BC Hydro
Power smart

Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

January 2021 to December 2021

PUBLIC

Table of Contents

List of Figures

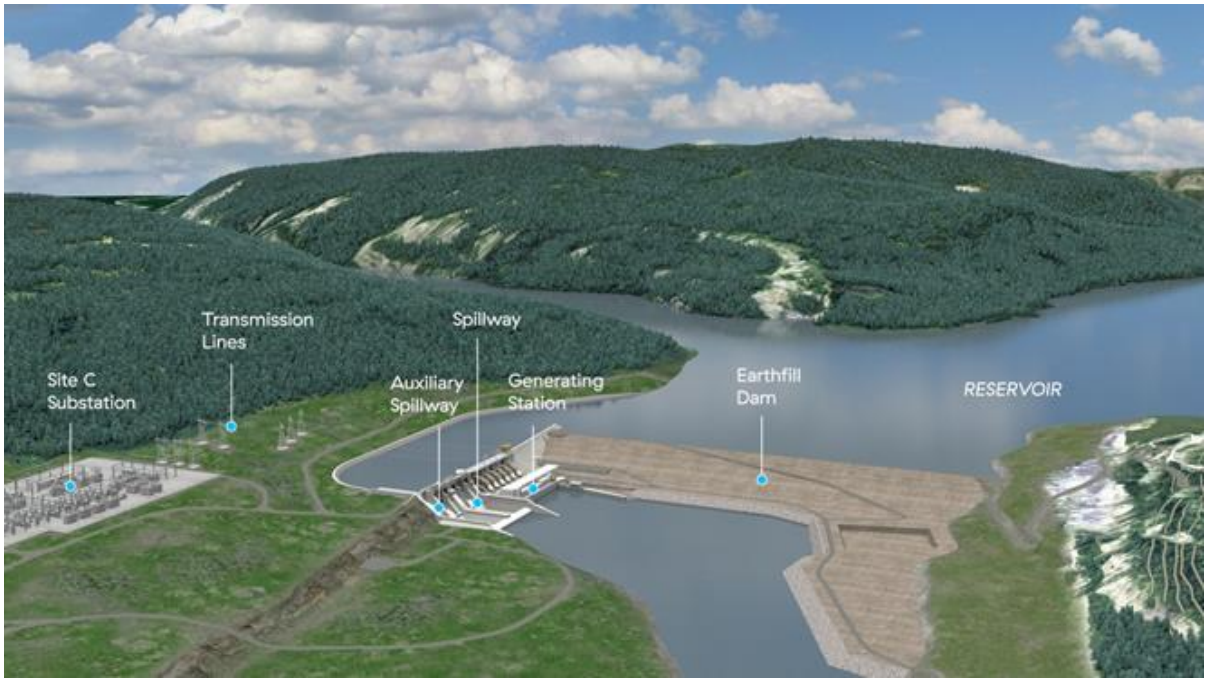
List of Tables

Appendices

1 Executive Summary

1.1 Overview and General Project Status

Site C will be the third dam and hydroelectric generating station on the Peace River in northeastern British Columbia (**B.C.**). Once complete, 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.



Construction on Site C began on July 27, 2015.

Annual Progress Report No. 6 covers the period January 1 to December 31, 2021 (reporting period), including quarterly results for the quarter ended December 31, 2021 (Quarterly Progress Report No. 24).

In February 2021, the Government of British Columbia announced a revised cost estimate of $16 billion to complete the Project, along with a new expected in-service date of 2025. The revised budget and schedule, which were subsequently approved

by Treasury Board in June 2021, address significant cost pressures and delays faced by the Project due to the COVID-19 pandemic, as well as the right bank foundation enhancements and other cost pressures prior to COVID-19.

Also, in February 2021, Government released the Site C Project Review, led by Peter Milburn (**Milburn Review**), which included 17 recommendations aimed at improving oversight, governance, risk management, and construction and claims management. All recommendations were fully implemented by September 30, 2021, and have resulted in enhancing the independence, mandate and expertise of the Site C Project Assurance Board and strengthening BC Hydro's risk and commercial management processes. Ernst & Young Canada also continues to provide independent oversight for the Project, including budget oversight, schedule and commercial management evaluation and risk assessment analysis.

By the end of 2021, the Project was more than 55 per cent complete. BC Hydro continues to actively manage cost and schedule risks.

The most significant challenge has been the continuation of the COVID-19 pandemic and related variants, with two COVID-19 outbreaks declared on the Site C Project during the reporting period. In October 2021, BC Hydro announced a vaccine policy which includes the requirement for all employees and contractors on the Site C Project to have two doses of an approved COVID-19 vaccine as of January 10, 2022.

The second key challenge includes the continued work required to design and implement extensive foundation enhancements to address the geotechnical issues previously identified on the right bank. The Technical Advisory Board and independent dam experts have confirmed that the Project design continues to meet the highest safety standards and international best practices.

BC Hydro also continues to actively monitor other significant risks such as commercial negotiations with contractors; design finalization for the right bank

foundation enhancements and related procurements; aggregate supply; the ability of the Project's contractors to attract and retain sufficient skilled craft workers; and the possibility that the Blueberry River Decision could affect the timing of the issuance of provincial permits required for the completion of the Project.

Despite these challenges and risks, the Project advanced construction throughout the year and achieved significant construction milestones, including the completion of the upstream and downstream cofferdams before the spring freshet, full completion of the Project's roller-compacted concrete buttress, and significant progress on the earthfill dam. In addition, work commenced on the right bank foundation enhancements program, with 27 of the 96 piles being installed by the end of 2021. Away from the dam site, key highlights include stringing commencing on the second of two transmission lines connecting Site C to the Peace Canyon generating station, as well as the substantial completion of Highway 29's Halfway River bridge in August 2021 and the opening of the Farrell Creek East segment to traffic in October 2021. BC Hydro has also upheld its commitments to the environment, Indigenous groups and local communities throughout the reporting period.

The Project remains on track to be on budget and meet the Project in-service date in 2025. BC Hydro will continue to work with the Project Assurance Board, Mr. Milburn, Ernst & Young Canada, and the Technical Advisory Board to manage ongoing project risks.

The following sections contain additional discussion of the major challenges and successes of 2021, and the Project Status Dashboard as of December 31, 2021.

1.2 Revised Budget and New Expected In-Service Date

On February 26, 2021, the Government of British Columbia announced a revised cost estimate of $16 billion to complete the Site C Project, and a revised Project schedule with an in-service date in 2025.

In June 2021, following the completion of a Project re-baselining process, Treasury Board approved the revised budget and in-service date.

The revised budget and schedule address significant cost pressures and delays faced by the Project due to the COVID-19 pandemic, as well as the right bank foundation enhancements and other cost pressures being managed by the Project prior to COVID-19, as summarized in previous progress reports.

The impacts and delays due to the COVID-19 pandemic are the single largest contributors to the cost increase, which includes the amount of interest costs financed by the Project for the one year delay, followed by the additional costs for foundation enhancements measures, and other cost pressures prior to the onset of the COVID-19 pandemic.

With the Project more than 55 per cent complete, BC Hydro continues to actively manage potential cost and schedule risks. The two key challenges have been the continuation of the COVID-19 pandemic and its related variants, and the continued work to address the previous geotechnical issues identified on the right bank. Both of these challenges are discussed in further detail later in this section.

In addition, BC Hydro and Site C contractors continue to schedule work and explore strategies to accelerate the work delayed by the COVID-19 pandemic. If successful, this will result in lowering the schedule risk and could result in an earlier in-service date; however, achieving an earlier in-service date remains subject to uncertainty and to the risks summarized in this report.

As of December 31, 2021, the life-to-date actual costs are $8.4 billion, which results in an estimated $7.6 billion of remaining costs. The Project remains on track to be completed within the $16 billion budget and meet the Project in-service date in 2025.

1.3 COVID-19 Pandemic Continues to Impact Project

During 2021, the global COVID-19 pandemic continued to have a significant impact on safety, schedule, scope and cost for the Project.

To reduce the risk of increased post-winter holiday transmission of COVID-19 at major projects and local communities in the north, B.C.'s Provincial Health Officer issued several public health orders in late December 2020 and early January 2021.

Starting from a reduced number of onsite workers in January 2021, BC Hydro was able to ramp up gradually throughout the first few months of the year.

Over the course of the year, Northern Health declared two COVID-19 outbreaks on the Site C Project. The first outbreak occurred between April 28 and June 23, 2021. In total, 56 lab-confirmed cases were associated with the outbreak (involving separate clusters of COVID-19 activity dating back to March 2021).

The second outbreak occurred between August 18 and October 12, 2021. In total, 92 cases were associated with the outbreak (involving separate clusters of COVID-19 activity); the substantial majority of these cases occurred in unvaccinated workers.

In the case of both outbreaks, work continued on-site and BC Hydro was not directed to shut down the site or stop any work due to the COVID-19 protocols in place.

On October 7, 2021, BC Hydro announced it would require proof of vaccination from all BC Hydro employees and from all other individuals working at BC Hydro facilities, including those working at the Project.

BC Hydro employees were required to have one dose of the COVID-19 vaccine by November 22, 2021 and have two doses of an approved COVID-19 vaccine by January 10, 2022.

Consultants and employees of contractors and sub-contractors working at BC Hydro facilities, including the Project, were required to have two doses of an approved COVID-19 vaccine by January 10, 2022. BC Hydro is monitoring the potential impacts on employee and contractor workforces as a result of the implementation of the vaccine policy.

From the onset of the pandemic in March 2020 to the end of 2021, 354 Site C workers had tested positive for COVID-19.

As of December 31, 2021, the onsite medical clinic had administered 4,589 COVID-19 vaccinations, of which 2,233 were first doses, 1,922 were second doses, eight were third doses and 426 were booster doses.

Throughout the pandemic, BC Hydro has continued to prioritize employee health and safety by implementing measures across the Project to minimize the risk of transmission at the worker accommodations, all work fronts, and all construction offices by offering vaccination clinics to on-site Site C workers and employees; and working closely with local government, First Nations and health authority stakeholders. Through regular communications, these stakeholders have been kept informed about pandemic-related updates on the Project.

1.4 Right Bank Foundation Enhancements Design Approved, Installation Underway

By early 2020, BC Hydro had determined that significant foundation enhancements were required to increase the stability under the structures on the right bank, including the powerhouse, spillways and future dam core area.

