainage-metal-water-quality-annual-report-2016.pdf
Acid Rock Drainage and Metal Leachate Management Plan – Water Quality Annual Report 2017	https://www.ceaa.gc.ca/050/documents/p63919/122317E.pdf
Agricultural Monitoring and Follow-up Program 2016 Annual Report	https://www.sitecproject.com/sites/default/files/Agricultural-Monitoring-Annual-Report-2016.pdf
Agriculture Monitoring and Follow-up Program 2017 Annual Report	https://www.sitecproject.com/sites/default/files/agriculture-monitoring-annual-report-2017.pdf
Agriculture Monitoring and Follow-up Program 2018 Annual Report	https://www.sitecproject.com/sites/default/files/Ag-Monitoring-Annual-Report-2018.pdf
Air Quality Management Plan 2015 Annual Report	https://www.sitecproject.com/sites/default/files/Appendix-A-RWDI-Site-C-Climate-and-Air-Quality-Monitoring-Annual-Report-2015.pdf
Air Quality Management Plan 2016 Annual Report	https://www.sitecproject.com/sites/default/files/Climate-Air-Quality-Annual-Report-2016.pdf
Air Quality Management Plan 2017 Annual Report	https://www.sitecproject.com/sites/default/files/Air-Quality-Management-Plan-2017-Annual-Report.pdf
Annual Compliance Report - Status of Compliance with EAC Conditions and Schedule B – 2015-2016	https://projects.eao.gov.bc.ca/api/document/5b0722d24972950024b6e21c/fetch
Annual Compliance Report – Status of Compliance with EAC Conditions and Schedule B – 2016-2017	https://projects.eao.gov.bc.ca/api/document/5a9dc9f66f07af0024d5a246/fetch
Annual Compliance Report – Status of Compliance with EAC Conditions and Schedule B -2017-2018	https://projects.eao.gov.bc.ca/api/document/5b328d38d46d3f002426863f/fetch
Business Participation Plan 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/business-participation-plan-annual-report-july-29-2016.pdf
Business Participation Plan 2016 – 2017 Annual Report	https://www.sitecproject.com/sites/default/files/business-participation-plan-annual-report-year-two-july-2017.pdf

Business Participation Plan 2017 - 2018 Annual Report	https://www.sitecproject.com/sites/default/files/Business-Participation-Plan-Annual-Report-July-27-2018.pdf
Construction Communications 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/Site-C-Construction-Communications-Annual-Report-2016.pdf
Construction Communications 2016 – 2017 Annual Report	https://www.sitecproject.com/sites/default/files/site-c-construction-communications-annual-report-july-2017.pdf
Construction Communications 2017 - 2018 Annual Report	https://www.sitecproject.com/sites/default/files/Site-C-Construction-Communications-Annual-Report-July-2018.pdf
Cultural Resources Mitigation Plan 2015 Annual Report	https://www.sitecproject.com/sites/default/files/Report-annual-Cultural-Resources-Mitigation-Plan-2015-2016-20160705.pdf
Cultural Resources Mitigation Plan 2016-2017 Annual Report	https://www.sitecproject.com/sites/default/files/cultural-resources-mitigation-plan-2016-2017-annual-report.pdf
Cultural Resources Mitigation Plan 2017-2018 Annual Report	https://www.sitecproject.com/sites/default/files/Cultural-Resources-Mitigation-Plan-2017-2018-Annual-Report.pdf
Fisheries and Aquatic Habitat Management Plan 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/Annual-Report-Fisheries-Aquatic-Habitait-Management-Plan-2015-2016.pdf
Fisheries and Aquatic Habitat Management Plan 2016-2017 Annual Report	https://www.sitecproject.com/sites/default/files/fisheries-aquatic-habitat-management-plan-annual-report-2016.pdf
Fisheries and Aquatic Habitat Management Plan 2017 Annual Report	https://www.sitecproject.com/sites/default/files/fisheries-aquatic-habitat-management-plan-annual-report-2017_0.pdf
Fisheries and Aquatic Habitat Monitoring and Follow Up Program 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/fisheries-aquatic-habitat-monitoring-follow-up-program-annual-report.pdf
Fisheries and Aquatic Habitat Monitoring and Follow up Program 2017 Annual Report	https://www.sitecproject.com/sites/default/files/report-annual-fahmfp-2017-20180301.pdf
Heritage Resources Management Plan 2015 Annual Report	https://www.sitecproject.com/sites/default/files/Report-annual-BCH-to-CEAA-Heritage-Rsrcs-Mgt-Plan-20160705.pdf
Heritage Resources Management Plan 2016 Annual Report	https://www.sitecproject.com/sites/default/files/heritage-resource-management-plan-annual-report-2016.pdf
Heritage Resource Management Plan 2017 Annual Report	https://www.sitecproject.com/sites/default/files/Heritage-Resource-Management-Plan-2017-Annual-Report.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2015 Annual Report	https://www.sitecproject.com/sites/default/files/vegetation-and-wildlife-mitigation-and-monitoring-plan-annual-report-2015.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2015 Annual Report Appendices Part 1	https://www.sitecproject.com/sites/default/files/vegetation-and-wildlife-mitigation-and-monitoring-plan-annual-report-2015-appendices-part-1.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2015 Annual Report Appendices Part 2	https://www.sitecproject.com/sites/default/files/vegetation-and-wildlife-mitigation-and-monitoring-plan-annual-report-2015-appendices-part-2.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2016 Annual Report	https://www.sitecproject.com/sites/default/files/vegetation-wildlife-mitigation-monitoring-plan-2016.pdf

Vegetation Wildlife Mitigation and Monitoring Plan 2017 Annual Report	https://www.sitecproject.com/sites/default/files/vegetation-wildlife-mitigation-monitoring-plan-annual-report-2017.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2017 Annual Report Appendices Part 1	https://www.sitecproject.com/sites/default/files/vegetation-wildlife-mitigation-monitoring-plan-annual-report-2017-appendices-part-1_0.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2017 Annual Report Appendices Part 2	https://www.sitecproject.com/sites/default/files/vegetation-wildlife-mitigation-monitoring-plan-annual-report-2017-appendices-part-2_0.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2017 Annual Report Appendices Part 3	https://www.sitecproject.com/sites/default/files/vegetation-wildlife-mitigation-monitoring-plan-annual-report-2017-appendices-part-3.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2017 Annual Report Appendices Part 4	https://www.sitecproject.com/sites/default/files/vegetation-wildlife-mitigation-monitoring-plan-annual-report-2017-appendices-part-4.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2017 Annual Report Appendices Part 5	https://www.sitecproject.com/sites/default/files/vegetation-wildlife-mitigation-monitoring-plan-annual-report-2017-appendices-part-5.pdf

Site C Clean Energy Project

**Annual Progress Report No. 4
(Combined with Quarterly Progress Report No. 18)**

Appendix G

**Environmental Assessment Certificate
Annual Compliance Report**

Environmental Assessment Certificate #14-02 Annual Compliance Report

*Site C Clean Energy Project
March 29, 2019*

Site C Clean Energy Project
Status of Compliance with the Conditions of the EAC #14-02
March 29, 2019

Background

The Site C Clean Energy Project (the Project) will be the third dam and generating station on the Peace River that will provide up to 1,100 megawatts (MW) of capacity and about 5,100 gigawatt hours (GWh) of energy each year to the province's integrated electricity system. On October 14, 2014, the BC Provincial Minister of Environment and Minister of Forests, Lands and Natural Resource Operations decided that the Project is in the public interest and that the benefits identified by the Project outweigh the risks of significant adverse environmental, social and heritage effects. The assessment leading to the conclusion noted that the effects of the Project will largely be mitigated through careful, comprehensive mitigation programs and ongoing monitoring during construction and operation.

On October 14, 2014, the Ministers issued Environmental Assessment Certificate (EAC) #14-02 setting 77 conditions under which the Project can proceed. On November 14, 2018, the Environmental Assessment Office added one additional condition to the EAC, following an amendment to Schedule A of the EAC (Project Description). Table 1 provides a list of amendments that have been made to both Schedule A (Project Description) and Schedule B (List of Conditions) of the EAC since issuance.

EAC #14-02 requires that BC Hydro submit a report to "EAO Compliance and Enforcement staff on the status of compliance with the Conditions of this Certificate, and the conditions in Schedule B ... on or before March 31 in each year during construction and operation phases of the Project." The following report is being submitted in accordance with this requirement, and covers the period April 1, 2018 to December 31, 2018. The report submitted in March 2020 will cover the period January 1, 2019 to December 31, 2019.

Summary of Compliance

EAC #14-02 contains 78 conditions which comprise 608 unique requirements relating to the following areas:

- Aquatic Environment
- Fish and Fish Habitat
- Vegetation and Ecological Communities
- Wildlife Resources
- Current Use of Lands and Resources for Traditional Purposes
- Land and Resource Use
- Transportation
- Outdoor Recreation
- Community

- Human Health
- Heritage Resources
- Environmental Protections and Management
- Environmental Management Plans, Follow-up and Monitoring
- Dam Safety
- West Pine Haul Route Traffic Management Plan

BC Hydro has assessed compliance of conditions as a whole, as well as with the individual requirements of each condition. This assessment is based on evidence collected through a comprehensive compliance program which requires monitoring and reporting by contractors, an Independent Environmental Monitor, and by BC Hydro.

Compliance with 78 Conditions

Of the 78 conditions in EAC #14-02:

- No conditions have been assessed as being in non-compliance
- One condition has been assessed as being in partial-compliance
- 14 conditions have not yet required implementation – all of the requirements in these conditions are in an initial planning stage and will be implemented at a future time, such as during reservoir filling or operations
- 64 conditions are underway and are in various stages of implementation. The requirements in these conditions have either been completed, are ongoing, or are not yet required to have started

Summary of Compliance with 608 Requirements

Table 2 summarizes the status of compliance with each of the requirements in the 78 conditions of EAC #14-02. The table shows that 475 of the requirements are assessed as being in compliance, 2 as being in partial-compliance (See Condition #3) and 131 as future requirements.

Summary of Inspections by EAO

BC Hydro was inspected by regulatory agencies multiple times during the reporting period, including five inspections by the Environmental Assessment Office. During this reporting period, the EAO issued two Orders regarding erosion and sediment control at Portage Mountain Quarry and the dam site area respectively. Corrective actions for these Orders have been implemented and the related EAC conditions brought into compliance. Details regarding the Orders and corrective actions are described in Table 3 and the compliance report, per relevant conditions.

The EAO also issued four inspection reports covering the five inspections. These reports identified 13 separate findings of non-compliance related to site specific and often isolated

issues, such as missing spill trays, deficient erosion and sediment control, and dust control. BC Hydro responded to each finding of non-compliance, corrected the deficiencies, and provided evidence of corrections to the Environmental Assessment Office.

Summary of Inspections by BC Hydro

BC Hydro has developed an Active Compliance Management Tool (ACMT), to monitor, track and report on compliance with environmental conditions for the Project. The ACMT includes a mobile inspection tool that provides geography-specific and theme-specific record of environmental compliance at site. These themes are: Aquatic and Environment; Fish and Fish Habitat; Vegetation and Ecological Communities; Wildlife Resources; Transportation; Community; Human Health; Heritage Resources; and Environmental Management Plans, Follow-up Monitoring. In June 2017 BCH launched the ACMT on the Site C Project, enhancing the ability to share inspection results with contractors and driving environmental compliance.

In the ACMT, an inspection is defined as a single inspection against one compliance requirement within an Environmental Protection Plan. Between April 1, 2018 to December 31, 2018 BC Hydro used the ACMT to conduct 22,862 inspections for the Site C Project.

The inspections showed that contractors were compliant with their Environmental Protection Plans 91% of the time. Where deficiencies were found -- for example, 8% of the time for requirements related to fish and fish habitat, 11% of the time for vegetation ecological communities, and 5% of the time for wildlife resources -- BC Hydro actively worked with its contractors to remedy the deficiencies. The majority of deficiencies were corrected when identified in the field, and some deficiencies were corrected following formal communication between BCH and responsible contractors. As of December 31, 2018 less than .004% of the deficiencies identified between April 1, 2018 and December 31, 2018 were open.

Updates to Mitigation/Monitoring Plans

Both the Heritage Resources Mitigation Plan (HRMP) and Cultural Resources Mitigation Plan (CRMP) were revised on November 19, 2018 incorporating feedback from the EAO and new information from Indigenous groups. A description of the revisions is provided in the compliance report for Condition 62 (HRMP) and Condition 63 (CRMP).

Proposed revisions to the Construction Environmental Management Plan and Vegetation Clearing and Debris Management Plan were provided to regulators and Indigenous groups in early 2019, with final revisions incorporating feedback submitted on February 15, 2019. Because these revisions took place outside of the reporting period of April 1, 2018 to December 31, 2018, compliance with the previous versions of these plans is covered in this report.

Conclusion

BC Hydro is committed to meeting all the conditions of its Environmental Assessment Certificate for the Site C Clean Energy Project, including the 78 EAC Conditions and the 608 unique requirements.

In this Annual Compliance Report for April 1, 2018 to December 1, 2018, BC Hydro has provided evidence to demonstrate compliance with all EAC #14-02 Conditions.

Table 1. List of Amendments to EAC #E14-02

Amendment No.	Issued	Amendment to EAC #E14-02
1	March 12, 2018	<p>Amends Schedule A (Project Description) Sections 4.3.1, 4.3.1.4 and 4.3.1.5 of Schedule A regarding the design of the Generating Station and Spillway as follows:</p> <ul style="list-style-type: none"> • The location of the transformers changed from the draft tube deck to upstream of the generator units on the transformer deck • the spillway design changed from seven gates to three radial gates and six low level outlets • the discharge capacity changed from 10,100 m³/s at the maximum normal reservoir level and 17,300 m³/s at the maximum flood level to 11,000 m³/s at the maximum normal reservoir level and 16,700 m³/s at the maximum flood level
2	October 26, 2018	Amends Schedule A (Project Description) Section 4.3.4.1 and Figure 4.32 of Schedule A to increase the length of the Halfway River Bridge from 305m up to 1,100m in length, eliminate the causeway, and increase the number of bridge piers up to 19.
3	November 14, 2018	<p>Amends Schedule A (Project Description) Section 4.3.5.2.3 and 4.3.5.2.4, Table 4.7 and 4.9 of Schedule A to permit the use West Pine Quarry, in addition to Portage Mountain Quarry, as a source of excavated material for the construction of Highway 29 realignment, Hudson's Hope shoreline protection, and areas along the reservoir requiring protection during reservoir filling.</p> <p>Amends Schedule B (Conditions) in response to Amendment #3 above to require that BC Hydro develop a Traffic Management Plan for the West Pine Quarry Haul Route, in consultation with Sauteau First nations, West Moberly First Nations, the District of Hudson's Hope, the District of Chetwynd, and the Ministry of Transportation and Infrastructure.</p>
4	February 12, 2019	Amends Schedule B Conditions #4 and #13 to maintain a 15 m machine free zone adjacent to watercourses during reservoir clearing, except where worker safety prohibits manual tree falling and vegetation removal methods and as addressed in a site-specific prescription prepared and endorsed by a QEP. The rationale for the safety exemption must be documented in the prescription.

Table 2. Summary of Compliance with Requirements of EAC #14-02 Conditions

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "in Compliance"	# of Requirements "Partially in Compliance"
					(Completed or Ongoing)	
Aquatic Environment	Hydrology	1	11	11	0	0
	Fluvial Geomorphology and Sediment	1	17	0	17	0
	Water Quality	1	12	0	10	2
Fish and Fish Habitat	Fish and Fish Habitat	4	51	27	24	0
Vegetation and Ecological Communities	Vegetation and Ecological Communities	7	66	0	66	0
Wildlife Resources	Wildlife Resources	10	64	0	64	0
Current Use of Lands and Resources for Traditional Purposes	Current Use of Lands and Resources for Traditional Purposes	4	20	2	18	0
Land and Resource Use	Harvest of Fish and Wildlife	1	2	0	2	0
	Agriculture	2	25	0	25	0
	Other Resource Industries	3	13	6	7	0
Transportation	Transportation	4	41	0	41	0
Outdoor Recreation and	Outdoor Recreation and	3	15	3	12	0

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "in Compliance"	# of Requirements "Partially in Compliance"
					(Completed or Ongoing)	
Tourism	Tourism					
Community	Community Infrastructure and Services	6	31	6	25	0
	Housing	2	18	0	18	0
	Regional Economic Development	6	34	1	33	0
Human Health	Potable and Recreational Water Quality	1	3	1	2	0
	Ambient Air Quality	1	11	1	10	0
	Noise and Vibration	2	14	1	13	0
	Methylmercury	1	13	13	0	0
Heritage Resources	Visual Resources	1	4	0	4	0
	Physical Heritage and Cultural Heritage	3	22	6	16	0
Environmental Protection and Management	GHG Monitoring	1	7	7	0	0

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "in Compliance"	# of Requirements "Partially in Compliance"
					(Completed or Ongoing)	
Environmental Management Plans, Follow-up and Monitoring	Environmental Management Plans, Follow-up and Monitoring	10	98	31	67	0
Dam Safety	Dam Safety	2	3	3	0	0
West Pine Haul Route Traffic Management Plan	West Pine Haul Route Traffic Management Plan	1	13	12	1	0
TOTAL		78	608	131	477	0

Table 3. Section 34 Orders Issued by EAO, April 1, 2018 to December 31, 2018

Date of Order	Date of Inspection	Condition	Order	Summary of Order
May 14, 2018	May 1 to May 3, 2018	EAC 2, 69	Water and sediment control	<p>Issue: Failure to adhere to implement measures to control runoff water and sediment following clearing of the Portage Mountain Quarry.</p> <p>Order/Corrective Action: to immediately implement measures to control runoff water, soil erosion and sediment transport on site in accordance with the CEMP.</p>
Sep 21, 2018	Sep 11 to Sep 13, 2018	EAC 69	Water and sediment control	<p>Issue: Failure to adhere to implement measures to control runoff water and sediment transport prior to commencing operations in Area 30, as specified by the Area 30 (Operations) Environmental Protection Plan.</p> <p>Order/Corrective Action: Immediately implement measures to control runoff water and sediment transport to wetlands adjacent to Area 30, and ensure measures are in place to intercept and control selenium laden water at Area 30 in accordance with the CEMP and Area 30 EPP.</p>

Acronyms and Abbreviations

APUMP	Aboriginal Plan Use Mitigation Plan
CEAA	Canadian Environmental Assessment Act
CEMP	Construction Environmental Management Plan
CMHC	Canada Mortgage and Housing Corporation
CRMP	Cultural Resources Mitigation Plan
CSMP	Construction Safety Management Plan
DFO	Department of Fisheries and Oceans Canada
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
EPP	Environmental Protection Plan
FAHMFP	Fisheries and Aquatic Habitat Management Follow-up Program
FAHMP	Fisheries and Aquatic Habitat Management Plan
FLNR	Ministry of Forests, Lands and Natural Resource Operations
FNHA	First Nations Health Authority
GHG	Greenhouse Gas
HRMP	Heritage Resources Management Plan
IEM	Independent Environmental Monitor
IWMAMP	Invasive Weed Mitigation and Adaptive Management Plan
MOE	Ministry of Environment
MOTI	Ministry of Transportation and Infrastructure
MOU	Memorandum of Understanding
NHA	Northern Health Authority
OEMP	Operations Environmental Management Plan
OHWM	Ordinary High Water Mark
PAG	Potentially Acid Generating
PRRD	Peace River Regional District
QEP	Qualified Environmental Professional
QP	Qualified Professional
SARA	Species at Risk Act
RAA	The Regional Assessment Area
RSEM	Relocated Surplus Excavated Material
RVMA	Riparian Vegetation Management Area
TSFA	Terrain Stability Field Assessments
TSS	Total Suspended Solids
TU	Treatment Unit
VCDMP	Vegetation Clearing and Debris Management Plan
VWMMP	Vegetation and Wildlife Mitigation and Monitoring Plan
VWTC	Vegetation and Wildlife Technical Committee
WHIMS	Workplace Hazardous Materials Information System

**Site C Clean Energy Project
 Annual Compliance Report for Environmental
 Assessment Certificate #14-02 March 29, 2019**

No.	EAC Condition	Implementation Status	Compliance Status	Description
AQUATIC ENVIRONMENT				
Hydrology				
EAC 01	The EAC Holder must address potential risks to infrastructure downstream of the Site C dam as far as Peace River, Alberta caused by low flows, caused by the Project, during reservoir filling and operation by implementing the following measures:	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro has entered into agreements with the downstream communities that identify potential infrastructure impacts and establish commitments to either monitor and mitigate or mitigate- such as the District of Taylor Water intake. Additionally, BC Hydro continues to collect present state field data to inform and future changes and associate downstream impact assessments.
EAC 01	The Holder must maintain a minimum release of 390 cubic meters per second from the Site C dam	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro has included this requirement within the design of the generating station and spillways and overall operation of the dam. BC Hydro will be developing an Owner's Operation, Maintenance and Surveillance Manual that will also include this requirement during the operating period.
EAC 01	The Holder must estimate downstream flows at minimum, average and maximum rates of reservoir filling in order to identify the approach that would minimize impacts on downstream flows and water level conditions.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro has included this requirement within the design of the generating station and spillways and overall operation of the dam. BC Hydro will be developing an Owner's Operation, Maintenance and Surveillance Manual that will also include this requirement.
EAC 01	The Holder must work with the Government of Alberta to jointly develop an Adaptive Management Plan to manage potential risks to infrastructure downstream of the Site C dam to the Town of Peace River, Alberta caused by low water flows during reservoir filling and operation of the Project. For the purposes of the Plan infrastructure must include water intakes, ferry crossings and any other activities identified by the Proponent and the Government of Alberta.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro continues to collect present state field data to inform and future changes and associate downstream impact assessments and future discussion with the Government of Alberta.
EAC 01	The Plan must include at least the following: Provisions for assessing potential risks to infrastructure caused by low water flows as a result of the Project;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 01	Provisions for obtaining baseline and operational flow information;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 01	Provisions for obtaining information on any current impacts to infrastructure attributable to low water flows caused by the Project;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 01	Identification of any impacts to infrastructure attributable to low water flows caused by the Project; and	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 01	The Mitigation measures such as additional flow regulation, adjustment to Alberta infrastructure and notifying the Government of Alberta of prolonged low water flow conditions, necessary to avoid or minimize impacts attributable to low water flows caused by the Project.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 01	The EAC Holder must submit the plan to EAO a minimum of 30 days prior to reservoir filling.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 01	The EAC Holder must implement the Plan and report on the results annually to EAO commencing from reservoir filling to the end of year 5 of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
Fluvial Geomorphology and Sediment Transport				
EAC 02	The EAC Holder must manage adverse Project effects on water quality by managing erosion and sediment transport, as detailed in an Erosion Prevention and Sediment Control Plan.	Ongoing	In Compliance	The Erosion and Sediment Control Plan is described in Section 4.4 of the Construction Environmental Management Plan (CEMP). The final CEMP (Revision 1) was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published). Revision 4 of the CEMP contains a new Appendix, Appendix I, which provides details on the Project's erosion and sediment control requirements, including the requirement for Contractors to retain their own Erosion and Sediment Control QPs.
EAC 02	The Erosion Prevention and Sediment Control Plan must be developed by a Qualified Environmental Professional (QEP).	Completed	In Compliance	Section 6.0 of the CEMP lists the Qualified Environmental Professional (QEP) who prepared the plan. Appendix I sets out the credential requirements of the Erosion and Sediment Control QPs and require that QPs approve and oversee the implementation of site- specific erosion and sediment control plans.
EAC 02	The Plan must identify areas of high erosion and sediment potential. The Erosion Prevention and Sediment Control Plan must include at least the following:	Ongoing	In Compliance	The CEMP requires that contractors identify and isolate work areas to prevent sediment from entering the downstream environment. BC Hydro audits compliance with this requirement by reviewing contractor Environmental Protection Plans (EPPs) and conducting environmental audits during construction to verify implementation of EPPs.
EAC 02	Manage water (e.g. rainfall, snowmelt,) to control runoff and direct it away from work areas where excavation, spoil placement, and staging activities occur.	Ongoing	In Compliance	The CEMP requires that Contractor EPPs identify water management plans to control runoff and direct it away from work areas where excavation, soil placement and staging activities occur. BC Hydro audits compliance with these requirements by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 02	Adjust the timing of construction activities to coincide with periods of high background sediment levels.	Ongoing	In Compliance	The CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of the EPP.
EAC 02	Use clean rock materials for riprap construction.	Ongoing	In Compliance	The CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of the EPP.
EAC 02	Manage equipment production rates during construction to reduce sediment generation.	Ongoing	In Compliance	The CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of the EPP.
EAC 02	Identify and isolate work areas to prevent sediment from entering the downstream environment.	Ongoing	In Compliance	<p>BC Hydro is implementing and adhering to the final Erosion Prevention and Sediment Control Plan as well as additional commitments including quality inspections and regular reporting on plan progress. To date, many of the areas that experienced high rates of erosion between 2017 and 2018 have been restored, revegetated, and in some cases augmented with additional ditching, sediment control ponds or other measures to prevent erosion and reduce sediment loading from runoff.</p> <p>This program involves Qualified Erosion and Sediment Control Professionals who review work areas for Erosion and Sediment Control risks, author prescriptions with due dates based on risk, oversee the implementation of these prescriptions, prescribe re-inspection dates, and have overall responsibility for Erosion and Sediment Control measures in their work areas. This Program was initiated in October 2016 with results reported to the EAO weekly up to late 2017 and monthly since then.</p> <p>On May 14, 2018, EAO issued an Order under Section 34 of the Environmental Assessment Act for failure to adhere to implement measures to control runoff water and sediment following clearing of the Portage Mountain Quarry. In response, BC Hydro immediately implemented measures to control runoff water, soil erosion and sediment transport on site in accordance with the CEMP, bringing the site into compliance.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 02	Leave stumps in place to reduce soil disturbance, erosion and sediment transport in the headpond during reservoir clearing to reduce soil disturbance and potential sedimentation issues.	Ongoing	In Compliance	<p>The CEMP requires contractors to leave stumps in place to reduce soil disturbance, and erosion and sediment transport in the headpond during reservoir clearing. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.</p> <p>Note that stumps are removed for road construction associated with reservoir clearing as described in the Project's Environmental Impact Statement and Vegetation Clearing and Debris Management Plan (VCDMP). BC Hydro has determined that stump removal associated with road construction is consistent with this condition.</p>
EAC 02	Manage vegetation and soil stripping, taking into consideration proximity to sensitive habitats as determined by a QEP (e.g. wetlands) and slope stability.	Ongoing	In Compliance	<p>The CEMP requires contractors to manage vegetation and soil stripping, taking into consideration proximity to sensitive habitat and slope stability as determined by a QEP. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.</p>
EAC 02	Salvage and stockpile clean surface soils for site restoration.	Ongoing	In Compliance	<p>The CEMP requires contractors to salvage and stockpile clean surface soils for site restoration. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. To date, several soil stockpiles have needed to be relocated due to construction modifications, and the relocation and preservation of these piles is audited by BC Hydro.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 02	Establish vegetative cover on the soils stockpiled to prevent erosion.	Ongoing	In Compliance	<p>The CEMP requires contractors to establish vegetative cover on the soils stockpiled to prevent erosion.</p> <p>BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.</p> <p>The Main Civil Work Contractor, Peace River Hydro Partner's (PRHP) has hydro seeded and hand seeded new soil stockpiles in 2018 and has seeded many of the existing pre-2018 stockpile locations. Signage has been installed at larger stockpile areas to prevent disturbance. Topsoil stockpiles are monitored to assess the re-vegetation success as well as invasive occurrences by both BC Hydro and PRHP's QEP's. Some off dam site topsoil stripping occurred in 2018 including locations on Highway 29, 85th Avenue borrow area, south bank side-channel construction and limited topsoil stripping at transmission tower and access road construction sites.</p>
EAC 02	Develop construction schedules such that reservoir clearing in the winter is maximized.	Ongoing	In Compliance	To date, reservoir clearing has coincided with winter conditions. The final stages of lower reservoir and Moberly River clearing commenced in late fall 2018 and continued into winter 2019. Other eastern and middle reservoir clearing areas commenced in late fall 2018 and continued into winter 2019.
EAC 02	Isolate in-stream work areas from flowing water except as permitted by the on-site environmental monitor.	Ongoing	In Compliance	BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. Some instream work has occurred on the Project in compliance with the Project's Fisheries Act Authorizations (both early works and dam construction). This work has not always been completed in isolation of the Peace river but was conducted under the supervision of the on-site environmental monitor, and was monitored for compliance with the Fisheries Act Authorizations' severity of ill effects limits.
EAC 02	The EAC Holder must provide this draft Erosion Prevention and Sediment Control Plan to BC Ministry of Forests, Lands and Natural Resource Operations (FLNR), BC Ministry of Environment (MOE), Aboriginal Groups, Peace River Regional District, City of Fort St. John, and District of Hudson's Hope for review a minimum of 90 days prior to commencement of construction activities.	Completed	In Compliance	The Erosion Prevention and Sediment Control Plan is described in Section 4.4 of the CEMP for the Project. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 02	The EAC Holder must file the final Erosion Prevention and Sediment Control Plan with EAO, FLNR, MOE, Aboriginal Groups, Peace River Regional District, City of Fort St. John and District of Hudson's Hope a minimum of 30 days prior to commencement of construction activities.	Completed	In Compliance	The final CEMP (Revision 1) was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 02	The EAC Holder must develop, implement and adhere to the final Erosion Prevention and Sediment Control Plan, and any amendments to the final Erosion Prevention and Sediment Control Plan, to the satisfaction of Environmental Assessment Office (EAO).	Ongoing	In Compliance	<p>The Erosion and Sediment Control Plan is described in Section 4.4 of the Construction Environmental Management Plan (CEMP).</p> <p>This program involves Qualified Erosion and Sediment Control Professionals who review work areas for Erosion and Sediment Control risks, author prescriptions with due dates based on risk, oversee the implementation of these prescriptions, prescribe re-inspection dates, and have overall responsibility for Erosion and Sediment Control measures in their work areas. This Program was initiated in October 2016 with its results reported to the EAO weekly up to late 2017 and monthly since then.</p>
Water Quality				
EAC 03	To address potential environmental effects of acid generation and metal leaching from construction activities and reservoir creation, EAC Holder must develop a water quality monitoring program.	Ongoing	In Compliance	Section 4.14 and Appendix E of the CEMP sets out the water quality management program that contractors are required to adhere to, including associated measures to address potential effects of acid generation and metal leaching. BC Hydro audits compliance with Section 4.14 and Appendix E of the CEMP by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 03	The water quality monitoring program must include: · Identification of water quality parameters to be monitored;	Ongoing	In Compliance	CEMP Appendix E identifies water quality parameters to be monitored based on the source and type (e.g., surface water, groundwater, sediment pond water) of Potentially Acid Generating (PAG) contact water. The plan describes the monitoring frequency, duration, and parameters, which vary by monitoring sub-program. Parameters of interest for Relocated Surface Excavated Material (RSEM) discharges containing PAG have currently been identified as Cd, Co, Cu, Zn, TSS, and pH (CEMP Appendix E, Table 2), in addition to a requirement for acute toxicity testing. These parameters are subject to reassessment as the Project gathers additional information from water quality and toxicity assessments.
EAC 03	· Identification of the geographic extent and duration of the monitoring;	Ongoing	In Compliance	Appendix E of the CEMP identifies the geographic extent and duration of the water quality monitoring requirements based on the source and type of potential PAG contact water (e.g., surface water, groundwater, sediment pond water). The plan describes the monitoring frequency, duration, and parameters, which vary by monitoring sub-program. For example, the geographic extent of the monthly Peace River water quality monitoring program extends from a control point upstream of the construction footprint to a far-field location downstream of all RSEM discharges where the Peace River and RSEM discharge is completely mixed. The duration of the monitoring corresponds with the duration of RSEM sediment pond operation and discharge, except when monitoring poses an undue risk to worker health and safety.
EAC 03	· Baseline sampling of parameters;	Ongoing	In Compliance	Baseline sampling is specific to each type of monitoring program. For example, a quarterly baseline water quality monitoring program at sampling locations in the Peace River commenced in 2015 and is ongoing. Baseline sampling at groundwater wells installed at PAG-contact RSEM facilities was conducted prior to placement of PAG at those RSEMs.
EAC 03	· Monitoring of parameters;	Ongoing	In Compliance	Surface water monitoring in the Peace River, at runoff locations at the dam site, and in PAG-contact RSEM sediment ponds (as required by the CEMP, Appendix E) is ongoing. Installation of groundwater wells at RSEM Areas R5a and R5b occurred between September and November 2016, with baseline monitoring completed shortly after installation and quarterly monitoring ongoing through 2018.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 03	Identification of potential mitigation measures if water quality impacts observed; and	Ongoing	Partial Compliance	<p>Potential mitigation measures to be implemented if water quality impacts are observed are described in CEMP Appendix E, Section 7.4.</p> <p>In 2018, a mobile water treatment facility was procured to the dam site to treat PAG- contact water for elevated metals (commissioned as of July).</p> <p>For the reporting period, PAG-contact water quality exceedance events were noted associated with dam site road cuts (at River Road) and RSEM sediment pond discharges (at RSEM R5b and RSEM R6). Mitigations have been and continue to be implemented in response to these exceedances as per QP (ARD) recommendations.</p> <p>On September 8 and 9, 2018, a discharge of approximately four million litres of partially treated storm water into the Peace River occurred during a 55-mm rain event. The discharge was a relatively small volume of approximately 34 litres per second over a 26-hour period into a flow in the Peace River of approximately 1.2 million litres per second. As such, the water was immediately diluted with no harmful effects observed. Following this event, the Comptroller of Water Rights requested a review of the capacity of the care of water system on the right bank approach channel. Environment Canada is also investigating the incident. BC Hydro is taking action to increase the holding capacity and effectiveness of the care of water system and to remove the weathered acidic rock to reduce the potential for a similar reoccurrence.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 03	Process for implementing mitigation measures to address water quality impacts.	Ongoing	Partial Compliance	<p>The process for implementing mitigation measures if water quality impacts are observed is described in CEMP Appendix E, Section 7.4.</p> <p>In 2018, a mobile water treatment facility was procured to the dam site to treat PAG- contact water for elevated metals (commissioned as of July).</p> <p>For the reporting period, PAG-contact water quality exceedance events were noted associated with dam site road cuts (at River Road) and RSEM sediment pond discharges (at RSEM R5b and RSEM R6). Mitigations have been and continue to be implemented in response to these exceedances as per QP (ARD) recommendations.</p> <p>On September 8 and 9, 2018, a discharge of approximately four million litres of partially treated storm water into the Peace River occurred during a 55-mm rain event. The discharge was a relatively small volume of approximately 34 litres per second over a 26-hour period into a flow in the Peace River of approximately 1.2 million litres per second. As such, the water was immediately diluted with no harmful effects observed. Following this event, the Comptroller of Water Rights requested a review of the capacity of the care of water system on the right bank approach channel. Environment Canada is also investigating the incident. BC Hydro is taking action to increase the holding capacity and effectiveness of the care of water system and to remove the weathered acidic rock to reduce the potential for a similar reoccurrence.</p>
EAC 03	The EAC Holder must provide this draft water quality monitoring program to Environment Canada, Natural Resources Canada, MOE, FLNR, Aboriginal Groups, Peace River Regional District and the City of Fort St. John for review a minimum of 90 days prior to commencement of construction.	Completed	In Compliance	The Water Quality Monitoring Program is described in Section 4.14 and Appendix E - Section 7.3 of the CEMP. The draft CEMP was provided to regulatory agencies, governments and Indigenous groups on October 17, 2014.
EAC 03	The EAC Holder must file the final water quality monitoring program with EAO, Environment Canada, Natural Resources Canada, MOE, FLNR, Aboriginal Groups, Peace River Regional District and City of Fort St. John a minimum of 30 days prior to commencement of construction.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 03	The EAC Holder must report on the results annually to the EAO every June 1.	Ongoing	In Compliance	A water quality report covering 2017 construction activities was submitted to the EAO on March 29, 2018. The next report (covering 2018 construction activities) will be submitted to the EAO by June 1, 2019.
EAC 03	The final water quality monitoring program must be detailed in the Acid Rock Drainage and Metal Leachate Management Plan,	Completed	In Compliance	The water quality monitoring program is described in Section 4.14 and Appendix E - Section 7.0 of the CEMP (Revision 4).