Later that same year, BC Hydro identified a two-part solution to improve the stability of the right bank structures. These enhancements include the installation of 96 large piles to further extend the foundation deeper into the bedrock and enhancements to the design of the approach channel above the powerhouse and spillways.

In February 2021, the Government of British Columbia released the geotechnical review from two independent, world-leading dam experts. Their review confirmed the foundation enhancements developed to address geotechnical issues on the Project's right bank indicate the Project design continues to meet the highest safety standards and international best practices. The independent dam experts have been retained to provide oversight to BC Hydro while construction of the foundation enhancements is completed.

Throughout the second half of 2021, activities on the right bank foundation enhancements focused on finalizing the design of the steel piles, continuation of design enhancements for the approach channel, and, in September 2021, the commencement of the installation of the steel piles located within the spillways stilling basin.

By the end of the reporting period, crews had installed 27 of the 96 piles. Excavations of overburden material and bedrock were also underway within the approach channel to prepare for the installation of the approach channel lining in late spring 2022.

1.5 Independent Project Review by Peter Milburn

In July 2020, the Government of British Columbia appointed a special advisor, Peter Milburn, former deputy minister of finance and secretary to Treasury Board, to complete a review of the Project, which included an assessment of four key areas of the Project: governance and oversight, geotechnical issues, risk, and construction supervision and claims management.

Mr. Milburn's review team consisted of individuals with specialized expertise and experience with major capital projects. The review period covered January 2018 to October 2020. BC Hydro supported Mr. Milburn and his team throughout the review period.

In February 2021, the Government of British Columbia released Mr. Milburn's independent review of the Project. His report included 17 recommendations aimed at improving oversight and governance and strengthening Site C risk reporting and management. The Government of British Columbia and BC Hydro accepted all 17 recommendations and immediately began implementation.

By September 30, 2021, all 17 recommendations were fully implemented. This includes changing the structure of the Project Assurance Board by having a majority of independent members on the Board with expertise in the areas of capital project construction and management; delivery of major civil projects; commercial negotiations; and construction-related claims settlements.

The Project Assurance Board has also appointed a commercial sub-committee, which has been actively providing oversight on ongoing key construction, schedule, cost reporting, claims management and other commercial matters.

BC Hydro has added additional resources to its Site C risk management, claims management and construction management teams, as recommended.

1.6 The B.C. Supreme Court decision in *Yahey v British Columbia*

On June 29, 2021, the Supreme Court of British Columbia released its decision in Yahey v British Columbia (the **Blueberry River Decision**), determining that the cumulative impacts from a range of provincially authorized industrial activities (primarily oil and gas and forestry) within Blueberry River First Nations traditional territory constituted an infringement of Blueberry River First Nations Treaty 8 rights. BC Hydro was not a party to that court case.

BC Hydro continues to be issued permits and authorizations in accordance with its construction timelines. As of December 31, 2021, 534 (84 per cent) of the estimated 633 provincial and federal permits required for the Project have been received and are actively being managed. The remaining authorizations fall within the footprint

and description of the Project that was approved in 2014. The remaining permits are required for construction activities to achieve completion of Site C, as approved.

BC Hydro continues to consult with Blueberry River First Nations and all Treaty 8 First Nations, and remains willing to negotiate an impact benefits agreement with Blueberry River First Nations.

1.7 Construction Advanced in 2021

Despite the challenges discussed above, the Project continued to progress in 2021.

Following the successful diversion of the Peace River in fall 2020, the Project advanced construction of the upstream and downstream cofferdams. The upstream cofferdam was completed to full height in February 2021, two months ahead of schedule. The downstream cofferdam was completed one month later. With these important components of the earthfill dam complete in advance of the spring freshet, the area between the two cofferdams was dewatered to allow for the excavation of the centre section of the dam core trench.

For the remainder of the year, crews excavated and then began placing material in the earthfill dam. To December 31, 2021, approximately 30 per cent of the total required volume of material had been placed in the dam.

Concurrent to dam construction, work advanced on roller-compacted concrete placements in the dam and core buttress. Together with the powerhouse and spillways buttresses, the dam and core buttress forms a key safety component in the Project’s design.

In October 2021, BC Hydro completed the dam and core buttress, marking the completion of the Project’s overall roller-compacted-concrete program. Since the program began in 2017, crews placed a total of 1.7 million cubic metres of roller-compacted concrete in the three large buttresses.

In the generating station, work on the concrete foundation and enclosure of the powerhouse structure were completed in 2021. Placement of the concrete that embeds the turbines and forms the floors in the powerhouse is advancing at a pace to match the turbines and generators contractor's schedule.

As of December 31, 2021, 81 penstock sections (out of a total of 90 sections) had been installed, and in the spillways, more than 50 per cent of the spillways concrete had been placed.

Away from the dam site, work progressed on all six segments of the Highway 29 realignment sub-project, including the substantial completion of the Halfway River bridge in August 2021 and the opening of the Farrell Creek East segment to traffic in October 2021.

Construction of the second 500 kV transmission line connecting Site C to the Peace Canyon generating station continued in 2021. All foundations were completed and all towers were assembled and installed on the foundations by March 2021. In July 2021, conductor stringing began; by the end of the year, the line was approximately two-thirds complete.

For more details on the significant Project milestones achieved in 2021, refer to sections 1.10 and Appendix B.

1.8 Upholding Commitments to the Environment, Indigenous Groups and Local Communities

During the reporting period, BC Hydro continued to uphold its commitments to the environment, Indigenous groups and local communities.

BC Hydro continued to secure the appropriate permits, authorizations and leaves to commence construction required for the Project. As of December 31, 2021, 534 (84 per cent) of the estimated 633 provincial and federal permits have been received.

Environmental compliance on the Project remains high. BC Hydro completed more than 43,000 environmental compliance inspections in 2021, with a compliant or partial-compliant result of 95 per cent across all contractors and works areas.

Work advanced in the areas of environmental monitoring and assessment, as well as in the Project's fish, wildlife, habitat, vegetation management and heritage programs. Of significant note, the Project saw a successful first year of operations for the temporary fish passage facility. The facility provides safe and efficient fish passage from the diversion tunnel outlet channel to upstream release locations during construction of the Project. Between April and October, 2,465 fish from 11 different species passed through the facility. In general, the number of fish passed and the level of mortality associated with the handling of the fish were consistent with expected results. The team worked collaboratively with provincial and federal fisheries representatives to evaluate facility performance and implement improvements throughout the season.

Throughout the year, BC Hydro continued to engage, build relationships and find solutions together on topics that are most important to the First Nations communities affected by Site C. BC Hydro collaborated with Indigenous Groups on a wide variety of environmentally related topics through the Environmental Forums – drawing on Indigenous traditional knowledge to inform environmental approaches. In 2021, seven Environmental Forum meetings were held, with participation and involvement from Blueberry River First Nations, Doig River First Nation, Duncan's First Nation, Halfway River First Nation, Horse Lake First Nation, Kelly Lake Metis Settlement Society, McLeod Lake Indian Band, Métis Nation BC and Saulteau First Nations. Key discussion topics over the year included, right bank foundation enhancements, methylmercury, the wetland compensation program, additional aggregate sources for dam construction, beaver study results, reclamation planning and the operations of the temporary fish passage facility.

Accommodation offers were originally extended to 10 First Nations communities. Seven agreements have now been fully executed and are in various stages of implementation.

BC Hydro also worked to advance economic opportunities for Indigenous groups through capacity-building and procurement opportunities. In 2021, $62 million in Site C procurement opportunities were awarded to Indigenous-designated companies; overall, approximately $602 million has been awarded to Indigenous-designated companies since the beginning the Project.

In December 2021, 320 Indigenous people were working on the Site C Project, compared to 347 in December 2020. The Project high for the year was reached in August 2021, with 393 Indigenous workers.

Community engagement activities are an integral part of the Project; these activities also advanced throughout the year.

Throughout 2021, BC Hydro worked closely with local government, First Nations and health authority stakeholders to ensure worker and public safety while managing the COVID-19 pandemic at Site C. Through regular communications, these stakeholders were kept informed about pandemic-related updates on the Project.

In 2021, BC Hydro distributed more than $75,000 to nine non-profit organizations in the Peace Region and as of December 2021, nearly $575,000 has been distributed to 65 projects.

In 2021, 28 Peace Region agricultural projects received approximately $700,000 in funding through the BC Hydro Peace Agricultural Compensation Fund and as of December 31, 2021, nearly $1.3 million had been distributed to 53 projects. BC Hydro and Northern Development Initiative Trust are working to promote increased applications for the fund as the fund has been underutilized.

1.9 Project Status Dashboard for 2021

BC Hydro, with oversight from the Project Assurance Board, is focused on completing the Site C Project within the approved budget of $16 billion and a 2025 in-service date, without compromising on safety, scope and quality. To report on Project status, BC Hydro uses a dashboard system, where key Site C Project areas are classified as red (at risk), amber (moderate issues) or green (on target).

The Project Status Dashboard, as of December 31, 2021, is provided in Table 1.

In the dashboard, BC Hydro has classified the overall health of the Project as "amber," or at moderate risk. The Project is more than 55 per cent complete; however, there are still potential significant risks remaining. Working with the Project Assurance Board, special advisor Peter Milburn, and Ernst & Young Canada, BC Hydro continues to review, assess, manage and monitor these risks to the Project.