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 03	The EAC Holder must develop, implement and adhere to the final water quality monitoring program, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The water quality monitoring program, as outlined in Appendix E of the CEMP, is being implemented and adhered to, with responsibilities specific to BC Hydro and the Contractor as outlined. Water quality monitoring reports have been submitted annually by June 1 of each year to cover monitoring conducted in conjunction with construction in the preceding year. The next report (covering 2018 construction activities) will be submitted to the EAO on or before June 1, 2019.
FISH AND FISH HABITAT				
EAC 04	The EAC Holder must manage harmful Project effects on fish and fish habitats during the construction and operation phases by implementing mitigation measures detailed in a Fisheries and Aquatic Habitat Management Plan.	Ongoing	In Compliance	BC Hydro developed a Fisheries and Aquatic Habitat Management Plan and is implementing measures in accordance with the plan.
EAC 04	The Fisheries and Aquatic Habitat Management Plan must be developed by a QEP.	Completed	In Compliance	Section 8.0 of the Fisheries and Aquatic Habitat Management Plan (FAHMP) lists the QEPs who prepared the plan.
EAC 04	The Fisheries and Aquatic Habitat Management Plan must include at least the following: · Remove temporary structures as soon as they are no longer required.	Ongoing	In Compliance	Section 4.5 of the CEMP (Fisheries and Aquatic Habitat Management) requires that Contractor Environmental Protection Plans (EPPs) identify how the Contractor will remove temporary structures as soon as they are no longer required. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 04	· Maintain a 15 m machine free zone adjacent to watercourses during reservoir clearing (as measured from the Ordinary High Water Mark). ¹	Ongoing	In Compliance	During the reporting period, Section 4.5 of the CEMP (Fisheries and Aquatic Habitat Management) required that Contractor EPPs identify that the Contractor will maintain a 15 m machine free zone adjacent to watercourses during reservoir clearing. BC Hydro audited compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. Please refer to footnote below regarding the amendment to this Condition in February 2019, allowing for the selective use of mechanical clearing in riparian zones where safety prohibits manual falling. Future compliance reports will describe compliance with the condition as revised in February 2019.

¹ BC Hydro received an Amendment to Condition No.4 of the EAC #14-02 on February 12, 2019. The condition now reads “Maintain a 15m machine free zone adjacent to watercourses during reservoir clearing (as measured from the Ordinary High Water Mark), **except where worker safety prohibits manual tree falling and vegetation removal methods and as addressed in a site-specific prescription prepared and endorsed by a QEP. The rationale for the safety exemption must be documented in the prescription.**” As this amendment was received outside of the reporting window of April 1, 2018 to December 31, 2018 it is not included in this report. Compliance with this amendment will be documented in the next Annual EAC Compliance Report to be submitted to the EAO by March 31, 2020. Revision 5 of the Construction Environmental Management Plan and Revision 2 of the Vegetation Clearing and Debris Management Plan were initiated in 2019 to incorporate this amendment. Compliance with these revisions will also be described in the next Annual EAC Compliance Report to be submitted to the EAO by March 31, 2020.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 04	Place material relocation sites (R5a, R5b, and R6) 15 m back from the mainstem to avoid affecting Peace River fish habitat.	Ongoing	In Compliance	Material relocation sites (R5a, R5b and R6) were designed to be at least 15 m from the mainstem of the Peace River as required by this condition.
EAC 04	Contour mainstream bars to reduce potential for fish stranding, as advised by FLNR.	Ongoing	In Compliance	Section 6.2.1.1 of the FAHMP (Peace River Channel Contouring and Side Channel Enhancement) describes the contouring of mainstream bars associated with this condition. Initial stages of mainstem channel contouring are underway with completion expected by 2021.
EAC 04	Incorporate fish habitat features into the final capping of material relocation sites upstream of the dam.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 04	Contour and cap with gravels and cobble substrate the spoil area between elevations 455 m and 461 m to provide a productive	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 04	Incorporate fish habitat features into the final design of the Highway 29 roadway that would border the reservoir, east of Lynx Creek.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Section 6.2.3.2 of the FAHMP (Highway 29 Realignment Fish Habitat) describes this requirement.
EAC 04	Include fish habitat features (e.g., shears, large riprap point bars, etc.) in the final design of the north bank haul road bed material that would be placed in the Peace River.	Completed	In Compliance	Fish habitat features have also been incorporated into the design of the north bank haul road bed material placed in the Peace River; this work was completed in the Spring of 2016.
EAC 04	Construct the Hudson's Hope shoreline protection with large material that will provide replacement fish habitat. Incorporate additional fish habitat features (e.g., shear zones and point bars) into the final design of the Hudson's Hope shoreline protection.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 04	Contour Highway 29 borrow sites prior to decommissioning to provide littoral fish habitat in the reservoir.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 04	Cap material repositioning areas with gravel and cobble, and contour to enhance fish habitat conditions.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 04	Plant a 15 m wide riparian area along the reservoir shoreline adjacent to BC Hydro-owned farmland where necessary to provide riparian habitat and bank stabilization except as approved by the onsite environmental monitor.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 04	Increase wetted habitat by creating new wetted channels and restoring back channels on the south bank island downstream of the dam.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Section 6.2.1.1 of the FAHMP (Peace River Channel Contouring and Side Channel Enhancement) describes new and restored back channels on the south bank island downstream of dam, associated with this condition.
EAC 04	Enhance side channel complexes between the dam site and the confluence of the Peace and Pine rivers during low flows.	Ongoing	In Compliance	BC Hydro commenced construction of Side Channel 108R, located on the right bank of the Peace River downstream of the dam site, in October 2018, per the FAHMP.
EAC 04	Manage reservoir fluctuation within a 1.8 m maximum normal operating range from the maximum operating level of 461.8 m.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 04	If the reservoir deviates from the normal operating range, the EAC Holder must report the event in accordance with water licence requirements.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 04	Develop a feasible strategy for the salvage and relocation of stranded fish in habitats that are at risk of dewatering.	Ongoing	In Compliance	Section 4.5 (Fisheries and Aquatic Habitat Management) of the CEMP requires that Contractor EPPs contain a feasible strategy for the salvage and relocation of stranded fish in habitats that are at risk of dewatering. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 04	The EAC Holder must manage construction footprints to reduce the harmful Project effects on fish and fish habitat, in accordance with the conditions of the applicable Fisheries Act authorization(s) and direction provided by FLNR.	Ongoing	In Compliance	Construction footprints to reduce the harmful Project effects on fish and fish habitat are being managed in accordance with Fisheries Act authorizations 15-HPAC-00170 for site preparation activities and 15-HPAC-01160 for dam construction, reservoir preparation and filling, as well as any direction provided by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development.
EAC 04	This draft Plan must be provided to FLNR, MOE and Aboriginal Groups for review a minimum of 90 days prior to commencement of construction.	Completed	In Compliance	The Draft Fisheries and Aquatic Habitat Management Plan was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014.
EAC 04	The EAC Holder must file the Final Plan with EAO, FLNR, MOE and Aboriginal Groups a minimum of 30 days prior to commencement of construction.	Completed	In Compliance	The Final Fisheries and Aquatic Habitat Management Plan was submitted to regulatory agencies, governments, and Indigenous groups on June 1, 2015.
EAC 04	The EAC Holder must develop, implement and adhere to the Final Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The Fisheries and Aquatic Habitat Management Plan is being implemented as planned.
EAC 05	EAC Holder must manage harmful Project effects on fish during reservoir filling, turbine commissioning and operations by developing and implementing mitigation measures detailed in operational procedures developed by a QEP to:	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 05	· Minimize levels of total dissolved oxygen gas in the tailwater;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 05	· Minimize levels of dissolved gas super-saturation	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 05	These operational procedures must be developed in consultation with FLNR and MOE prior to reservoir filling, and include monitoring activities.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 06	The EAC Holder must implement mitigation measures, as detailed in a Fish Passage Management Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 06	The Fish Passage Management Plan must be developed by a QEP.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 06	The Fish Passage Management Plan must include at least the following: · Establish a periodic capture data base/protocol/methodology for small-fish species to assess genetic exchange between upstream and downstream fish populations. Data must be provided annually to the relevant federal and provincial agencies.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. The Fish Passage Management Plan included in the EIS (Volume 2 Appendix Q) describes the approach to manage fish passage. Following EAC condition 6, a Fish Passage Management Plan, which will include updates since submission of the EIS, will be prepared by QEPs and submitted prior to Project activities that may affect upstream fish passage. The EIS (Volume 2 Section 12) identified the river diversion phase of construction as the first Project activity that is expected to affect upstream fish passage. BC Hydro is preparing this update to the Fish Passage Management Plan, including input from Indigenous groups that has been received and taken into account, information on the progress of the design and construction of the temporary and permanent fish passage facilities, as well as plans for the operation of the facilities. The plan will also reference the monitoring of fish movement and fish passage that is described in the Project's Fisheries and Aquatic Habitat Monitoring and Follow-up Program.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 06	Address genetic differences exceeding beyond a pre- defined threshold (to be determined through discussion with the agencies) by implementing a translocation program.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 06	Design the installation and use of a trap and haul facility.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 06	This draft Fish Passage Management Plan must be provided to FLNR, MOE and Aboriginal Groups for review a minimum of 90 days prior to Project activities that may impact upstream fish passage.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 06	The EAC Holder must file the final Fish Passage Management Plan with EAO, FLNR, MOE and Aboriginal Groups a minimum of 30 days prior to Project activities that may impact upstream fish passage.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 06	The EAC Holder must develop, implement and adhere to the final Fish Passage Management Plan, and any amendments, to the satisfaction of EAO.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 07	The EAC Holder must develop a Fisheries and Aquatic Habitat Monitoring and Follow-up Program to assess the effectiveness of measures to mitigate Project effects on healthy fish populations in the Peace River and tributaries, and, if recommended by a QEP or FLNR, to assess the need to adjust those measures to adequately mitigate the Project's effects.	Ongoing	In Compliance	A Fisheries and Aquatic Habitat Monitoring and Follow-up Program (FAHMFP) was submitted to the EAO on December 22, 2015. The FAHMFP provides for: a) monitoring fish and fish habitat during construction and operation of the Site C Clean Energy Project (the Project), and b) an outline for a procedure to evaluate and implement future mitigation and compensation options during operation of the Project. The types of monitoring and the outline of procedures for evaluation and implementation required by Condition 7 of the EAC are provided for in this FAHMFP. The monitoring will provide information that can be used to assess the effectiveness of the mitigation measures described in the Fisheries and Aquatic Habitat Management Plan.
EAC 07	The Fisheries and Aquatic Habitat Monitoring and Follow-up Program must be developed by a QEP.	Completed	In Compliance	Section 7.0 of the FAHMFP lists the QEPs who prepared the program.
EAC 07	The Program must include monitoring during construction for at least the following: · Effectiveness of standard mitigation measures for reducing sedimentation and fish stranding in the construction headpond and proximal reach of the river downstream of the dam.	Ongoing	In Compliance	These requirements are addressed in Mon-3 Peace River Physical Habitat Monitoring and Follow-up Program, and Mon-12 Site C Fish Stranding Monitoring Program, which are included in the FAHMFP as Appendices C and M, respectively. Data collection/monitoring for Mon-3 is scheduled to occur in future years. Monitoring of fish stranding sites is ongoing for Mon-12, the fish stranding monitoring program.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 07	<ul style="list-style-type: none"> · Accuracy of predictions about physical changes to habitat in the reservoir area during the development and operation of the construction headpond during the diversion stage of the Project. 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. This requirement is addressed in Mon-3 Peace River Physical Habitat Monitoring Program, which is included as Appendix C of the FAHMFP. Data collection/monitoring for Mon-3 is scheduled to occur in future years.
EAC 07	<ul style="list-style-type: none"> · Documenting, at an appropriate scale, spatial and temporal changes occurring in physical environmental conditions resulting from headpond hydrology, and in localized areas in relation to the effects of construction activities and mitigation procedures. 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. This requirement is addressed in Mon-3 Peace River Physical Habitat Monitoring Program, which is included as Appendix C of the FAHMFP. Data collection/monitoring for Mon-3 is scheduled to occur in future years.
EAC 07	<ul style="list-style-type: none"> · Effectiveness of mitigation measures for management of predicted effects of sediment and fish stranding, and provide information required to adjust the mitigation program to reduce unforeseen adverse effects, as required. 	Ongoing	In Compliance	These requirements are addressed in Mon-3 Peace River Physical Habitat Monitoring, and Mon-12 Site C Fish Stranding Monitoring, included as Appendices C and M of the FAHMFP. Data collection/monitoring for Mon-3 is scheduled to occur in future years. Monitoring of fish stranding sites is ongoing for Mon-12, the fish stranding monitoring program.
EAC 07	<ul style="list-style-type: none"> · Total dissolved gas. 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. This requirement is addressed in Mon-11 Site C Total Dissolved Gas Monitoring Program, which is included as Appendix L of the FAHMFP. Data collection/monitoring for Mon-11 is scheduled to occur in future years.
EAC 07	<p>The Fisheries and Aquatic Habitat Monitoring and Follow-up Program must include monitoring during operations for a period of twenty years for at least the following:</p> <ul style="list-style-type: none"> · Continued effectiveness of environmental protection measures undertaken during construction to mitigate effects on fish and fish habitat. 	Ongoing	In Compliance	This requirement will be met through implementation of the Site C FAHMFP as described in FAHMFP Section 6 and the supporting monitoring plans, which are included as Appendices A - Q of the FAHMFP.
EAC 07	<ul style="list-style-type: none"> · Total dissolved gas. 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. This requirement is addressed in Mon-11 Site C Total Dissolved Gas Monitoring Program, which is included as Appendix L of the FAHMFP. Data collection/monitoring for Mon-11 is scheduled to occur in future years.

Annual Progress Report No. 4
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Appendix G

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 07	Meeting monitoring commitments as per the Fish Passage Management Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. This requirement is addressed in: 1) Mon-13 Site C Fishway Effectiveness Monitoring; 2) Mon-14 Site C Trap and Haul Fish Release Location Monitoring Program; and 3) Mon-15 Site C Small Fish Species Translocation Monitoring Program. These monitoring plans are included as Appendices N – P of the FAHMFP. Data collection/monitoring for Mon-13, Mon-14, and Mon-15 are scheduled to occur in future years.
EAC 07	Implement on-site monitoring of fish habitat areas in the side channel and mainstream margins, resulting from water fluctuations.	Ongoing	In Compliance	These requirements are addressed in Mon-3 Peace River Physical Habitat Monitoring, and Mon-12 Site C Fish Stranding Monitoring, included as Appendices C and M of the FAHMFP. Data collection/monitoring for Mon-3 is scheduled to occur in future years. Monitoring of fish stranding sites is ongoing for Mon-12, the fish stranding monitoring program.
EAC 07	Fish and fish habitat productivity, for reservoir, reservoir tributaries, and for downstream Peace River.	Ongoing	In Compliance	This requirement is addressed in the following programs (status in parenthesis): 1) Mon-1a Site C Reservoir Fish Community Monitoring Program (scheduled to occur in future years) 2) Mon-1b Site C Reservoir Tributaries Fish Community and Spawning Monitoring Program (Peace River Bull Trout Spawning Assessment is ongoing; Site C Reservoir Tributaries fish population indexing survey has been completed) 3) Mon-2 Peace River Fish Community Monitoring Program (ongoing) 4) Mon-3 Peace River Physical Habitat Monitoring Program (scheduled to occur in future years) 5) Mon-4 Site C Reservoir Riparian Vegetation Monitoring Program (scheduled to occur in future years) 6) Mon-5 Peace River Riparian Vegetation Monitoring Program (scheduled to occur in future years) 7) Mon-6 Site C Reservoir Fish Food Organisms Monitoring Program (scheduled to occur in future years) 8) Mon-7 Peace River Fish Food Organisms Monitoring Program (scheduled to occur in future years) 9) Mon-8 Site C Reservoir Water and Sediment Quality Monitoring Program (general water and sediment quality monitoring, temperature monitoring, and turbidity monitoring are ongoing). 10) Mon-9 Peace River Water and Sediment Quality Monitoring Program (scheduled to occur in future years) The monitoring plans are included as Appendices A – J of the Fisheries and Aquatic Habitat Monitoring and Follow-up Program.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 07	The Fisheries and Aquatic Habitat Monitoring and Follow-up Program must outline a procedure for evaluating future mitigation and compensation options after reservoir development and follow-up monitoring, as well as procedures for how compensation options that are technically and economically feasible will be implemented.	Completed	In Compliance	This requirement is addressed in Section 7.0 of the FAHMFP (Framework to Implement Future Compensation Actions).
EAC 07	The Fisheries and Aquatic Habitat Monitoring and Follow-up Program reporting must occur at least annually during construction and operations beginning 180 days following commencement of construction and operations phases, or in accordance with the applicable Fisheries Act authorization(s).	Ongoing	In Compliance	BC Hydro submits Annual Reports for the FAHMFP on March 1 each year, with the first report submitted March 1, 2017, and the most recent on March 1, 2019. These reports describe the status of each component of the FAHMFP.
EAC 07	The EAC Holder must provide this draft Fisheries and Aquatic Habitat Monitoring and Follow-up Program to FLNR, MOE and Aboriginal Groups for review within 90 days following the commencement of the construction and operations phases.	Completed	In Compliance	The draft FAHMFP was submitted to regulatory agencies and Indigenous groups on June 1, 2015.
EAC 07	The EAC Holder must file the final Fisheries and Aquatic Habitat Monitoring and Follow-up Program with EAO, FLN, MOE and Aboriginal Groups within 150 days following the commencement of the construction and operations phases.	Completed	In Compliance	The final FAHMFP was submitted to regulatory agencies and Indigenous groups on December 22, 2015.
EAC 07	The EAC Holder must develop, implement and adhere to the final Fisheries and Aquatic Habitat Monitoring and Follow-up Program, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	<p>BC Hydro submitted the 2018 Annual Report for the FAHMFP on March 1, 2019. The report describes the status of each component of the FAHMFP.</p> <p>All of the monitoring programs that were scheduled to occur in 2018 were implemented. In support of meeting Fish and Fish Habitat conditions, a Fisheries and Aquatic Habitat Mitigation and Monitoring Technical Committee has been established with MOE, FLNR and Fisheries and Oceans Canada (DFO) staff to:</p> <ul style="list-style-type: none"> - review the approach and outcome of mitigation and monitoring plans, provide technical recommendations to BC Hydro and regulatory agencies, and endorse relevant plans, - provide technical advice during plan implementation, - provide recommendations for adaptive management where needed, and - provide a mechanism to resolve areas of disagreement on technical or policy matters.