Table 1 Project Status Dashboard

● On Target ● Moderate Issues ● At Risk

Status as of:		December 31, 2021
Overall Project Health	●	As of December 31, 2021, overall Project health remained "amber." The revised budget and schedule were approved in June 2021 and address significant cost pressures and delays faced by the Project due to the COVID-19 pandemic, the need for right bank foundation enhancements, and other cost pressures being managed by the Project prior to COVID-19. The Project is more than 55 per cent complete; however, there are still potential significant risks remaining. BC Hydro continues to review, assess, manage and monitor significant potential risks to the Project. The Technical Advisory Board and independent experts continued to review and confirm that BC Hydro's foundation enhancements solution is appropriate and sound, and will make the right bank structures safe and serviceable over the long operating life of Site C.
Safety	●	Management of COVID-19 on the Project was a continued health and safety focus during 2021, with 328 confirmed cases over the course of the year. The Project worked through two outbreaks (June and August 2021) with Northern Health. Rapid testing capability was implemented in late September 2021 and was used for case and contact management. In anticipation of the potential impacts from the more transmissible Omicron variant for workers returning in January 2022, BC Hydro extended rapid testing as a screening method for local and camp workers, in addition to mandatory proof of vaccination. BC Hydro's proof of vaccination policy announced in October 2021 came into effect on January 10, 2022. By December 31, 2021, the onsite medical clinic had administered more than 4,500 vaccinations and continues to offer booster shots. Extreme weather events were a safety issue in 2021, with a heat dome in the summer and extreme cold in December 2021 and January 2022. Contractors implemented their heat and cold management plans to keep workers safe. Safety performance in 2021 (all contractors, all work sites) was consistent with 2020 results, with 1,055 safety incidents in total including near misses. To encourage active learning, 129 safety incident reviews were held, including reviews for 25 incidents classified as serious. Safety trends in 2021 were hot work, confined space, scaffolding and guardrails, working at heights and object falls from height.

Status as of:		December 31, 2021
Scope	🟡	Scope remained "amber" as of December 31, 2021. Provisions are included in the Project plans for potential scope adjustments for site conditions and interfaces. As construction progresses, there remains a risk of design changes due to unknown field conditions. The design, value engineering and constructability reviews for the right bank foundation enhancements continue to be finalized. The Technical Advisory Board and independent experts have confirmed that BC Hydro's right bank foundation enhancements solution is appropriate and sound and will make the right bank structures safe and serviceable over the long operating life of Site C; they will continue to review the designs as they are finalized.
Schedule	🟡	Schedule remained "amber" as of December 31, 2021. The Project is currently on schedule to achieve the approved 2025 in service date; however, as the Project is more than 55 per cent complete, a significant amount of work and potential schedule risks remain. BC Hydro is actively reviewing, assessing, mitigating, and managing these remaining risks. BC Hydro and Site C contractors continue to schedule work and explore strategies to accelerate work delayed by COVID-19. If successful, this will result in lowering the schedule risk and could result in an earlier in-service date; however, achieving an earlier in service date remains subject to uncertainty and to the risks summarized in this report.
Cost	🟡	Cost remained "amber" as of December 31, 2021. The revised budget addresses cost pressures due to the COVID-19 pandemic, the need for foundation enhancements on the right bank, and other cost pressures the Project was managing prior to the COVID-19 pandemic. Significant potential cost risks remain, including the continuation of the COVID-19 pandemic, commercial negotiations with contractors, design changes due to unknown field conditions, the availability of skilled craft workers and obtaining remaining authorizations for the completion of the Project. As of December 31, 2021, the life-to-date actual costs are $8.4 billion, which results in an estimated $7.6 billion of remaining costs.
Quality	🟢	The overall quality rating for the Project continued to be good during the reporting period, indicating that the work generally conforms to the requirements of the drawings and specifications.

Status as of:		December 31, 2021
Regulatory, Permits and Tenures	🟡	The status of the regulatory, permits and tenures indicator remains "amber." The "amber" status reflects the possibility that the Blueberry River Decision could affect the timing of the issuance of provincial permits required for the completion of the Project. BC Hydro continues to be issued permits and authorizations in accordance with its construction timelines. As of December 31, 2021, 534 (or 84 per cent) of the estimated 633 provincial and federal permits required for the Project have been received and are actively being managed. The remaining authorizations fall within the footprint and description of the Project that was approved in 2014. The remaining permits are required for construction activities to achieve completion of Site C, as approved. BC Hydro is awaiting a decision on a proposal that BC Hydro amend one of three boat launch locations required by the Environmental Assessment Certificate from Cache Creek to a location close to Halfway River. BC Hydro is also awaiting the decision on the amendment to provide for contingency haul trucking from the 85th Avenue quarry. The conveyor will restart moving quarry materials in spring 2022 and the contingency haul trucking plan would be required in 2022 if there are any issues with the conveyor.
Environment	🟢	Environmental work continues to focus on daily environmental compliance inspections. Focus remains on minimizing sediment and erosion across the dam site, care of water, hydrocarbon management, wildlife attractant management and invasive weed control. During the final quarter of the year, the team was also focussed on planning for the implementation of fish and wildlife habitat offsets/mitigation to be constructed in 2022. BC Hydro operated the temporary fish passage facility from April 1 to October 31, 2021, and passed 2,465 fish from 11 different species. Environment Canada initiated an investigation on October 10, 2018, with regards to a rainfall event in September 2018. BC Hydro subsequently increased the care of water system capacity along with other actions to reduce the potential of future similar events and no similar events have occurred; however, the investigation remains ongoing.

Status as of:		December 31, 2021
Procurement	🟡	As of December 31, 2021, the status of the procurement indicator remained "amber" due to the remaining right bank foundation enhancements procurements that still need to be negotiated. Good progress has been made on the balance of plant procurement, which has been split into six packages. During 2021, the mechanical and electrical contracts were awarded in July and September 2021, respectively. In the quarter ending December 2021, the proposals for the architectural and the permanent upstream fishway and other out structures were under evaluation and the final two requests for proposals packages for the HVAC and fire protection were received. A number of commercial agreements have been established to deliver the right bank foundation enhancements and the remaining changes are anticipated to be approved in 2022.
Indigenous Relations	🟡	BC Hydro has a mandate from the Government of British Columbia to reach project or impact benefits agreements with the 10 Indigenous groups that are most impacted by Site C. Seven of 10 agreements are fully executed and in implementation. There are three mandated First Nations with whom BC Hydro has not been able to achieve negotiated agreements. Consultation is ongoing with impacted First Nations regarding options and site-specific plans for managing identified burial and cultural sites impacted by reservoir inundation, in particular in the Halfway River and Cache Creek Bear Flats areas.
Litigation	🟡	As of January 21, 2022, the trial that was scheduled to begin in March 2022 for the treaty infringement claim filed by West Moberly First Nations in January 2018, as amended, has been adjourned. The parties to the litigation are continuing confidential discussions to seek to settle this litigation.
Stakeholder Engagement	🟢	BC Hydro continues to work with the communities, regional district and stakeholder groups on the implementation of various community agreements. In 2021, BC Hydro maintained the recurring COVID-19 updates (through calls and emails) with local community representatives and Northern Health that were initiated in 2020, and developed numerous Project update videos and other materials. Additionally, BC Hydro continues to receive, respond to and resolve Project-related enquiries.

1.10 Significant Project Updates in 2021

Significant Project updates that occurred between January 1 and December 31, 2021 include the following:

- On December 29, 2020 the Provincial Health Officer posted the *Industrial Projects Restart Order* limiting the number of workers at five industrial camps in Northern B.C., including Site C. BC Hydro complied with the *Industrial Projects Restart Order* issued by the Provincial Health Officer throughout the reporting period. Refer to sections 1.3 and 4.1.2 for more information.
- The upstream cofferdam was completed to full height (elevation 433.9 metres) in February 2021, two months ahead of schedule. The downstream cofferdam interlocking steel pile wall was completed in January 2021 followed by the completion of the downstream cofferdam to full height (elevation 414 metres) in March 2021. Refer to section 4.1.1 for more information.
- The area between the upstream and downstream cofferdams was dewatered to allow for commencement of the excavation of the centre section of the earthfill dam core trench. The dewatering was completed in February 2021. Refer to section 4.1.1 for more information.
- On February 26, 2021, the Government of British Columbia announced a revised cost estimate of $16 billion to complete Site C, which includes a new expected in-service date of 2025, as a result of the significant cost pressures and delays faced by the Project due to the COVID-19 pandemic, as well as the right bank foundation enhancements and other cost pressures prior to COVID-19. Refer to section 6.1.1 for more information.
- On February 26, 2021, the Government of British Columbia released the geotechnical review from two independent, world-leading dam experts. Their review confirmed the foundation enhancements developed to address geotechnical issues on the Project's right bank indicate the Project design

continues to meet the highest safety standards and international best practices. Refer to sections 4.2.2 and 4.2.7 and Appendix E for more information.

- On February 26, 2021, the Government of British Columbia released the independent review of the Project by special advisor Peter Milburn. His report included 17 recommendations aimed at improving oversight and governance and strengthening Site C risk reporting and management. All recommendations were fully implemented by September 30, 2021. Refer to sections 1.5 and 6.1 for more information.
- By the end of March 2021, crews had installed the last of the 205 transmission tower foundations for the second, 75-kilometre-long, 500 kV transmission line that connects Site C to the Peace Canyon Generating Station. All the towers for the second transmission line were also assembled and installed on the foundations. In July 2021, stringing of the transmission line began. By the end of the reporting period, approximately 68 per cent of the line had been strung. Refer to section 4.1.7 for more information.
- On April 28, 2021, Northern Health declared a COVID-19 outbreak on the Site C Project. A total of 56 workers were connected to this outbreak; all cases recovered. Northern Health declared the outbreak over on June 23, 2021. Refer to sections 1.3, 3.1.1 and 4.1.2 for more information.
- On May 1, 2021, the lower section of the Halfway River was reopened to boat traffic. This section of the river had been closed to boaters from September 1, 2020, to April 30, 2021, while BC Hydro cleared vegetation to prepare for the Site C reservoir.
- In May 2021, annual blasting resumed at Portage Mountain Quarry. This material will be used for the Hudson's Hope shoreline protection works and the Highway 29 realignment. Refer to section 4.1.8 for more information.

- In collaboration with local partners, BC Hydro launched a new environmental training program in mid-June 2021, which covered nine certifications that will enable local Indigenous participants to qualify for environmental monitoring work at Site C. Refer to section 12.4 for more information.
- In May 2021, placement of earthfill dam material commenced on the left and right abutments, and centre sections of the dam. By the end of the reporting period, approximately 30 per cent of the total material required for the earthfill dam had been placed. Refer to sections 1.7 and 4.1.1 for further information.
- On June 15, 2021, the B.C. Construction Association announced that BC Hydro and seven Site C contractors had become the first multi-contractor project to sign the Builders Code, setting a new industry standard with a project-wide commitment to eradicate hazing, bullying and harassment. Refer to section 12.4 for more information.
- In June 2021, Treasury Board approved the $16 billion Project budget and new expected in-service date of 2025. Refer to sections 1.2, 5.1 and 6.1.1 for more information.
- In June 2021, BC Hydro submitted a final Environmental Assessment Certificate amendment request to the Environmental Assessment Office regarding the use of haul trucks on a contingency basis to transport till material from 85th Avenue Industrial Lands to the dam site area. Prior to submitting the request, BC Hydro engaged with local governments, Indigenous groups and local residents on the proposed activity and responded to concerns in the final amendment submission. Refer to section 10.4 for further information.
- In June 2021, BC Hydro submitted a request to amend Condition 40 of the Environmental Assessment Certificate, proposing that BC Hydro amend one of three boat launch locations required by the Certificate from Cache Creek to a location close to Halfway River. A decision is expected in 2022. Refer to section 10.4 for more information.

- In July 2021, BC Hydro concluded a settlement agreement with the generating station and spillways civil contractor on the impacts due to the COVID-19 pandemic. The agreement includes schedule recovery of most completion milestones that were impacted by the pandemic. Refer to section 4.1.3 for more information.
- On August 12, 2021, crews completed the final concrete deck placements on the Halfway River bridge, as part of the Highway 29 realignment sub-project. A total of 2,300 cubic metres of concrete was placed on the 1.05-kilometre-long bridge deck in 13 concrete placements. Refer to section 4.1.8 for more information.
- On August 18, 2021, Northern Health declared a second COVID-19 outbreak on the Site C Project. A total of 92 workers were connected to this outbreak; all cases recovered. Northern Health declared the outbreak over on October 12, 2021. Refer to sections 1.3, 3.1.1, 4.1.2 and 12.2 for more information.
- On September 1, 2021, BC Hydro began accepting applications from non-profit recreation groups, local governments and Indigenous groups to develop rustic recreation sites along the Peace River or outside the Site C dam site and reservoir area. The $200,000 Rustic Recreation Site fund was first launched in 2019.
- On October 8, 2021, crews completed the final placement of roller-compacted concrete in the dam and core buttress, marking the overall completion of the Project's roller-compacted concrete buttress. Refer to section 4.1.1 for more information.
- In September 2021, the first pile for the right bank foundation enhancements was installed in the spillway stilling basin. By the end of the reporting period, 27 piles had been installed. Refer to section 4.1.4 for more information.

- In October 2021, the Farrell Creek East portion of Highway 29 was opened to traffic, the first segment of the highway realignment to do so. Refer to section 4.1.8 for more information.
- In October 2021, the temporary fish passage facility concluded its first full year of operation. Between April and October, the Project recorded more than 2,400 fish from 11 different species passing through the facility. Refer to section 11.4 for more information.
- On October 7, 2021, BC Hydro announced it would require proof of vaccination from all BC Hydro employees and from all other individuals working at BC Hydro facilities, including those working at the Project. All workers were required to have two doses of an approved COVID-19 vaccine by January 10, 2022. Refer to sections 1.3 and 3.1.2 for more information.
- In 2021, BC Hydro distributed more than $75,000 to nine non-profit organizations in the Peace Region and as of December 2021, nearly $575,000 has been distributed to 65 projects since the fund was launched. Refer to section 13.1 for more information.
- In 2021, 28 Peace Region agricultural projects received approximately $700,000 in funding through the BC Hydro Peace Agricultural Compensation Fund and as of December 31, 2021, nearly $1.3 million had been distributed to 53 projects. Refer to section 11.5 for more information.
- Throughout the reporting period, procurement advanced on the six balance of plant contracts. The first contract (mechanical) was awarded on July 29, 2021. The balance of plant electrical contract was awarded on September 22, 2021. As of December 31, 2021, the proposals for the architectural and the permanent upstream fishway and other out structures were under evaluation; the electrical contractor had mobilized to site; and the final two requests for proposals packages were received. Refer to section 4.1.5 for more information.

- Powerhouse construction continued throughout the reporting period, including concrete placements at the powerhouse, intakes and spillways; installation of penstock segments; and completion of the steel super-structure for the powerhouse. Refer to section 4.1.3 for more information.

Refer to Appendix A for site construction photos for the quarter and refer to Appendix B for a list of work completed since the project commenced in 2015.

2 Site C Project Objectives

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 1, and is as follows:

- First, safely implement the Project scope, consistent with the quality specifications; in other words, do not compromise on the safety of structures and the workforce, 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 significant impacts associated with missing the reservoir inundation schedule milestone. Reservoir inundation can only occur in the fall of any given year. Failure to commence inundation in the fall of a particular year would result in reservoir inundation being delayed to the fall of the following year. As a result, the Project team has completed several activities to increase schedule float to further reduce the risk of missing reservoir inundation when unplanned events occur that delay the schedule; and
- Third, complete the Project 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 1 Site C Project Objective

3 Safety and Security

BC Hydro managed several health and safety challenges in 2021, including a continued focus on COVID-19; two declared outbreaks and managing the Omicron variant of concern; implementation of BC Hydro's mandatory vaccination policy; several extreme weather events including a heat dome in the summer and extreme cold temperatures in the winter; construction road safety with increased haul traffic; several issues in the powerhouse, including onboarding and coordination of several new contractors; and safety hazards arising from the now enclosed powerhouse structure.

3.1.1 Management of COVID-19 Cases

There were successive waves of COVID-19 variants during 2021, resulting in 328 confirmed cases and two declared outbreaks. In the first outbreak in April 2021, there were 56 lab-confirmed cases, and a second outbreak in late August 2021 resulted in 92 lab-confirmed cases directly connected with the outbreak.
Three workers were hospitalized, and all have recovered. In addition to all existing COVID-19 control measures at site, in September 2021 BC Hydro implemented a

rapid testing capability for site-based case management and contact tracing (allowed for testing of asymptomatic workers).

Recognizing the Omicron variant could have a significant impact on the Project with workers returning from the winter break, BC Hydro expanded the rapid testing for mandatory pre-access screening of all workers, locals and residents in the camp accommodation, in addition to mandatory proof of vaccination. From January 2022 to early February 2022, 10,000 rapid tests were administered and 600 positive cases identified and isolated. BC Hydro estimates about 1,000 additional positive cases were avoided at the Project site during these six weeks, helping the Project manage through the peak of the Omicron impacts.

BC Hydro received a Letter of Expectation on December 30, 2021, issued to all industrial projects from Northern Health, requiring additional COVID-19 reporting and scenario planning. BC Hydro complied with all requirements.

3.1.2 COVID-19 Vaccination Program

In March 2021, Northern Health initiated an ‘Industrial Projects COVID-19 Vaccination Program’, providing the vaccines and asking all projects in the region to promote and deliver vaccinations on site. The Site C Project started with initial high-volume vaccination clinics at the worker accommodation facilities, and then continued through the onsite medical clinic on an ongoing basis.

On October 7, 2021, BC Hydro announced it would require proof of vaccination from all BC Hydro employees and from all other individuals working at BC Hydro facilities, including those working at the Project.

BC Hydro employees were required to have one dose of the COVID-19 vaccine by November 22, 2021 and have two doses of an approved COVID-19 vaccine by January 10, 2022.

Consultants and employees of contractors and sub-contractors working at BC Hydro facilities, including the Project, were required to have two doses of an approved COVID-19 vaccine by January 10, 2022.

As of December 31, 2021, the Project had administered over 4,500 vaccines, which includes more than 400 booster shots.

3.1.3 Safety Forums

The Site C safety team reviews all new safety incidents each week. The resulting data analytics enables the safety team to identify safety incident trends and opportunities for theme-based safety forums. Safety forums allow for collaborative discussion across all contractors, learning from each other's practices to reduce the risk of future safety incidents. For the reporting period of October through December 2021, the Site C safety team facilitated a safety forum on scaffolding and guardrail safety. Some of the ideas discussed at the forum included the workers themselves conducting regular inspections of the scaffolding and putting a tag on the scaffolding with contact name and number for communicating issues and concerns. One contractor shared their own comprehensive scaffolding inspection checklist, which others found useful. The next Site C safety forum will be on eye injury prevention.

In late November 2021, WorkSafeBC and the B.C. Forestry Safety Council co-facilitated a hand faller safety information session for all operators and projects involved in forestry work. Hand falling is a high-risk activity, accounting for several serious injuries and deaths in British Columbia each year. The session included best practices from logging field supervisors and superintendents. Representatives from the Site C safety team and Site C clearing contractors attended.

3.1.4 Powerhouse Update

With winter approaching, there was a concerted effort on getting the powerhouse structure fully enclosed and heated for the workers. Once enclosed, a few safety concerns were addressed, including:

- With daylight no longer available, providing lighting in the high-traffic stairwells and shadowed areas of the powerhouse. Lighting for low-traffic areas is underway.
- From an air quality perspective, replacing internal combustion engine equipment (diesel, propane) in the powerhouse with electrically powered options or alternative work methods as much as possible. Enhanced safety controls are implemented where such equipment must still be used.
- Dust has been accumulating in the powerhouse for several years from construction activities, concrete works, and exposure to outside environments – potentially with higher respirable silica content. The newly installed large-scale heaters were moving air and dust around increasing possible exposure. During the winter holidays, BC Hydro contracted a third party and developed safe work procedures to complete a deep cleaning of the powerhouse with HEPA-filter vacuums.

With balance of plant contractors starting and a significant increase in welding work, there has been an increase in ‘hot work’ activity and associated safety incidents, including a small fire incident in a coupling chamber in the powerhouse. In response, BC Hydro’s Site Safety Coordination team established a hot works permit station in the powerhouse, where contractors must file all hot work permits on a daily basis and the permits must be closed out by the end of each day. The safety coordinators conduct sample audits of these hot work permits weekly.

3.1.5 Security Update

All security and safety improvements for the main access to site (Gate A) were completed in November 2021. Specifically, the approach lanes were widened to support safe staging of heavy trucks and equipment coming into site, a covered and heated search area was constructed protecting the guards and workers, and speed monitoring and motion detection technologies were deployed. All three of the Site C security access gates are now upgraded to ensure effective security, and efficient and safe access and egress to site. In 2022, new works to develop and transport additional sources of aggregates for the Project will require further changes to Gate C, specifically increased automation to retain our security posture while allowing for increased traffic.

In December 2021, a site-specific procedure was implemented to manage winter road maintenance and Site C related vehicle incidents on Old Fort Road and 240 Road, heavily used public roads around the Project site. Site C security will now ensure heavy duty vehicle operators do not remove their winter chains prior to leaving site; distribute an emergency contact card to operators during adverse winter conditions; and conduct patrols on 240 Road and Old Fort Road to assess road conditions and call in road maintenance services if required.