No.	EAC Condition	Implementation Status	Compliance Status	Description
VEGETATION AND ECOLOGICAL COMMUNITIES				
EAC 08	The EAC Holder must develop a Soil Management, Site Restoration, and Re-vegetation Plan to effectively manage disturbed soils, and to reclaim and revegetate disturbed construction areas to a safe and environmentally acceptable condition.	Completed	In Compliance	<p>The Soil Management, Site Restoration, and Re-vegetation Plan is described in Section 4.12 of the CEMP for the Project. The final CEMP (Revision 1) was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015.</p> <p>Revision 2 of the CEMP was issued in February 2016, Revision 4 in July 2016 (Revision 3 was not formally published). In addition to adding new CEMP requirements regarding soil management and site restoration, in July 2017 BC Hydro retained a new QEP responsible for site restoration and invasive weed management, based out of the Construction Office at site.</p>
EAC 08	The Soil Management, Site Restoration, and Re-vegetation Plan must be developed by a QEP.	Completed	In Compliance	<p>The Soil Management, Site Restoration, and Re-vegetation Plan is described in Section 4.12 of the Construction Environmental Management Plan (CEMP). Section 6.0 of the CEMP lists the QEPs who prepared the plan. In 2016, the Soil Management, Site Restoration, and Re-vegetation Plan was reviewed and revised by the VWTC composed of members from the MOE, the MFLNRO and Canadian Wildlife Services.</p> <p>In July 2017 BC Hydro retained a new QEP responsible for site restoration and invasive weed management, based out of the Construction Office at site.</p>
EAC 08	<p>The Soil Management, Site Restoration, and Re-vegetation Plan must include at least the following:</p> <ul style="list-style-type: none"> · Soil storage and handling measures that will maximize native soil use in restoration efforts, and manage incidental introduction and spread of invasive species. 	Ongoing	In Compliance	<p>Section 4.12 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. BC Hydro also developed the Invasive Weed Mitigation and Adaptive Management Plan (Rev 6 August 2017) and it has been issued to contractors to incorporate into their plans.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 08	Manage run-off so that it is directed around soil stockpiles and areas where excavation, spoil placement, and staging activities occur.	Ongoing	In Compliance	Section 4.3 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 08	Progressive closure and reclamation of any temporary disturbance. Disturbed sites are replanted within one year with ground cover, shrubs, or trees that are regionally appropriate once erosion concerns have been addressed.	Ongoing	In Compliance	Section 4.12 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 08	Identify native seed mixes used for site restoration and revegetation purposes.	Ongoing	In Compliance	Appendix H of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 08	Identify traditional use plants for revegetation purposes, in consultation with Aboriginal Groups.	Ongoing	In Compliance	Plant species of high traditional Indigenous value are being identified (per EAC 25) and will be included in the mix of species considered for re-vegetation activities conducted under the Soil Management, Site Restoration and Revegetation Plan (Appendix H of the CEMP). See EAC conditions 25 and 26 below.
EAC 08	The EAC Holder must provide this draft Plan to FLNR, MOE, Aboriginal Groups, Peace River Regional District, City of Fort St. John and the District of Hudson's Hope for review a minimum of 90 days prior to the commencement of construction.			The Soil Management Site Restoration, and Re-vegetation Plan is described in Section 4.12 of the CEMP for the Project. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 08	The EAC Holder must file the final Soil Management, Site Restoration, and Re-vegetation Plan with EAO, FLNR, MOE, Aboriginal Groups, Peace River Regional District, City of Fort St. John and the District of Hudson's Hope a minimum of 30 days prior to the commencement of construction.			The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 08	The EAC Holder must develop, implement and adhere to the final Soil Management, Site Restoration, and Re-vegetation Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Appendix H of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 09	The EAC Holder must develop a Vegetation and Invasive Plant Management Plan to protect ecosystems, plant habitats, plant communities, and vegetation with components applicable to the construction phase.	Ongoing	In Compliance	Section 4.15 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 09	The Vegetation and Invasive Plant Management Plan must be developed by a QEP.	Completed	In Compliance	<p>The Vegetation and Invasive Plant Management Plan is described in Section 4.15 of the Construction Environmental Management Plan (CEMP). Section 6.0 of the CEMP lists the QPs who prepared the plan.</p> <p>In addition to improving the CEMP requirements regarding soil management and site restoration, in July 2017 BC Hydro retained a new staff QEP person responsible for site restoration and invasive weed management, based out of the Construction Office at site.</p>
EAC 09	The Vegetation and Invasive Plant Management Plan must include at least the following: Invasive Species · Surveys of existing invasive species populations prior to construction.	Completed	In Compliance	Surveys of existing invasive species populations are required as part of all EPPs, and therefore before all works that may involve disturbing soil or vegetation. BC Hydro has retained a contractor to complete invasive species management across all areas of the project. This contractor started in 2017 and completed the first full season during construction in 2018.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 09	Invasive plant control measures to manage established invasive species populations and to prevent invasive species establishment.	Completed	In Compliance	<p>Section 4.15 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.</p> <p>The Invasive Weed Mitigation and Adaptive Management Plan (IWMAMP) includes herbicide based invasive plant management in the dam site area, and the expansion of the vehicle cleanliness program, including the use of vehicle inspection forms. Rev 6 of the IWMAMP was completed and has been rolled out to some contractors.</p> <p>To date, contractors have completed the following: invasive plant removal through hand pulling, on-going inventories of invasive plant locations, extensive hydroseeding of exposed slopes across the Project area, regular vehicle inspections and cleaning through various methods to ensure vehicles are clean and free of dirt and invasive plants when transitioning between sites and into the Project area. BC Hydro implemented an Invasive Species Management Contractor that completed a control program across the dam site in September and October 2017. That contractor has continued into 2018 across all areas of the project and this will continue for the remainder of the project lifespan.</p> <p>The Main Civil Works contractor has retained an invasive plant species specialist to advise on invasive plant species management. BC Hydro installed two temporary wash stations at Gate A and Gate B in July 2017. The temporary wash stations were decommissioned at the onset of winter conditions in 2017 and procurement was completed for a permanent wash station which will be installed in spring 2019.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 09	<p>Rare Plants and Sensitive Ecosystems</p> <p>The EAC Holder must expand its modelling, including completing field work, to improve identification of rare and sensitive plant communities and aid in delineation of habitats that may require extra care, 90 days prior to any Project activities that may affect these rare or sensitive plant communities</p>	Completed	In Compliance	Field surveys in support of expanding modelling to improve the identification of rare and sensitive plant communities were completed in 2015. The results of these field surveys are described in the 2015 Annual Report for the VWMMP, provided to agencies on January 22, 2016.
EAC 09	<p>The EAC Holder must, with the use of a QEP, complete an inventory in areas not already surveyed and use rare plant location information as inputs to final design of access roads and transmission lines.</p>	Ongoing	In Compliance	Field surveys for rare plants along access roads and the Highway 29 realignment corridors not previously surveyed were conducted in 2018. The complete 2018 program report will be provided in the 2018 Annual Report for the VWMMP, which will be provided to agencies by 31 March 2019.
EAC 09	<p>These pre- construction surveys must target rare plants as defined in Section 13.2.2 of the EIS —including vascular plants, mosses, and lichens.</p>	Ongoing	In Compliance	Pre-construction surveys are targeting rare plants as defined in Section 13.2.2 of the EIS. The complete 2018 program report will be provided in the 2018 Annual Report for the VWMMP, which will be provided to agencies by 31 March 2019.
EAC 09	<p>The EAC Holder must create and maintain a spatial database of known rare plant occurrences in the vicinity of Project components that must be searched to avoid effects to rare plants during construction activities.</p>	Ongoing	In Compliance	A spatial database of rare plant occurrences in the vicinity of Project Components is captured on the Environmental Features Map. The Environmental Features Map was updated with the 2018 rare plant data on 20 August 2018 and provided to contractors for use in planning.
EAC 09	<p>The database must be updated as new information becomes available and any findings of new rare plant species occurrences must be submitted to Environment Canada and MOE using provincial data collection standards.</p>	Ongoing	In Compliance	A spatial database of rare plant occurrences in the vicinity of Project Components is captured on the Environmental Features Map. The Environmental Features Map was updated with the 2018 rare plant data in August 2018 and provided to contractors for use in planning. The 2018 rare plant data were submitted to the Program Botanist at the BC Conservation Data Center, MOE on 11 January, 2019.
EAC 09	<p>The EAC Holder must implement construction methods to reduce the impact to rare plants, maximize use of existing access corridors, and construct transmission towers and temporary roads away from wetlands and known rare plant occurrences.</p>	Ongoing	In Compliance	BC Hydro finalized the layout of access roads and laydown areas to avoid as many rare plant occurrences as feasible. In 2018, "no disturbance" buffers were established around rare plant occurrences located next to a planned access road needed for reservoir clearing. These buffers were established to avoid impacting rare plant occurrences.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 09	Protect known occurrences of Tufa seeps, wetlands and rare plants located adjacent to construction areas. Install signage and flagging where necessary, as determined by the QEP, to indicate the boundaries of the exclusion area.			Tufa seeps are present on the south bank of the eastern reservoir, where clearing is planned to occur in 2019. Signage and flagging will be installed to indicate boundaries of any necessary exclusion area, as appropriate. A Tufa Seep will be partially impacted due to the construction of the Hudson's Hope shoreline protection berm, which is planned to occur 2020-2022. Impacts will be reduced through design and fencing will be installed to protect areas of the tufa seep that can be avoided.
EAC 09	The EAC Holder will engage the services of a Rare Plant Botanist during construction to design and implement an experimental rare plant translocation program in consultation with MOE using the BC MOE's Guidelines for Translocation of Plant Species at Risk in BC (Maslovat, 2009).	Ongoing	In Compliance	BC Hydro engaged the services of rare plant biologists to design the rare plant translocation program. Development of the program began in 2016 following the steps outlined in the VWMMP (June 5, 2015) and in "Guidelines for Translocation of Plant Species at Risk in British Columbia", by C. Maslovat, C. 2009. The 2018 Annual Report for the VWMMP, which will be submitted to regulatory agencies and Indigenous groups by March 31, 2019, outlines the status of the program as of December 2018.
EAC 09	The EAC Holder must provide this draft Vegetation and Invasive Plant Management Plan to Environment Canada, FLNR, MOE, and Aboriginal Groups for review a minimum of 90 days prior to construction and operation phases.	Completed	In Compliance	The Vegetation and Invasive Plant Management Plan is described in Section 8.1 of the VWMMP. The draft and first revision of the VWMMP was submitted to regulatory agencies and Indigenous groups on October 17, 2014, and April 7, 2015, respectively.
EAC 09	The EAC Holder must file the final Vegetation and Invasive Plant Management Plan with EAO, Environment Canada, FLNR, MOE, and Aboriginal Groups, a minimum of 30 days prior to construction and operation phases.	Completed	In Compliance	The final Vegetation and Invasive Plant Management Plan was submitted to regulatory agencies and Indigenous groups on June 5, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 09	The EAC Holder must develop, implement and adhere to the final Vegetation and Invasive Plant Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	<p>Section 4.15 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.</p> <p>The IWMAMP includes herbicide based invasive plant management in the dam site area, and the expansion of the vehicle cleanliness program, including the use of vehicle and equipment inspection forms. Rev 6 of the IWMAMP was completed and rolled out to most contractors for the project.</p> <p>To date, contractors have completed the following: invasive plant removal through hand pulling, on-going inventories of invasive plant locations, extensive hydroseeding of exposed slopes across the Project area, regular vehicle inspections and cleaning through various methods to ensure vehicles are clean and free of dirt and invasive plants when transitioning between sites and into the Project area. BC Hydro implemented an Invasive Species Management Contractor that completed a control program across the dam site in September and October 2017 and this has continued through 2018 and is scheduled to continue until the end of the project.</p> <p>The Main Civil Works contractor has retained an invasive plant species specialist to advise on invasive plant species management. BC Hydro installed two temporary wash stations at Gate A and Gate B in July 2017. The temporary wash stations were decommissioned at the onset of winter conditions in 2017 and procurement was completed for a permanent wash station which will be installed in spring 2019.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 10	The EAC Holder must fund or undertake directly with the use of a Rare Plant Botanist the following, during construction: · Targeted surveys in the RAA (as defined in the amended EIS) to identify occurrences of the 18 directly affected rare plant species (as defined in the amended EIS), and rare plant species identified by the MOEs Conservation Framework requiring additional inventories.	Ongoing	In Compliance	The requirement for targeted surveys in the Regional Assessment Area (RAA) is addressed in Section 7.4.7 Part B Supplemental Regional Rare Plant Surveys (see also S. 8.2.2) of the VWMMP. Targeted surveys in the RAA began in 2016 and were completed in 2017. The final report of the targeted rare plant surveys in the RAA was included in the 2017 Annual Report for the VWMMP, which was submitted to regulatory agencies and Indigenous groups in March, 2018.
EAC 10	· A study focused on clarifying the taxonomy of Ochroleucus bladderwort (<i>Utricularia ochroleuca</i>), including field, herbaria, and genetic work in consultation with FLNR and the MOE (BC Conservation Data Centre).	Completed	In Compliance	On March 22, 2016, BC Hydro submitted a letter to the Conservation Data Centre indicating that the taxonomy of Ochroleucus bladderwort had been completed by the BC MOE, and therefore no further work was required by BC Hydro. On March 24, 2016, the Conservation Data Centre confirmed the same understanding. Based on this information no further work is planned.
EAC 10	The EAC Holder must provide FLNR and MOE (BC Conservation Data Centre) with the findings and analysis of results from the surveys and taxonomic study.	Completed	In Compliance	Results of the targeted surveys are provided to FLNR and MOE in the 2017 Annual Report for the VWMMP. The 2017 rare plant data were submitted to the Program Botanist at the BC Conservation Data Center, MOE on 2 November 2017 and 6 February 2018. As noted above, no further work is required on taxonomy of Ochroleucus bladderwort.
EAC 11	The EAC Holder must compensate for the loss of rare and sensitive habitats and protect occurrences of rare plants by developing, or funding the development and implementation of a compensation program, during construction, that includes:	Ongoing	In Compliance	BC Hydro finalized its experimental rare plant translocation program in early 2018. This program will enhance habitat by increasing the density of rare plants in suitable habitat, using propagules that were salvaged from all areas that will be impacted by the Project. Work to salvage rare plants under this program occurred in 2018.
EAC 11	· Assistance (financial or in-kind) to the managing organization of suitable habitat enhancement projects in the RAA (RAA as defined in the amended EIS).	Ongoing	In Compliance	Habitat enhancement activities to compensate for the loss of rare and sensitive habitats and for protecting occurrences of rare plants are being conducted through Ducks Unlimited for wetland compensation activities and Ecologic Consultants through the Saulteau-EBA Environmental Services Joint Venture for the Rare Plant Translocation Program.
EAC 11	· Direct purchase of lands in the RAA and manage these lands and suitable existing properties owned by the EAC Holder to enhance or retain rare plant values where opportunities exist.	Ongoing	In Compliance	In 2014 BC Hydro purchased the Marl Fen property, located outside Hudson's Hope. This property supports several rare plant species. This property is being managed to maintain rare plants along with other wildlife and vegetation values. Results of surveys documenting species that are using the property are provided in the 2015 Annual Reports for the VWMMP.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 11	The EAC Holder must engage with FLNR, MOE and Aboriginal Groups with regard to the development of the compensation program.	Ongoing	In Compliance	<p>The compensation plan is described in the VWMMP, Section 7.4.4 Part D. The draft and first revision of the VWMMP was submitted to regulatory agencies and Indigenous groups on October 17, 2014, and April 7, 2015, respectively. The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.</p> <p>Consultation is ongoing. An Environmental Forum was held in Fort St. John on November 13, 2018 to discuss ongoing aspects of the Rare Plant Translocation Program and the Wetland Compensation Program with interested Indigenous groups. Indigenous groups have also been asked for input regarding potential wetland compensation opportunities.</p>
EAC 12	The EAC Holder must develop a Wetland Mitigation and Compensation Plan.	Ongoing	In Compliance	The Wetland Mitigation and Compensation Plan is described in Section 7.3 (see also Section 8.4) of the VWMMP. Details of the Wetland Mitigation and Compensation Plan continue to be developed as wetland enhancement projects are identified and implemented in the Peace Region.
EAC 12	The Wetland Mitigation and Compensation Plan must include an assessment of wetland function lost as a result of the Project that is important to migratory birds and species at risk (wildlife and plants).	Ongoing	In Compliance	Drafts of the assessment of wetland function were provided in the 2015 and 2016 Annual Report for the VWMMP. A revised assessment of wetland function is provided in the 2018 Annual Report for the VWMMP.
EAC 12	The Wetland Mitigation and Compensation Plan must be developed by a QEP with experience in wetland enhancement, maintenance and development.	Ongoing	In Compliance	The Wetland Mitigation and Compensation Plan is described in Section 7.3 (see also Section 8.4) of the VWMMP. Section 2.3 of the Plan lists the QPs who prepared the plan.
EAC 12	<p>The Wetland Mitigation and Compensation Plan must include at least the following:</p> <ul style="list-style-type: none"> · Information on location, size and type of wetlands affected by the Project; 	Ongoing	In Compliance	<p>Data on wetland location, size and type gathered during baseline surveys are summarized in Section 7.3.3 of the VWMMP.</p> <p>To gather additional site specific data on wetlands within the Project footprint, BC Hydro, in cooperation with Ducks Unlimited, has developed a wetland monitoring plan as a component of the assessment of wetland function. Wetland monitoring has been occurring in various aspects of the Local Assessment Area (as defined in the Project's Environmental Impact Statement) prior to and during construction, but this monitoring plan will provide additional structure to identify and fill key information gaps needed to better understand Project impacts to wetlands and to help inform the determination of appropriate compensation. The wetland monitoring plan was implemented in Spring of 2018.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 12	· If roads cannot avoid wetlands, culverts will be installed under access roads to maintain hydrological balance, and sedimentation barriers will be installed;	Ongoing	In Compliance	Culverts are installed under access roads where necessary to maintain hydrological balance, and sedimentation barriers installed as required, as described in Section 4.4 of the CEMP.
EAC 12	· Stormwater management will be designed to control runoff and direct it away from work areas where excavation, spoil placement, and staging activities occur.	Ongoing	In Compliance	Stormwater across the site is managed by contractors under the Erosion and Sediment Control Program. Management includes installation of sedimentation ponds and interception ditches. Interception ditches capture and divert stormwater away from construction areas into the sedimentation ponds. Water from the sedimentation ponds is discharged into surrounding environment.
EAC 12	· Develop, with the assistance of a hydrologist, site-specific measures prior to construction to reduce changes to the existing hydrologic balance and wetland function during construction of the Jackfish Lake Road and Project access roads and transmission line.	Ongoing	In Compliance	BC Hydro has engaged a forestry consultant to design access roads and clearing prescriptions along the transmission line. A hydrologist on staff with the forestry consultant has reviewed the design to ensure that the hydrology of wetlands along the transmission line is maintained. Due to a voluntary suspension of work in 2018 as a result of an injunction application by the West Moberly First Nations, several sections of the transmission line were not cleared nor were access roads built within these areas. This clearing and access road construction resumed when the injunction was dismissed by the BC Supreme Court in October 2018. The balance of access road construction works are expected to be complete by October 2019. The design and construction of these roads continues to involve input from the consultant hydrologist to ensure compliance with this condition.
EAC 12	· All activities that involve potentially harmful or toxic substances, such as oil, fuel, antifreeze, and concrete, must follow approved work practices and consider the provincial BMP guidebook Develop with Care (BC Ministry of Environment 2012 or as amended from time to time).	Ongoing	In Compliance	Section 4.13 of the CEMP requires contractors to follow approved work practices and BMPs with regard to potentially harmful or toxic substances. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 12	A defined mitigation hierarchy that prioritizes mitigation actions to be undertaken, including but not limited to: <ul style="list-style-type: none"> o Avoid direct effects where feasible; o Minimize direct effects where avoidance is not feasible; o Maintain or improve hydrology where avoidance is not feasible; o Replace like for like where wetlands will be lost, in terms of functions and compensation in terms of area; o Improve the function of existing wetland habitats; and o Create new wetland habitat 	Ongoing	In Compliance	The CEMP describes how impacts to wetlands are avoided or minimized to the degree feasible, including through the maintenance or improvement of hydrology. In 2016 BC Hydro and Ducks Unlimited initiated the process of identifying wetland mitigation opportunities that could become components of the wetland mitigation plan. To date, BC Hydro has secured 2 properties for wetland compensation and is in the process of identifying compensation opportunities on Crown land to contribute towards fulfilling the plan requirements while also facilitating the current use of lands and resources by Indigenous groups. The construction guidelines for Area A, a new wetland area to be completed as part of the dam site reclamation area, were submitted with the June 5, 2015 VWMMP, and have been incorporated as requirements in the Main Civil Works contract covering this area. Creation of this new wetland is planned to occur toward the end of the 8 year construction period, and will contribute toward wetland compensation requirements.
EAC 12	The EAC Holder must monitor construction and operation activities that could cause changes in wetland functions.	Ongoing	In Compliance	BC Hydro requires its contractors to describe in their EPPs construction activities that could cause changes in wetland functions, including how those construction activities will be monitored and at what frequency. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 12	The EAC Holder must provide this draft Wetland Mitigation and Compensation Plan to Environment Canada, FLNR, MOE, Aboriginal Groups, Peace River Regional District and District of Hudson's Hope for review a minimum of 90 days prior to any activity affecting the wetlands.	Completed	In Compliance	The draft and first revision of the VWMMP was submitted to regulatory agencies and Indigenous groups on October 17, 2014, and April 7, 2015, respectively.
EAC 12	The EAC Holder must file the final Wetland Mitigation and Compensation Plan with EAO, Environment Canada, FLNR, MOE, Peace River Regional District, District of Hudson's Hope and Aboriginal Groups, a minimum of 30 days prior to any activity affecting the wetlands.	Completed	In Compliance	The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 12	The EAC Holder must develop, implement and adhere to the final Wetland Mitigation and Compensation Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro has partnered with Ducks Unlimited and procured property to start fulfilling the Plan's wetland compensation requirements, with wetland compensation activities ongoing. In addition to work on private lands, BC Hydro and Ducks Unlimited are in the process of identifying wetland compensation opportunities on Crown land to contribute towards fulfilling wetland compensation requirements while also facilitating the current use of lands and resources by Indigenous groups.
EAC 13	The EAC Holder must develop the Vegetation Clearing and Debris Management Plan.	Completed	In Compliance	Revision 1 of the VCDMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.
EAC 13	The Vegetation Clearing and Debris Management Plan must be developed by a QEP.	Completed	In Compliance	Section 11.0 of the VCDMP lists the QPs who prepared the plan.
EAC 13	The Vegetation Clearing and Debris Management Plan must ensure that clearing would be conducted in the approved Project Activity Zone only,	Ongoing	In Compliance	BC Hydro prepares the clearing plans for all work on the Site C Project. As part of this plan preparation, BC Hydro ensures that clearing boundaries are within the Project activity Zone.
EAC 13	And construction would be monitored by the QEP to prevent any unnecessary clearing.	Ongoing	In Compliance	BC Hydro requires its contractors to prepare EPPs that include an explanation of environmental monitoring effort and that this monitoring occur by a QEP or under the supervision of a QEP.
EAC 13	Specific to the transmission line component of the Project: · The EAC Holder must not grub the right of way with the exception of transmission tower foundation pads, temporary work spaces and access roads.	Ongoing	In Compliance	BC Hydro requires its transmission line clearing and construction contractors to describe in their EPPs construction activities that comply with this condition's requirement. These EPPs are reviewed and accepted by BC Hydro and BC Hydro inspects the contractors for compliance with their EPPs. No observations of non-compliance with this condition were recorded during 2018 inspections.
EAC 13	· Where conductor clearance allows, the EAC Holder must not remove riparian vegetation along watercourses or waterbodies crossed by the transmission corridor.	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition. A special prescription is in place for transmission line clearing that requires retention of low growing willow species that are not expected to grow into the overhead conductor's limits of approach.
EAC 13	To reduce erosion along steep or unstable slopes, the EAC Holder must apply best management practices for reservoir clearing along riparian areas and watercourses.	Ongoing	In Compliance	The Riparian Vegetation Management Area (RVMA) buffer is established 15m back from the Ordinary High Water Mark (OHWM). Terrain Stability Field Assessments (TSFAs) are done by a terrain specialist to ensure any clearing on or near Terrain Class V (high likelihood of landslide initiation following timber harvesting or road construction) areas will not increase slope instability. Areas of potential instability will be removed until a TSFA can be completed. Steep areas will be handfelled (fall and leave) where safe to do so. Areas deemed unsafe or unstable will be left standing until inundation occurs. Boundary limits for clearing activities are flagged (orange ribbon) in the field.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 13	Practices must include but not limited to the following: Retention of all trees on steep, unstable slopes that would be highly susceptible to landslides if the vegetation was removed.	Ongoing	In Compliance	Clearing plans for the dam site area Moberly River drainage and eastern reservoir have all had extensive Terrain Stability Field Assessments (TSFA) completed. All layouts have incorporated the recommendations of a geotechnical specialist and a spreadsheet recording recommendations and how they have been addressed in the field (with associated map references) has been developed by our forestry consultant. BC Hydro has also been provided the clearing plans and TSFA reports to review as the owner's geotechnical specialists.
EAC 13	Retention of non-merchantable trees and vegetation in riparian areas within a 15 m buffer from the Ordinary High Water Mark.	Ongoing	In Compliance	Clearing prescriptions include descriptions on how Riparian Vegetation Management Area clearing is to be conducted and the level of Riparian Vegetation Management Area (RVMA) retention within each treatment unit (TU). The RVMA buffer is flagged in the field, 15m back from the Ordinary High Water Mark (OHWM) (as per the Approved Work Practices for Managing Riparian Vegetation Guide, 26 Oct 2003).
EAC 13	Merchantable trees and vegetation that may protrude above 455 m elevation may still be removed using clearing practices to maintain a 15 m machine-free zone from the OHWM. ²	Ongoing	In Compliance	<p>During the reporting period, the Vegetation Clearing and Debris Management Plan required that the Contractor maintain a 15 m machine free zone adjacent to watercourses during reservoir clearing. BC Hydro audited compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.</p> <p>Please refer to footnote below regarding the amendment to this Condition in February 2019, allowing for the selective use of mechanical clearing in riparian zones where safety prohibits manual falling. Future compliance reports will describe compliance with the condition as revised in February 2019.</p>

² BC Hydro received an Amendment to Condition No.13 of the EAC #14-02 on February 12, 2019. The condition now reads "Merchantable trees and vegetation that may protrude above 455 m elevation may still be removed using clearing practices to maintain a 15 m machine-free zone from the OHWM **except where worker safety prohibits manual tree falling and vegetation removal methods and as addressed in a site-specific prescription prepared and endorsed by a QEP. The rationale for the safety exemption must be documented in the prescription.**" As this amendment was received outside of the reporting window of April 1, 2018 to December 31, 2018 it is not included in this report. Compliance with this amendment will be documented in the next Annual EAC Compliance Report to be submitted to the EAO by March 31, 2020. Note that the Construction Environmental Management Plan and Vegetation Clearing and Debris Management Plan were updated to reflect this amendment (as well as other changes), and submitted to regulators on February 15, 2019. Compliance with these revised plans will be described in the next Annual EAC Compliance Report to be submitted to the EAO by March 31, 2020.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 13	The EAC Holder must provide this draft Vegetation Clearing and Debris Management Plan to Environment Canada, FLNR, MOE, Aboriginal Groups, Peace River Regional District and District of Hudson's Hope for review a minimum of 90 days prior to commencement of construction.	Completed	In Compliance	The draft VCDMP was submitted to regulatory agencies, governments, and Indigenous groups October 17, 2014.
EAC 13	The EAC Holder must file the final Vegetation Clearing and Debris Management Plan with EAO, Environment Canada, FLNR, MOE, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups, a minimum of 30 days prior to commencement of construction.	Completed	In Compliance	The final VCDMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015, respectively.
EAC 13	The EAC Holder must develop, implement and adhere to the final Vegetation Clearing and Debris Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The VCDMP is being implemented as planned. Please refer to footnote below regarding revisions to the VCDMP to be described in the next EAC Compliance Report reporting period.
EAC 14	The EAC Holder must develop a Vegetation and Ecological Communities Monitoring and Follow-up Program for the construction phase and first 10 years of the operations phase.	Completed	In Compliance	This requirement is addressed in Section 7.4.4, Part C of the VWMMP.
EAC 14	The Vegetation and Ecological Communities Monitoring and Follow-up Program must be developed by a QEP.	Completed	In Compliance	The Vegetation and Ecological Communities Monitoring and Follow-up Program is described in Section 7.4.4, Part C of the VWMMP. Section 2.3 of the VWMMP lists the QPs who prepared the plan.
EAC 14	The Vegetation and Ecological Communities Monitoring and Follow-up Program must include at least the following: <ul style="list-style-type: none"> · Definition of the study design for the rare plant translocation program (see condition 9). 	Ongoing	In Compliance	Development of the Rare Plant Translocation program began in 2016. The 2018 Annual Report for the VWMMP, to be submitted by March 31, 2019, provides an update on the status of the translocation program.
EAC 14	· Plan for following-up monitoring of any translocation sites to assess the survival and health of translocated rare plant species, under the supervision of a Rare Plant Botanist.	Ongoing	In Compliance	Development of the Rare Plant Translocation program began in 2016. The 2018 Annual Report for the VWMMP, to be submitted by March 31, 2019, provides an update on the status of the translocation program.

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January 2019 to December 2019
Appendix G

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 14	Measurement criteria, including vegetation growth, persistence of rare plants and establishment / spread of invasive plant species, and associated monitoring to document the effectiveness of habitat enhancement and possible compensation programs.	Ongoing	In Compliance	The rare plant translocation monitoring program will document a suite of measurable parameters designed to evaluate the efficacy of translocation methods and management in relation to the stated objectives of the program. The monitoring program is in development and will not be required until after planting of propagated rare translocated plants. In 2018, the rare plant translocation program continued to collect propagules (seeds, whole plants) and identify suitable planting sites, while beginning ex-situ propagation and translocation.
EAC 14	The Vegetation and Ecological Communities Monitoring and Follow-up Program reporting must occur annually during construction and the first 10 years of operations, beginning 180 days following commencement of construction.	Ongoing	In Compliance	BC Hydro provided the 2015 Annual Report on the implementation of the VWMMP on January 22, 2016. The 2016 Annual Report for the VWMMP was submitted to regulatory agencies and Indigenous groups on March 31, 2017. The 2017 Annual Report for the VWMMP was submitted on March 29, 2018. The 2018 Annual Report will be submitted by March 31, 2019.
EAC 14	The EAC Holder must provide this draft Vegetation and Ecological Communities Monitoring and Follow-up Program to Environment Canada, FLNR, MOE, Peace River Regional District, City of Fort St. John and Aboriginal Groups for review within 90 days after the commencement of construction.	Completed	In Compliance	This requirement is addressed in Section 7.4.4, Part C of the VWMMP. The draft and first revision of the VWMMP was submitted to regulatory agencies and Indigenous groups on October 17, 2014, and April 7, 2015, respectively. The final VWMMP was submitted to the same recipients on June 5, 2015.
EAC 14	The EAC Holder must file the final Vegetation and Ecological Communities Monitoring and Follow-up Program with EAO, Environment Canada, FLNR, MOE, Peace River Regional District, City of Fort St. John, and Aboriginal Groups, within 150 days after commencement of construction.	Completed	In Compliance	The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.
EAC 14	The EAC Holder must develop, implement and adhere to the final Vegetation and Ecological Communities Monitoring and Follow-up Program, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro is adhering to the Vegetation and Ecological Communities Monitoring and Follow-up Program, as shown by activities described in the Annual Report for the VWMMP. The 2018 Annual Report for the VWMMP will be submitted by March 31, 2019.
WILDLIFE RESOURCES				
EAC 15	The EAC Holder must develop a Wildlife Management Plan.	Completed	In Compliance	The Wildlife Management Plan is described in Sections 3.0 and 4.17 of the CEMP and Section 8.6.2 of the VWMMP.
EAC 15	The Wildlife Management Plan must be developed by a QEP.	Completed	In Compliance	The Wildlife Management Plan is described in Sections 3.0 and 4.17 of the CEMP and Section 8.6.2 of the VWMMP. Section 6.0 of the CEMP and Section 2.3 of the VWMMP lists the QEPs who prepared the plans.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 15	The Wildlife Management Plan must include at least the following: · Field work, conducted by a QEP, to verify the modelled results for surveyed species at risk and determine, with specificity and by ecosystem, the habitat lost or fragmented for those species.	Completed	In Compliance	Results of the field work completed to verify the modelled results for surveyed species at risk was included in the 2015 Annual Report for the VWMMP.
EAC 15	The EAC Holder must use these resulting data to inform final Project design and to develop additional mitigation measures, as needed, as part of the Wildlife Management Plan, in consultation with Environment Canada and FLNR.	Completed	In Compliance	Resulting data were used to update the models and the ranking of habitats. BC Hydro is using this information to assess habitat losses and plan for mitigation efforts.
EAC 15	· Measures to avoid, if feasible, constructing in sensitive wildlife habitats. If avoiding sensitive wildlife habitats is not feasible, condition 16 applies.	Ongoing	In Compliance	BC Hydro is avoiding, where feasible, construction in sensitive wildlife habitats. For example, BC Hydro relocated work zones within the Portage Mountain quarry to avoid known bat hibernacula. BC Hydro also implemented buffer zones and no- activity windows to avoid disturbing hibernating bats adjacent to the quarry. Required general measures for mitigating impacts to sensitive wildlife habitat features are described in Section 4.17 of the CEMP.
EAC 15	· If sensitive habitats, such as wetlands, are located immediately adjacent to any work site, buffer zones must be established by a QEP to avoid direct disturbance to these sites.	Ongoing	In Compliance	Section 4.18 of the CEMP requires contractors to identify Restricted Activity and Work Avoidance Zones and the implementation of buffer zones. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 15	· Protocol for the application of construction methods, equipment, material and timing of activities to mitigate adverse effects to wildlife and wildlife habitat.	Ongoing	In Compliance	Section 4.17 of the CEMP describes how requirements for EPPs in minimizing disturbance to wildlife during the construction phase, including conducting works within the least risk timing windows. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 15	· Protocol to ensure that lighting is focused on work sites and away from surrounding areas to manage light pollution and disturbance to wildlife.	Ongoing	In Compliance	The requirement to focus lighting into work areas is included in Section 4.17 of the CEMP. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. Lighting was focused on the work site in all construction locations.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 15	If lighting cannot be directed away from surrounding areas, the EAC Holder must ensure additional mitigation measures are implemented to reduce light pollution, including light shielding.	Ongoing	In Compliance	The requirement to focus lighting into work areas is included in Section 4.17 of the CEMP. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. Lighting was focused on the work site in all construction locations.
EAC 15	A mandatory environmental training program for all workers so that they are informed that hunting in the vicinity of any work site/Project housing site is strictly prohibited for all workers.	Completed	In Compliance	The requirement for all workers to receive environmental training is included in Section 3.0 of the CEMP V4. Section 4.17 of the CEMP V4 clarifies some of the activities that are prohibited and the training that is required: "Project workers shall be prohibited from hunting while on construction sites, Project built roads or worker housing sites, Cleaning game at construction sites Project built roads or worker housing sites. All workers are required to attend both a BC Hydro orientation and a contractor specific orientation(s) prior to starting work on-site. A component of these training sessions is environmental training for workers. Completion of these sessions required prior to the issuance of site access cards."
EAC 15	The EAC Holder must ensure that all workers are familiar with the Wildlife Management Plan.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation EPPs.
EAC 15	The EAC Holder must submit this draft Wildlife Management Plan to Environment Canada, FLNR, MOE and Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The Wildlife Management Plan is described in Section 4.17 of the CEMP and Section 8.6.2 of the VWMMP. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014. The draft and first revision of the VWMMP was submitted to regulatory agencies and Indigenous groups on October 17, 2014, and April 7, 2015, respectively.
EAC 15	The EAC Holder must file the final Wildlife Management Plan with EAO, Environment Canada, FLN, MOE and Aboriginal Groups, a minimum of 30 days prior to commencement of construction.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.
EAC 15	The EAC Holder must develop, implement and adhere to the final Wildlife Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 16	If loss of sensitive wildlife habitat or important wildlife areas cannot be avoided through Project design or otherwise mitigated, the EAC Holder must implement the following measures, which must be described in the Vegetation and Wildlife Mitigation and Monitoring Plan.	Ongoing	In Compliance	All required measures of EAC condition 16 are identified in the VWMMP. The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.
EAC 16	The Vegetation and Wildlife Mitigation and Monitoring Plan must include the following compensation measures: <ul style="list-style-type: none"> · Compensation options for wetlands must include fish-free areas to manage the effects of fish predation on invertebrate and amphibian eggs and larvae and young birds. 	Ongoing	In Compliance	Section 8.7.2 of the VWMMP sets out the specifications for the new wetland area (Area A of the dam site area), which is to include fish-free areas. Additional compensation options for wetlands, still in development, will also include fish-free areas.
EAC 16	· Mitigation for the loss of snake hibernacula, artificial dens must be included during habitat compensation.	Ongoing	In Compliance	BC Hydro has engaged a contractor to develop and implement construction and monitoring of artificial snake hibernacula. The mitigation and monitoring plan for snakes has been reviewed by the VWTC and was deemed complete in 2018. Installation of snake hibernacula is planned for 2019.
EAC 16	· Management of EAC Holder-owned lands adjacent to the Peace River suitable as breeding habitat for Northern Harrier and Short-eared Owl.	Ongoing	In Compliance	BC Hydro continues to manage three BC Hydro owned properties identified for retention and wildlife management. All three properties provide suitable habitat for non-wetland birds, including the northern harrier and short-eared owl. Surveys in 2016 documented short-eared owl on one property and northern harrier on all three properties.
EAC 16	· Establishment of nest boxes for cavity-nesting waterfowl developed as part of wetland mitigation and compensation plan, and established within riparian vegetation zones established along the reservoir on BC Hydro-owned properties.	Ongoing	In Compliance	The establishment of nest boxes for cavity-nesting waterfowl is addressed in the Section 7.3.6 of the VWMMP (Wetland compensation). An expanded nest box program to mitigate for the loss of nesting sites for cavity nesting bird species has been developed based on discussions with the VWTC. Implementation began in 2017 after review by the VWTC.
EAC 16	· A design for bat roosting habitat in HWY 29 bridges to BC Ministry of Transportation and Infrastructure (MOTI) for consideration into new bridge designs located within the Peace River valley.	Completed	In Compliance	BC Hydro received notification on 25 October 2018 from the Regional Manager of Environmental Services, MOTI, that MOTI does not support the placement of bat roosting boxes on bridges. Therefore, the bat boxes will not be integrated into the designs of any new bridges, including the planned Farrell Creek, Halfway River, Cache Creek and Lynx Creek bridges.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 16	Following rock extraction at Portage Mountain, creation of hibernating and roosting sites for bats.	Ongoing	In Compliance	The Portage Mountain Quarry development plan has been altered to avoid impacting bat hibernacula, through the VWTC. Section 4.2 of the CEMP states that blasting will be prohibited within 300 m of bat hibernacula from September 15 to May 15. A monitoring plan has also been developed through the VWTC to detect any changes to bat use of the hibernacula at Portage Mountain due to quarrying activity, if any. Test blasts occurred in summer of 2018, outside of the restricted activity period that was established to mitigate impacts to bat use of the hibernacula (i.e., September 15 to May 15). Noise monitoring conducted at the site determined that noise and vibration caused by test blasts did not exceed thresholds at hibernacula locations, as defined in Best Management Practices for Bats in BC (2016).
EAC 16	Creation of natural or artificial piles of coarse woody debris dispersed throughout the disturbed landscape to maintain foraging areas and cold-weather rest sites, and arboreal resting sites, for the fisher population south of the Peace River.	Ongoing	In Compliance	Twenty-five (25) coarse woody debris piles for fisher have been created within the dam site area and 31 were constructed along the transmission line. A map of the CWD piles created by October 2018 will be included in the 2018 Annual Report for the VWMMP. BC Hydro has installed signs that advise people to remain distant from the piles. Additional piles are planned to be installed along the transmission line ROW at a target installation rate of one per kilometer where adjacent habitat is appropriate for fisher.
EAC 16	The EAC Holder must provide this draft Vegetation and Wildlife Mitigation and Monitoring Plan to Environment Canada, FLNR, MOE, and Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft and first revision of the VWMMP was submitted to regulatory agencies and Indigenous groups on October 17, 2014, and April 7, 2015, respectively.
EAC 16	The EAC Holder must file the final Vegetation and Wildlife Mitigation and Monitoring Plan with EAO, Environment Canada, FLNR MOE, and Aboriginal Groups, a minimum of 30 days prior to commencement of construction.	Completed	In Compliance	The final VWMMP was submitted to the same recipients on June 5, 2015. Section 2.0 of the VWMMP provides a concordance table which shows how each of the requirements of Condition 16 is addressed in the Plan, including references to the CEMP as appropriate.
EAC 16	The EAC Holder must develop, implement and adhere to the final Vegetation and Wildlife Mitigation and Monitoring Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The 2015 Annual Report for the VWMMP describes implementation of the plan to date. Please refer to responses related to EAC Condition 19 for mitigation specific to reducing the risk of injury and mortality to amphibians and snakes.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 17	As part of the Vegetation Clearing and Debris Management Plan, if the EAC Holder must conduct clearing activities during these specified critical time periods: <ul style="list-style-type: none"> · Songbirds: May 1 through July 31; · Trumpeter swan, raptors and owls: April 1 through July 31; and · Sharp-tailed grouse: mid-April and mid-July (lek to nesting to hatching). 	Ongoing	In Compliance	Section 3.5 of the VCDMP and Section 4.17 of the CEMP describe mitigation for addressing the requirements outlined in Condition 17. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify appropriate implementation of the EPP.
EAC 17	The EAC Holder must first develop and implement a nest and lek search protocol, in consultation with the FLNR and MOE.	Ongoing	In Compliance	The nest search protocol was revised in 2016, was included as Appendix 2 of the 2016 Annual Report for the VWMMP, and submitted to regulatory agencies and Indigenous groups on March 31, 2017. An expanded Sharp-tailed Grouse lek mitigation program was developed based on discussions with the VWTC and provided in Section 4.17 of CEMP Revision 4 issued July 26, 2016. The Sharp-tailed Grouse lek mitigation program has been revised in discussions with the VWTC.
EAC 17	The EAC Holder must provide FLNR and MOE with all known nest and lek locations.	Ongoing	In Compliance	BC Hydro provides FLNR and MOE with all known nest and lek locations annually. All 2017 data on known nest locations will be provided to FLNR and MOE by March 31, 2018. No new leks were identified in 2017.
EAC 17	The EAC Holder must flag these sites and require employees and contractors to avoid these sites.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 17	The nest and lek search protocol must include specifications for buffers around active nest sites and flagging, as required by FLNR.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	The EAC Holder must avoid human-wildlife conflicts during the construction phase by implementing measures detailed in a Human-Wildlife Conflict Management Plan.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	The Human-Wildlife Conflict Management Plan must include at least the following: <ul style="list-style-type: none"> · Prior to the commencement of work, the EAC Holder must ensure that all crews have participated in Bear Aware or a similar training program. 	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	<ul style="list-style-type: none"> · Prohibit feeding of wildlife at work sites. 	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 18	· Ensure that all construction areas and worker housing sites are kept clean and free of discarded anthropogenic food sources, with garbage securely stored in verified bear-proof containers or removed from site.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. These inspections have identified on a few occasions the presence of non- animal proof waste containers; but in all cases these containers were either removed entirely or replaced with animal-proof containers within 2-weeks.
EAC 18	· Prohibit work crews from hunting while on any work sites, Project built roads and worker housing sites.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	· Prohibit work crews from cleaning game at construction sites. Project built roads and worker housing sites.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	· Measures to minimize road mortality, including posted speed limits, provision of alternative transportation options including, for example, carpooling,	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	· Procedures for reporting dangerous human-wildlife incidents and incidents of wildlife mortality.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	· Prompt notification to the appropriate authorities of incidences of roadkill, or, in the event a wildlife act permit to manage road kill is obtained by the EAC Holder, the EAC Holder must implement management measures as per permit requirements.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	· Review of effectiveness of measures to manage dangerous human-wildlife interactions.	Ongoing	In Compliance	Section 4.17 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 18	The EAC Holder must provide the draft Human-Wildlife Conflict Management Plan to the MOE Conservation Officer Service for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The Human Wildlife Conflict Management Plan is described in Section 4.17 of the CEMP for the Project. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 18	The EAC Holder must file the final Human-Wildlife Conflict Management Plan with EAO and the MOE Conservation Officer Service a minimum of 30 days prior to the commencement of construction.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 18	The EAC Holder must develop, implement and adhere to the final Human-Wildlife Conflict Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of the EPP.
EAC 19	The EAC Holder must use reasonable efforts to avoid and reduce injury and mortality to amphibians and snakes on roads adjacent to wetlands and other areas where amphibians or snakes are known to migrate across roads including locations with structures designed for wildlife passage	Ongoing	In Compliance	<p>BC Hydro is using reasonable efforts to avoid and reduce injury and mortality to amphibians and snakes.</p> <p>Section 4.17 of Rev 4 of the CEMP outlines mitigation for amphibians. For amphibian salvage and relocation, BC Hydro has obtained Wildlife Act permit FJ16- 226024, which is valid until 31 December 2023.</p> <p>BC Hydro developed the Site C Western Toad Management Procedure, which describes a protocol for conducting amphibian assessments within and adjacent to work sites, halting work when necessary, and translocating migrating toads along their way and past dangerous work areas. The Site C Western Toad Management Procedure was developed through and deemed complete by the VWTC. This Procedure has been passed to all relevant contractors since its completion 21 July 2017, for inclusion in appropriate EPPs. Also, BC Hydro implemented barrier fencing to prevent migration of toads across roads at Portage Mountain quarry, and also incorporated special amphibian crossing culverts into the design of the road to the quarry.</p> <p>Amphibian salvage and translocation activities in 2018 are described in the 2018 Annual Report for the VWMMP, to be submitted by March 31, 2019.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 19	The EAC Holder must consult with Environment Canada, FLNR and MOE with regard to the size and number of the proposed structures prior to construction.	Ongoing	In Compliance	<p>BC Hydro has developed a Western Toad Management Procedure, which was deemed complete by the VWTC in 2017, to salvage amphibians where they are observed along roads adjacent to wetlands and in other areas where they are known to migrate across roads. That procedure calls for installation of crossing structures after 3 years of documenting amphibian migration across a road in the same location. At this time no migration areas across roads have been identified through this protocol.</p> <p>The precautionary installation of crossing mitigation structures is planned across roads at Portage Mountain quarry, and may be considered elsewhere in the Project area. BC Hydro will consult with Environment Canada, FLNR and MOE with regard to the size and number of the proposed structures prior to construction.</p>
EAC 20	The EAC Holder must use reasonable efforts to minimize disturbance to wildlife during the construction phase by scheduling construction activities in accordance with the Construction Environmental Management Plan.	Ongoing	In Compliance	Section 4.17 of the CEMP describes how requirements for EPPs in minimizing disturbance to wildlife during the construction phase, including conducting works within the least risk timing windows. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 21	The EAC Holder must ensure that measures implemented to manage harmful Project effects on wildlife resources are effective by implementing monitoring measures detailed in a Vegetation and Wildlife Mitigation and Monitoring Plan.	Ongoing	In Compliance	The final VWMMP was developed and submitted to regulatory agencies, governments and Indigenous groups on June 5, 2015.
EAC 21	The Vegetation and Wildlife Mitigation and Monitoring Plan must be developed by a QEP.	Completed	In Compliance	Section 2.3 of the VWMMP lists the QEPs who prepared the plan.
EAC 21	<p>The Vegetation and Wildlife Mitigation and Monitoring Plan must include at least the following:</p> <ul style="list-style-type: none"> · Monitor Bald Eagle nesting populations adjacent to the reservoir, including their use of artificial nest structures. 	Ongoing	In Compliance	Monitoring of the Bald Eagle nesting population occurred three times over May and June in 2018. Twenty-eight (28) bald eagle nests were identified as active in 2018, of which 22 were observed containing at least one chick. The annual bald eagle nest monitoring report will be provided in the 2018 Annual Report of the VWMMP, which will be submitted by March 31, 2019.
EAC 21	<ul style="list-style-type: none"> · Monitor waterfowl and shorebird populations and their use of natural wetlands, created wetlands, and artificial wetland features. 	Ongoing	In Compliance	Spring and fall waterfowl and shorebird (i.e., waterbird) surveys were conducted along the Peace River and the transmission line ROW in 2018. The annual waterbird monitoring report will be provided in the 2018 Annual Report of the VWMMP, which will be submitted by March 31, 2019.