3.1.6 Summary of Safety and Regulatory Performance Metrics

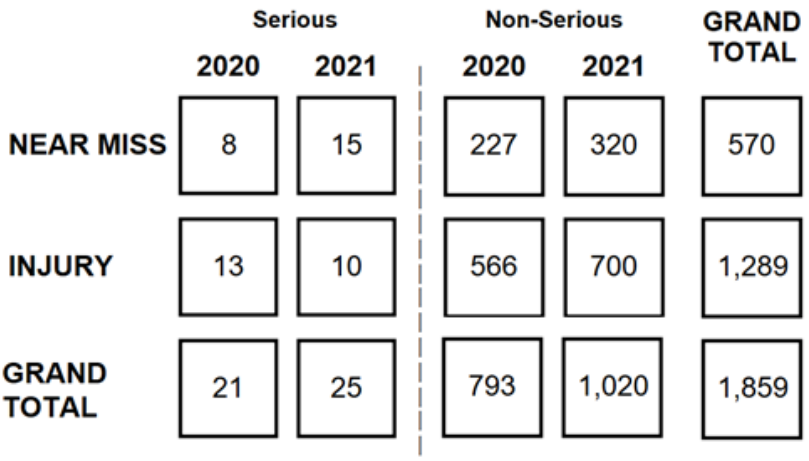
From July 2015 through December 2021, all work fronts across the Project had completed almost 36.1 million work hours, with no fatalities and one permanent partial disabling injury in 2017.

As shown in Figure 2, in 2021 the Project reported 25 serious safety incidents consisting of 15 near misses, and 10 injuries that either required medical attention or had the potential to be a serious injury. There were two serious injury incidents of note in 2021:

- On May 28, 2021, a serious safety incident occurred on the Highway 29 work site at Lynx Creek. A worker was helping to load a conveyor onto the lowbed trailer, which slipped and pinned the worker between the lowbed trailer and conveyor. The worker is expected to make a full recovery.
- On September 24, 2021, a hand faller on the reservoir clearing work was struck by a falling tree. The worker sustained serious injuries and was admitted to hospital. The worker is expected to make a full recovery.

Additionally, there were 1,020 non-serious safety incidents in 2021, which included 320 near misses and 700 minor injuries that may have required first aid and/or some medical treatment. A near miss is 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. The number of non-serious safety incidents increased from 2020 for several reasons, including the restart of work and onboarding of new workers after the January 2021 COVID-19 shut-down; new work scopes such as the right bank foundation enhancements; and increased work activities with higher safety risks such as welding and gouging (hot work), new confined space areas, and increased congestion and overlapping work areas. Site C continues to see safety incidents related to working at heights, dropped objects from height, and scaffolding and guardrails.

Figure 2 Serious and Non-Serious Incidents



Refer to Appendix B for a listing of all serious safety incidents.

To encourage a safety learning culture across all work fronts and contractors, the Project held 129 safety incident reviews for serious and significant incidents in 2021, including reviews for the 25 incidents classified as serious. Senior management from BC Hydro and contractors participated in the safety incident reviews of 19 incidents, while construction management and safety team site leadership participated in the other 110 safety incident reviews. The safety trends in 2021 were hot work, confined space, scaffolding and guardrails, working at heights and object falls from height.

Table 2 reflects safety performance results for the Project, including all contractors and all sub-projects.

Table 2 Summary of Site C Safety Metrics

	Reported for Quarter October 1, 2020 to December 31, 2020[1]	Reported for Quarter October 1, 2021 to December 31, 2021[1]	Reported for 2020 (January to December)[1]	Reported for 2021 (January to December)[1]	Reported Since Inception (July 27, 2015 to December 31, 2021)[1]
Fatality[2]	0	0	0	0	0
Permanently Disabling Injury[3]	0	0	0	0	1
Serious Incidents[4]	4	6	21	25	100
Lost Time Injuries[5]	1	0	9	5	38
All-Injury Incidents[6] (Lost Time Injuries[5] and Medical Attention Requiring Treatment[7])	17	9	57	56	260

3.1.7 Safety Verifications

In 2021, the Site C safety team completed a total of 781 planned safety verifications for the Project (on dam-site and off dam-site) – an average of 65 per month. This compares with the 653 verifications completed in 2020, indicating an increase of work activities in field safety. By year end, closure rate for nonconformances identified in 2021 verifications was 96 per cent; a timely result due in part to collaboration between the BC Hydro construction and safety teams. All nonconformances are tracked to completion. In 2021, 25 per cent (197) of the verifications were green / clean sheet, with no nonconformances found. Further, 88 per cent of all the safety verifications conducted in 2021 identified good safety practices even though there were some nonconformances. Planned safety

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 Serious incidents are any injury or near miss with a potential for a fatality or serious injury.
5 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.
6 All-Injury incidents is a count of all work-related medical attention requiring treatment, lost time injuries, and fatalities.
7 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.

verifications are a current leading indicator for safety on the Project. The Project team is also looking at some other possible safety leading indicators, such as field interventions or construction safe work observations.

3.1.8 Safety Performance Frequency Metrics

To assess safety performance over time, the Project considers key safety metrics in the context of the total amount of hours worked (frequency) which corrects for the volume of work. Table 3 summarizes these key safety frequencies by quarter for a rolling 12-month average.

Table 3 Summary of Safety Performance Frequency Metrics 2020 and 2021

	January– December 2020 (Rolling 12-Month Average)				January– December 2021 (Rolling 12-Month Average)			
	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec	Q1 Jan-Mar	Q2 Apr-Jun	Q3 Jul-Sep	Q4 Oct-Dec
Serious Incident Frequency	0.53	0.55	0.62	0.48	**0.48**	0.45	0.51	0.56
Lost Time Injury Frequency	0.22	0.23	0.21	0.21	0.12	0.09	0.13	0.11
All Injury Frequency	1.93	1.92	1.46	1.33	**1.14**	1.19	1.41	1.24

The serious incident frequency (adjusted for work hours) for October to December 2021 quarterly reporting period was 0.56, compared to 0.48 for the same period in 2020. This is due primarily to the increase in higher risk work activities in 2021 and changing conditions on the Project, as described above. Lost time injury frequency during this quarter was 0.11, down from 0.21 the same quarter last year. Managing lost time injuries and return to work programs has remained a priority for contractors. Finally, all-injury frequency was at 1.24 this quarter, a decrease compared to 1.33 for the same quarter last year.

3.1.9 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 worker

safety (employee and contractor) for the Project, both on the dam site and off the dam site. The Ministry of Energy, Mines and Low Carbon Innovation 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.

For the reporting period from October to December 2021, WorkSafeBC issued 10 regulatory inspection reports and seven regulatory orders, primarily for the Highway 29 Realignment, Reservoir Clearing, and Hudson's Hope berm sub-projects. The Ministry of Energy, Mines and Low Carbon Innovation issued one inspection report and five orders for the West Pine Quarry. This compares to ten regulatory inspection reports and 15 regulatory orders issued for the same reporting period in 2020.

As shown in Table 4, in 2021, the Project was issued 66 regulatory inspection reports with 85 orders. WorkSafeBC accounted for 62 inspection reports with 74 orders, and the Ministry of Energy, Mines and Low Carbon Innovation for four inspection reports with 11 orders. The main themes in the regulatory inspection reports were:

- Exposure control plans;
- Safe work procedures in handling hazardous materials;
- Lockout procedures;
- Fall protection programs;
- Incident management; and
- Safe work procedures in operation of equipment.

Table 4 Regulatory Inspections in 2020 and 2021

	Reported for Quarter October 1, 2020 to December 31, 2020	Reported for Quarter October 1, 2021 to December 31, 2021	Reported for 2020 (January 1, 2020 to December 31, 2020)	Reported for 2021 (January 1, 2021 to December 31, 2021)[8]	Reported Since Inception (July 27, 2015 to December 31, 2021)[8]
Regulatory Inspections	10	11	45	66	268
Regulatory Orders	15	12	39	85	380

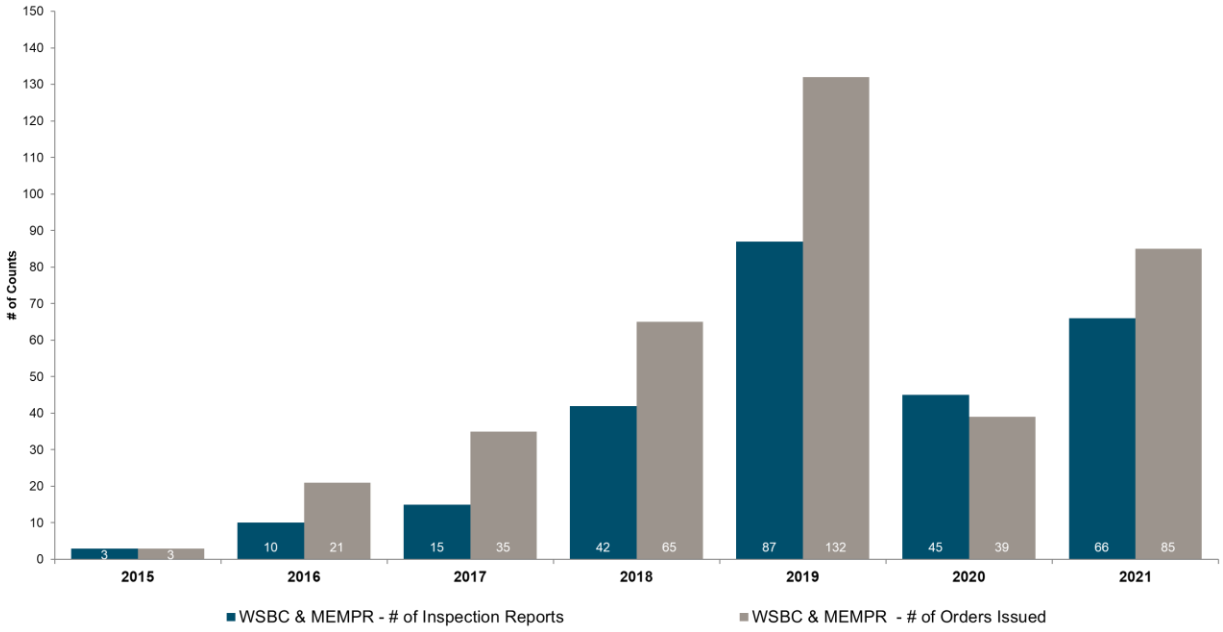
Of the 85 regulatory orders, two were stop-work orders and two were stop-use orders. The two stop-work orders were issued by WorkSafeBC for off-dam site work areas after serious incidents occurred. One stop-use order was issued for inadequate mounting points on a mobile treatment centre. A second stop-use order was issued on a water truck as a result of an incident that involved a high potential for a serious injury.

For the last couple years, BC Hydro has monitored another metric – average number of orders per regulatory inspection – as a possible indicator of safety performance on the Project; however, in recent discussions with WorkSafeBC Northern Region, it has been clarified that clean sheets (no orders on an inspection report) and orders per inspection metrics are just indicative of regulatory compliance at a point in time and not effective for monitoring safety performance. Accordingly, the average number of orders per regulatory inspection metric will be monitored but is no longer reported. The Site C safety team will continue to explore other practical, leading indicators for safety on the Project.

Figure 3 shows the number of regulatory inspections and orders issued for the Project since 2015. The reduction in the regulatory activity in 2020 and 2021 can be partially attributed to COVID-19 restrictions.

[8] Numbers are subject to change due to timing of when data is retrieved and when injury is categorized.

Figure 3 Number of Regulatory Inspections and Orders, 2015 to 2021



Refer to Appendix B, for a list of all regulatory inspections and orders in 2021.

4 Construction and Engineering Major Accomplishments, Challenges, and Work Completed

4.1 Construction

Despite the challenges of the COVID-19 pandemic, construction of the Project continued to advance through the important summer construction season in 2021 and achieved significant construction milestones with the full completion of the Project's roller-compacted concrete buttress and significant progress on the earthfill dam. BC Hydro and Site C contractors continue to schedule work and explore strategies to accelerate the work delayed by the COVID-19 pandemic. If successful, this will result in lowering the schedule risk and could result in an earlier in-service date; however, achieving an earlier in-service date remains subject to uncertainty and to the risks summarized in this report.

4.1.1 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 materials (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 powerhouse, spillways and dam and core buttress approximately 800 metres long made up of approximately 1.7 million cubic metres of concrete); and
- Haul roads.

As of January 2021, most of the key planned main civil work activities that had been scaled back due to the COVID-19 pandemic had restarted, with the exception of the earthfill dam fill placements, as the placement of these materials requires warmer temperatures. This work commenced in spring 2021 and the progress of dam construction advanced in all major areas (core, filters, and shell placements).

Construction activities took place on the left bank, right bank and other areas as described below.

Left Bank

Left Bank Drainage Adit

Significant work activities on the left bank have been focused on the left bank drainage adit. In early 2021, the 454 metre long left bank drainage adit tunnel was completed and by the summer 2021, the finishing concrete work, which includes the placement of slabs, was also completed.

Diversion Facilities – Structures, Approach Channels and Tunnels

This work was completed in 2020. All facilities are operating as designed.

Right Bank

Right Bank Drainage Tunnel

Remediation work on some shotcrete on the wall of the tunnel continued to advance in the first quarter of 2021 and was completed in the summer of 2021. With the shotcrete work complete in the right bank drainage tunnel, the construction of the invert slab is underway and being placed over the winter of 2021/2022.

Spillway Roller-Compacted Concrete (Upper Spillway and Dam/Core Buttress)

Roller-compacted concrete for the dam and core buttress was expected to be complete in fall 2020. Due to the necessary reduction in the number of workers in the worker accommodation lodge because of the COVID-19 pandemic, only 30 per cent of the original planned placements of roller-compacted concrete for the dam/core buttress was achieved in 2020. The remainder of the roller-compacted concrete placements recommenced in the spring 2021 and in October 2021, the contractor completed the roller-compacted concrete dam and core buttress.

The completion of the dam and core buttress marked the conclusion of the Project's roller-compacted concrete program. Since the program began in 2017, crews placed a total of 1.7 million cubic metres of roller-compacted concrete in the powerhouse, spillways and dam and core buttresses.

Stage 2 Cofferdam Construction

The upstream cofferdam was completed in mid-February 2021, approximately two months ahead of schedule. The downstream cofferdam interlocking steel pile wall was completed in January 2021 followed by the completion of the downstream cofferdam to full height (elevation 414 metres) in March 2021.

Other Areas

Core Trench Excavation

Grouting works and core trench excavation were scaled back in spring 2020 due to the reduction in the number of workers in the worker accommodation lodge because of the COVID-19 pandemic. This work resumed in late-summer 2020 and continued in 2021. Excavation and foundation grouting for the earthfill dam was completed in the late spring of 2021 to allow for placement of the dam core material to commence. As of December 31, 2021, the only remaining grouting required to be done is in the upper portions of the abutments.

The dewatering of the centre section of the dam core trench was completed in February 2021, facilitating continuation of the core trench excavation work front into the centre area of the dam.

Grouting on the left bank core trench floor was completed in early 2021. The remaining grouting on the left slope of the core trench recommenced once the dam material placements reached an elevation of 410 metres and above, providing access to the remaining sections of the slope.

Grouting on the right bank core trench floor was completed in early 2021, allowing for the dam core material placements to progress once the summer construction season began in spring 2021. The grouting holes on the slope were completed to allow for the roller-compacted concrete placements program to begin.

In spring/summer 2021, core trench class 1 (soil), and class 2 (rock) excavations were completed. The completion of this work allowed for full access for the

foundation consolidation and curtain grouting, which was also completed in summer 2021. Placements of earthfill dam materials then commenced and by October 23, 2021, placements of core (till) material (material used in the impervious centre section of the dam) were complete for the year, having progressed to elevation 410.2 metres in the core trench. Approximately 794,000 cubic metres of core (till) material were placed between May 5, 2021 and October 27, 2021, exceeding the target for the season.

The increased placements of till and other shell materials on the earthfill dam in 2021 is one of the strategies adopted by BC Hydro to attempt to recover some of the delays to the earthfill dam construction works as a result of the COVID-19 pandemic.

Earthfill Dam

Earthfill dam placements continued during the reporting period, with approximately 3.5 million cubic metres placed throughout 2021.

By the end of October 2021, placements of core (till) material (material used in the impervious centre section of the dam) progressed to elevation 410.2 metres in the core trench and placements were stopped for the year due to the colder temperatures at site. Approximately 794,000 cubic metres of core (till) material was placed between May and October 2021, exceeding the target for the season. Despite placements of core material being stopped for the year, placements of other shell (granular) materials on the dam continued to progress into November and December 2021, as they can continue to be placed during colder temperatures.

To December 31, 2021, approximately 30 per cent of the total required volume of material had been placed in the dam.

Conveyor Belt System

Upgrades to the five-kilometre long electric conveyor belt system, which transports earthfill dam core (till) materials from the 85th Avenue Industrial Lands to the dam

site, were completed by March 31, 2021, and works to complete tests on the system in advance of the production season were also completed. Throughout the reporting period, the conveyor system operated as planned. An additional feeder system was installed and commissioned during the summer/fall 2021, adding capacity and reliability to the conveyor system. To mitigate potential shutdowns in the conveyor system, materials are also stockpiled at the site.

4.1.2 Infrastructure and Site Operations

The infrastructure and site operations section of this report includes updates on the construction and operations of the worker accommodation and debris management for the reporting period.

Worker Accommodation

The total capacity of the worker accommodation, including camp operations staff, is 2,350.

Since January 2020, BC Hydro and the camp operator have implemented numerous measures to protect employees, contractors and the facilities as a result of the COVID-19 pandemic. The changes made at the worker accommodation lodge to increase cleaning and physical distancing continued through 2021.

Prior to workers boarding flights to site, all workers continued to be required to complete the B.C. Ministry of Health self-assessment and confirm their results with their employer.

Every person accessing the site is screened and their temperature is scanned daily at the gate before entering the work site. In addition, every person accessing the site is required to provide vaccine verification. BC Hydro and its contractors also set up thermal scanners at various exit and entry points in the worker accommodation lodge that can be used before workers board crew buses or leave camp to go to other Project work sites. These scanners support the employers and employees with the required daily self-assessment before reporting to work each day.

BC Hydro continued to implement the protocols mandated by the Provincial Health Authority and the British Columbia Centre for Disease Control for the worker accommodation lodge. During the two COVID-19 outbreaks that were declared on the Site C Project in 2021, the camp operator and the onsite health clinic worked collaboratively with Northern Health to manage isolations, positive cases, and contact tracing requirements. Orders mandated by the Provincial Health Authority and the British Columbia Centre for Disease Control that impacted the operations of the Site C Project from December 2020 through 2021 include:

- On December 29, 2020 the Provincial Health Officer posted the Industrial Projects Restart Order, limiting the number of workers at five industrial camps in northern B.C., including Site C.
- On April 13, 2021, the Industrial Camps Order of the Provincial Health Officer rescinded the camp occupancy thresholds established in the previous order and set a new requirement for workers to remain in the camp and refrain from accessing the local community for the duration of their shift.
- On May 21, 2021 the Industrial Camps Order of the Provincial Health Officer was posted, providing a number of clarifications related to expectations for workers, employers and coordinators. On August 19, 2021, Northern Health directed BC Hydro to implement additional control measures requiring guests in camp to remain in the camp for the duration of their shift. This control measure was lifted on October 12, 2021.

Debris Management

There are up to four debris retention structures on the Moberly and Peace Rivers that provide coverage for all head pond elevations to capture and prevent debris from entering the diversion tunnels. Debris management is seasonal with activities from approximately April to November each year and no activities over the winter season (approximately December to March).

The debris management contractor returned to site at the end of March 2021 to begin debris management. The contractor performed maintenance on the BC Hydro Peace River boom prior to returning it to service for the season, and in early April 2021, strung the boom across the Peace River. In June 2021, a contract was awarded to manage debris at both the Peace River and Moberly River until the end of 2023, with an option to extend to 2024.