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(Combined with Quarterly Progress Report No. 18)
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Appendix G

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 21	Monitor amphibian use of migration crossing structures installed along Project roads.	Ongoing	In Compliance	BC Hydro incorporated special amphibian crossing culverts into the design of the road to the Portage Mountain quarry, which remains in development. BC Hydro developed a Western Toad Management Procedure, which was deemed complete by the VWTC in 2017. That procedure calls for installation of crossing structures after 3 years of documenting amphibian migration across a road in the same location. At this time no migration areas across roads have been identified through this protocol. Monitoring of structures will occur in future years as required.
EAC 21	Survey songbird and ground-nesting raptor populations during construction and operations.	Ongoing	In Compliance	Songbirds and ground-nesting raptors were surveyed in separate monitoring programs in 2018. The 2018 results of those surveys will be included in the 2018 Annual Report of the VWMMP, which will be submitted by March 31, 2019.
EAC 21	Survey the distribution of western toad and garter snake populations downstream of the Site C dam to the Pine River.	Ongoing	In Compliance	BC Hydro developed the Downstream Western Toad and Garter snake Monitoring Program, which was deemed complete by the VWTC in 2018. Implementation of the program began in 2018. The results of this program for 2018 will be included in the 2018 Annual Report of the VWMMP, which will be submitted by March 31, 2019.
EAC 21	Require annual reporting during the construction phase and during the first 10 years of operations to EAO, beginning 180 days following commencement of construction.	Ongoing	In Compliance	Results of monitoring surveys and other programs are described in the 2018 Annual Report for the VWMMP, which will be submitted to regulatory agencies and Indigenous groups by March 31, 2019.
EAC 21	The EAC Holder must provide this draft Vegetation and Wildlife Mitigation and Monitoring Plan to FLNR, MOE, Environment Canada and Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft and first revision of the VWMMP was submitted to regulatory agencies and Indigenous groups on October 17, 2014, and April 7, 2015, respectively. The final VWMMP was submitted to the same recipients on June 5, 2015.
EAC 21	The EAC Holder must file the final Vegetation and Wildlife Mitigation and Monitoring Plan must with EAO, FLNR, MOE, Environment Canada and Aboriginal Groups a minimum 30 days prior to the commencement of construction.	Completed	In Compliance	The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.
EAC 21	The EAC Holder must develop, implement and adhere to the final Vegetation and Wildlife Mitigation and Monitoring Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The VWMMP was submitted in June 2015, and is being implemented and adhered to. Implementation of the VWMMP in 2018 will be summarized in the 2018 Annual Report for the VWMMP, which will be submitted by March 31, 2019.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 22	The EAC Holder must implement measures that reduce the potential for new or increased public access via roads constructed for the Project, by using pre-existing routes where feasible, decommissioning temporary access roads as soon as practicable after use,	Ongoing	In Compliance	Appendix A of the VCDMP describes how the requirements of Condition 22 are being met during construction. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 22	And proposing to FLNR Project access roads that should be closed to the public in areas known to be important to Aboriginal groups.	Ongoing	In Compliance	Specific access routes will be identified in relevant permit applications, such as the Forest Act Occupant Licence to Cut permits. Consultation on these permits is undertaken with the groups identified in the condition, which allows for discussion about the selection of new or pre-existing access routes, and decommissioning requirements.
EAC 22	The EAC Holder must develop mitigation measures in collaboration with FLNR and the Saulteau, West Moberly, Halfway River, Doig River, Blueberry River and Prophet River First Nations, and McLeod Lake Indian Band.	Ongoing	In Compliance	Specific access routes will be identified in relevant permit applications, such as the Forest Act Occupant Licence to Cut permits. Consultation on these permits is undertaken with the groups identified in the condition, which allows for discussion about the selection of new or pre-existing access routes, and decommissioning requirements. The draft and final VCDMP were submitted to regulatory agencies, governments, and Indigenous groups for comment on October 17, 2014 and June 5, 2015, respectively.
EAC 23	The EAC Holder must maintain current knowledge of Project effects on the status of listed species by tracking updates for species identified by the Province, the Committee on the Status of Endangered Wildlife in Canada, and the Species at Risk Act.	Ongoing	In Compliance	Rare plants: In 2018, for plants with ranges that overlap with the Site C Project footprint, the BC CDC status of 28 species changed. Of those, the BC CDC statuses of 18 species that were formerly Blue-listed or Red-listed in BC became Yellow-listed, and eight species changed from Red-listed to Blue-listed. In addition, <i>Fulgensia subbracteata</i> was determined to be Red-listed by the BC CDC (formerly not tracked), while <i>Rorippa calycina</i> was changed from Red-listed to no longer tracked. The conservation status of the other relevant plant species remained the same. Wildlife: There were no changes to the provincial or federal status of wildlife with ranges that overlap with the Site C Project footprint in 2018.
EAC 23	Should the status of a listed species change for the worse during the course of the construction of the Project due to Project activities, the EAC Holder, must work with Environment Canada FLNR and MOE to determine if any changes to the associated management plans or monitoring programs are required to mitigate effects of the Project on affected listed species.	Ongoing	In Compliance	Due to the listing of bank swallow as Threatened on Schedule 1 of SARA, BC Hydro is developing a bank swallow mitigation and monitoring plan collaboratively through the VWTC. The plan remains in development through ongoing discussions with the VWTC, including CWS.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 24	The EAC Holder must identify suitable lands for ungulate winter range by the end of the first year of construction, on BC Hydro-owned lands, or Crown lands, in the vicinity of the Project in consultation with FLNR.	Completed	In Compliance	BC Hydro fulfilled this condition in 2015. Section 8.11 of the VWMMP addresses this condition. Suitable winter range on BC Hydro owned land was identified in Figures 9, 10 and 11 of the VWMMP, and in Forest Act Occupant Licence to Cut permit applications overlapping with provincially designated winter range.
EAC 24	If FLNR determines that identified winter range is required, the EAC Holder must identify and maintain suitable BC Hydro- owned lands for ungulate winter range to the satisfaction of FLNR and for the length of time determined by FLNR.	Completed	In Compliance	BC Hydro fulfilled this condition in 2015. Section 8.11 of the VWMMP addresses this condition. Suitable winter range on BC Hydro owned land was identified in Figures 9, 10 and 11 of the VWMMP, and in Forest Act Occupant Licence to Cut permit applications overlapping with provincially designated winter range.
CURRENT USE OF LANDS AND RESOURCES FOR TRADITIONAL PURPOSES				

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 25	The EAC Holder must undertake a ground truthing program of traditional plants currently used by Aboriginal Groups in collaboration with Aboriginal Groups prior to construction.	Ongoing	In Compliance	<p>BC Hydro has initiated ground truthing programs with the purpose of engaging with Indigenous land users, including registered trapline holders, to verify and accurately locate Indigenous land use information, and to identify concerns related to specific features, or sites that may be affected by the Project. BC Hydro has provided funding to Indigenous groups for ground truthing through Consultation and Capacity Funding Agreements. During this reporting period, ground truthing was undertaken by Doig River, Halfway River, Blueberry River, McLeod Lake, Horse Lake and Saulneau First Nations.</p> <p>BC Hydro remains engaged with Saulneau registered trapline holders whose tenure areas are affected by project construction and operations. BC Hydro contacts registered trapline holders in advance of any ground disturbance work planned to take place within their respective trapline areas, BC Hydro also shares the quarterly Notices of Construction Activities with registered trapline holders and advises it is available to meet to discuss any questions regarding the activities in the notice.</p> <p>BC Hydro continues to consult with Indigenous groups regarding construction plans, and has sent invitation letters in April 2017, September 2017, January 2018, June 2018 and August 2018 highlighting areas where construction is planned in order that Indigenous groups could ground truth areas of traditional significance prior to construction. Ground-truthing information received continues to be used to support and inform mitigation measures and relevant mitigation plans.</p> <p>BC Hydro is coordinating with interested nearby/proximal Indigenous groups to coordinate pre-clearing harvesting activities in construction areas prior to ground disturbance or clearing activities.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 25	Where specific plants are known to be harvested by Aboriginal Groups, the EAC Holder must make reasonable efforts to consult interested Aboriginal Groups using the results of the ground truthing to inform the development and implementation of mitigation and compensation measures to accommodate adverse effects of the Project on plants traditionally used by Aboriginal Groups.	Ongoing	In Compliance	<p>Based on the results of ground truthing to date, a number of plants species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2017-2018 APUMP Annual Report, describing activities from June 2017 through March 2018, was submitted to the EAO on March 29, 2018 and is shared with Indigenous groups on the project website along with previous APUMP and other annual reports.</p> <p>Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.</p> <p>BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing groundtruthing activities. These species will be incorporated into reclamation plans, as appropriate. As draft reclamation plans are developed to address the adverse effects of the project on plants traditionally used by Indigenous groups they will be provided to Indigenous Groups for review and comment.</p> <p>Through this process, as well as new information provided through future ground truthing, plants of high traditional Indigenous value will continue to be identified and included in the mix of species considered for re-vegetation conducted under the VWMMP and the Soil Management, Site Restoration and Revegetation Plan (Appendix H of the CEMP).</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 26	The EAC Holder must develop an Aboriginal Plant Use Mitigation Plan to describe how the effects of the Project on plants currently harvested by Aboriginal Groups will be mitigated, including through compensation measures.	Ongoing	In Compliance	<p>The Aboriginal Plant Use Mitigation Plan (June 2015) is available on the Project website at https://www.sitecproject.com/sites/default/files/Aboriginal_Plant_Use_Mitigation_Plan.pdf</p> <p>Based on the results of ground truthing to date, a number of plants species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2017-2018 APUMP Annual Report, describing activities from June 2017 through March 2018, was submitted to the EAO on March 29, 2018 and is shared with Indigenous groups on the project website along with previous APUMP and other annual reports.</p> <p>Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.</p> <p>BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing groundtruthing activities. These species will be incorporated into reclamation plans, as appropriate. As draft reclamation plans are developed to address the adverse effects of the project on plants traditionally used by Indigenous groups they will be provided to Indigenous Groups for review and comment.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 26	The Aboriginal Plant Use Mitigation Plan must include at least the following: · Identify within the Project footprint including areas being reclaimed potential sites for relocation of medicinal and food plants;	Ongoing	In Compliance	<p>Based on the results of ground truthing to date, a number of plants species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2017-2018 APUMP Annual Report, describing activities from June 2017 through March 2018, was submitted to the EAO on March 29, 2018 and is shared with Indigenous groups on the project website along with previous APUMP and other annual reports.</p> <p>Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.</p> <p>BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing groundtruthing activities. These species will be incorporated into reclamation plans, as appropriate. As draft reclamation plans are developed to address the adverse effects of the project on plants traditionally used by Indigenous groups they will be provided to Indigenous Groups for review and comment.</p> <p>Through this process, as well as new information provided through future ground truthing, plants of high traditional Indigenous value will continue to be identified and included in the mix of species considered for re-vegetation conducted under the VWMMP and the Soil Management, Site Restoration and Revegetation Plan (Appendix H of the CEMP).</p>
EAC 26	Relocate when deemed necessary by a QEP.	Initial Planning	Future Requirement	<p>BC Hydro acknowledges and understands this condition.</p> <p>Rare plant species impacted, or potentially impacted, by project construction activities may be included in the experimental rare plant translocation program (described in section 8.2 of the VWMMP) based on the characteristics of the species, and availability of suitable locations and habitat conditions near to the construction area.</p> <p>For other (non-rare) species, a QEP will identify those species suitable for use in reclamation plans, based on the biological and site conditions of identified reclamation areas as well as the requirements of the target plant species. Currently, "Rat root" (<i>Acorus americanus</i>) is the only rare plant species of traditional Indigenous value identified through ground truthing (currently Red-listed in BC by the BC Conservation Data Centre).</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 26	Identify within the Project footprint including areas being reclaimed opportunities to restore ecological communities that support species of high traditional use value for affected Aboriginal Groups	Ongoing	In Compliance	<p>Based on the results of ground truthing to date, a number of plants species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2017-2018 APUMP Annual Report, describing activities from June 2017 through March 2018, was submitted to the EAO on March 29, 2018 and is shared with Indigenous groups on the project website along with previous APUMP and other annual reports.</p> <p>Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.</p> <p>BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing groundtruthing activities. These species will be incorporated into reclamation plans, as appropriate. As draft reclamation plans are developed to address the adverse effects of the project on plants traditionally used by Indigenous groups they will be provided to Indigenous Groups for review and comment.</p> <p>Through this process, as well as new information provided through future ground truthing, plants of high traditional Indigenous value will continue to be identified and included in the mix of species considered for re-vegetation conducted under the VWMMP and the Soil Management, Site Restoration and Revegetation Plan (Appendix H of the CEMP).</p>
EAC 26	And undertake restoration of those ecological communities where deemed necessary by a QEP.	Initial Planning	Future Requirement	<p>BC Hydro acknowledges and understands this condition. Plant species of traditional Indigenous value will be identified and will be incorporated into reclamation plans, as appropriate. As draft reclamation plans are developed to address the adverse effects of the project on plants traditionally used by Indigenous groups they will be provided to Indigenous Groups for review and comment. Additionally, plants of traditional Indigenous value will continue to be identified and included in the mix of species considered for re-vegetation conducted under the VWMMP and the Soil Management, Site Restoration and Revegetation Plan (Appendix H of the CEMP).</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 26	Identify opportunities and provide financial support for propagation of indigenous plant species for use in reclamation programs, such as that offered through the indigenous nursery owned by the West Moberly First Nation and Sauleteu First Nation.	Ongoing	In Compliance	BC Hydro has entered into a contract with Twin Sisters Nursery (an indigenous nursery owned by West Moberly First Nations and Sauleteu First Nations) for supply and delivery of live native grass seeds suitable for dry or hydro seed application to support re-vegetation and reclamation activities. Seeds of local plant species of traditional Indigenous value have been collected by Twin Sisters and will be available for use in reclamation plans as required.
EAC 26	The EAC Holder must make reasonable commercial efforts to obtain up to \$1 million in commercial service contracts with indigenous nurseries for provision of plants.			BC Hydro has entered into a contract with Twin Sisters Nursery (an indigenous nursery owned by West Moberly First Nations and Sauleteu First Nations) for supply and delivery of live native grass seeds suitable for dry or hydro seed application to support re-vegetation and reclamation activities. Seeds of local plant species of traditional Indigenous value have been collected by Twin Sisters and will be available for use in reclamation plans as required.
EAC 26	The EAC Holder must make reasonable efforts to develop the Aboriginal Plant Use Mitigation Plan in collaboration with FLNR and Aboriginal Groups, at least 90 days prior to Project activities that may affect traditional plants.	Completed	In Compliance	The draft Aboriginal Plant Use Mitigation Plan (APUMP) was submitted to regulatory agencies and Indigenous groups on October 17, 2014.
EAC 26	The EAC Holder must file the final Aboriginal Plant Use Mitigation Plan with EAO, FLNR and Aboriginal Groups at least 30 days prior to Project activities that may affect traditional plants.	Completed	In Compliance	The final Aboriginal Plant Use Mitigation Plan was submitted to regulatory agencies and Indigenous groups on June 5, 2017.
EAC 26	The EAC Holder must develop, implement and adhere to the final Aboriginal Plant Use Mitigation Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	<p>The APUMP describes the scope of the ground truthing program and how the information gained during ground truthing is used to inform mitigation measures related to plants of traditional Indigenous value.</p> <p>The 2017-2018 APUMP Annual Report, describing activities from June 2017 through March 2018, was submitted to the EAO on March 29, 2018 and is shared with Indigenous groups on the project website along with previous APUMP and other annual reports. Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.</p> <p>BC Hydro will update the plan as required based on new information. Initiatives described in the Aboriginal Plant Use Mitigation Plan will continue to be implemented through project construction.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 27	In order to manage adverse effects on Aboriginal plant, fish and game harvesters during both the construction and operations phases of the Project, the EAC Holder must develop, as part of the Construction Communication Plan, a communications program (Program) for informing Aboriginal harvesters about construction activities that may affect their harvesting opportunities for plants, fish, and game, as well as access to those opportunities.	Ongoing	In Compliance	<p>BC Hydro has developed an Aboriginal Group Communication Plan (AGCP; see Appendix D of the CEMP) which describes the measures being taken to inform Indigenous groups about construction activities that may affect harvesting opportunities.</p> <p>The 2017-2018 AGCP Annual Report, describing activities from July 1, 2017 through March 2018, was submitted to the EAO on August 24, 2018 and is shared with Indigenous groups on the project website along with previous AGCP and other annual reports. Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.</p> <p>The AGCP will be updated as required to reflect evolving project communications with Indigenous Groups through to the end of construction.</p>
EAC 27	The Program must also include information regarding how fish monitoring programs will be used to inform Aboriginal harvesters about changes in fish community composition during operations.	Completed	In Compliance	The 2017-2018 AGCP Annual Report, describing activities from July 1, 2017 through March 2018, was submitted to the EAO on August 24, 2018 and is shared with Indigenous groups on the project website along with previous AGCP and other annual reports. Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.
EAC 27	The EAC Holder must make all reasonable efforts to develop the draft Program in collaboration with FLNR and Aboriginal Groups, at least 90 days prior to Project activities that may affect Aboriginal harvesting opportunities.	Completed	In Compliance	The draft Aboriginal Group Communications Plan is described in Appendix D of the CEMP for the Project. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014.
EAC 27	The EAC Holder must file the final Program with EAO, FLNR and Aboriginal Groups at least 30 days prior to any activities that may affect Aboriginal harvesting opportunities.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 27	The EAC Holder must develop, implement and adhere to the final Program, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The 2017-2018 AGCP Annual Report, describing activities from July 1, 2017 through March 2018, was submitted to the EAO on August 24, 2018 and is shared with Indigenous groups on the project website along with previous AGCP and other annual reports. Indigenous groups are notified when reports are shared through the bi-weekly Site C Information Update. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 28	In order to mitigate the loss of use and access to structures used in Aboriginal traditional and current harvesting (e.g. cabins associated with tenured trap lines) as a result of Project reservoir flooding, the EAC Holder must make all reasonable efforts to consult with Aboriginal Groups and FLNR to identify the locations of such structures, including permanent, untenured structures.	Ongoing	In Compliance	<p>BC Hydro remains engaged with Saulneau registered trapline holders whose tenure areas are affected by project construction and operations. BC Hydro contacts registered trapline holders in advance of any ground disturbance work planned to take place within their respective trapline areas. BC Hydro also shares the quarterly Notices of Construction Activities with registered trapline holders and advises it is available to meet to discuss any questions regarding the activities in the notice.</p> <p>Indigenous groups have also identified two areas containing structures within or near the project area that are used for cultural purposes. BC Hydro is continuing to engage with the respective Indigenous groups on their cultural interests and potential measures to avoid or mitigate impacts to these structures.</p> <p>BC Hydro has a standing invitation to Indigenous groups to meet and discuss any issues or concerns regarding the project as construction proceeds, and remain committed to conducting ground truthing with any interested Indigenous groups in the project activity zone.</p>
EAC 28	Where the loss of such structures are identified and confirmed through ground-truthing, the EAC Holder must make reasonable efforts to consult with Aboriginal groups and FLNR to establish measures to compensate for the loss of such structures prior to the loss of the structures.	Ongoing	In Compliance	<p>BC Hydro remains engaged with Saulneau registered trapline holders whose tenure areas are affected by project construction and operations. BC Hydro contacts registered trapline holders in advance of any ground disturbance work planned to take place within their respective trapline areas, BC Hydro also shares the quarterly Notices of Construction Activities with registered trapline holders and advises it is available to meet to discuss any questions regarding the activities in the notice.</p> <p>Indigenous groups have also identified two areas containing structures within or near the project area that are used for cultural purposes. BC Hydro is continuing to engage with the respective Indigenous groups on their cultural interests and potential measures to avoid or mitigate impacts to these structures.</p> <p>BC Hydro has a standing invitation to Indigenous groups to meet and discuss any issues or concerns regarding the project as construction proceeds, and remain committed to conducting ground truthing with any interested Indigenous groups in the project activity zone.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 28	The EAC Holder must implement a process for the identification of, and compensation for untenured structures that are culturally important to Aboriginal Groups at least 30 days prior to the commencement of construction activities.	Ongoing	In Compliance	<p>BC Hydro remains engaged with Saulneau registered trapline holders whose tenure areas are affected by project construction and operations. BC Hydro contacts registered trapline holders in advance of any ground disturbance work planned to take place within their respective trapline areas, BC Hydro also shares the quarterly Notices of Construction Activities with registered trapline holders and advises it is available to meet to discuss any questions regarding the activities in the notice.</p> <p>Indigenous groups have also identified two areas containing structures within or near the project area that are used for cultural purposes. BC Hydro is continuing to engage with the respective Indigenous groups on their cultural interests and potential measures to avoid or mitigate impacts to these structures.</p> <p>BC Hydro has a standing invitation to Indigenous groups to meet and discuss any issues or concerns regarding the project as construction proceeds, and remain committed to conducting ground truthing with any interested Indigenous groups in the project activity zone.</p>
LAND AND RESOURCE USE				
Harvest of Fish and Wildlife Resources				
EAC 29	In order to appropriately manage effects on disruption of access to registered trapline holders and Guide Outfitters during construction, the EAC Holder must make reasonable efforts to conclude access agreements with these affected registered third parties, unless there are safety concerns involved.	Ongoing	In Compliance	<p>BC Hydro is in discussions with all trapline holders and guide outfitters within whose territory construction activities are planned for 2018 and beyond.</p> <p>To date, a total of 11 trapline holders will be impacted by construction activities in 2019. Eight agreements have been reached with trapline holders; three agreements are under development. Agreements have also been reached with the 2 out of 4 guide outfitters impacted by construction activities in 2019.</p>
EAC 29	Efforts undertaken by the EAC Holder to reach access agreements must be made to the satisfaction of EAO prior to the disruption of access to trapline holders and guide outfitters	Ongoing	In Compliance	<p>BC Hydro is in discussions with all trapline holders and guide outfitters within whose territory construction activities are planned for 2018 and beyond.</p> <p>To date, a total of 11 trapline holders will be impacted by construction activities in 2019. Eight agreements have been reached with trapline holders; three agreements are under development. Agreements have also been reached with the 2 out of 4 guide outfitters impacted by construction activities in 2019.</p>
Agriculture				