The debris management contractor continued to perform debris management operations on the BC Hydro Peace River boom, the Moberly River debris piles and the Moberly River log boom through the rest of 2021. This included mobilizing debris management equipment to the Moberly River debris management area. Debris clearing and stockpiling also occurred as required, based on debris accumulations on the debris structures mentioned above. A new barge pad/ramp was constructed at the Moberly River in November 2021 for barge mobilization and demobilization, as well as ongoing debris management. The upstream Peace River debris boom was removed from service for the winter season on November 2, 2021.

4.1.3 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 of the powerhouse cranes, tailrace gantry crane, and headworks gantry crane; and

- Hydromechanical equipment, including the supply of all gates.

Construction progress is taking place in the generating station and spillways civil works, cranes and hydromechanical equipment as described below.

Generating Station and Spillways Civil Works

The generating station and spillways civil works contract includes the delivery of civil works associated with the powerhouse, intakes, penstocks and spillways. In July 2021, BC Hydro concluded a settlement agreement with the generating station and spillways civil contractor on the impacts due to the COVID-19 pandemic. Under the terms of the settlement agreement, all major completion milestones are to be recovered, with the exception of the stilling basins completion date. The stilling basins completion date was delayed from the original milestone date in order to accommodate the right bank foundation enhancements work. The contractor has been working to this schedule since April 2021.

By concrete volume, the generating station and spillways civil works sub-project was approximately 62 per cent complete as of December 31, 2021.

Powerhouse

During 2021, work on the first stage concrete (the concrete foundation of the powerhouse) was completed. The second stage concrete (concrete that embeds the turbines and forms the floors) is advancing at a pace to match the turbines and generators contractor's schedule. At the end of December 2021, the contractor was ready to start embedding the Unit 1 spiral case and completing Unit 1 to the powerhouse main floor. The powerhouse concrete is approximately 73 per cent complete.

In fall 2021, work on the powerhouse superstructure was completed. With the building fully enclosed, all subsequent work in the powerhouse can proceed in a heated building during the winter.

Intakes Headworks

As of December 31, 2021, first stage concrete for the intakes is more than 70 per cent complete. Intakes 1, 2, 3 and 6 are essentially complete. Intake 4 concrete is about 10 per cent complete and intake 5 concrete is about 50 per cent complete. Intakes are about 15 per cent behind plan. The contractor will recover some of the schedule by working through the winter on the intakes. There is schedule float with the intake schedule.

Penstocks

Penstock steel for all penstocks is essentially complete with the exception of penstock 4. Penstock 4 production is proceeding in accordance with the plan. As of December 31, 2021, penstock steel is about 90 per cent complete and the contractor has installed 81 penstock sections (out of a total of 90 sections).

Spillways

The contractor has completed more than 50 per cent of the spillways concrete. Some concrete work in the spillways stilling basin has been postponed until some of the right bank foundation enhancements work in the stilling basin is complete. The placements of concrete in the stilling basin resumed in November 2021. The spillways are about nine per cent behind plan. Some of the schedule delays will be recovered once the stilling basin work resumes at full production. Spillway production will be closely monitored in 2022.

Cranes

The headworks gantry crane has been delivered to site and will be erected in summer 2022. The tailrace gantry crane is ready to be shipped to site and is scheduled to be erected in March 2022.

Hydromechanical Equipment

All draft tube gates, intake operating gates, and intake maintenance gates and components will be on site by early 2022. Spillway radial gates are nearing completion by the fabricator. All three spillway radial gates are scheduled to be delivered to site by June 1, 2022 which will meet the schedule requirements of the contractor.

4.1.4 Right Bank Foundation Enhancements

At the end of 2020, BC Hydro identified a two-part solution to improve the stability of the right bank structures. Engineering design work commenced through the balance of 2020 to design and optimize the solution. These enhancements will extend the concrete foundation deeper into the bedrock and reduce the water pressures that can build up in the bedrock foundation. In February 2021, the Government of British Columbia released the geotechnical review from two independent, world-leading dam experts. Their review confirmed the foundation enhancements developed to

address geotechnical issues on the Project's right bank indicate the Project design continues to meet the highest safety standards and international best practices.

The two independent, world-leading dam experts and the Technical Advisory Board continued to provide oversight to BC Hydro on the design and construction of the right bank foundation enhancements through 2021.

Through 2021, activities on the right bank foundation enhancements focused on detailed engineering design, development of a commercial agreement with the generating station and spillways contractor to complete the scope of work, construction planning, site preparations to support construction, the procurement of materials, finalizing the design of the steel piles, and the continuation of design enhancements for the approach channel.

Ongoing reviews by the Technical Advisory Board and independent dam experts continue to confirm that the design of the foundation enhancements to address geotechnical issues in the bedrock foundation on the Project's right bank meet the highest safety standards and international best practices. The foundation enhancements include the installation of large piles to further extend the foundation deeper into the bedrock and enhancements to the design of the approach channel above the powerhouse and spillways.

In September 2021, construction commenced on the right bank foundation enhancements. Work started on the installation of the piles located within the spillways stilling basin. The full scope of piles work in the spillways includes the drilling and installation of 48 large diameter vertical steel piles.

The sequence of pile installations includes starting work within the eastern side of the spillways stilling basin, followed by the western side of the basin. The scope of piling work includes first drilling vertical shafts through the spillways roller-compacted concrete slab and underlying bedrock foundation with large scale rotary pile drilling rigs. While pile drilling takes place, separate crews assemble shorter lengths of steel

pipe into the full-length steel piles, via submerged arc welding. Once each shaft is drilled and the pile is fully welded, a steel pile is lowered into the vertical open shaft by an overhead crane. Once the steel pile is inserted within the shaft through the roller-compacted concrete and bedrock foundation, the pile is fully encased in concrete, filling the void inside the steel pile and the void between the wall of the steel pile and the larger shaft.

As of December 31, 2021, a total of 27 vertical piles had been installed.

In addition to the pile installation, work on the approach channel advanced. As of December 31, 2021, excavations of overburden material and bedrock were underway within the approach channel to prepare for the installation of the approach channel lining in late spring 2022.

4.1.5 Balance of Plant

At the end of 2020, the balance of plant procurement was split into six separate contracts, due to the inability to reach an agreement with the preferred proponent for the entire balance of plant package of work. The six contract packages include: (1) mechanical; (2) electrical; (3) architectural; (4) permanent upstream fishway and other out structures; (5) heating, ventilation, and air conditioning (**HVAC**); and (6) fire detection and protection.

During 2021, the mechanical and electrical contracts were awarded in July and September 2021, respectively. In the quarter ending December 2021, the proposals for the architectural and the permanent upstream fishway and other out structures were under evaluation; the electrical contractor mobilized to site; and the final two requests for proposals packages for the HVAC and fire protection were received.

4.1.6 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.

Although there were some impacts due to the COVID-19 pandemic, at the end of 2021, the design, procurement and manufacturing for the turbines and generators are on schedule.

During 2021, the remaining four turbine runners were transported from São Paulo, Brazil, and are stored at the Port of Prince Rupert. The four runners are expected to arrive on site in 2022.

The manufacturing and installation for the turbines and generators are on track to meet the planned contractual in-service dates; however there have been some delays to the work, which has used up some of the float in the schedule. To mitigate these delays, BC Hydro directed a night shift be added to ensure the contractor completes spiral case welding for units 1, 2 and 3, and ready for pressure testing, as close to schedule as is achievable for this component of the work.

In December 2021, commercial discussions with the contractor were initiated to agree to a recovery schedule and resolve outstanding commercial disputes. Meetings regarding manufacturing progress of the turbine and generator components in the São Paulo factory are continuing and have been held concurrently with visits by BC Hydro’s subcontracted inspection agencies to many of the contractor’s subcontractors in the São Paulo area and Europe. Manufacturing of all remaining components is being closely monitored to avoid any interruption to the turbine and generator installations.

4.1.7 Transmission and Substation

The transmission sub-project will connect the Site C generating station 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.

Progress continued on the transmission sub-project in 2021.

The COVID-19 pandemic impacted transmission activities but work generally continued as planned during the reporting period. The following reflects progress to December 31, 2021.

Transmission Lines

Transmission Lines

Construction of the second 500 kV transmission line (5L006) continued in 2021 and all foundations were completed and all towers were assembled and installed on the foundations by March 2021.

Conductor stringing began in July 2021 and as of the end of December 2021, 140 of 205 towers (68 per cent) had been strung.

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 kilometres.

4.1.8 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 approximately 30 kilometres of the existing highway. BC Hydro is working with the Ministry of Transportation and Infrastructure on Highway 29 construction.

The Highway 29 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 the Portage Mountain Quarry, which will supply riprap and filter materials for highway and berm construction.

The permanent highway realignment is planned to be completed by summer 2023 to ensure the highway remains accessible once the reservoir is created and the dam is operational.

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

- Cache Creek highway realignment and bridge;
- Halfway River highway realignment and bridge;
- Farrell Creek East highway realignment;
- Farrell Creek highway realignment and bridge;
- 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.

The following reflects progress to December 31, 2021:

Cache Creek

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

Cache Creek East

The contractor completed the diversion of Cache Creek to allow for bridge construction and also completed the installation of a temporary single lane bridge to mitigate the risk of the existing bridge being overtopped by the Site C diversion headpond.

Bridge foundations were completed, including the installation of piles, pile caps and concrete bridge piers. The installation of steel bridge girders on the foundations began and was approximately 40 per cent complete by the end of December 2021. This segment is on track for completion by October 2022.

Cache Creek West

Construction of the Cache Creek West segment was completed in August 2020.

Halfway River

The Halfway River Bridge 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 contractor substantially completed the construction of the bridge in October 2021.This segment is on track for completion in August 2022.

Farrell Creek East

The Farrell Creek East segment includes the realignment of 8.4 kilometres of highway.

The grading of the Farrell Creek East highway segment was substantially completed and the segment was opened to traffic in October 2021. This segment is on track for completion in August 2022.

Farrell Creek

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

The contractor completed the diversion of Farrell Creek to allow for bridge construction and also completed the bridge foundations, including the installation of piles, pile caps and concrete bridge piers. This segment is on track for completion by October 2022.

Dry Creek

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

The contractor substantially completed construction of the Dry Creek bridge in December 2021. This segment is on track for completion by August 2022.

Lynx Creek

The Lynx Creek segment includes the realignment of 9.1 kilometres of highway and the construction of a 169-metre-long bridge.