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 30	In order to avoid or manage the effects of the project on agricultural land owners and tenure holders, the EAC Holder must develop an Agricultural Mitigation and Compensation Plan.	Completed	In Compliance	BC Hydro submitted the final Agricultural Mitigation and Compensation Plan on July 27, 2017. BC Hydro submitted Rev 1 of the Agricultural Mitigation and Compensation Plan on September 25, 2017.
EAC 30	The Agricultural Mitigation and Compensation Plan must be developed by a QEP.	Completed	In Compliance	Section 2.1 and Appendix B of the final Agricultural Mitigation and Compensation Plan lists the QEPs who prepared the plan.
EAC 30	As part of Agricultural Mitigation and Compensation Plan development, the EAC Holder must evaluate effects on agricultural land owners and tenure holders, and develop mitigation and compensation measures consistent with industry compensation standards, to mitigate effects or compensate for losses.	Ongoing	In Compliance	Section 2.4 of the final Agricultural Mitigation and Compensation Plan describes the process that will be undertaken to develop individual farm mitigation plans with directly affected agricultural land owners and tenure holders. Development of individual farm mitigation plans is underway as part of the property acquisition process.
EAC 30	The Agricultural Mitigation and Compensation Plan must include at least the following: <ul style="list-style-type: none"> · Inclusion of suitable land in the Agricultural Land Reserve in consultation with the Agriculture Land Commission. 	Ongoing	In Compliance	Section 2.5 of the final Agricultural Mitigation and Compensation Plan describes the process for suitable land to be included in the Agricultural Land Reserve. This will primarily occur during the operations phase.
EAC 30	<ul style="list-style-type: none"> · When residual land parcels are to be sold, consolidate and/or connect residual agricultural parcels with adjacent agricultural land holdings, where practical and when owner(s) and BC Hydro agree. 	Ongoing	In Compliance	Section 2.5 of the final Agricultural Mitigation and Compensation Plan describes the process for consolidation and/or connection of residual agricultural parcels. This will primarily occur during the operations phase.
EAC 30	<ul style="list-style-type: none"> · Funding for mitigation actions for disruptions to agricultural land owners and tenure holders, including but not limited to the provision of alternative / replacement: <ul style="list-style-type: none"> o Livestock movement options and compensation for associated increased costs; o Infrastructure (irrigation and drainage improvements); o Water supplies; o Relocation of quality soil in selected locations; o Farm and field access; o Highway crossings; o Utility crossings; o Livestock watering and drainage works during construction, and restore original works after construction is completed; and o Fencing. 	Ongoing	In Compliance	Section 2.4 of the final Agricultural Mitigation and Compensation Plan describes the process that will be undertaken to develop individual farm mitigation plans with directly affected agricultural land owners and tenure holders. Development of individual farm mitigation plans is underway as part of the property acquisition process.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 30	Minimize access to agricultural lands by construction workers and implement measures to minimize unauthorized public access.	Ongoing	In Compliance	Section 2.3 of the final Agriculture Mitigation Compensation Plan reflects this requirement. Construction mitigation measures that address impacts on agricultural land and operations are included in applicable contracts, in the Project's Construction Environmental Management Plan, and will be included in individual farm mitigation plans, as applicable.
EAC 30	For impacts that cannot be avoided, the plan will contain an approach for reimbursements that compensate for associated financial losses due to disruptions to agricultural land use.	Ongoing	In Compliance	Section 2.4 of the final Agricultural Mitigation and Compensation Plan describes the process that will be undertaken to develop individual farm mitigation plans with directly affected agricultural land owners and tenure holders. Development of individual farm mitigation plans is underway as part of the property acquisition process.
EAC 30	In addition to the above bulleted measures in this condition, establishment of an agricultural compensation fund of \$20 million for use in the Peace Region or other areas of the province as necessary to compensate for lost agricultural lands and activities, and an approach for establishing the governance and allocation of funds.	Ongoing	In Compliance	Section 2.6 of the final Agricultural Mitigation and Compensation Plan describes the fund along with Appendix C, D, E, F and G. Establishment of the Fund Board and procurement of the Fund Administrator began on February 23, 2018. This was completed and the \$20 million was transferred to the Fund Administrator for management on December 14, 2018. The Fund Administrator and Fund Board will work together to recommend when the first grant intake will occur based on investment returns.
EAC 30	The EAC Holder must work with the Ministry of Agriculture to establish a governance structure for the agriculture compensation fund that will ensure funds will be used to support enhancement projects that improve agricultural land, productivity or systems.	Completed	In Compliance	Section 1.7 and Appendix B of the final Agricultural Mitigation and Compensation Plan describes the joint Consultation Steering Committee established including staff from Ministry of Agriculture, Ministry of Energy and Mines, and BC Hydro to develop the Agricultural Mitigation and Compensation Plan.
EAC 30	The framework for the Agricultural Mitigation and Compensation Plan must be developed in consultation with the affected agricultural land owners and tenure holders, and the Ministry of Agriculture, and provided to Peace River Regional District and the District of Hudson's Hope for review within 1 year after the commencement of construction.	Completed	In Compliance	The Agricultural Mitigation and Compensation Plan Framework was submitted on July 27, 2016. Stakeholder consultation regarding the Framework took place from November 23 to January 29, 2016 in coordination with Ministry of Agriculture and Ministry of Energy and Mines. One hundred and fourteen (114) participant interactions occurred during the consultation period, including 81 attendees at regional meetings in December and January in Hudson's Hope, Fort St. John, Dawson Creek, and Chetwynd, 30 online feedback forms, and three written submissions. The Consultation Summary Report was posted publically on March 7, 2016. A meeting with Regional representatives on the Agricultural compensation fund occurred on March 8, 2016.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 30	The EAC Holder must provide this draft Agricultural Mitigation and Compensation Plan to the affected agricultural land owners and tenure holders, Peace River Regional District, District of Hudson's Hope, Ministry of Agriculture and FLNR for review within 18 months after the commencement of construction.	Completed	In Compliance	The final Agriculture Mitigation and Compensation Plan was submitted on July 27, 2017. The draft and final Agricultural Mitigation and Compensation Plan and Framework for the plan were both developed and submitted in accordance with the condition.
EAC 30	The EAC Holder must file the final Agricultural Mitigation and Compensation Plan with EAO, Peace River Regional District, District of Hudson's Hope the Ministry of Agriculture and FLNR within 2 years after the commencement of construction.	Completed	In Compliance	BC Hydro submitted the final Agricultural Mitigation and Compensation Plan on July 27, 2017. BC Hydro submitted Rev 1 of the Agricultural Mitigation and Compensation Plan on September 25, 2017.
EAC 30	The EAC Holder must develop, jointly with agricultural land owners and tenure holders, individual farm mitigation plans throughout the construction phase for all farms directly affected by the Project.	Ongoing	In Compliance	Section 2.4 of the final Agricultural Mitigation and Compensation Plan describes the process that will be undertaken to develop individual farm mitigation plans with directly affected agricultural land owners and tenure holders. Development of individual farm mitigation plans is underway as part of the property acquisition process.
EAC 30	The EAC Holder must develop, implement and adhere to the final Agricultural Mitigation and Compensation Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The final Agriculture Mitigation and Compensation Plan was submitted on July 27, 2017. BC Hydro submitted Rev 1 of the Agricultural Mitigation and Compensation Plan on September 25, 2017. The draft and final Agricultural Mitigation and Compensation Plan and Framework for the plan were both developed and submitted in accordance with the condition.
EAC 31	In addition to and separate from the compensation funding and mitigation funding the EAC Holder must fund and develop an Agriculture Monitoring and Follow-up Program for a 10 year period which includes the five years prior to reservoir filling and the first five years of operation.	Completed	In Compliance	The draft and final Agricultural Monitoring and Follow-up Programs were submitted to regulatory agencies and governments on October 23, 2015 and December 22, 2015, respectively. Section 3.0 of the Agricultural Monitoring and Follow-up Program contains a concordance table which shows how each of the requirements of Condition 31 is addressed in the Program. A summary update is also provided below.
EAC 31	The Agriculture Monitoring and Follow-up Program must include at least the following: · Monitoring for Project-induced changes in wildlife habitat utilization, and evaluation of associated crop or feed storage damage for, agricultural operations within 5 km of the reservoir, to assess if there is an increase in wildlife-related crop depredation due to Project-related habitat losses. Monitoring must include pre- and post- reservoir filling field surveys, wildlife monitoring, farm operator interviews, and analysis of relevant records related to wildlife-related crop depredation.	Ongoing	In Compliance	Appendix A of the final Agriculture Monitoring and Follow-up Program describes the wildlife habitat utilization monitoring program. BC Hydro completed procurement of a qualified professional to carry out the program in early 2019 and monitoring will begin five years prior to reservoir filling in spring 2019.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 31	Monitoring for Project-induced changes to humidity within 3 km of the reservoir, and evaluate associated effects on crop drying within this area. Monitoring must include collection and analysis of climate data, calculation of crop drying indices, and farm operator interviews.	Ongoing	In Compliance	Appendix B of the final Agriculture Monitoring and Follow-up Program describes the monitoring of potential effects on crop drying program. Agriculture monitoring will begin five years prior to reservoir filling in spring 2019. Baseline climatic data collection has been on-going since the environmental assessment.
EAC 31	Monitoring for Project-induced changes to groundwater elevations within 2 km of the reservoir (the area potentially influenced by groundwater elevation changes), and evaluate associated effects on crop productivity. Monitoring must include field surveys and farm operator interviews.	Ongoing	In Compliance	Appendix C of the final Agriculture Monitoring and Follow-up Program describes the monitoring of potential groundwater effects program. Agriculture monitoring will begin five years prior to reservoir filling in spring 2019.
EAC 31	Monitoring for climatic factors to estimate moisture deficits and to estimate irrigation water requirements in the vicinity of the reservoir to provide information for potential future irrigation projects. Data collection will be undertaken before reservoir filling, and in the 5 years after reservoir filling, and data will be reviewed as required for proposed irrigation projects.	Ongoing	In Compliance	Appendix D of the final Agriculture Monitoring and Follow-up Program describes the monitoring to estimate irrigation requirements. Baseline climatic data collection has been on-going since the environmental assessment.
EAC 31	The Agriculture Monitoring and Follow-up Program reports must be provided annually during the monitoring and follow-up period to affected agricultural land owners and tenure holders, and Ministry of Agriculture. The results of the Agriculture Monitoring and Follow-up Program must inform the Farm Mitigation Plans.	Ongoing	In Compliance	BC Hydro provided the third annual report on the implementation of the Agriculture monitoring and Follow-up Program in July 2018. The fourth annual report will be provided in July 2019.
EAC 31	Reporting must begin 180 days after the commencement of the monitoring and follow-up program that is to begin 180 days after commencement of construction.	Ongoing	In Compliance	BC Hydro provided the third annual report on the implementation of the Agriculture monitoring and Follow-up Program in July 2018. The fourth annual report will be provided in July 2019.
EAC 31	The EAC Holder must provide this draft Agriculture Monitoring and Follow-up Program to the Ministry of Agriculture, Peace River Regional District and the District of Hudson's Hope for review within 90 days after the commencement of construction.	Completed	In Compliance	The draft Agricultural Monitoring and Follow-up Program was submitted to regulatory agencies and governments on October 23, 2015.
EAC 31	The EAC Holder must file the final Agriculture Monitoring and Follow-up Program with EAO, Ministry of Agriculture, Peace River Regional District and the District of Hudson's Hope within 150 days of commencement of construction.	Completed	In Compliance	The final Agricultural Monitoring and Follow-up Program was submitted to regulatory agencies and governments on December 22, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 31	The EAC Holder must develop, implement and adhere to the final Agriculture Monitoring and Follow-up Program, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro provided the third annual report on the implementation of the Agriculture monitoring and Follow-up Program in July 2018. The fourth annual report will be provided in July 2019.
Other Resource Industries				
EAC 32	The EAC Holder must develop an Oil, Gas and Energy Monitoring and Follow-up Program.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 32	The Oil, Gas and Energy Monitoring and Follow-up Program must, at a minimum, monitor baseline conditions and effects of increased sedimentation on Spectra intakes, during construction, and effects of increased water temperature and sedimentation during operations, on Spectra cooling operations for a period of 10 years after the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 32	Monitoring reports must be provided to Spectra Energy beginning 180 days following commencement of operations, and annually thereafter.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 32	The EAC Holder must provide this draft Oil, Gas and Energy Monitoring and Follow-up Program to Spectra Energy for review within 90 days after the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 32	The EAC Holder must file the final Oil, Gas and Energy Monitoring and Follow-up Program with EAO and Spectra Energy within 150 days after the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 32	The EAC Holder must develop, implement and adhere to the final Oil, Gas and Energy Monitoring and Follow-up Program, and any amendments, to the satisfaction of EAO.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 33	The EAC Holder must negotiate a Memorandum of Understanding (MOU) with the MOTI prior to material extraction at MOTI quarries or pits to compensate for material used by the Project and to maintain availability of regional aggregate resources for MOTI operational needs.	Ongoing	In Compliance	BC Hydro has a signed MOU with MOTI, dated November 12, 2013.
EAC 33	The MOU must include: · Aggregate source strategy to compensate for inundated Ministry aggregate sources, and	Ongoing	In Compliance	BC Hydro continues to work with MoTI to satisfy these commitments in the MOU. Aggregate sources have been set aside for MoTI during Hwy 29 construction in Peaceview Pit. BC Hydro continues to pursue other sources.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 33	Strategy for the EAC Holder to stockpile surplus rock material at the West Pine, Wuthrich, and Portage Mountain quarries.	Ongoing	In Compliance	BC Hydro is currently stockpiling surplus excavated material for MOTI at West Pine and Wuthrich Quarries. A site for surplus stockpiled material has been identified at Portage Mountain Quarry.
EAC 33	The EAC Holder commitments as outlined in the MOU must be implemented and adhered to, to the satisfaction of the MOTI.	Ongoing	In Compliance	BC Hydro continues to work with MoTI to satisfy these commitments in the MOU. Current commitments include: coordination of Hwy 29 management, procurement construction and decommissioning. BCH continues to work with MoTI on pursuing material sources for future MOTI requirements from inundated sources.
EAC 34	The EAC Holder must discuss any overlap with the Project activity zone and preliminary reservoir impact lines with affected mineral and aggregate tenure holders.	Completed	In Compliance	<p>No mineral tenures appear to overlap with the Project Activity Zone and preliminary impact lines.</p> <p>The dam site, reservoir and transmission line are covered by no registration reserves or conditional registration reserves. No mineral claims may be made in no registration reserves. No activity may be undertaken without prior consent of BC Hydro in conditional registration reserves. Further the entire District of Hudson's Hope, the Peace Moberly Tract and the Proposed Peace Boudreau Protected area are also covered by no registration reserves. Portions of the preliminary impact lines on the north bank are not protected by any reserve, however, no mineral claims appear to have been made.</p> <p>Other than reserves held by the MOTI, BC Hydro is not aware of any tenures issued to third parties for the purposes of aggregate production on Crown land that overlap with the Project Activity Zone and preliminary impact lines.</p>
EAC 34	Where conflicts exist, the EAC Holder must make reasonable efforts to enter into agreements with mineral and aggregate tenure holders, to the satisfaction of EAO, to resolve conflicts with mineral and aggregate tenure holders.	Completed	In Compliance	<p>No mineral tenures appear to overlap with the Project Activity Zone and preliminary impact lines.</p> <p>The dam site, reservoir and transmission line are covered by no registration reserves or conditional registration reserves. No mineral claims may be made in no registration reserves. No activity may be undertaken without prior consent of BC Hydro in conditional registration reserves. Further the entire District of Hudson's Hope, the Peace Moberly Tract and the Proposed Peace Boudreau Protected area are also covered by no registration reserves. Portions of the preliminary impact lines on the north bank are not protected by any reserve, however, no mineral claims appear to have been made.</p> <p>Other than reserves held by the MOTI, BC Hydro is not aware of any tenures issued to 3rd parties for the purposes of aggregate production on Crown land that overlap with the Project Activity Zone and preliminary impact lines.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 34	Efforts made by the EAC Holder to enter into such agreements must be documented.	Completed	In Compliance	<p>No mineral tenures appear to overlap with the Project Activity Zone and preliminary impact lines.</p> <p>The dam site, reservoir and transmission line are covered by no registration reserves or conditional registration reserves. No mineral claims may be made in no registration reserves. No activity may be undertaken without prior consent of BC Hydro in conditional registration reserves. Further the entire District of Hudson's Hope, the Peace Moberly Tract and the Proposed Peace Boudreau Protected area are also covered by no registration reserves. Portions of the preliminary impact lines on the north bank are not protected by any reserve, however, no mineral claims appear to have been made.</p> <p>Other than reserves held by the MOTI, BC Hydro is not aware of any tenures issued to 3rd parties for the purposes of aggregate production on Crown land that overlap with the Project Activity Zone and preliminary impact lines.</p>
TRANSPORTATION				
EAC 35	The EAC Holder must develop a Traffic Management Plan to appropriately manage Project-related traffic in and around work sites during construction in a manner that protects wildlife, maximizes worker and public safety, and manages effects on productivity.	Ongoing	In Compliance	<p>This requirement is addressed in the final Construction Safety Management Plan (CSMP), Section 5.4 Traffic Management Plan.</p> <p>Site-specific Traffic Management Plans and Safety Management Plans are required from contractors, and approved by MOTI. These plans include measures such as coordinating Project Scheduling, Traffic Control Plans, addressing posted speeds, lane widths, hazardous zones, lane closures, public notification, etc. to protect wildlife, maximize safety and manage effects on productivity.</p>
EAC 35	The Traffic Management Plan must be developed by a QEP.	Completed	In Compliance	The Traffic Management Plan is described in Section 5.4 of the CSMP. Section 6.0 of the CSMP lists the QPs who prepared the plan.
EAC 35	The Traffic Management Plan must include at least the following: <ul style="list-style-type: none"> · Maximize the use of existing access corridors. 	Ongoing	In Compliance	The project is maximizing the use of existing access corridors as much as possible. This is currently being done in areas along the Transmission line where existing Right- Of-Way access exists for maintenance and for clearing in the Eastern Reservoir.
EAC 35	<ul style="list-style-type: none"> · Equip Project vehicles travelling on Project access roads with VHF/UHF communication radios. 	Ongoing	In Compliance	All Project vehicles travelling on Project access roads have VHF/UHF communication radios.
EAC 35	<ul style="list-style-type: none"> · Control and/or restrict access where required, and as discussed with MOTI. 	Ongoing	In Compliance	

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Appendix G

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 35	Identify access roads to be decommissioned after Project use.	Ongoing	In Compliance	Contractor Traffic Management Plans will identify access roads to be decommissioned. This has included temporary access for clearing, dam site construction, and Hwy 29 realignment.
EAC 35	Public safety measures.	Ongoing	In Compliance	Public safety measures are addressed in Contractor Traffic Management Plans or Safety Plans, which are reviewed and approved by MOTI. Measures include having Incident Management Plans, Traffic Control Plans, public signage and notification, etc.
EAC 35	Post speed limits on all construction access roads.	Ongoing	In Compliance	Speed limits are posted throughout the dam site area as well as on all public roadways where construction is taking place. These speed limits are reflective of construction speed zones.
EAC 35	Work schedules, subject to safety considerations, to minimize delays and nuisance to the public caused by the realignment of Highway 29, particularly during peak visitor periods.	Ongoing	In Compliance	All works on public roadways are subject to Traffic Management Guidelines as provided by MOTI. This includes measures such as maximum delay and work stoppage.
EAC 35	Inclusion of Traffic Control Plans, Public Information Plans, Incident Plans, and Implementation Plans.	Ongoing	In Compliance	These topics are included in site-specific Contractor Traffic Management Plans.
EAC 35	The Traffic Management Plan must also establish measures for identifying and mitigating effects on local transportation infrastructure resulting from Project activities.	Ongoing	In Compliance	The Traffic Management Plans include a pavement management program. MOTI conducts pavement condition monitoring surveys in the region once every two years travelling in one direction on main roads. BC Hydro has increased the requirement to survey both directions on main roads every two years for all project effected roads. This includes 240 Rd, 269 Rd, 271 Rd, Jackfish Lake Rd, Hwy 97, and Hwy 29.
EAC 35	The Traffic Management Plan must also include at least the following: · Identification of all road modifications, realignments, and improvements on Highway 29 North, Highway 29 South, Jackfish Lake Road, and North Bank Minor Roads that are required to ensure access is maintained and service levels meet the appropriate MOTI standards.	Completed	In Compliance	All road modifications and improvements on the listed roads require approval from MOTI. MOTI has reviewed and approved design standards for 271 Rd, Cache Creek segment of Hwy 29, etc.
EAC 35	Construction of a paved brake-check before the start of the 10% grade on Canyon Drive west of Hudson's Hope and make it a mandatory requirement for Project-related trucks to stop and check vehicle brakes.	Completed	In Compliance	Construction of a paved brake-check was completed in September 2015.
EAC 35	In consultation with MOTI, identify any additional measures that may be required for public safety (signage, signals, illumination, monitoring etc.)	Ongoing	In Compliance	BC Hydro worked with MOTI to identify any additional required measures that may be required for public safety. Additional measures may be identified in the future based on feedback from MOTI.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 35	Follow best management practices as outlined in Traffic Management Guidelines for Work on Roadways (BC Ministry of Transportation 2001 and as amended from time to time).	Ongoing	In Compliance	BMPs are written into contracts and being followed for all works on public roadways.
EAC 35	The EAC Holder must provide this draft Traffic Management Plan to MOTI, Peace River Regional District, City of Fort St. John, District of Hudson's Hope, District of Chetwynd and Saulteau, West Moberly, Halfway River, Doig River, Blueberry River and Prophet River First Nations, and McLeod Lake Indian Band for review 90 days prior to the commencement of construction.	Completed	In Compliance	The Draft Traffic Management Plan is described in Section 5.4 of the CSMP. The draft CSMP was submitted to the required recipients on October 17, 2014.
EAC 35	The EAC Holder must file the final Traffic Management Plan with EAO, MOTI, Peace River Regional District, City of Fort St. John, District of Hudson's Hope, Chetwynd and Saulteau, West Moberly, Halfway River, Doig River, Blueberry River and Prophet River First Nations, and McLeod Lake Indian Band 30 days prior to the commencement of construction.	Completed	In Compliance	The Draft Traffic Management Plan is described in Section 5.4 of the CSMP. The final CSMP was submitted to the required recipients on June 5, 2015.
EAC 35	The EAC Holder must develop, implement and adhere to the final Traffic Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	<p>Site-specific Traffic Management Plans and Safety Management Plans are required from contractors, and approved by MOTI. These plans include measures such as coordinating Project Scheduling, Traffic Control Plans, addressing posted speeds, lane widths, hazardous zones, lane closures, and public notification, etc. to protect wildlife, maximize safety and manage effects on productivity.</p> <p>Revision 2 to the CSMP was issued in March 2017. Revision 2 of the CSMP contains updates to Section 5.2.12 Traffic Monitoring and Appendix C, section 2.1 and 2.4.</p>
EAC 36	The EAC Holder must develop and implement a carpool and commuter program as part of the Traffic Management Plan.	Ongoing	In Compliance	The carpool and commuter program is described in Appendix C of the CSMP, Appendix C – Commuter and Carpool Plan and is being implemented as planned. Preferred carpool parking is designated in the main site parking lot.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 36	The EAC Holder will provide a shuttle service for workers between Chetwynd and the Site C dam site if warranted by demand or restrictions on access for private vehicles to the dam site.	Ongoing	In Compliance	Potential carpool coordination websites for works were posted on the public Site C website in the fall of 2015. Please see: http://hw/activities/sustainable_transportation/Pages/default.aspx . A requirement for a shuttle service if warranted by demand or restrictions for workers between Chetwynd and the Site C dam site was placed in the GSS and MCW contracts. The Contractors will monitor demand from their workforce. There are no restrictions on access for private vehicles to the dam site gates.
EAC 36	The EAC Holder must consult with the affected local communities, including Aboriginal communities in the development of a carpool and commuter program.	Completed	In Compliance	The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively.
EAC 37	The EAC Holder must develop a Transportation Monitoring and Follow-up Plan to ensure measures to mitigate Project effects on local transportation infrastructure are effective or need to be adjusted to adequately mitigate the effects.	Completed	In Compliance	The requirements of Condition 37 are addressed in Sections 5.4.10, Section 5.4.12, and Appendix B of the CSMP.
EAC 37	The Transportation Monitoring and Follow-up Plan must be developed by a QEP.	Completed	In Compliance	The Transportation Monitoring and Follow-up Plan is described in Sections 5.4.10, Section 5.4.12, and Appendix B of the CSMP. Section 6.0 of the CSMP lists the QPs who prepared the plan. Appendix B Traffic Monitoring and Mitigation Plan - Fort St. John and North Bank Area Roads was developed in consultation with the City of Fort St. John staff.
EAC 37	The Transportation Monitoring and Follow-up Plan must include at least the following: <ul style="list-style-type: none"> · On an annual basis during construction and during each year when Project traffic will be using each identified intersection, traffic counts and monitoring of traffic operations at the following intersections: o Beattie Drive in Hudson's Hope o Clarke Avenue in Hudson's Hope o Highway 29 and Canyon Drive in Hudson's Hope o Highway 29 and Jackfish Lake Rd o Highway 97 / Highway 29 in Chetwynd o Highway 97 intersections in Fort St. John, including: o Highway 97 at Old Fort Road in Fort St. John o Highway 97 at 100th Street in Fort St. John o Highway 97 at 85th Avenue in Fort St. John 	Ongoing	In Compliance	Intersection monitoring was carried out annually in Year 3 of construction with quarterly monitoring of the dam site entrances. The Traffic and Pavement Monitoring report for the third year of construction was submitted to regulatory agencies and local governments on January 22, 2019. The next annual monitoring data collection will occur in April - May 2019.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 37	Annual monitoring during construction of traffic operations on local roads to determine if road restrictions for Project-related traffic should be implemented, in accordance with appropriate MOTI standards.	Ongoing	In Compliance	Intersection monitoring was carried out annually in Year 3 of construction with quarterly monitoring of the dam site entrances. The Traffic and Pavement Monitoring report for the third year of construction was submitted to regulatory agencies and local governments on January 22, 2019. The next annual monitoring data collection will occur in April - May 2019.
EAC 37	As part of the Transportation Monitoring and Follow-up Plan, the EAC Holder must implement the following 90 days prior to commencement of operations: · Illumination of continuous lightning along Highway 97 through Taylor, from Birch Avenue west to 100th Street access at McMahan Drive, and intersection lightning at Highway 97 and Pine Avenue, 103rd Avenue, and Cherry Avenue	Completed	In Compliance	Continuous lighting was installed in 2015 and is operating in Taylor along Highway 97 in accordance with this requirement.
EAC 37	Installation of changeable message signs on Highway 97 on the south Taylor Hill and on the hill north of Taylor, to be operated as part of the MOTI network that will provide drivers with advanced notification of road conditions, including notification of fog conditions.	Completed	In Compliance	Changeable message signs were installed in 2015 and are operating on Highway 97 in accordance with this requirement.
EAC 37	Installation of a highway webcam in Taylor to monitor fog conditions, to be operated as part of the MOTI network. The location will be determined in consultation with Taylor and MOTI.	Completed	In Compliance	The webcam was installed in 2017 as part of MOTI's network and can be accessed on DriveBC.
EAC 37	The Transportation Monitoring and Follow-up Plan reporting must occur at least annually during the monitoring and follow-up program period, beginning 180 days after the commencement of construction.	Ongoing	In Compliance	BC Hydro submitted the Year 3 Traffic and Pavement Monitoring report on January 22, 2019.
EAC 37	The EAC Holder must provide the draft Transportation Monitoring and Follow-up Plan to MOTI, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups for review within 90 days after the commencement of construction.	Completed	In Compliance	The draft Transportation Monitoring and Follow-up Plan, as part of the CSMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014.
EAC 37	The EAC Holder must file the final Transportation Monitoring and Follow-up Plan with EAO, MOTI, Peace River Regional District, City of Fort St. John, District of Hudson's Hope, District of Chetwynd and Aboriginal Groups within 150 days after the commencement of construction.	Completed	In Compliance	The final CSMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 37	The EAC Holder must develop, implement and adhere to the final Transportation Monitoring and Follow-up Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	<p>BC Hydro submitted the CSMP on June 5, 2015, the most recent revision was submitted on March 22, 2017. The CSMP includes all of the measures in the Transportation Monitoring and Follow-up Plan in section 5.4.10, section 5.4.12, and Appendix B Traffic Monitoring and Mitigation Plan - Fort St. John and North Bank Area Roads.</p> <p>The Traffic and Pavement Monitoring report for the second year of construction was submitted regulators and local communities on January 22, 2019.</p>
EAC 38	The EAC Holder must develop a Public Safety Management Plan to describe how it will implement measures to avoid or manage the effects of the Project on public safety during construction and operations.	Completed	In Compliance	<p>Section 5.3 of the CSMP describes the Public Safety Management Plan (Public Safety Management Plan) as well as planning for future aspects of the project.</p> <p>The Public Safety Management Plan, developed by a QEP, is described in Section 5.3 of the CSMP. The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively. A status update on Condition 37 requirements is provided below.</p> <p>Public Safety Management Plans are key deliverables by all Primes and major contractors at Site C and must be approved before the contractor can mobilize to site.</p>
EAC 38	The Public Safety Management Plan must be developed by a QEP.	Completed	In Compliance	The Public Safety Management Plan is described in Section 5.3 of the CSMP. Section 6.0 of the CSMP lists the QP who prepared the plan.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 38	The Public Safety Management Plan must include at least the following: · Increase public awareness of safety hazards, including navigational hazards, access restrictions and closures during the construction and operation of the Site C reservoir.	Ongoing	In Compliance	The PSMP describes measures to inform public on safety issues during the construction of the Project. In river work zone hazards are well marked for navigation purposes and meet the requirements for river navigation. Public safety signs and beacons have been installed on the north and south banks of the Peace River, upstream and downstream of the dam site, to mark the boundaries of the active construction area. The work site maintains a security perimeter with activity access control, security patrols and signage to inform members of the public. Information about safety is shared publicly using a variety of methods. The bi-weekly construction bulletin provides information about planned work and safety information for boaters. 26 bulletins were provided in 2018. The quarterly Aboriginal Group construction notification also contains this information. Four letters were provided in 2018. As per the PSMP, Contractor Public Safety Management Plans are provided to Indigenous groups and to local and regional governments. The operations PSMP will be developed prior to reservoir filling.
EAC 38	· Establish boater communication protocol including communication of navigational hazards during construction and operations.	Ongoing	In compliance	Information about safety is shared publicly using a variety of methods, including the bi-weekly construction bulletin and the quarterly construction notification letter which is sent to Indigenous groups, local governments and posted online. Public safety signs and beacons have been installed on the banks of the Peace River to mark the boundaries of the active construction area. Further, BC Hydro will facilitate the distribution of contractor's public safety management plans as and when needed.
EAC 38	· Develop standard navigation mitigations for signals, markings and notifications, relating to overhead structures such as towers and conductors crossing navigable waters.	Ongoing	In Compliance	Standard navigation mitigations for signals, markings and notifications is being undertaken in compliance with Navigation Protection Act approvals.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 38	Manage public water-based access during construction and for the first 5 years of operation.	Ongoing	In Compliance	<p>The Peace River will not be closed to the public until river diversion.</p> <p>In river work zone hazards are well marked for navigation purposes and meet the requirements for river navigation. Public safety signs and beacons have been installed on the north and south banks of the Peace River, upstream and downstream of the dam site, to mark the boundaries of the active construction area. The work site maintains a security perimeter with activity access control, security patrols and signage to inform members of the public.</p>
EAC 38	The EAC Holder must provide this draft Public Safety Management Plan to MOTI, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Saulteau, West Moberly, Halfway River, Doig River, Blueberry River and Prophet River First Nations, and McLeod Lake Indian Band for review 90 days prior to the commencement of construction and operations.	Completed	In Compliance	The draft CSMP (Section 5.3 Public Safety Management Plan) was submitted to regulatory agencies, governments and Indigenous groups on October 7, 2014.
EAC 38	The EAC Holder must file the final Public Safety Management Plan with the MOTI, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Saulteau, West Moberly, Halfway River, Doig River, Blueberry River and Prophet River First Nations, and McLeod Lake Indian Band 30 days prior to the commencement of construction and operations.	Completed	In Compliance	The final CSMP (Section 5.3 Public Safety Management Plan) was submitted to regulatory agencies, governments and Indigenous groups on June 5, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 38	The EAC Holder must develop, implement and adhere to the final Public Safety Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	<p>The PSMP is described in Section 5.3 of the CSMP.</p> <p>The PSMP describes the requirements for BC Hydro and its contractors in managing public safety. The PSMP applies to all work sites and all activities associated with construction of the Project.</p> <p>Ongoing implementation of the PSMP includes: blocking trails where public can access the site; appropriate signage in the river channel along the property perimeter and in other key places; appropriate information on Public Safety Management Plan included in site orientations; additional emergency measures related to downstream inundation response; security enforcement of trespass and access control protocols; managing tour groups and visitor access to mitigate safety concerns; managing work practices so public safety is contemplated in all components of the project. River navigation hazards are in place in addition to river channel signs and construction zone beacons. The Peace River bridge is well marked in stream work is identified by warning signs and river safety boat patrols are ongoing.</p> <p>Site C Communications takes steps to keep key public stakeholders informed about construction activity and to provide applicable warnings about work that may impact public safety, including noise abatement, dust abatement and traffic management planning.</p>
OUTDOOR RECREATION AND TOURISM				
EAC 39	The EAC Holder must provide information to the Province of Alberta, during construction and operations, to assist in their communications with anglers in Alberta regarding changes in downstream fishing opportunities due to construction activities and longer-term changes in fish community composition.	Initial Planning	Future Requirement	<p>BC Hydro acknowledges and understands this condition.</p> <p>BC Hydro will provide information regarding changes in downstream fishing opportunities on to the Province of Alberta on an annual basis, commencing when information from the FAHMFP becomes available.</p>
EAC 40	The EAC Holder must finalize and implement the Outdoor Recreation Mitigation Plan to mitigate changes in recreational opportunities and loss of existing recreational areas resulting from the Project.	Ongoing	In Compliance	<p>BC Hydro submitted the draft Outdoor Recreation Mitigation Plan on July 27, 2016 and submitted the final Outdoor Recreation Mitigation Plan on January 27, 2017 with regulatory agencies, governments and Indigenous group. The Plan describes the timing for when different measures will occur. The timing of specific measures is referenced below.</p>
EAC 40	The Outdoor Recreation Mitigation Plan must be developed by a QEP.	Completed	In Compliance	<p>Section 5.0 of the Outdoor Recreation Management Plan lists the QPs who prepared the plan.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 40	The Outdoor Recreation Mitigation Plan must include at least the following to: · Provide technical information to support outdoor recreation providers in adapting to new shoreline conditions.	Ongoing	In Compliance	Section 2.2.1 of the final Outdoor Recreation Mitigation Plan includes information about the provision of technical information and communications strategies that will be used.
EAC 40	· Establish three new boat launch/day use sites, complete with parking, picnic areas and toilets, at Cache Creek, Lynx Creek and Hudson's Hope Shoreline, and accessible via Highway 29.	Ongoing	In Compliance	Section 2.2.2 of the final Outdoor Recreation Mitigation Plan includes information about the boat launches. The design of three new boat launch and day use sites is ongoing. Road access for boaters and recreation site users from Highway 29 for each of the boat launches is currently in design phase, in coordination with Highway 29 work.
EAC 40	· Establish at least one public viewpoint at the Site C dam site.	Completed	In Compliance	Section 2.2.2 of the final Outdoor Recreation Mitigation Plan includes information about the viewpoint on the north bank. The viewpoint opened to the public in August 2017.
EAC 40	· Provide approximately \$150,000 to the District of Hudson Hope for the enhancement of Alwin Holland Park, or other community shoreline recreation areas.	Completed	In Compliance	Section 2.2.2 of the final Outdoor Recreation Mitigation Plan includes information about the payment which was made to Hudson's Hope in 2017.
EAC 40	· Provide approximately \$200,000 for a Community Recreation Site Fund of which \$50,000 is for recreational sites on the south bank to support development of new shoreline recreation areas within the Peace River and its tributaries to the Alberta border.	Ongoing	In Compliance	Section 2.2.3 of the final Outdoor Recreation Mitigation Plan describes the strategy and implementation plan for the recreation fund. BC Hydro consulted with local governments on the implementation of the fund in in 2018. Implementation of the fund will commence in 2019.
EAC 40	· Outline an approach to governance and allocation of funds from the Community Recreation Site Fund	Ongoing	In Compliance	Section 2.2.3 of the final Outdoor Recreation Mitigation Plan describes the strategy and implementation plan for the recreation fund. BC Hydro consulted with local governments on the implementation of the fund in in 2018. Implementation of the fund will commence in 2019.
EAC 40	· Fund the development of a BC Peace River/Site C Reservoir Navigation and Recreation Opportunities Plan	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. The Outdoor Recreation Mitigation Plan describes the plan in section 2.2.4. A BC Peace River / Site C Reservoir Navigation and Recreation Opportunities Plan will be developed to mitigate potential effects on over the long term on outdoor recreation and tourism infrastructure, as well as access to water-based navigation. The planning process and the plan development will be funded by BC Hydro and initiated within one year after reservoir filling.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 40	The EAC Holder must provide this draft Outdoor Recreation Mitigation Plan to FLNR, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Saulteau, West Moberly, Halfway River, Doig River, Blueberry River and Prophet River First Nations, and McLeod Lake Indian Band for review within 12 months after the commencement of construction.	Completed	In Compliance	BC Hydro submitted the draft Outdoor Recreation Mitigation Plan on July 27, 2016 to regulatory agencies, governments and Indigenous groups.
EAC 40	The EAC Holder must file the final Outdoor Recreation Mitigation Plan with EAO, FLNR, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Saulteau, West Moberly, Halfway River, Doig River, Blueberry River and Prophet River First Nations, and McLeod Lake Indian Band within 18 months after the commencement of construction.	Completed	In Compliance	BC Hydro submitted the final Outdoor Recreation Mitigation Plan on January 27, 2017 to regulatory agencies, governments and Indigenous groups.
EAC 40	The EAC Holder must develop, implement and adhere to the final Outdoor Recreation Mitigation Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Implementation of the measures as described in the final Outdoor Recreation Mitigation Plan is underway.
EAC 41	The EAC Holder must make reasonable efforts to enter into agreements with the owners of the campground at Cache Creek and the hunting camp near the Site C dam site to compensate for any effects to those facilities, prior to potential effects on operation of these facilities.	Ongoing	In Compliance	BC Hydro has entered into an agreement with the owner of the campground at Cache Creek. This agreement transferred the land to BC Hydro in return for compensation. Further discussions regarding the effects of the project on the campground facility are ongoing. BC Hydro has entered into an agreement with the operator of the hunt camp near Site C. This agreement compensated the operator for the effects on the facility and the cost to replace and/or relocate the physical infrastructure. It is not known if the operator has reinstated the hunt camp at an alternative location.
EAC 41	Where it is both physically and economically feasible, the costs to relocate facilities will be included in the agreements.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
COMMUNITY				
Community Infrastructure and Services				
EAC 42	The EAC Holder must manage increased demands resulting from the influx of the Project workforce on community health care and social services by implementing mitigation measures detailed in a Healthcare Services Plan.	Ongoing	In Compliance	The final Health Care Services Plan was submitted on June 5, 2015. Implementation of the measures in the Plan are underway.

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No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 42	The Healthcare Services Plan must include at least the following: · Implement on-site health care comprised of physician and nursing services to manage non-urgent health issues for the workforce residing in the construction camps.	Ongoing	In Compliance	Section 6.1 of the final Health Care Services Plan describes the on-site health care. The on-site Project Health Clinic opened on March 1, 2016 staffed with a nurse practitioner and advanced care paramedic. BC Hydro provides quarterly data reports to Northern Health on the Project Health Clinic's activities.
EAC 42	· Establish a process for coordination of program delivery with the Northern Health Authority (NHA).	Completed	In Compliance	Project Health Clinic staff have been in contact with Northern Health Authority (NHA) contacts provided by Northern Health to coordinate programs delivered through the clinic. BC Hydro provides a quarterly report to Northern Health on use of the Project Health Clinic. BC Hydro and Health Clinic staff also hosted a tour and meeting with Northern Health staff, members of the local Division of Family Practice, WorkSafe BC and BC Ambulance on October 30, 2017.
EAC 42	· Establish a process for providing new resident workers and their families with local information about health, education and social services.	Completed	In Compliance	Links to information about health, education and social services for each community in the Peace were posted on the public Site C website in fall 2015 to share with new residents and potential new residents. This information is reviewed and updated as needed.
EAC 42	The EAC Holder must provide this draft Healthcare Services Plan to NHA, Peace River Regional District, City of Fort St. John and District of Hudson's Hope for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft Health Care Services Plan was submitted to NHA and governments on October 17, 2014.
EAC 42	The EAC Holder must file the final Healthcare Services Plan with the NHA, Peace River Regional District, City of Fort St. John and the District of Hudson's Hope a minimum of 30 days prior to the commencement of construction.	Completed	In Compliance	The final Health Care Services Plan was submitted to NHA and governments on June 5, 2015.
EAC 42	The EAC Holder must develop, implement and adhere to the final Healthcare Services Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The final Health Care Services Plan was submitted on June 5, 2015. Implementation of the measures in the Plan are underway. The Project Health Clinic opened on March 1, 2016. BC Hydro held a Joint Health Care Services meeting on November 1, 2018 with Northern Health, WorkSafe BC and physicians from the local Division of Family Practice.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 43	The EAC Holder must develop an Emergency Services Plan that includes at least the following to describe how the EAC Holder will implement measures to: <ul style="list-style-type: none"> · Contract for provision of emergency services (fire services and medical transport) 	Ongoing	In Compliance	The final Emergency Services Plan was submitted to local emergency services providers, and governments on June 5, 2015. Fire and emergency services continue to attend site when called via 9-1-1 from the Worker Accommodation site. PRHP maintains a brigade for construction purposes. BC Hydro's Fire Marshall has been involved in this planning and has spoken fully into the requirement which prime at site have planned for. The medical clinic at site continues to provide immediate EMT response to for serious incidents while BC Ambulance service is dispatched. This supplements the first aid requirements already in place per WSBC standards. Medical transport from Site C can presently occur via site supplied transport or BC Ambulance transport. Additional resources have been allocated for emergency response by the local Fort St John Fire Department who will respond to emergencies at the ATCO Two Rivers accommodations and the AFDE worksites on the right bank.
EAC 43	Communicate Project emergency management plans to all emergency service providers, and provide updates as plans are amended	Ongoing	In Compliance	The Emergency Action Plan continues to develop at Site C, as construction advances and all contractors are required to plan and prepare emergency responses in accordance with the Site C plan. Ongoing emergency planning continues to include the PRRD, the City of FSJ, police, fire services, BC Ambulance and other stakeholders, especially as this concerns inundation response planning. As coffer dam development continues in advance of river diversion in 2020, additional planning, preparations exercises and response mechanisms will be defined, coordinated and tested by contractors in conjunction with BC Hydro requirements.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 43	· Develop site access protocols to enable safe site access during construction and communicate to emergency service providers For this condition, these emergency services refer only to Project need for emergency services during construction and are defined as those services relating to: firefighting, policing, ambulance services, Conservation Officer Service, Search and Rescue Associations, BC Wildfire Management Branch.	Ongoing	In Compliance	BC Hydro continues to develop and mature both access requirements and access restrictions as they relate to effective security and safety. Emergency services traveling to site in 2018 did not encounter any problems with access. Protocols in place planned to deal with escorting emergency service vehicles and accommodating emergency response personnel for routine meetings and inspections were all carried out without incident. BC Hydro continues to liaise with emergency services in the region on a regular basis to provide information and respond to questions and concerns. Interactions with fire services, BC Ambulance, RCMP, Conservation Officers and other provincial bodies occurred in 2018 without concerns expressed and is planned to continue in 2019.
EAC 43	The EAC Holder must provide this draft Emergency Services Plan to the appropriate local emergency service providers including the Peace River Regional District, City of Fort St. John, District of Hudson's Hope and District of Taylor for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft Emergency Services Plan was submitted to local emergency services providers, and governments on October 17, 2014.
EAC 43	The EAC Holder must file the final Emergency Services Plan with EAO, local emergency service providers including the Peace River Regional District, City of Fort St. John, District of Hudson's Hope and District of Taylor a minimum of 30 days prior to the commencement of construction.	Completed	In Compliance	The final Emergency Services Plan was submitted to local emergency services providers, and governments on June 5, 2015.
EAC 43	The EAC Holder must develop, implement and adhere to the final Emergency Services Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro submitted an Emergency Action Plan with full sign-off in August 2016. The plan has been integrated into all safety management planning for contractors at site. Building on previous work and success around emergency management at Site C, additional coordination meetings occurred in 2018 to ensure alignment with prime contractors and to confirm baseline requirements for exercises and ongoing planning.
EAC 44	The EAC Holder must assist School Districts 59 and 60 to adjust to potential increased need resulting from the influx of the Project workforce by providing annual information throughout construction about anticipated changes in the resident population and potential new school enrolment.	Ongoing	In Compliance	BC Hydro provided this information on the Project workforce to School Districts 59 and 60 on July 27, 2018. BC Hydro will provide updated information in July 2019.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 45	The EAC Holder must assist the Northern Lights College to adjust to potential increased need resulting from the influx of the Project workforce by providing information annually during construction to identify the number of worker hires.	Ongoing	In Compliance	Site C Contractors are contractually required to report on their work force monthly. BC Hydro has provided this information in "The Summary of the Site C Workforce - Annual report (Total worker, Temporary Foreign Workers and Difficult to Hire Positions)" that was provided to the Northern Lights College and School District 59 and 60 on July 27th, 2018. The next report will be issued in July 2019.
EAC 46	The EAC Holder must develop a Waste Management Plan.	Completed	In Compliance	The Waste Management Plan is described in Section 4.16 of the CEMP for the Project.
EAC 46	The Waste Management Plan must be developed by a QEP.	Completed	In Compliance	The Waste Management Plan is described in Section 4.16 of the CEMP. Section 6.0 of the CEMP lists the QPs who prepared the plan.
EAC 46	The Waste Management Plan must include at least the following: <ul style="list-style-type: none"> · Identify waste management strategies to manage effects on landfills in the region. 	Ongoing	In Compliance	Section 4.16 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 46	<ul style="list-style-type: none"> · Develop methods for disposal of project-related waste. 	Ongoing	In Compliance	Section 4.16 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 46	<ul style="list-style-type: none"> · Ensure capacity of local landfills to meet disposal requirements of the Project construction activities 	Ongoing	In Compliance	BC Hydro has been in communications with local landfills about operations. Landfill operators have not to date expressed concerns about waste streams from the Project negatively affecting landfill capacity.
EAC 46	<ul style="list-style-type: none"> · Establish resources and funding arrangements to address any potential shortfall in existing landfill capacity. 	Ongoing	In Compliance	Operators of the Regional District Landfill have not expressed concern over landfill capacity resulting from increased waste flows from the Site C Project.
EAC 46	<ul style="list-style-type: none"> · Identify other waste management options through consultation with the Peace River Regional District/municipal agencies responsible for management of solid waste in the area. 	Ongoing	In Compliance	All contractors onsite manage a waste stream that is segregated as per the available waste programs in the area. BC Hydro consulted with Peace River Regional District in 2018 and did not identify any additional waste management practices that BC Hydro needs to pursue.
EAC 46	The EAC Holder must provide the Waste Management Plan to the MOE, Peace River Regional District, City of Fort St. John and the District of Hudson's Hope for review a minimum of 90 days prior to the commencement of construction activities.	Completed	In Compliance	The Waste Management Plan is described in Section 4.16 of the CEMP for the Project. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 46	The EAC Holder must file the final Waste Management Plan with the EAO, MOE, Peace River Regional District, City of Fort St. John and the District of Hudson's Hope a minimum of 30 days prior to the commencement of construction activities.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 46	The EAC Holder must develop, implement and adhere to the final Waste Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Section 4.16 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 47	The EAC Holder must mitigate actual effects on the functionality of local water and sewage systems by implementing measures detailed in a Local Infrastructure Mitigation Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro established mitigation and/or monitoring programs with the District of Hudson's Hope, City of Fort St. John and the District of Taylor for their water and sewage systems as appropriate, in their community agreements. BC Hydro is working with the PRRD to establish a similar agreement. BC Hydro will submit the draft Local Infrastructure Mitigation Plan to governments and Indigenous groups, a minimum of 360 days prior to reservoir filling. BC Hydro will submit the final Local Infrastructure Mitigation Plan to the EAO, governments and Indigenous groups, a minimum of 30 days prior to reservoir filling.
EAC 47	The Local Infrastructure Mitigation Plan must include at least the following: A strategy for ongoing communication with local municipalities. · Specific mitigation measures (system relocation, replacement, monitoring) that may be required to ensure the functionality of existing municipal water and sewer systems.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition
EAC 47	· Identification of resources and funding arrangements associated with specific mitigation measures that may be required to ensure functionality of existing municipal water and sewer systems.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition
EAC 47	The EAC Holder must provide this draft Local Infrastructure Mitigation Plan to the Peace River Regional District, City of Fort St. John, District of Hudson's Hope, District of Taylor, and Aboriginal Groups for review a minimum of 360 days prior to reservoir filling.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 47	The EAC Holder must file the final Local Infrastructure Mitigation Plan with EAO, Peace River Regional District, City of Fort St. John, District of Hudson's Hope, District of Taylor, and Aboriginal Groups a minimum of 30 days prior to reservoir filling.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition
EAC 47	The EAC Holder must develop, implement and adhere to the final Local Infrastructure Mitigation Plan, and any amendments, to the satisfaction of EAO.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition
Housing				
EAC 48	The EAC Holder must manage the increased demands for housing in the City of Fort St. John, resulting from the influx of the Project workforce by implementing mitigation measures detailed in a Housing Plan.	Ongoing	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 was submitted in December 2016. The implementation of the measures in the Plan is underway. The construction of the 50 rental units of housing is underway in Fort St. John by BC Housing's contractor and is expected to be opened in 2019.
EAC 48	The Housing Plan must include at least the following: · Establish a community camp co-coordinator.	Ongoing	In Compliance	The coordinator identified and posted logistical information on the public Site C website to support workers consideration of moving to a local community. This information is reviewed and updated regularly.
EAC 48	· Establish a process for adjusting camp capacity throughout the construction phase to accommodate direct Project workers.	Completed	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Revision 2 describes in section 5.2 how the camp was structured to allow the accommodation of direct Project workers. BC Hydro has constructed the Two Rivers Lodge (Lodge) at the dam site worker accommodation camp to meet anticipated demand for camp housing at the dam site location for the Project workforce. The first beds in the Lodge opened on February 29, 2016 with the last beds opening on September 1, 2016 for a total of approximately 1,600 beds. The camp is planned and contracted to allow additional phased units to be added to meet the on-site housing needs of the workforce through the course of the Project construction if needed.
EAC 48	· Expand affordable rental housing supply in the City of Fort St. John by building 50 rental units to be owned and operated by BC Housing or an approved non-profit operator. Immediately on completion of the housing development, 40 of the rental units will be available for BC Hydro worker housing and 10 will be available to low to moderate income households. Upon completion of the Site C construction phase, the 40 worker housing units will be made available to low to moderate income households.	Ongoing	In Compliance	Section 5.3 of the Housing Plan and Housing Monitoring and Follow-up Program describes the plan to build the additional rental units. BC Hydro completed a contract with BC Housing on July 19, 2016. BC Housing issued a request for proposal in December 2016 for a design-build team for the Project. The construction of the 50 rental units of housing is underway in Fort St. John by BC Housing's contractor. BC Housing is expected to open the building in 2019.

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No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 48	Expand RV accommodation by building 20 new temporary long-stay RV accommodations.	Completed	In Compliance	Section 5.4 of the Housing Plan and Housing Monitoring and Follow-up Program describes the plan to build the long-stay RV accommodations. The RV spaces at Peace Island Park operated by the District of Taylor have been completed. Taylor opened the spaces to the public in early summer 2018.
EAC 48	Provide approximately \$250,000 to emergency or transitional housing providers in the City of Fort St. John.	Completed	In Compliance	To date, BC Hydro has provided the following funding for emergency and transitional housing programs in Fort St. John: \$25,000 contribution to Skye's Place in September 2015 to support transitional housing; \$25,000 contribution to Meaope Transition House in September 2015 to support transitional housing; and \$200,000 contribution to Salvation Army in November 2016 to support emergency housing.
EAC 48	Monitor net migration to reserves as a result of the Project.	Ongoing	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 describes how monitoring net migration to reserves is completed in section 7.2. The report for 2017 was submitted in May 2018. The report for 2018 will be submitted in May 2019.
EAC 48	The EAC Holder must provide this draft Housing Plan to the City of Fort St. John, and Aboriginal Groups for review a minimum of 90 days prior to the construction of housing.	Completed	In Compliance	The draft Housing Plan and Housing Monitoring and Follow-Up Program, was submitted to the City of Fort St. John and Indigenous groups on April 7, 2015.
EAC 48	The EAC Holder must file the final Housing Plan with the EAO, the City of Fort St. John and Aboriginal Groups a minimum of 30 days prior to the construction of housing.	Completed	In Compliance	The final Housing Plan and Housing Monitoring and Follow-Up Program, was submitted to the EAO, the City of Fort St. John and Indigenous groups on June 5, 2015. Revision 2 of the final plan was submitted on December 12, 2016.
EAC 48	The EAC Holder must develop, implement and adhere to the final Housing Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 was submitted in December 2016. The Housing Plan Rental Apartments Monitoring Report - 2018 was submitted to the City and BC Housing on January 22, 2019. The First Nations Net Migration report for 2018 will be submitted in May 2019.
EAC 49	The EAC Holder must ensure that measures implemented under the Housing Plan are effective in mitigating increased demands for housing in the City of Fort St. John by developing and implementing a Housing Monitoring and Follow-up Program for the construction phase.	Ongoing	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 was submitted in December 2016. The Housing Plan Rental Apartments Monitoring Report - 2018 was submitted to the City and BC Housing on January 22, 2019. The First Nations Net Migration report for 2018 will be submitted in May 2019. BC Hydro meets with the City of Fort St. John several times a year to discuss any topics of interest to the City as well as implementation of conditions.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 49	The Housing Monitoring and Follow-up Program must include at least the following to ensure measures to mitigate Project effects are effective or need to be adjusted to adequately mitigate the effects: · The EAC Holder must develop an approach for monitoring the apartment rental vacancy rate and price as published by the CMHC semi-annually, for the Fort St. John area and must define the nature and duration of market changes that may require additional mitigation.	Completed	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 describes monitoring of the apartment rental vacancy rate and price as published by the Canada Mortgage and Housing Corporation (CMHC) and defines the nature and duration of market changes that may require additional mitigation.
EAC 49	The EAC Holder will review the monitoring results with the City of Fort St. John and discuss if additional mitigation is required and mitigation options.	Ongoing	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 was submitted in December 2016. The Housing Plan Rental Apartments Monitoring Report - 2018 was submitted to the City and BC Housing on January 22, 2019. BC Hydro meets with the City of Fort St. John several times a year to discuss any topics of interest to the City as well as implementation of conditions. The most recent meeting occurred on October 31, 2018. The First Nations Net Migration report for 2018 will be submitted in May 2019.
EAC 49	· Reports must be provided semi-annually during construction to BC Housing and City of Fort St. John, beginning 180 days following the commencement of construction.	Ongoing	In Compliance	BC Hydro submitted the Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 on December 12, 2016 which reflects the change by CMHC from semi-annual reporting to annual reporting. The monitoring was updated to reflect only fall monitoring but the threshold to consider mitigation was lowered from two reporting cycles to one to off-set this change. BC Hydro discussed the change with the City prior to submitting the revised Plan.
EAC 49	· The EAC Holder must work with Aboriginal communities in the LAA (as defined in EIS) to track net migration to reserves attributable to Project effects, on rental market conditions in the City of Fort St. John and to identify if additional mitigation is needed.	Ongoing	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 describes how monitoring net migration to reserves is completed in section 7.2. The report for 2017 was submitted in May 2018. The report for 2018 will be submitted in May 2019. BC Hydro has requested Indigenous communities to provide information they would like included in the report for 2018.
EAC 49	The EAC Holder must provide this draft Housing Monitoring and Follow-up Program to the City of Fort St. John and Aboriginal Groups for review within 90 days after the commencement of construction.	Completed	In Compliance	The draft Housing Plan and Housing Monitoring and Follow-Up Program was submitted to the City of Fort St. John and Indigenous groups on April 7, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 49	The EAC Holder must file the final Housing Monitoring and Follow-up Program with EAO, City of Fort St. John and Aboriginal Groups within 150 days following the commencement of construction.	Completed	In Compliance	<p>The final Housing Plan and Housing Monitoring and Follow-Up Program, was submitted to the EAO, the City of Fort St. John and Indigenous groups on June 5, 2015. BC Hydro submitted Revision 2 of the Housing Plan and Housing Monitoring and Follow-Up Program on Dec 12, 2016.</p> <p>The Plan was updated due to CMHC eliminating its spring data collection period. As such, the revised plan includes monitoring once a year, but the threshold when mitigation would be explored was reduced to one monitoring cycle to maintain the same time frame (12 months).</p>
EAC 49	The EAC Holder must develop, implement and adhere to the final Housing Monitoring and Follow-up Program, any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro submitted the Housing Plan and Housing Monitoring and Follow-up Program Rev. 2 on December 12, 2016 which reflects the change by CMHC from semi-annual reporting to annual reporting. The monitoring was updated to reflect only fall monitoring but the threshold to consider mitigation was lowered from two reporting cycles to one to off-set this change.
Regional Economic Development				
EAC 50	The EAC Holder must provide a one-time contribution of \$160,000 to the District of Hudson's Hope within one year of reservoir filling to address permanent inundation of land no longer available for development.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro will provide a one- time contribution to the District of Hudson's Hope within one year of reservoir filling to address permanent inundation of land no longer available for funding.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 51	The EAC Holder must develop and implement a Business Participation Plan (Plan).	Ongoing	In Compliance	<p>The Site C Project continued to maintain an active business directory, with approximately 1,700 businesses registered. This business directory is shared with major contractors, including PRHP, ATCO and AFDE. BC Hydro also uses the business directory for internal requirements.</p> <p>Information about BC Hydro-issued public procurement opportunities are posted to BC Bid, on the Site C website (where appropriate) and emailed to the Site C business directory. In this period, seven emails were sent to the business directory and information on major procurements are provided to local and regional governments and local and provincial business association stakeholders.</p> <p>Other activities include: The Site C procurement forecast, including regularly- updated major procurement/contract fact sheets, is available on the Site C website. BC Hydro responded to enquiries related to business opportunities in this period, providing information and linking businesses to relevant opportunities with BC Hydro and the Site C contractors.</p> <p>BC Hydro is an active member of several local and regional Chamber organizations (e.g. Fort St. John, Chetwynd), attending meetings and providing presentations as appropriate. This satisfies the requirement to build relationships and increase awareness in the region.</p> <p>As part of ongoing community relations, BC Hydro will continue to meet with local economic development offices and business organizations to provide up-to-date information on business opportunities with the Site C project. Site C's major contractors have also led several procurements through their own internal systems and maintain active vendor's lists. BC Hydro provides information to businesses</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 51	<p>The Plan must include at least the following:</p> <ul style="list-style-type: none"> Increase awareness in the business community about Project procurement opportunities. 	Ongoing	In Compliance	<p>The Site C Project continued to maintain an active business directory, with approximately 1,700 businesses registered. This business directory is shared with major contractors, including PRHP, ATCO and AFDE. BC Hydro also uses the business directory for internal requirements.</p> <p>Information about BC Hydro-issued public procurement opportunities are posted to BC Bid, on the Site C website (where appropriate) and emailed to the Site C business directory. In this period, seven emails were sent to the business directory and information on major procurements are provided to local and regional governments and local and provincial business association stakeholders.</p> <p>Other activities include: The Site C procurement forecast, including regularly- updated major procurement/contract fact sheets, is available on the Site C website. BC Hydro responded to enquiries related to business opportunities in this period, providing information and linking businesses to relevant opportunities with BC Hydro and the Site C contractors.</p> <p>BC Hydro is an active member of several local and regional Chamber organizations (e.g. Fort St. John, Chetwynd), attending meetings and providing presentations as appropriate. This satisfies the requirement to build relationships and increase awareness in the region.</p> <p>As part of ongoing community relations, BC Hydro will continue to meet with local economic development offices and business organizations to provide up-to-date information on business opportunities with the Site C project. Site C's major contractors have also led several procurements through their own internal systems and maintain active vendor's lists. BC Hydro provides information to businesses</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 51	Develop partnerships with local business organizations and economic development offices and programs to communicate and maximize opportunities for local businesses.	Ongoing	In Compliance	<p>The Site C Project continued to maintain an active business directory, with approximately 1,700 businesses registered. This business directory is shared with major contractors, including PRHP, ATCO and AFDE. BC Hydro also uses the business directory for internal requirements.</p> <p>Information about BC Hydro-issued public procurement opportunities are posted to BC Bid, on the Site C website (where appropriate) and emailed to the Site C business directory. In this period, seven emails were sent to the business directory and information on major procurements are provided to local and regional governments and local and provincial business association stakeholders.</p> <p>Other activities include: The Site C procurement forecast, including regularly- updated major procurement/contract fact sheets, is available on the Site C website. BC Hydro responded to enquiries related to business opportunities in this period, providing information and linking businesses to relevant opportunities with BC Hydro and the Site C contractors.</p> <p>BC Hydro is an active member of several local and regional Chamber organizations (e.g. Fort St. John, Chetwynd), attending meetings and providing presentations as appropriate. This satisfies the requirement to build relationships and increase awareness in the region.</p> <p>As part of ongoing community relations, BC Hydro will continue to meet with local economic development offices and business organizations to provide up-to-date information on business opportunities with the Site C project. Site C's major contractors have also led several procurements through their own internal systems and maintain active vendor's lists. BC Hydro provides information to businesses</p>
EAC 51	The EAC Holder must provide this draft Plan to the City of Fort St. John, District of Hudson Hope, District of Taylor and Peace River Regional District for review 90 days prior to the commencement of construction.	Completed	In Compliance	The draft Business Participation Plan was submitted to regulatory agencies and governments on October 7, 2014.
EAC 51	The EAC Holder must file the Final Plan with EAO, City of Fort St. John, District of Hudson's Hope, District of Taylor, and Peace River Regional District a minimum of 30 days prior to the commencement of construction.	Completed	In Compliance	The final Business Participation Plan was submitted to regulatory agencies and governments on June 5, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 51	The EAC Holder must develop, implement and adhere to the Final Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	As described in the Business Participation Plan (available on the Site C website), BC Hydro will publicly report on business participation activities on an annual basis. The 2017-2018 Annual Report for the Business Participation Plan was made available on the Site C website in July 2018. The 2018- 2019 annual report will be available on the Site C website in July 2019.
EAC 52	The EAC Holder must support the North and South Peace non- profit organizations by establishing a community non-profit fund and providing an annual contribution of \$100,000 per year to the fund during the construction phase. Organizations that support children and families will be eligible to apply for funding from the community non-profit fund.	Ongoing	In Compliance	<p>BC Hydro worked with local governments and non-profit organizations active in the Peace region to establish the BC Hydro Peace Region Non-Profit Community Fund ("Fund"), now called the BC Hydro Generate Opportunities 'GO Fund'.</p> <p>The Fund will support programs provided by non-profit organizations in target communities in the North and South Peace (Chetwynd, Hudson's Hope, Taylor, Fort St. John and PRRD) throughout Project construction. BC Hydro will provide an annual contribution of \$100,000 per year to the fund for eight years. BC Hydro established the Regional Decision-making Committee in June 2016. The GO Fund was launched jointly by BC Hydro, Northern Development Initiative Trust (NDIT) and the Committee on September 13, 2016.</p> <p>All information is available on website: www.northerndevelopment.bc.ca/funding-programs/capacity-building/bc-hydro-go-fund/. Applications will be accepted continuously with four intake reviews (November, February, May, and August).</p>
EAC 53	The EAC Holder must develop and implement a Labour and Training Plan.	Ongoing	In Compliance	The final Labour and Training Plan was submitted to regulatory agencies, governments, Indigenous groups, School Districts 59 and 60, and Northern Lights College on June 5, 2017. The Labour and Training Plan requires an annual report on the Project workforce be submitted to Training institutions on the North. "The Summary of the Site C Workforce - Annual report (Total worker, Temporary Foreign Workers and Difficult to Hire Positions)" was provided to the Northern Lights College and School District 59 and 60 on July 27th, 2018. The next report will be issued in July 2019.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 53	The Labour and Training Plan must include at least the following: - Where labour requirements cannot be met through the local labour pool, develop a strategy for attracting new entrants to the local labour force.	ongoing	In Compliance	BC Hydro has undertaken the following initiatives described in the Plan to date: - Site C contractors continue to participate in regional jobs fairs. - BC Hydro has contractually required Site C Contractors to report on their work force monthly, including reporting on categories of workers that are difficult to hire for the Peace Region labour pool. - Developed and implemented the Indigenous Employment and Information Day. The session is an opportunity for networking between contractors and the training and employment representatives from regional Indigenous communities. Two sessions have been held in 2018 - BC Hydro required Site C contractors to post Site C employment opportunities on the WorkBC and Employment Connections websites. BC Hydro has also facilitated contact between new Site C contractors and Employment Connections to ensure Site C Contractors continue to post Site C employment opportunities. BC Hydro monitors compliance with these postings on a regular basis - BC Hydro has contractually required Site C contractors to provide information on the number and job category of foreign workers, management, and supervisors employed in Canada on Project related work. - In September 2017, the Contractors Labour Committee agreed to establish an Indigenous labour subcommittee. The purpose of the subcommittee is to support Indigenous training, labour and employment on Site C through communication, consultation, coordination and cooperation among contractors on the Project

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 53	Resources and funding arrangements with education providers to ensure required training and skill development programs are available.	Ongoing	In Compliance	<p>BC Hydro has undertaken the following initiatives described in the Plan to date:</p> <ul style="list-style-type: none"> - continued to support trades and skilled training through the BC Hydro Trades and Skilled Training Bursary Awards program through Northern Lights College. As of August 2018, 241 students had received bursaries, including 100 Indigenous students who have benefitted from the bursary in programs such as electrical, welding, millwright, cooking, social work, and many others. The bursary ended in October 2018, with remaining amounts still available. BC Hydro has worked with the Northern Lights College Foundation to extend the bursary for additional year, and reserve the remaining bursary amounts for local workers with trades programs directly needed for project work. - maintained regular contact with relevant Ministry's to update relevant departments with workforce requirements for the Project and provide workforce information.
EAC 53	Participation in regional workforce training initiatives during construction	Ongoing	In Compliance	<p>BC Hydro has maintained on-going contact with training providers/institutions and employment agencies in Northeast British Columbia and facilitated contact between these agencies and Site C contractors.</p> <p>BC Hydro has facilitated connections between PRHP, AFDE and Employment Connections to plan on job fair specifically focused on workers required for upcoming positions at Site. In August 2013, Northern Lights College Foundation started distributing the BC Hydro Trades and Skilled Training Bursary Awards. As of August 2018, 241 students had received bursaries, including 100 Indigenous students who have benefitted from the bursary in programs such as electrical, welding, millwright, cooking, social work, and many others. The bursary ended in October 2018, with remaining amounts still available. BC Hydro has worked with the Northern Lights College Foundation to extend the bursary for additional year, and reserve the remaining bursary amounts for local workers with trades programs directly needed for project work.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 53	Identification of apprenticeship opportunities during construction	Ongoing	In Compliance	<p>BC Hydro has undertaken the following initiatives described in the Plan to date:</p> <ul style="list-style-type: none"> - Required Site C contractors to adhere to the provincial government’s policy “Apprentices on Public Projects in British Columbia” which requires identification of apprentices being utilized on the Site C Project. BC Hydro requires Site C contractors contractually to comply with the provincial government policy which requires contractors to demonstrate they are engaged in apprenticeship training and use apprentices on the work site. BC Hydro will be ensuring compliance with the any updated policy as appropriate to applicable contracts - Worked with major Site C contractors to identify apprenticeship and training opportunities for the term of their respective construction contract. BC Hydro has also included broad apprentice targets in the Main Civil Works (MCW) contract. In addition, both the Generating Station and Spillway (GSS) Civil contract and the Transmission lines and the substation contracts have apprentice targets included in them that were developed based on the request of government as outlined above to assist companies to aspire to a 25 per cent or greater target for apprentices. - BC Hydro meets regularly with Site C Contractors via the Contractors Labour Committee. A part of this meeting’s agenda includes reviewing workforce requirements and apprenticeship reporting to ensure targets and reporting requirements are met. This also includes determining what support is required for training workers for upcoming project required skills.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 53	Provision of additional day-care spaces in Fort St. John to increase spousal participation in the labour market.	Completed	In Compliance	<p>Section 6.5 of the Labour and Training Plan submitted on June 5, 2015 describes the approach to providing additional day-care spaces in Fort St. John.</p> <p>In spring 2015, BC Hydro and School District 60 reached an agreement that will create 37 new childcare spaces in the new elementary school in Fort St. John. BC Hydro contributed \$1.8 million to School District 60 to build the new childcare centre as part of the new school. School District 60 selected the YMCA of Northern British Columbia as the operator in January 2018. The daycare opened on August 1, 2018.</p>
EAC 53	The EAC Holder must provide this draft Labour and Training Plan to the City of Fort St John, District of Taylor, District of Hudson Hope, Peace River Regional District, Aboriginal Groups, School Districts 59 and 60, and Northern Lights College for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft Labour and Training Plan was submitted to regulatory agencies, governments, Indigenous groups, School Districts 59 and 60, and Northern Lights College on October 17, 2014.
EAC 53	The EAC Holder must file the final Labour and Training Plan with EAO, City of Fort St John, District of Taylor, District of Hudson Hope, Peace River Regional District, Aboriginal Groups, School Districts 59 and 60, and Northern Lights College a minimum of 30 days prior to the commencement of construction.	Completed	In Compliance	The final Labour and Training Plan was submitted to regulatory agencies, governments, Indigenous groups, School Districts 59 and 60, and Northern Lights College on June 5, 2017.
EAC 53	The EAC Holder must develop, implement and adhere to the final Labour and Training Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	The Summary of the Site C Workforce - Annual report (Total worker, Temporary Foreign Workers and Difficult to Hire Positions) was provided to the Northern Lights College and School District 59 and 60 on July 27th, 2018. The next report will be issued in July 2019.
EAC 54	The EAC Holder must develop an Aboriginal Training and Inclusion Plan.	Completed	In Compliance	The Aboriginal Training and Inclusion Plan (June 2015) is available on the Project website at: https://www.sitecproject.com/sites/default/files/Aboriginal_Training_and_Inclusion_Plan.pdf

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 54	The Aboriginal Training and Inclusion Plan must include at least the following: · Description of a protocol and plan for the communication of employment opportunities to Aboriginal groups.	Ongoing	In Compliance	BC Hydro continues to post Site C Project job opportunities on the Site C Project, WorkBC and Employment Connections websites. These sites and the hyperlinks are provided as standing information in the bi-weekly information updates sent out by email to Indigenous groups. During this reporting period, employment of Indigenous people working for Site C Construction and Non-Construction Contractors ranged from approximately 80-220 per month. BC Hydro's Indigenous Employment and Business Development Program Specialist in Fort St. John continued to actively work with Indigenous communities to highlight the opportunities both on Site C as well as with BC Hydro broadly. Results of these initiatives are described in the Aboriginal Training and Inclusion Plan Annual Report, submitted to the EAO and made available to Indigenous groups through the Project website. Indigenous groups are notified of annual reports through the bi-weekly Site C Information Update emails. The 2017-2018 ATIP Annual Report, describing activities from July 1, 2017 to March 31, 2018 was submitted to the EAO on October 24, 2018. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.
EAC 54	· Inclusion of evaluation criteria for hiring and training Aboriginal persons in contractor procurement packages.	Ongoing	In Compliance	BC Hydro contractors have continued to train and employ Indigenous carpenter apprentices on the Project. Where applicable to their role, the following safety training has been provided to over 50 Indigenous workers on the Site C Project: Fire Suppression Training; Power System Safety Protection (PSSP); Risk Tolerance; H2S (Hydrogen Sulfide) Awareness; First Aid; and Bear Aware.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 54	<p>Strategies for capacity building, education, and training associated with Aboriginal participation in the labour market, including construction, trades, and other indirect and induced sectors for Aboriginal workers, as these jobs are likely to be longer lived than those related strictly to construction.</p>	Ongoing	In Compliance	<p>BC Hydro has implemented capacity building initiatives that have supported essential skills training, pre-trades and trades training, or increased business capacity in Indigenous businesses. Examples include Indigenous involvement in Site C field programs; Moberly Lake Academic Program; Youth Hires Program; Site C Tours; Career Energizers with BC Hydro; Northern Lights College Essential Skills for Trades; Driver Training; Construction Safety Training System 09; ATCO Kitchen Skills Program; Try-a-Trade program; Lab Technician training with PRHP; and Electro- Fishing Training course. BC Hydro is currently developing a Site C pre-Carpentry training program which is scheduled to launch in April 2019.</p> <p>BC Hydro will continue to consider proposals from Indigenous groups and training organizations for potential capacity building, education and training opportunities throughout the construction phase of the Project.</p>
EAC 54	<p>Resources and funding arrangements to support training, industry, and Aboriginal partnership opportunities in the region. Provide \$30,000 to the to the Minerva Foundation for three years to support Treaty 8 First Nation women in northeast BC wishing to participate in the Minerva Foundation's Combining Our Strength Initiative (\$10,000 provided to date.).</p>	Complete	In Compliance	<p>As of 2017, BC Hydro has fulfilled its commitment of providing \$30,000 in funding to Minerva Foundation to support Treaty 8 First Nation women in northeast BC wishing to participate in the Minerva Foundation's Combining Our Strength Initiative. This funding was provided over three years from 2014 to 2017.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 54	This is in addition to funding provided to date to Northern Lights College Foundation (\$1 million over five years), Northern Development Opportunities Program (\$175,000), Northern Opportunities School District Counsellor (\$184,000), NENAS NEATT Program (\$100,000) and Oho Education (\$16,600).	Ongoing	In Compliance	<p>In 2012, BC Hydro provided \$1 million in funding to the Northern Lights College Foundation (NLCF) for the BC Hydro Trades & Skilled Training Award Bursary. This was to be distributed over a five-year period, ending in August 2018. The purpose of the bursary was to support the development of skilled workers in northeast B.C. and assist students who may not otherwise have access to post-secondary education.</p> <p>Fifty per cent of the funding for bursaries is dedicated to Indigenous students. As of the last intake of August 2018, 241 students received bursaries, including 100 Indigenous students.</p>
EAC 54	<p>Aboriginal Business Participation Strategy to maximize opportunities for Aboriginal businesses, incorporating at least the following:</p> <ul style="list-style-type: none"> o Obtaining information from Aboriginal suppliers in the LAA, and from other Aboriginal groups with whom BC Hydro is engaged about the Project, about their business capacity and capabilities to provide goods and services for the Project 	Ongoing	In Compliance	<p>BC Hydro supports the advancement of economic opportunities for Indigenous groups, and is working with Indigenous businesses with respect to contracting opportunities on the Project. In addition, BC Hydro's contractors are required to make efforts to provide opportunities for subcontracting, employment and training for Indigenous businesses and individuals, and to report on Indigenous inclusion in the performance of their work.</p> <p>Indigenous businesses have been awarded work on the Site C Project in the following areas: vegetation clearing; site preparation, roads and bridges; grass seed supply; wetland mitigation; safety buoys; project health clinic; substation work; environmental monitoring; fish habitat enhancement; civil construction; erosion and sediment control; quarry development and rip rap production.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 54	o Direct engagement with the local Aboriginal business community, including sponsoring and participating in Aboriginal business events and conferences.	Ongoing	In Compliance	BC Hydro continues to engage the local Aboriginal Business community through the following initiatives: - Site C Business Directory - Business Networking Sessions and Job Fairs - Procurement Process Support
EAC 54	o Implementation of BC Hydro's Aboriginal Contract and Procurement Policy.	Ongoing	In Compliance	BC Hydro's procurement and Indigenous Relations staff are available to discuss procurement processes and ways to stay informed about upcoming procurements. BC Hydro works closely with Indigenous communities and businesses to understand their capacity and interest with respect to the Project and identification of potential contracting opportunities.
EAC 54	The EAC Holder must provide this draft Aboriginal Training and Inclusion Plan to Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft Aboriginal Training and Inclusion Plan was submitted to Indigenous groups on October 17, 2014.
EAC 54	The EAC Holder must file the final Aboriginal Training and Inclusion Plan with EAO and Aboriginal Groups a minimum of 30 days prior to construction.	Completed	In Compliance	The final Aboriginal Training and Inclusion Plan was submitted to EAO and Indigenous groups on June 5, 2015
EAC 54	The EAC Holder must develop, implement and adhere to the final Aboriginal Training and Inclusion Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Results of initiatives conducted under Aboriginal Training and Inclusion Plan (ATIP) are described in annual reports submitted to the EAO and made available to Indigenous groups through the Project website. Indigenous groups are notified of annual reports through the bi-weekly Site C Information Update emails. The 2017- 2018 ATIP Annual Report, describing activities from July 1, 2017 to March 31, 2018 was submitted to the EAO on October 24, 2018. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019. BC Hydro will update the ATIP as required based on new information, and will continue to implement initiatives described in the plan throughout construction.
HUMAN HEALTH				
Potable and Recreational Water Quality				
EAC 55	The EAC Holder must manage increased demands on community recreational programs and services resulting from the influx of the Project workforce by implementing mitigation measures detailed in a Recreation Program for residents of the work camp, in consultation with the City of Fort St. John.	Ongoing	In Compliance	BC Hydro signed a Community Measures Agreement with the City of Fort St. John on April 22, 2016 which addressed mitigation for camp resident use of City recreational services.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 55	If the recreational services required by residents of the camp extend beyond that provided through in-house (EAC Holder) facilities and programming, the EAC Holder must identify, through consultation with the City of Fort St. John, additional facility and/or programming needs and must provide the resources required to meet those needs.	Ongoing	In Compliance	BC Hydro signed a Community Measures Agreement with the City of Fort St. John on April 22, 2016 which addressed mitigation for camp resident use of City recreational services.
EAC 55	The EAC Holder must develop a draft Recreation Program for review by the City of Fort St. John and the Peace River Regional District a minimum of 90 days prior to the commencement of camp operations.	Completed	In Compliance	The draft Recreation Program was submitted to City of Fort St. John, and PRRD on October 17, 2014.
EAC 55	The EAC Holder must file the final Recreation Program with EAO, City of Fort St. John and Peace River Regional District a minimum of 30 days prior to the commencement of camp operations.	Completed	In Compliance	The final Recreation Program was submitted to EAO, City of Fort St. John, and PRRD on June 5, 2015.
EAC 55	The EAC Holder must develop, implement and adhere to the final Recreation Program, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro has made payments to the City in accordance with the Community Measures Agreement for Year 1-4 of the Project.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 56	The EAC Holder must ensure that wells affected by changes to groundwater levels within 1 km of the reservoir or Peace River continue to function as reliable and safe sources of water for human consumption by monitoring potentially affected wells, with the approval of potentially affected well owners, for significant long-term well quality issues.	Ongoing	In Compliance	<p>BC Hydro commenced monitoring of groundwater in June 2015 at representative water sampling locations selected based on historical well drill logs and spatial proximity to water wells within 1 km of the reservoir. This program was implemented as an alternative to monitoring private wells for which BC Hydro cannot control access, operation, maintenance, or possible contamination.</p> <p>For those willing to participate in the monitoring program, BC Hydro has requested information on wells, and if used for drinking water, requested approval to complete well water testing. An initial field program was conducted in fall 2016, during which time 10 wells were sampled at eight residential properties for baseline water quality analysis. An additional monitoring event was undertaken in spring 2017, during which time 5 wells were sampled for baseline water quality analysis. A renewed effort was made by BC Hydro in summer 2017 to contact owners of registered and non-registered wells. Monitoring in fall 2017 included a total of 16 wells, and expanded the program to include well yield testing where feasible. Monitoring in 2018 was conducted in spring (12 wells sampled and questionnaires completed) and fall (5 wells sampled, 23 questionnaires completed).</p> <p>Well owners whom BC Hydro was unable to successfully contact to schedule monitoring in advance of planned field programs, or who requested to join the voluntary program after the planned event, are considered for inclusion in future monitoring events.</p> <p>Implementation of twice per year monitoring will include contact with drinking water well owners with a brief questionnaire on well operations and any potential changes in water quality. Water quality and well yield testing will be completed on an as-needed basis in private drinking water wells, if potential changes or concerns are identified.</p>
EAC 56	Monitoring must be done twice a year for 10 years, beginning annually from the outset of construction.	Ongoing	In Compliance	Monitoring will continue for a period of 10 years from the date of the initial voluntary sampling event in October 2016.
EAC 56	If any functionality problems such as poor water quality or low yield result from the Project, the EAC Holder must work with the well owner(s) to provide an alternate source of potable water.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. If testing finds issues with water quality or yield caused as a result of the project, BC Hydro will work with the well owner(s) to provide an alternate source of potable water.
Ambient Air Quality				

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 57	The EAC Holder must develop an Air Quality Management Plan and Smoke Management Plan, in compliance with applicable legislation and consistent with the Air Quality Guidelines for the Protection of Human Health and the Environment (CCME 1998), and the British Columbia Air Quality Objectives and Standards (BC Ministry of Environment 2009). The main purpose of the Air Quality Management Plan and Smoke Management Plan is to mitigate the potential human health effects from a degradation of air quality in the region of Fort St. John, Taylor, Hudson's Hope, Chetwynd and for Aboriginal Groups using areas for traditional purposes close to the construction activities of clearing and burning.	Completed	In Compliance	The Smoke Management Plan and Air Quality Monitoring Program are described in Section 4.1 and Appendix A and B, respectively, of the CEMP.
EAC 57	The Air Quality Management Plan and Smoke Management Plan must include at least the following to describe how the EAC Holder: <ul style="list-style-type: none"> · Identify places of high use by Aboriginal Groups for traditional purposes and develop mitigation measures if adverse effects are predicted at those locations. 	Ongoing	In Compliance	<p>BC Hydro has initiated ground truthing programs with the purpose of engaging with Indigenous land users, including registered trapline holders, to verify and accurately locate Indigenous land use information, and to identify concerns related to specific features, or sites that may be affected by the Project. BC Hydro has provided funding to Indigenous groups for ground truthing through Consultation and Capacity Funding Agreements. During this reporting period, ground truthing was undertaken by Blueberry River First Nations, Doig River First Nation, Halfway River First Nation, McLeod Lake Indian Band, and Saulteau First Nation.</p> <p>BC Hydro continues to consult with Indigenous groups regarding construction plans, and has sent invitation letters in April 2017, September 2017, January 2018, June 2018 and August 2018 highlighting areas where construction is planned in order that Indigenous groups could ground truth areas of traditional significance prior to construction. Ground-truthing information received continues to be used to support and inform mitigation measures and relevant mitigation plans.</p>
EAC 57	· Measures to manage emissions and dust from all Project activities.	Ongoing	In Compliance	Section 4.1 of the CEMP requires Contractors to prepare EPPs that include measures to manage emissions and dust from all project activities. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 57	Measures to manage Project effects on air quality associated with concrete production at concrete batch plants.	Ongoing	In Compliance	Section 4.1 of the CEMP requires Contractors to prepare EPPs that include measures to manage emissions and dust from all project activities. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 57	Control Project-related smoke by following the most current BC Ministry of Environment Open Burning Smoke Control Regulation.	Ongoing	In Compliance	Section 4.1 and Appendix A of the CEMP refer to the requirement to control Project-related smoke in accordance with the BC Ministry of Environment's Open Burning Smoke Control Regulation. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 57	Measures to retain vegetative barriers, or install temporary barriers, where practical.	Ongoing	In Compliance	Section 4.1 of the CEMP requires Contractors to retain vegetative barriers, or install temporary barriers, where practicable. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 57	Procedures to provide MOE with data collected during monitoring so that they can notify sensitive populations if air quality thresholds are exceeded.	Completed	In Compliance	A MOU agreement was established between BC Hydro and the MOE regarding the housing and publishing of Site C air quality monitoring data on January 7, 2016.
EAC 57	The EAC Holder must monitor air quality associated with shoreline protection works at Hudson's Hope during the construction period and for the first two years of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Shoreline protection works at Hudson's Hope are planned to commence in 2020 – 2022. Air quality monitoring plans will be implemented during construction and for the first 2 years of reservoir operations.
EAC 57	The EAC Holder must provide these draft Air Quality Management Plan and Smoke Management Plan to MOE, City of Fort St. John, District of Hudson's Hope, Peace River Regional District, District of Taylor, District of Hudson's Hope, District of Chetwynd and Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction activities.	Completed	In Compliance	The Smoke Management Plan and Air Quality Monitoring Program are described in Section 4.1 and Appendix A and B, respectively, of the CEMP. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014
EAC 57	The EAC Holder must file the final Air Quality Management Plan and Smoke Management Plan with EAO, MOE, City of Fort St. John, District of Hudson's Hope, Peace River Regional District, District of Taylor, District of Chetwynd and Aboriginal Groups a minimum of 30 days prior to the commencement of construction activities.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 57	The EAC Holder must develop, implement and adhere to the final Air Quality Management Plan and Smoke Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Appendix A of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
Noise and Vibration				
EAC 58	The EAC Holder must develop a Noise and Vibration Management Plan to mitigate Project-related noise and vibration effects on human health.	Completed	In Compliance	The Noise and Vibration Management Plan is described in Section 4.11 of the CEMP.
EAC 58	The Noise and Vibration Management Plan must include at least the following: · Program to monitor noise levels associated with construction of Hudson's Hope Shoreline Protection.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Shoreline protection works at Hudson's Hope are planned to commence in 2020- 2022, and noise level monitoring will be undertaken during construction.
EAC 58	· Implement notification of construction program and Construction Communication Plan for residents in vicinity of Project activities	Ongoing	In compliance	The Site C project team is implementing the Construction Communication Plan and the Aboriginal Group Communication Plans to ensure that residents, stakeholders and Indigenous groups are provided with advance notification about construction activities. The 2017-2016 Annual Report for the Construction Communications Plan was posted on the Site C website on July 27, 2018. The 2018-2019 Annual Report will be posted in July 2019. Implementation events include: Regional Community Liaison Committee meetings, mail drops, bi-weekly construction updates, First Nations Construction Notification Letter, Stakeholder Construction Notification Letter, Construction Information Sheets posted on the Project website, news releases about key project milestones, site tours, Project website, responses to public enquiries, advertising (i.e., transmission line access road).
EAC 58	· Retain or erect acoustic barriers, fencing, and vegetative screens as appropriate.	Ongoing	In Compliance	The CEMP Section 4.11 describes the retention or erection of acoustic barriers, fencing, and vegetative screens as appropriate as a mitigation measure for noise and vibration effects. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 58	Develop and implement noise monitoring and adaptive management as required.	Ongoing	In Compliance	The CEMP Section 4.11 describes the implementation of a noise monitoring program to measure noise levels at sensitive locations near the 85th Avenue Industrial Lands, Highway 29 re-alignment, and Hudson's Hope berm. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 58	Mitigate night-time noise (e.g. perimeter berms and acoustic barriers, portable enclosures or barriers to the conveyor hopper, and silent backup alarms)	Ongoing	In Compliance	The CEMP Section 4.11 describes the scheduling of construction activity near homes to reduce periods of disturbance, and the control of construction traffic and deliveries on local roads during night-time hours (22:00-07:00). BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 58	Monitor noise at 85th Avenue Industrial Lands	Ongoing	In Compliance	The CEMP Section 4.11 describes the implementation of a noise monitoring program at 85th Avenue Industrial Lands. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 58	Construct perimeter fencing and retain or plant tree screens at 85th Avenue Industrial Lands	Ongoing	In Compliance	The CEMP Section 4.11 describes noise mitigation measures specific to 85th Avenue Industrial Lands. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 58	Design a work and noise management schedule that allows an uninterrupted eight hour sleep schedule	Completed	In Compliance	The Noise Management Plan included within Worker Accommodation design and operations contract is aligned with the CEMP Section 4.11.
EAC 58	Manage Project construction noise to provide quiet enjoyment to residents, even if it means temporary relocation of residents at the EAC Holder's expense.	Ongoing	In Compliance	The CEMP Section 4.11 describes noise mitigation measures specific to 85th Avenue Industrial Lands. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation and by conducting noise monitoring during construction activities that commenced in mid-2018.
EAC 58	The EAC Holder must develop, implement and adhere to the final Noise and Vibration Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Section 4.11 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 58	The EAC Holder must provide this draft Noise and Vibration Management Plan to FLNR, District of Hudson's Hope, City of Fort St. John, Peace River Regional District and District of Chetwynd for review a minimum of 90 days prior to the commencement of construction activities.	Completed	In Compliance	The Noise and Vibration Management Plan is described in Section 4.11 of the CEMP. The Draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014
EAC 58	The EAC Holder must file the final Noise and Vibration Management Plan with EAO, FLNR, District of Hudson's Hope, City of Fort St. John, Peace River Regional District and District of Chetwynd a minimum of 30 days prior to the commencement of construction activities.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. The CEMP continues to be updated as required, with the most recent version, Revision 4, dated July 26, 2016, provided to regulators, government agencies, Indigenous groups and the public via the Site C Clean Energy Project website at: https://www.sitecproject.com/document-library/environmental-management .
EAC 59	The EAC Holder must outline measures including relocation of affected home-owners, as deemed appropriate in consultation with affected home-owners, to address serious levels of noise or changes in air quality during construction of the Project. The measures would be included in the appropriate plans.	Ongoing	In Compliance	Implementation of the Noise and Vibration and Air Quality Management Plans, including review of EPPs, inspections of mitigation measures, and monitoring, is ongoing. A noise and air quality complaint response process has been developed and is being implemented.
Methylmercury				
EAC 60	The EAC Holder must, in collaboration with the First Nations Health Authority (FNHA), NHA and Aboriginal Groups, develop a Methylmercury Monitoring Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro has commenced preparation of a draft Methylmercury Monitoring Plan to share with the FNHA, Northern Health Authority (NHA) and Indigenous groups. BC Hydro will submit this Plan to EAO, FNHA and NHA, a minimum 90 days prior to reservoir filling.
EAC 60	The Methylmercury Monitoring Plan must include: Methods for collecting monitoring information must include: · Involving Aboriginal Groups and the FNHA in the design, implementation, management and interpretation and communication of results;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 60	<ul style="list-style-type: none"> · Use of information regarding consumption of fish by Aboriginal Groups known to consume fish in the methylmercury monitoring study if available, and non-aboriginal harvesters including: <ul style="list-style-type: none"> o species and size of fish caught for consumption; o location where fish are caught for consumption; o consumption of fish by age group and gender; o fish meal sizes by age group and gender; o fish meal frequency; o parts of fish consumed; o fish preparation methods; and o other relevant consumption information (e.g. events where consumption is higher over a short period of time such as a camping event); and 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	<ul style="list-style-type: none"> · Use of baseline methylmercury levels in representative fish species consumed by Aboriginal Groups and non-aboriginal harvesters. 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	<ul style="list-style-type: none"> · Requirements for monitoring the trend and evolution of methylmercury concentrations in fish. Monitoring requirements must include the following: <ul style="list-style-type: none"> · proposed geographic extent; · proposed monitoring parameters; · proposed monitoring locations; and · proposed monitoring timelines and frequency. 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	<ul style="list-style-type: none"> · Measures to enable people to limit exposure to methylmercury to avoid risk to human health such as: 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	<ul style="list-style-type: none"> · a detailed communications strategy developed in consultation with relevant Aboriginal groups and government departments and agencies including consumption advisories or other health related bulletin or information, as may be necessary; and 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	<ul style="list-style-type: none"> · an annual update on the status, results, and trends of methylmercury concentrations in fish and the presence of human health risks associated with the consumption of fish from the affected waterbodies. 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 60	Baseline information must be established prior to any project impacts using a minimum of two years of data and operations phase monitoring will occur each year for the first ten years of operations and every 5 years after until such time as methylmercury levels in fish populations have stabilized.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	The EAC Holder must report on the results to EAO, FNHA and NHA in accordance with the monitoring schedule.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	The EAC Holder must provide this draft Methylmercury Monitoring Plan to FNHA and NHA for review a minimum of 90 days prior to the commencement of reservoir filling.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	The EAC Holder must file the final Methylmercury Monitoring Plan with EAO, FNHA and NHA a minimum of 30 days prior to the commencement of reservoir filling.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	The EAC Holder must develop, implement and adhere to the final Methylmercury Monitoring Plan, and any amendments, to the satisfaction of EAO.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
HERITAGE RESOURCES				
Visual Resources				
EAC 61	The EAC Holder must develop and implement measures to manage Project effects on visual resources by undertaking the following throughout construction: <ul style="list-style-type: none"> · Address how to landscape the shoreline protection area in Hudson's Hope to maintain or enhance natural views in collaboration with the District of Hudson's Hope 	Ongoing	In Compliance	BC Hydro has completed public consultation on the Hudson's Hope shoreline protection area. BC Hydro will collaborate with the District of Hudson's Hope regarding measures to maintain or enhance visual resources. BC Hydro signed a Partnering Relationship Agreement with the District of Hudson's Hope in January 2017 which addresses how the District and BC Hydro will work together on the measures in their community. BC Hydro has discussed plantings along the shoreline protection works with the District.
EAC 61	· Set objectives and requirements for exterior designs for Project structures, and landscaping to blend in with the character of the surrounding environment except in accordance with safety objectives.	Ongoing	In Compliance	BC Hydro has included requirement for building designs to blend in with surrounding in architectural contract terms for Project Structures, where feasible.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 61	Set objectives and requirements for establishing and building workforce accommodation camps on previously disturbed areas or areas generally hidden from key viewpoints.	Completed	In Compliance	The Site C workforce accommodation camp has been sited on a previously disturbed area and is, in general, hidden from key viewpoints.
EAC 61	The EAC Holder must undertake the measures to the satisfaction of EAO.	Ongoing	In Compliance	The implementation of the measures is underway in accordance with this condition.
Physical Heritage and Cultural Heritage				
EAC 62	The EAC Holder must protect and preserve heritage resources by implementing measures as detailed in a Heritage Resources Management Plan.	Ongoing	In Compliance	<p>The Heritage Resources Management Plan (HRMP) is available on the Project website at: https://www.sitecproject.com/document-library/environmental-management. Following instruction from the EAO, the HRMP was updated to Revision 3 and submitted to regulators on November 19, 2018.</p> <p>Revisions include: providing definitions of “confirmed heritage resources” and “reported but unconfirmed heritage resources”; setting out roles and responsibilities for implementation of the plan; providing a process for reporting, identifying and inspecting location of unconfirmed heritage resources; describing a process confirming the protection status of archaeological and historical sites, including burials; clarifying the circumstances in which avoidance will be considered as an option for mitigating impacts to heritage resources, and providing further description of management options for burial sites protected under the <i>Heritage Conservation Act</i>; and, further defining the heritage monitoring and follow-up program.</p> <p>Annual reports for field work completed in 2018 under these permits and for paleontological resources will be submitted to regulatory agencies by March 31, 2019.</p>
EAC 62	The Heritage Resources Management Plan must be developed by a QEP.	Completed	In Compliance	Section 10.0 of the HRMP lists the QEPs who prepared the plan.
EAC 62	The Heritage Resources Management Plan must specify a process for the engagement of Aboriginal Groups in planning and follow-up/monitoring activities related to heritage resources as the Project proceeds.	Ongoing	In Compliance	<p>This is addressed in the final HRMP. Implementation of this requirement has included:</p> <ul style="list-style-type: none"> -the opportunity for Indigenous groups to comment on Section 14 heritage reports and Section 14 and 12 permit amendments in accordance with the Heritage Conservation Act where the Indigenous groups is listed in the permit, - Offers to present heritage work results to Indigenous groups and, -providing archaeology crew field assistant employment opportunities for Indigenous people.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 62	In particular, the Plan must incorporate a process for continued collaboration with Aboriginal Groups on ground-truthing for the identification of any burial sites that the Project may disturb.	Ongoing	In Compliance	This is addressed in the final HRMP Implementation of this requirement has included: -in accordance with the Heritage Conservation Act, Indigenous groups that may be affected by a permitting decision and who are listed in the permit, are provided a review period of between 15 and 30 days and an opportunity for comment, and -providing archaeology crew field assistant employment opportunities for Indigenous people. - BC Hydro continues to work with First Nations to implement appropriate burial management solutions.
EAC 62	The EAC Holder must provide the draft Heritage Resources Management Plan to Archaeology Branch of FLNR and Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft HRMP was submitted to the Archaeology Branch of FLNR, and Indigenous groups on October 17, 2014.
EAC 62	The Heritage Resources Management Plan must include Archaeological Impact Management and Heritage Resources Monitoring and Follow-Up Programs.	Ongoing	In Compliance	Section 6 of the HRMP describes Heritage Resources Impact Management. Management measures implemented to date have included: -inclusion of heritage requirements in contractor EPPs, as applicable to the scope of work covered by the EPP, -undertaking archaeological work for the Heritage Resources Impact Assessment in accordance with the terms and conditions of Heritage Conservation Act Section 14 (Heritage Inspection) permits, and -undertaking any land-altering work in accordance with Section 12 Heritage Conservation Act (Site alteration) permit.
EAC 62	The field and reporting portions of each program will be of a scope, duration and frequency prescribed by the BC Heritage Conservation Act permits.	Ongoing	In Compliance	Annual reports for field work completed in 2018 under these permits, and for paleontological resources, will be submitted to regulatory agencies on March 31, 2019.
EAC 62	The Archaeology Impact Management Program must be developed by a QEP qualified to hold Section 14 Heritage Inspection and Investigation Permits.	Completed	In Compliance	Section 10.0 of the HRMP lists the QEPs who prepared the plan.
EAC 62	The Heritage Resources Monitoring and Follow-Up Program must include at least the following: · Monitor reservoir erosion during occurrences of exposure to assess the impacts on existing or newly identified protected archaeological sites and other heritage resources	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 62	Implement mitigation measures, systematic data recovery or emergency salvage operations in accordance with the Heritage Resources Management Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 62	Conduct the monitoring of shoreline erosion downstream (for approximately 2 km) as part of chance-find procedures to determine if physical heritage resources are affected by the Project. The EAC Holder must undertake this monitoring for any spills from the Project reservoir for a period of two years following the commencement of reservoir filling and commissioning.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 62	Establish a reporting structure for reporting to Aboriginal Groups and the Archaeology Branch beginning 180 days following the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 62	The EAC Holder must file the final Heritage Resources Management Plan with EAO, Archaeology Branch and Aboriginal Groups a minimum of 30 days prior to commencement of construction.	Completed	In Compliance	The final HRMP was submitted to EAO, the Archaeology Branch of FLNR, and Indigenous groups on June 5, 2015. Revision 3 of the final HRMP was submitted to EAO, the Archaeological Branch of FLNR, and Indigenous groups on November 19, 2018.
EAC 62	The EAC Holder must develop, implement and adhere to the final Heritage Resources Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Annual reports for field work completed in 2018 under these permits and for paleontological resources will be submitted to regulatory agencies by March 31, 2019.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 63	The EAC Holder must manage adverse Project effects on cultural resources by implementing mitigation measures detailed in a Cultural Resources Mitigation Plan.	Ongoing	In Compliance	<p>BC Hydro is engaging Indigenous groups on the development and implementation of mitigation measures respecting the potential effects of the Project on Indigenous culture and heritage. Results of initiatives conducted under Cultural Resources Mitigation Plan (CRMP) are described in annual reports submitted to the EAO and made available to Indigenous groups through the Project website. Indigenous groups are notified of annual reports through the bi-weekly Site C Information Update emails.</p> <p>The 2017-2018 CRMP Annual Report, describing activities from July 1, 2017 to March 31, 2018 was submitted to the EAO on August 24, 2018. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.</p> <p>BC Hydro has updated the CRMP based on feedback from the EAO and new information from Indigenous groups in November 2018. The revisions included, among others: providing a definition of "cultural resources", setting out roles and responsibilities for implementation of the plan, establishing a process for review and revision of the plan, clarification of the role and structure of the Cultural and Heritage Resources Committee, describing the process for developing mitigations measures for cultural resources in collaboration with individual Indigenous groups, including ground-truthing activities and the preparation of site specific mitigation plans, and identifying potential management options for cultural resources, including avoidance, mitigation, and compliance verification as applicable. BC Hydro will continue to implement initiatives described in the plan throughout construction.</p> <p>collaboration with individual Indigenous groups, including ground-truthing activities and the preparation of site specific mitigation plans.</p> <p>In April 2017, the Environmental Assessment Office initiated an inspection in response to a complaint from West Moberly First Nations and Prophet River First Nation regarding the effects of the Highway 29 realignment on cultural and heritage resources in the area of Bear Flats (near the confluence of Cache Creek and the Peace River). BC Hydro and the Ministry of Transportation and Infrastructure are currently working with Indigenous communities and others on the redesign of the Highway 29 realignment at Cache Creek, and undertook consultation on the alternative route options in 2018, supported by a Structured Decision Making Process, to select a route while seeking to avoid or reduce the effects on potential burial sites and sacred places at Cache Creek.</p> <p>BC Hydro continues to consult with Indigenous groups regarding construction plans, and support Indigenous groups in ground truthing of traditional land use areas within the Project activity zone prior to construction. BC Hydro has provided funding to Indigenous groups for ground truthing through Consultation and Capacity Funding Agreements as well as providing additional funding to Doig River First Nation, Halfway River First Nation, and Blueberry River First Nations for specific cultural investigations. Some Indigenous groups have confidentially identified cultural sites of concern within or near the project area, and BC Hydro is continuing to engage with these groups around mapping of their cultural interests, and potential measures to avoid or mitigate impacts.</p>

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 Appendix G

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 63	The Cultural Resources Mitigation Plan must be developed in collaboration with a Cultural and Heritage Resources Committee (Committee) established by the EAC Holder that includes Aboriginal Groups.	Ongoing	In Compliance	<p>The 2017-2018 Cultural Resources Mitigation Plan Annual Report, describing activities from July 1, 2017 to March 31, 2018 was submitted to the EAO on August 24, 2018. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019. BC Hydro will update the CRMP as required based on new information, and will continue to implement initiatives described in the plan throughout construction. The 2018 Revision of the CRMP (rev. 3) includes clarification of the role and structure of the Cultural and Heritage Resource Committee.</p> <p>The CRMP includes formation of a Cultural and Heritage Resource Committee. BC Hydro has continued to invite all 13 Indigenous groups named in the EAC and FDS, and representatives from 10 of the Indigenous groups have participated actively in the Committee (Doig River, Blueberry River, Halfway River, Dene Tha', Duncan's, Horse Lake First Nations, McLeod Lake Indian Band, Sauteau First Nations, Métis Nation BC, and Kelly Lake Métis Settlement Society). The Committee has continued to work collaboratively on cultural resources mitigation initiatives, such as identifying measures to commemorate sites that will be lost to inundation, identification and naming of key cultural sites, documenting historical use of the area, including trails, sites, and stories, and discussing and developing an approach to Indigenous cultural awareness and orientation of the workforce. Initiatives underway include signage shelters at the Site C north bank viewpoint and traveling museum exhibit that could travel to Indigenous communities and would ultimately reside in the Fort St John Museum.</p> <p>The Committee is currently working on other projects within their regional sub-groups that will identify measures to commemorate site, identify and name key cultural sites, document historical use of the area and discuss and develop an approach to cultural awareness and orientation of the workforce.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 63	The Cultural Resources Mitigation Plan must include consideration of the following elements and/or others that may be recommended by the Committee: <ul style="list-style-type: none"> · Identification and naming of key cultural sites · Documenting historical use of the area, including trails, sites, and stories. · Commemoration of sites lost to inundation. · Cultural awareness and orientation of workforce. · Support for cultural camps through financial or in-kind support. 	Ongoing	In Compliance	The Cultural Resource and Heritage Committee has continued to work collaboratively on cultural resources mitigation initiatives, such as identifying measures to commemorate sites that will be lost to inundation, identification and naming of key cultural sites, documenting historical use of the area, including trails, sites, and stories, and discussing and developing an approach to Indigenous cultural awareness and orientation of the workforce. Initiatives underway include Indigenous interpretive signage at the Site C north bank public viewpoint and a potential traveling museum exhibit that could travel to Indigenous communities and to ultimately reside in the Fort St John Museum. In early 2017, in an effort to make Committee meetings more effective, BC Hydro secured a facilitator in April 2017. This facilitator has helped facilitate six meetings during this reporting period, and advanced discussions around measures to improve upon Committee meetings. In April, 2018, in an effort to move matters forward expeditiously, the Committee agreed to meet in three regional sub-groups in addition to meeting as a whole. The intent of the regional sub-group structure is for the smaller groups to work on projects together.
EAC 63	The EAC Holder must provide the draft Cultural Resources Mitigation Plan to the Committee for review a minimum 90 days prior to the commencement of construction.	Completed	In Compliance	The draft Cultural Resources Mitigation Plan was submitted to Indigenous groups on October 17, 2014.
EAC 63	The EAC Holder must file the final Cultural Resources Mitigation Plan with EAO and the Committee a minimum of 30 days prior to the commencement of construction.	Completed	In Compliance	The final Cultural Resources Mitigation Plan was submitted to Indigenous groups on June 5, 2015. Revision 3 of the final CRMP was submitted to EAO and the Committee November 19, 2018.
EAC 63	The EAC Holder must develop, implement and adhere to the final Cultural Resources Mitigation Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Results of initiatives conducted under Cultural Resources Mitigation Plan are described in annual reports submitted to the EAO and made available to Indigenous groups through the Project website. Indigenous groups are notified of annual reports through the bi-weekly Site C Information Update emails. The 2017-2018 Cultural Resources Management Plan Annual Report, describing activities from July 1, 2017 to March 31, 2018 was submitted to the EAO on August 24 2018. The 2018-2019 Annual Report will describe activities from April 1, 2018 to March 31, 2019.
EAC 64	The EAC Holder must provide a total of \$100,000 to local accredited facilities in close proximity to the Project, prior to the start of operations, to curate and display the recovered resources and the funding is not to be used for buildings to house them.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro will fund local accredited facilities in close proximity to the Project, prior to the start of operations, to curate and display the recovered resources and the funding is not to be used for buildings to house them. The allocation of the funding is planned for Year 5 of Construction.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 64	These funds must be provided only to facilities that agree to work with interested Aboriginal Groups on the display and curation of those artefacts.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro will fund local accredited facilities in close proximity to the Project, prior to the start of operations, to curate and display the recovered resources and the funding is not to be used for buildings to house them. The allocation of the funding is planned for Year 5 of Construction.
ENVIRONMENTAL PROTECTION AND MANAGEMENT				
Greenhouse Gas Emissions				
EAC 65	The EAC Holder must monitor the levels of Greenhouse Gas (GHG) emissions resulting from the Project as detailed in a Greenhouse Gases Monitoring and Follow-Up Program to confirm predictions of the GHG model.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro will submit a draft and final Greenhouse Gases Monitoring and Follow-Up Program to regulatory agencies and Environment Canada within 90 day, and 150 days, respectively, after the commencement of operations.
EAC 65	The Program must include at least the following: · Protocols for monitoring GHG emissions from Site C reservoir for the first 10 years of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 65	· Protocols for monitoring and reporting GHG emissions during operation and maintenance activities.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 65	· A reporting structure for reporting results at least annually during the monitoring and follow-up program period, beginning 180 days following commencement of operations, to MOE and Environment Canada.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 65	The EAC Holder must develop, implement and adhere to the final Greenhouse Gases Monitoring and Follow-Up Program, and any amendments, to the satisfaction of EAO.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 65	The EAC Holder must provide this draft Greenhouse Gases Monitoring and Follow-Up Program to MOE and Environment Canada for review within 90 days after the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 65	The EAC Holder must file the final Greenhouse Gases Monitoring and Follow-Up Program with EAO, MOE and Environment Canada within 150 days after the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
ENVIRONMENTAL MANAGEMENT PLANS, FOLLOW-UP AND MONITORING				

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 66	The EAC Holder must clearly document its roles and responsibilities for monitoring and reporting employee and contractor performance and compliance with the EAC and its conditions in an Environmental Oversight Program.	Completed	In Compliance	Environmental Management Roles and Responsibilities are described in Section 2.0 of the CEMP.
EAC 66	The Environmental Oversight Program must include requirements for investigating and reporting non-compliance with the EAC and any management plans, ensuring corrective actions are implemented, and requirements for reviewing and updating the Construction Environmental Management Plans and Operations Environmental Management Plans to ensure that they remain relevant and current.	Ongoing	In Compliance	The BC Hydro environmental team onsite inspects and audits against the various environmental documentation and commitments. Contractors and BC Hydro keep a non-compliance report tracking program and share the information to ensure the identified items are acted upon. Some generic items have been identified; moving forward BC Hydro will ensure Non-compliance Reports are specific, actionable with accountable individuals assigned and a due date which is timely but able to be met. If BC Hydro or the IEM identify a non-compliance, contractors are required to investigate, document and rectify the non-compliance, keeping BC Hydro involvement to an inspection, audit, and oversight role. In 2018 BC Hydro inspectors checked for compliance with individual contractor EPP commitments 25,720 times.
EAC 66	The EAC Holder must submit the draft Environmental Oversight Program to EAO 90 days prior to commencing construction.	Completed	In Compliance	The draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014.
EAC 66	The EAC Holder must submit the final Environmental Oversight Program to EAO 30 days prior to commencing construction.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 66	The EAC Holder must develop, implement and adhere to the final Environmental Oversight Program, and any amendments, to the satisfaction of EAO.			The BC Hydro environmental team onsite inspects and audits against the various environmental documentation and commitments. Contractors and BC Hydro keep a non-compliance report tracking program and share the information to ensure the identified items are acted upon. Some generic items have been identified; moving forward BC Hydro will ensure Non-compliance Reports are specific, actionable with accountable individuals assigned and a due date which is timely but able to be met. If BC Hydro or the IEM identify a non-compliance, contractors are required to investigate, document and rectify the non-compliance, keeping BC Hydro involvement to an inspection, audit, and oversight role. In 2018 BC Hydro inspectors checked for compliance with individual contractor EPP commitments 25,720 times.
EAC 67	The EAC Holder must appoint an IEM acceptable to EAO, at least three months prior to construction.	Completed	In Compliance	BC Hydro retained Environmental Dynamics Inc. as the Independent Environmental Monitor for the Project on January 13, 2015. EAO approved this on May 7, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 67	The IEM will be responsible for monitoring the course of construction of the Project as directed by EAO.	Ongoing	In Compliance	BC Hydro retained Environmental Dynamics Inc. as the Independent Environmental Monitor for the Project on January 13, 2015. EAO approved this on May 7, 2015. EDI provides a weekly environmental monitoring report to BC Hydro and regulators.
EAC 67	The IEM must audit any incident reports as well as EAC Holder responses to the EAC Holder's Environmental Monitor's findings and recommendations (Reports) must be filed with FLNR and EAO within 30 days of request.	Ongoing	In Compliance	BC Hydro retained Environmental Dynamics Inc. as the Independent Environmental Monitor for the Project on January 13, 2015. EAO approved this on May 7, 2015. EDI provides a weekly environmental monitoring report to BC Hydro and regulators.
EAC 67	These Reports must be developed and reported to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro retained Environmental Dynamics Inc. as the Independent Environmental Monitor for the Project on January 13, 2015. EAO approved this on May 7, 2015. EDI provides a weekly environmental monitoring report to BC Hydro and regulators.
EAC 68	The EAC Holder must manage worker and public safety throughout the construction phase by implementing measures detailed in a Construction Safety Management Plan that complies with all applicable requirements of statutes, permits, approvals, and authorizations as outlined in Section 35 of the EIS.	Ongoing	In Compliance	<p>BC Hydro is auditing the implementation of measures in the CSMP by:</p> <ul style="list-style-type: none"> - reviewing Safety Management Plans /Public Safety Management Plans submitted by the contractors, - holding regular meetings with the contractors to discuss safety performance and exploring opportunities for improvement, and - conducting safety audits during construction to verify that requirements of the Plan are being considered and implemented as required. <p>BC Hydro has also required that the main Prime contractors retain independent third party auditors to conduct safety audits on an annual basis. BC Hydro has obtained a third party auditor to ensure compliance to Prime Contractor requirements.</p>
EAC 68	The Construction Safety Management Plan must be developed by a QEP.	Completed	In Compliance	Section 6.0 of the CSMP lists the QPs who prepared the plan.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 68	The Construction Safety Management Plan must include the following component plans: · Fire Hazard and Abatement Plan;	Ongoing	In Compliance	The Fire Hazard and Abatement plan is described in Section 5.2 of the CSMP. Fire abatement practices are part of everyday work. The BC Hydro Fire Marshall has been actively engaged in fire management planning and fire code review in each phase of construction and site services. The Fire Marshall and/or her representative has been actively engaged in Fire audit work at Site C. Fire Marshall recommendations have formed the basis of corrective action plans to the satisfaction of the Fire Marshall. Fire systems tests have been ongoing at the worker accommodation camp since it opened.
EAC 68	· Public Safety Management Plan;	Ongoing	In Compliance	Section 5.3 of the CSMP describes the Public Safety Management Plan as well as planning for future aspects of the project. The Public Safety Management Plan, developed by a QEP, is described in Section 5.3 of the CSMP. The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively. A status update on Condition 37 requirements is provided below. See comments for EAC condition 38. BC Hydro has obtained the services of a third party contractor to assist with implementation and monitoring of Public Safety Management Plans as river diversion and other activities draw closer.
EAC 68	· Traffic Management Plan; and	Ongoing	In Compliance	The Traffic Management Plan is contained in Section 5.4 of the CSMP. The Traffic Management Plan applies to the dam site, other work sites that will be influenced by Project-related traffic including, but not limited to, public roads in the Peace River Regional District, Wuthrich Quarry, West Pine Quarry, Highway 29, Hudson's Hope Shoreline Protection, Petroleum Development Roads, Project Access Roads, Jackfish Lane Road, Highway 97 and the transport of extraordinary loads.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 68	Worker Safety and Health Management Plan;	Ongoing	In Compliance	<p>The Worker Safety and Health Management Plan is contained in CSMP Section 5.5 and its sub-sections.</p> <p>BC Hydro is auditing the implementation of measures in the CSMP by:</p> <ul style="list-style-type: none"> - reviewing Safety Management Plans /Public Safety Management Plans submitted by the contractors, - holding regular meetings with the contractors to discuss safety performance and exploring opportunities for improvement , and - conducting safety audits during construction to verify that requirements of the Plan are being considered and implemented as required. <p>BC Hydro has also required that the MCW contractor retain independent third party auditors to conduct safety audits on an annual basis.</p> <p>This condition is being met by BC Hydro. The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively.</p>
EAC 68	<p>Each component plan in addition to plan specific conditions in this document must include the following:</p> <ul style="list-style-type: none"> · Clear statement of Objectives; 	Ongoing	In Compliance	<p>The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively. The CSMP contains a clear statement of objectives.</p>
EAC 68	<ul style="list-style-type: none"> · Description of potential Project effects and safety hazards, through consideration of baseline conditions and sensitive receptors; 	Ongoing	In Compliance	<p>BC Hydro is auditing the implementation of measures in the CSMP by:</p> <ul style="list-style-type: none"> - reviewing Safety Management Plans /Public Safety Management Plans submitted by the contractors, - holding regular meetings with the contractors to discuss safety performance and exploring opportunities for improvement •conducting safety audits during construction to verify that requirements of the Plan are being considered and implemented as required. BC Hydro has also required that the MCW contractor retain independent third party auditors to conduct safety audits on an annual basis. <p>This condition is being met by BC Hydro. The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively.</p>
EAC 68	<ul style="list-style-type: none"> · Clear documentation of all measures to be implemented and actions to be taken to mitigate potential effects and safety hazards; 	Ongoing	In Compliance	<p>Unexpected hazards encountered during construction are communicated to all contractors.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 68	Description of worker qualifications and training requirements pertaining to the Construction Safety Management Plan;	Ongoing	In Compliance	<p>CSMP requires that workers are appropriately qualified. The audit cycle ensures that this takes place, and WorkSafe BC also audits for compliance with worker qualifications. Requirements for safety training, orientation, training and tailboard meetings are also discussed in Section 3 of the CSMP.</p> <p>BC Hydro and Work Safe BC also audit for compliance with worker qualifications.</p>
EAC 68	Description of reporting requirements; and	Ongoing	In Compliance	<p>BC Hydro is auditing the implementation of measures in the CSMP by:</p> <ul style="list-style-type: none"> - reviewing Safety Management Plans /Public Safety Management Plans submitted by the contractors, - holding regular meetings with the contractors to discuss safety, performance and exploring opportunities for improvement, and - conducting safety audits during construction to verify that requirements of the Plan are being considered and implemented as required. <p>BC Hydro has also required that the Prime contractors retain independent third party auditors to conduct safety audits on an annual basis.</p> <p>The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively.</p> <p>Reporting requirements are being met by: BC Hydro's Incident Management System reporting, weekly reports on upcoming work to WorkSafe BC, and various weekly reports on safety including statistics, monthly business reviews on safety, reviews of incidents and investigations.</p>
EAC 68	Process for revising and updating the Construction Safety Management Plan.			The CSMP is updated as needed and if conditions on site change.
EAC 68	The EAC Holder must provide the draft Construction Safety Management Plan to regulatory agencies, Peace River Regional District, City of Fort St. John and the District of Hudson's Hope and Aboriginal Groups for review 90 days prior to commencement of construction.	Completed	In Compliance	The draft CSMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014.
EAC 68	The EAC Holder must file the final Construction Safety Management Plan with EAO, regulatory agencies, Peace River Regional District, City of Fort St. John and District of Hudson's Hope and Aboriginal Groups 30 days prior to commencement of construction.	Completed	In Compliance	The final CSMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015. Revision 2 of the CSMP was issued March 22, 2017 and contains updates to Section 5.4.12 Traffic Monitoring and Appendix C.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 68	The EAC Holder must develop, implement and adhere to the final Construction Safety Management Plan, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	<p>BC Hydro is auditing the implementation of measures in the CSMP by:</p> <ul style="list-style-type: none"> - reviewing Safety Management Plans /Public Safety Management Plans submitted by the contractors, - holding regular meetings with the contractors to discuss safety performance and explore opportunities for improvement, and - conducting safety audits during construction to verify that requirements of the Plan are being considered and implemented as required. <p>BC Hydro has also required that the MCW contractor retain independent third party auditors to conduct safety audits on an annual basis.</p>
EAC 69	The EAC Holder must manage effective environmental protection and management throughout the construction phase by implementing measures detailed in a Construction Environmental Management Plan (CEMP).	Ongoing	In Compliance	<p>The draft and final CEMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively.</p> <p>Revision 2 of the CEMP was submitted to these same recipients on February 4, 2016.</p> <p>Revision 3 of the CEMP was submitted to the Comptroller of Water Rights on March 31, 2016 as part of discussions related to early leaves to Commence Construction for the Project.</p> <p>Revision 4 of the CEMP was issued on July 26, 2016 and it included a number of minor edits and significant additional requirements related to Erosion and Sediment Control and water quality management.</p> <p>BC Hydro is auditing those measures of the CEMP by:</p> <ul style="list-style-type: none"> - reviewing EPPs submitted by the contractors, - conducting environmental inspections during construction to verify that requirements of the Plan are being considered and implemented as required, and - responding to issues identified by IEM in its weekly inspection reports. <p>Two Orders were issued by EAO during the reporting period regarding water and sediment control. The first Order was issued on May 14, 2018 for failure to adhere to implement measures to control runoff water and sediment following clearing of Portage Mountain Quarry. The second Order was issued on September 21, 2018 for failure to implement measures to control runoff water and sediment transport prior to commencing operations in Area 30 as specified by the Area 30 (Operations) Environmental Protection Plan. Corrective actions were immediately taken for each of these Orders to bring the sites into compliance.</p>
EAC 69	The CEMP must be developed by a QEP.	Completed	In Compliance	Section 6.0 of the CEMP lists the QPs who prepared the plan.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 69	The CEMP must provide details on how potential adverse effects will be avoided, mitigated, or compensated.	Completed	In Compliance	The CEMP provides details on how potential adverse effects will be avoided, mitigated, or compensated.
EAC 69	The CEMP must include the following: · Acid Rock Drainage and Metal Leachate Management Plan;	Completed	In Compliance	Appendix E of the CEMP contains the Acid Rock Drainage and Metal Leachate Management Plan.
EAC 69	· Air Quality Management Plan;	Completed	In Compliance	Appendix B of the CEMP contains the Air Quality Monitoring Program.
EAC 69	· Blasting Management Plan;	Completed	In Compliance	Blasting Management is described in Section 4.2 of the CEMP
EAC 69	· Contaminated Sites Management Plan;	Completed	In Compliance	Contaminated Sites Management is described in Section 4.3 of the CEMP.
EAC 69	· Erosion Prevention and Sediment Control Plan;	Completed	In Compliance	Erosion Prevention and Sediment Control Management is described in Section 4.4 of the CEMP.
EAC 69	· Fisheries and Aquatic Habitat Management Plan;	Completed	In Compliance	The Fisheries and Aquatic Habitat Management Plan is described in Section 4.5 of the CEMP.
EAC 69	· Fuel Handling and Storage Management Plan;	Completed	In Compliance	Fuel Handling and Storage Management is described in Section 4.6 of the CEMP.
EAC 69	· Groundwater Protection Plan;	Completed	In Compliance	Groundwater Protection is described in Section 4.7 of the CEMP.
EAC 69	· Hazardous Waste Management Plan;	Completed	In Compliance	Hazardous Wastes Management is described in Section 4.8 of the CEMP.
EAC 69	· Heritage Resources Management Plan;	Completed	In Compliance	Heritage Resource Management is described in Section 4.9 of the CEMP.
EAC 69	· Ice Management Plan;	Completed	In Compliance	Ice Management is described in Section 4.10 of the CEMP. BC Hydro will retain a QP to develop and implement a Head Pond Ice Monitoring Plan for the Stage 2 diversion stage of construction.
EAC 69	· Noise and Vibration Management Plan;	Completed	In Compliance	Noise and Vibration Management is described in Section 4.11 of the CEMP.
EAC 69	· Smoke Management Plan;	Completed	In Compliance	Appendix A of the CEMP contains the Smoke Management Plan
EAC 69	· Soil Management, Site Restoration, and Revegetation Plan;	Completed	In Compliance	Appendix H of the CEMP contains the Soil Management, Site Restoration, and Revegetation Plan
EAC 69	· Spill Prevention and Response Plan;	Completed	In Compliance	Spill Prevention and Response is described in Section 4.13 of the CEMP.
EAC 69	· Surface Water Quality Management Plan;	Completed	In Compliance	Surface Water Quality Management is described in Section 4.14 of the CEMP.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 69	Vegetation and Invasive Plant Management Plan;	Ongoing	In Compliance	<p>Section 4.15 of the CEMP requires that Contractor EPPs address this requirement. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.</p> <p>The IWMAMP includes herbicide and mechanical based invasive plant management in the dam site area, and the expansion of the vehicle cleanliness program, including the use of vehicle and equipment inspection forms. Rev 6 of the IWMAMP was completed and rolled out to most contractors for the project.</p> <p>To date, contractors have completed the following: invasive plant removal through hand pulling, on-going inventories of invasive plant locations, extensive hydroseeding of exposed slopes across the Project area, regular vehicle inspections and cleaning through various methods to ensure vehicles are clean and free of dirt and invasive plants when transitioning between sites and into the Project area. BC Hydro implemented an Invasive Species Management Contractor that completed a control program across the dam site and off dam site areas along Highway 29 work areas in mid to late 2018.</p> <p>In mid to late 2018 BC Hydro commenced construction of a permanent vehicle weed wash station near Gate B on the dam site. Civil site preparation and drainage was completed by the end of 2018 but the onset of winter conditions precluded concrete placement and the finalization of the facility. Construction will resume in spring 2019.</p>
EAC 69	Waste Management Plan; and	Completed	In Compliance	The Waste Management Plan is described in Section 4.16 of the CEMP.
EAC 69	Wildlife Management Plan.	Completed	In Compliance	The Wildlife Management Plan is described in Sections 3.0 and 4.17 of the CEMP and Section 8.6.2 of the VWMMP.
EAC 69	Process for revising and updating the CEMP.	Ongoing	In Compliance	The process for revising and updating the CEMP is described in Section 2.6 of the CEMP.
EAC 69	The CEMP is to be prepared by BC Hydro.	Completed	In Compliance	The process for revising and updating the CEMP is described in Section 2.6 of the CEMP.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 69	<p>Detailed Environmental Protection Plans will be developed which must include the following:</p> <ul style="list-style-type: none"> · Clear statement of objectives; · Description of potential Project effects and safety hazards, through consideration of baseline conditions and sensitive receptors; · Clean documentation of applicable legislative requirements that must be adhered to, as well as BC Hydro policies, guidelines and other best management practices that will be followed; · Clear documentation of measures to be implemented and actions to be taken to mitigate or compensate potential effects; · Description of worker qualifications and training requirements pertaining to each of the plans associated with the Constructive Environmental Management Plan; and · Description of Monitoring and Reporting Requirements. 	Ongoing	In Compliance	Environmental Protection Plan requirements are detailed in Section 2.4 of the CEMP. BC Hydro audits compliance with this requirement by reviewing contractor EPPs.
EAC 69	The EAC Holder must provide the draft CEMP to regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction.	Completed	In Compliance	The draft CEMP was submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014
EAC 69	The EAC Holder must file the CEMP with EAO, regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups 30 days prior to the commencement of construction.	Completed	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published).
EAC 69	The EAC Holder must develop, implement and adhere to the CEMP, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	BC Hydro audits compliance with the CEMP by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
EAC 70	The EAC Holder must manage Project effects through construction and operations by implementing measures detailed in mitigation and monitoring plans.	Ongoing	In Compliance	BC is implementing mitigation measures as outlined in mitigation and monitoring plans developed to date, as required by the EAC.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 70	<p>Each mitigation and monitoring plan in addition to plan specific conditions in this document must include the following:</p> <ul style="list-style-type: none"> · Plan objectives; · Plan scope; · Mitigation plan details (including details of any sub-components), including a summary of potential Project effects and baseline conditions relevant to the plan and any sub-components, a schedule and a spatial description of the plan area; · Monitoring plan details, where monitoring is required, including parameters to be monitored or measured, a schedule (including frequency and duration), a spatial description of monitoring plan area or sampling locations; and · Description of plan reporting requirements. 	Ongoing	In Compliance	<p>Final mitigation plans have been submitted to the EAO in accordance with the requirements of the EAC.</p> <p>These plans address the content requirements set out by the EAC. Plans submitted to date are as follows:</p> <ul style="list-style-type: none"> - Aboriginal Plant Use Mitigation Plan - Aboriginal Training and Inclusion Plan - Agricultural Monitoring and Follow-up Program - Agricultural Mitigation and Compensation Plan Framework - Business Participation Plan - Construction Environmental Management Plan (Rev 4) - Construction Safety Management Plan (Rev 2) - Cultural Resources Mitigation Plan - Del Rio Pit Development Plan - Emergency Services Plan - Fisheries and Aquatic Habitat Management Plan - Fisheries and Aquatic Habitat Monitoring and Follow-up Program - Healthcare Services Plan - Heritage Resources Management Plan - Housing Plan and Housing Monitoring and Follow-up Program (Rev2) - Impervious Core Materials Source Development Plan (85th Ave Industrial Lands Detailed Operations Plan) - Labour and Training Plan - Outdoor Recreation Mitigation Program - Recreation Program - Vegetation Wildlife Mitigation and Monitoring Plan - Vegetation Clearing and Debris Removal Plan - West Pine Quarry Development Plan; and - Wuthrich Quarry Development Plan
EAC 71	<p>The EAC Holder must manage environmental protection and management by implementing measures in the following Development Plans:</p> <ul style="list-style-type: none"> · Del Rio Pit Development Plan; 	Ongoing	In Compliance	<p>The draft and final Development Plans for Del Rio Pit were submitted to regulatory agencies, governments and Indigenous groups on April 7, 2015 and June 5, 2015, respectively. The plan sets out the plan purpose, scope, details, safety and environmental management, and site reclamation strategy (as appropriate). To date, no activities have taken place at Del Rio Pit.</p>

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 71	· Impervious Core Materials Source Development Plan;	Ongoing	In Compliance	The draft and final Impervious Core Materials Source Development Plan (Detailed Operations Plan for 85th Avenue Industrial Lands) were submitted to regulatory agencies, governments and Indigenous groups on September 21, 2016 and November 22, 2016, respectively. The plan sets out the plan purpose, scope, details, safety and environmental management, and site reclamation strategy (as appropriate).
EAC 71	· Portage Mountain Quarry Development Plan; and	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Quarry works at Portage Mountain have not yet commenced. A Development Plan will be submitted a minimum of 90 days prior to the commencement of construction activities that require the Development Plan.
EAC 71	· Wuthrich Quarry Development Plan.	Ongoing	In Compliance	The plan sets out the plan purpose, scope, details, safety and environmental management, and site reclamation strategy (as appropriate).
EAC 71	Each Development Plan will include the following: · Plan purpose; · Plan scope; · Plan details; · Summary of safety and environmental management; and · Site reclamation strategy.	Ongoing	In Compliance	All Development Plans submitted to date describe the purpose, scope, details, safety and environmental management, and site reclamation strategy (as appropriate).
EAC 71	The EAC Holder must provide the draft Development Plans to regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction activities that require an applicable Development Plan.	Completed	In Compliance	The draft Development Plans for Del Rio Pit, Impervious Core Materials Source (85th Avenue Industrial Lands), and Wuthrich Quarry, were submitted to regulatory agencies, governments and Indigenous groups on April 7, 2015, September 21, 2016 and April 7, 2015, respectively.
EAC 71	The EAC Holder must file the Final Development Plans with EAO, regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups 30 days prior to the commencement of construction activities that require an applicable Plan.	Completed	In Compliance	The final Development Plans for Del Rio Pit, Impervious Core Materials Source (85th Avenue Industrial Lands), and Wuthrich Quarry, were submitted to regulatory agencies, governments and Indigenous groups on June 5, 2015, November 22, 2016 and June 5, 2015, respectively.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 71	The EAC Holder must develop, implement and adhere to the Final Development Plans, and any amendments, to the satisfaction of EAO.	Ongoing	In Compliance	Works at West Pine Quarry and Wuthrich Quarry are conducted in accordance with the Final Development Plans (located here: https://www.sitecproject.com/document/library/environmental-management) . These are the only active quarries to date. The 2018 Annual Summary Reports for West Pine Quarry, and Wuthrich Quarry will be submitted to regulatory agencies and Indigenous groups by March 31, 2019.
EAC 72	The EAC Holder must manage effective communications for the Project by implementing measures in communication plans and a business participation plan.	Ongoing	In Compliance	BC Hydro is meeting this condition (see also Condition 58). The Site C project team is implementing the Construction Communication Plan and Aboriginal Group Communication Plans to ensure that residents, stakeholders and Indigenous groups are provided with advance notification about construction. The Site C project team is implementing the Business Participation Plan to keep businesses informed and updated on the opportunities associated with the construction of the Project. Examples of implementation measure include: mail drops and letters, construction updates and bulletins, presentations, Indigenous construction notification letters and updates to the project website. Other tactics also being used to provide construction- related and business opportunity information include Council Presentations, Regional Community Liaison Committees, presentations to stakeholders, government relations and property owner liaison.
EAC 72	The following communication and participation plans are to be developed and implemented: · Business Participation Plan;	Ongoing	In Compliance	The response to Condition 58 and the response to Condition 72 describe compliance with the Business Participation Plan.
EAC 72	· Construction Communication Plan; and	Ongoing	In Compliance	See response to Condition 27 (Aboriginal construction communications) and Condition 72.
EAC 72	· First Nations Communication Plan.	Ongoing	In Compliance	Condition 27 describes compliance with the Aboriginal Group Communications Plan.
EAC 72	Each plan in addition to plan specific conditions identified in this document will include: · Clear Statement of Objectives; · Audiences; · Key activities and tools; and · Annual summary reporting.	Ongoing	In Compliance	Condition 27 describes compliance with the Aboriginal Group Communications Plan.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 73	The EAC Holder must manage worker and public safety throughout the operations phase by implementing measures detailed in an Operations Safety Management Plan that complies with all applicable requirements of statutes, permits, approvals, and authorizations as outlined in Section 35 of the EIS.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro will submit a draft Operations Safety Management Plan, developed by a QEP, to regulatory agencies, governments and Indigenous groups, a minimum of 90 days and 30 days, respectively, prior to the commencement of operations.
EAC 73	The Operations Safety Management Plan must be developed by a QEP.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	The Operations Safety Management Plan must include the following component plans: <ul style="list-style-type: none"> · Public Safety Management Plan (including the Reservoir Shoreline Monitoring and Management Plan); and 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Worker Safety and Health Management Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	Each component plan must include the following: <ul style="list-style-type: none"> · Clear Statement of Objectives; 	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Description of potential Project effects and safety hazards, through consideration of baseline conditions and sensitive receptors;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Clear documentation of all applicable legislative requirements that must be adhered to, as well as BC Hydro policies, guidelines and other best management practices that will be followed;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Clear documentation of compliance and effectiveness monitoring to be undertaken;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Description of worker qualifications and training requirements pertaining to the Plan(s);	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Description of reporting requirements; and	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Process for revising and updating the Operations Safety Management Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	The EAC Holder must provide this draft Operations Safety Management Plan, including all component plans, to regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups for review a minimum of 90 days prior to the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 73	The EAC Holder must file the final Operations Safety Management Plan, including component plans with EAO, regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups a minimum of 30 days prior to the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	The EAC Holder must develop, implement and adhere to the final Operations Safety Management Plan, and any amendments, to the satisfaction of EAO.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The EAC Holder must manage to ensure effective environmental protection and management throughout the operations phase by implementing measures detailed in an Operations Environmental Management Plan (OEMP).	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The OEMP must be developed by a QEP.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The OEMP must include the following plans:	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Hazardous Waste Management Plan;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Ice Management Plan;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Vegetation and Invasive Plant Management;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Waste Management Plan (including Materials Management);	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	and	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Water Management Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	Each plan must include the following:	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· A Clear Statement of Objectives;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Description of potential Project effects, through consideration of baseline conditions and sensitive receptors;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Clear documentation of all applicable legislative requirements that must be adhered to, as well as BC Hydro policies, guidelines and other best management practices that will be followed;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Clear documentation of compliance and effectiveness monitoring to be undertaken;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Description of reporting requirements; and	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 74	Process for revising and updating the Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The EAC Holder must provide this draft OEMP, including all plans, to regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups for review a minimum of 90 days prior to the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The EAC Holder must file the final OEMP, with regulatory agencies, Peace River Regional District, City of Fort St. John, District of Hudson's Hope and Aboriginal Groups a minimum of 30 days prior to the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The EAC Holder must develop, implement and adhere to the final OEMP, and any amendments, to the satisfaction of EAO.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 75	The EAC Holder must provide its on-site project employees, contractors and sub-contractors, prior to those employees, contractors and sub-contractors starting work, with briefings on and copies of Schedule B (Table of Conditions) of the EAC and all Environmental and Safety Management Plans identified in Schedule B that are relevant to their works.	Ongoing	In Compliance	Prior to the start of field activities, Field Crew Supervisors, QEPs and Environmental Monitors attend an environmental overview and training workshop, where they review EAC and all Environmental and Safety Management Plans identified in Schedule B that are relevant to works.
DAM SAFETY				
EAC 76	The EAC Holder must conduct an assessment of the impacts of a multiple cascading dam breach, in accordance with the Canadian Dam Association Guidelines and BC Hydro's Dam Safety Program,	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 76	and share the results of that study with the Government of Alberta, FLNR and the authorities of the towns that would be affected, prior to the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 77	The EAC Holder must consult with the Government of Alberta and emergency management officials in Alberta, and FLNR on communication and contingency plans to address the potential occurrences of a multiple cascading dam breach, prior to the commencement of operations.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
WEST PINE HAUL ROUTE TRAFFIC MANAGEMENT PLAN				

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 78	The Holder must develop a West Pine Haul Route Traffic Management Plan (the "Plan") regarding use of the West Pine Haul Route by the Holder. The West Pine Haul Route (see Appendix A of this Order) comprises Highway 97 to Chetwynd, Highway 29 through Hudson's Hope to the Highway 29 realignment sites.	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition. As of December 31, 2018 BC Hydro was developing the West Pine Haul Route Traffic Management Plan. Consultation on the plan with Affected Communities commenced in early 2019. Compliance with this condition will be communicated in the next Annual Compliance Report to be submitted to the EAO by March 31, 2020.
EAC 78	The Plan must be developed in consultation with Sauleau First Nations, West Moberly First Nations, the District of Hudson's Hope, the District of Chetwynd, and the Peace River Regional District (the "Affected Communities") and the Ministry of Transportation and Infrastructure (MOTI)	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	The Plan must be developed to the satisfaction of the EAO and include at least the following: a) Identify potential adverse effects related to traffic along the West Pine Haul Route and measures to mitigate those effects of West Pine Quarry haul truck traffic on the West Pine Haul Route, including identification of locations to monitor haul truck traffic counts and the means by which the Holder will conduct monitoring for haul truck traffic counts;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	b) The means by which the Holder will identify additional mitigation measures if the measures referred to in paragraph (a) are not sufficient to mitigate the effects identified in paragraph (a);	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	c) The means by which the Holder will provide, at a minimum, monthly updates to the Affected Communities regarding the Holder's use of the West Pine Haul Route;	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	d) A process for communication and data sharing that must occur, at minimum, on a monthly basis with the Ministry of Transportation and Infrastructure; and	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	e) Data referred to in d), at a minimum, must include records of the location of traffic accidents, the location of any traffic related fatalities, complaints received from the public, and wildlife mortality attributable to the Holder's use of the West Pine Haul Route.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 78	3. The Holder must provide this Plan to the EAO, the Affected Communities, and MOTI a minimum of 30 days prior to the planned commencement of use of the West Pine Haul Route for the purposes of transporting materials from the West Pine Quarry to Highway 29 realignment segments, Shoreline Protection sites in Hudson's Hope, and areas of the reservoir requiring protection during reservoir filling.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	The EAO may, within 30 days of receiving the Plan, advise that: a) The Holder may proceed to implement the Plan with or without revisions; or b) A revised Plan, must be provided for approval of the EAO prior to commencement of use of the West Pine Haul Route for the purposes of transporting materials from the West Pine Quarry to Highway 29 realignment segments, Shoreline Protection sites in Hudson's Hope, and areas of the reservoir requiring protection during reservoir filling. If the EAO advises that pursuant to paragraphs 3 (a) or (b) changes are required to the Plan, then the Holder must follow the instructions of the EAO in that regard.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	4. At the time of submitting the Plan to the EAO, the Holder must also provide the EAO a consultation report setting out the following: a) A list of the invitees and an example of the invitation sent to the Affected Communities and MOTI to participate and provide their views including the timeframe for providing such views, on the Plan; and b) How the views and information provided by the Affected Communities and MOTI to the Holder have been considered and addressed in the Plan; or c) Why such views and information have not been addressed in the Plan.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	5. The Holder must: a) Maintain a record of the consultation referred to in paragraphs 1 and 3 and the comments provided by the Affected Communities, MOTI and the EAO under paragraph 3, above; and	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	Description
EAC 78	b) Provide a copy of the consultation report, required under paragraph 4 of this condition, to the EAO, the Affected Communities, MOTI, or all three parties, within 15 days of the Holder receiving a written request from the EAO, an Affected Community, or MOTI.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 78	The Plan, and any amendments thereto, must be implemented to the satisfaction of the EAO throughout the duration of use of the West Pine Haul Route for the purposes of transporting materials from the West Pine Quarry to Highway 29 realignment segments, Shoreline Protection sites in Hudson's Hope, and areas of the reservoir requiring protection during reservoir filling.	Initial Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

Site C Clean Energy Project

**Annual Progress Report No. 4
(Combined with Quarterly Progress Report No. 18)**

Appendix H

**Summary of Individual Contracts
Exceeding \$10 Million**

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Site C Clean Energy Project

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Appendix I

Project Progression

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Appendix J

Detailed Project Expenditure

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