The contractor has completed the Lynx Creek bridge foundations, including piles, pile caps and concrete bridge piers, and completed the installation of the steel bridge girders onto the foundations. The contractor excavated, hauled and placed more than one million cubic metres of aggregates onto the highway alignment in 2021. This segment is on schedule for completion in October 2022.

Highway 29 Decommissioning

Procurement of the Highway 29 decommissioning work was initiated with the issue of a request for quotation in November 2021; the contract will be awarded in 2022.

Portage Mountain Quarry

Portage Mountain Quarry supplies riprap and berm filter materials for various segments of the Highway 29 realignment and construction of the shoreline protection berm in the District of Hudson's Hope.

Blasting and riprap production continued at the Portage Mountain Quarry from May to August 2021. All highway riprap contract quantities were met. There was a shortfall of some riprap and filter materials required for the Hudson’s Hope berm due to the presence of non-conforming material; these materials will be produced by the Hudson’s Hope berm contractor.

Rock blasting for material production at Portage Mountain Quarry is now complete. The quarry contractor continues to process small amounts of rock for the Hudson’s Hope berm and continues to load processed materials onto trucks for the Hudson’s Hope berm and various sites on Highway 29. The contractor continues to manage the quarry, including related environmental management, while BC Hydro develops the scope of work for future remediation of the area, expected to occur in 2023. Based on monitoring data collected and analyzed, there has not been an apparent impact to bat activity at the site. Monitoring is ongoing, and further analyses will be conducted to see if there are any changes to bat activity now that quarry construction and operation have concluded.

Hudson’s Hope Shoreline Protection Berm

The Hudson’s Hope shoreline protection scope of work includes a 2.6 kilometre shoreline protection berm along the Peace River that will protect the slopes adjacent to the town of Hudson’s Hope from shoreline erosion due to impacts from the Site C reservoir.

The Hudson's Hope berm contractor was able to complete approximately 80 per cent of berm material hauling and placements during the reporting period, including completion of the toe berm.

In September 2021, a slough occurred on the slope above the berm that suspended work for two weeks while the slope was assessed and the slough remediated.

Construction of the Hudson's Hope shoreline protection berm is on schedule for completion in July 2022.

4.1.9 Reservoir

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 including Halfway River drainage and western reservoir.

Clearing in the lower reservoir, Moberly River drainage, eastern reservoir including Cache Creek drainage and middle reservoir up to Halfway River was required to support river diversion. All other clearing is scheduled for completion by summer 2023.

The following reflects progress to December 31, 2021:

Reservoir Clearing

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

Clearing activities, including waste wood disposal and road deactivation in the Moberly River drainage, north and south banks of the eastern reservoir and Cache Creek, are complete.

Middle Reservoir, Halfway River Drainage and Western Reservoir

In 2021, clearing activities occurred in the Halfway River drainage and along the Peace River from Halfway River to Farrell Creek. Work was substantially completed except for some trees that were left for wildlife buffers. Contractors subsequently returned to these areas in fall 2021 and removed trees in the wildlife buffers and conducted burning of waste wood piles as venting permitted.

Surveying and inventory work west of Farrell Creek progressed in the first half of 2021. This work was used to develop preliminary access and clearing plans for the 2021 – 2022 clearing contract packages and data was used in submissions for regulatory approvals.

Two contract packages were procured and awarded between April and September 2021, one contract package for the area between Farrell Creek and Peace Canyon and the other for the area between Halfway River and Farrell Creek on the south bank of the Peace River. Both contractors mobilized to site by the end of September 2021.

Clearing of the reservoir is scheduled to be substantially complete by March 2022. The 2022/2023 clearing season will consist of one contract package for the clearing of the Watson Slough area and one contract package for the final reservoir sweep program.

Other Reservoir Work

The scope of other reservoir work includes infrastructure relocations as well as environmental mitigations and enhancements works, which are required as part of reservoir filling.

BC Hydro’s existing 1L364 transmission line crossing of the Halfway River drainage needs to be relocated prior to inundation. Detailed design work was completed, and three contract packages were procured in spring/summer 2021 for the supply of the steel poles, the foundation pile caps, and the foundation installation work. The

foundation installation contractor mobilized to site in December 2021 with work scheduled to be complete by March 2022.

Fisheries habitat enhancement work is required as part of reservoir filling. Detailed design for this work was completed, and one contract package was procured for enhancements on the south bank of the Peace River, near Peace Canyon dam. Construction for the remaining three sites is planned in 2022.

4.2 Engineering

The Site C engineering team is responsible for defining the Project's design requirements, preparing the Project designs and contract specifications, and ensuring the safety and quality of the assets. The team consists of in-house design specialists from BC Hydro and a range of external consultants from engineering firms who are responsible for the various design components.

Throughout 2021, the engineering team provided technical and construction support focusing on: the achievement of contractors' schedules for the main civil works contract and the generating station and spillways civil works contracts; advancing the design of the foundation enhancements; integration and review of the large cranes, hydromechanical, and turbines and generators scopes of work; and the commencement of the balance of plant contracts.

4.2.1 Main Civil Works

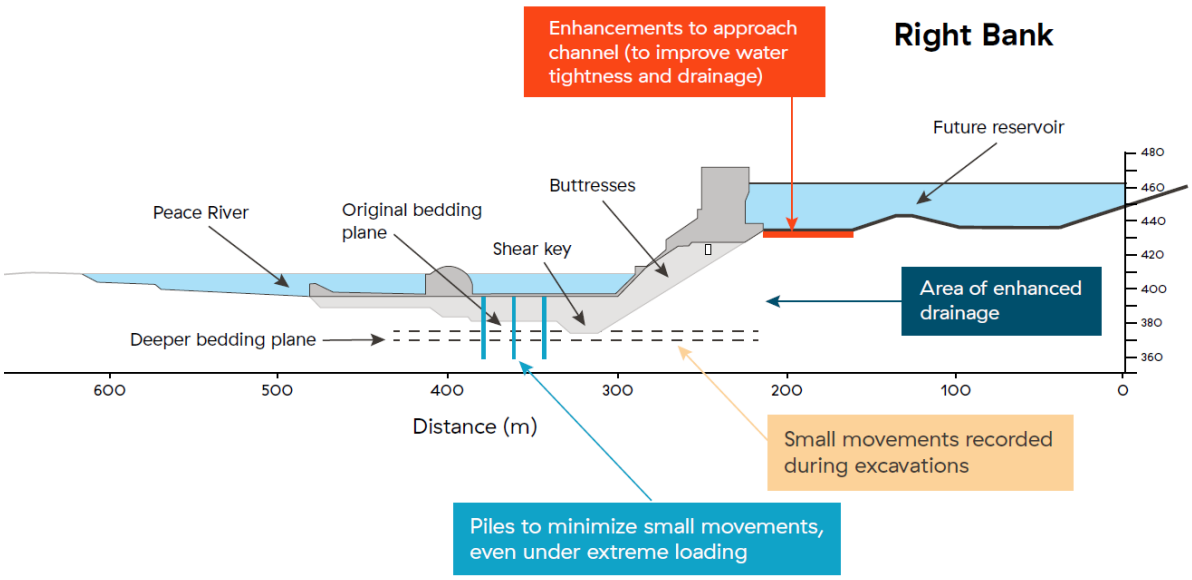
During 2021, the engineering team supported the main civil works contract in the following areas: dam core excavations; grouting and instrumentation; mapping of foundation shears; all foundation preparations; approvals for the main dam core trench; and dam fill placements of till and filters on the right, centre and left sections of the core trench and upstream and downstream sections of the dam shells. Through the year, instrumentation monitoring for dam stability showed positive results and confirmed that the dam foundation is responding to dam fill placements as predicted.

Detailed geological mapping of the excavations continued during construction and was focused on the approach channel excavations in the quarter ending December 2021. This information is used to update the design parameters for the site geology and foundations.

4.2.2 Right Bank Foundation Enhancements

During 2020, BC Hydro identified a two-part solution to improve the stability of the right bank structures: structural enhancements located within the foundation of the spillways and powerhouse; and enhancement of the water-tightness of the approach channel. These enhancements are illustrated in Figure 4.

Figure 4 Right Bank Foundation Enhancements Measures



In the last quarter of 2021, value engineering activities continued in support of finalizing the design of the foundation enhancements measures associated with improving the water tightness of the approach channel. Work included finalizing the design of the enhancements to the channel's lining and drainage and monitoring geotechnical instrumentation, which confirmed the results are within expectations.

BC Hydro continued to engage the independent dam experts, Technical Advisory Board and other subject matter experts to provide oversight of value engineering activities associated with the design of the right bank foundation enhancements. Refer to section 4.2.7 for a summary of the Technical Advisory Board meetings and Appendix E for the reports issued by the Technical Advisory Board and independent dam experts in 2021.

4.2.3 Large Cranes, Hydromechanical and Turbines and Generators

Engineering support to construction, manufacturing, and vendor submittal reviews and integration was ongoing throughout 2021 for the large cranes, hydromechanical equipment and turbines and generators contracts.

4.2.4 Generating Station and Spillways, Balance of Plant and Equipment Supply

The design for the generating station and spillways civil works contract was complete by the end 2021. Activities during 2021 focused on supporting construction with review of submittals for the powerhouse, intakes, penstocks, and spillways. Production of record drawings for the powerhouse also commenced.

For the balance of plant scope of work, engineering completed preparation and issuance of the technical specifications and issued for-proposal drawings for the balance of plant fire protection and the heating, ventilation, and air conditioning requests for proposals packages. The team also supported the procurement process for these packages through responding to requests for information, proposal evaluations, negotiations and other requests. The procurement processes for the mechanical, electrical, architectural, and permanent upstream fishway requests for proposals were completed; the mechanical and electrical contracts were awarded in July and September 2021, respectively. The engineering team continued to issue issued-for-construction drawings for the balance of plant mechanical contract and commenced issuing the issued-for-construction drawings for the electrical contract and supported the construction activities under these two contracts including review

of the technical submittals and contractor design drawings. The balance of plant team also continued to support the review of the technical submittals and design drawings, factory acceptance testing, and virtual factory visits for the seven remaining equipment supply contracts, including the generator terminal equipment, generator circuit breakers, generator step-up transformers, AC station service, DC station service, 500 kV motor-operated disconnects, and diesel generators. The large valves and compressed air receivers equipment supply contracts have largely been completed with all of the equipment delivered to site.

Engineering design and fabrication continued to be advanced on the protection and control systems and integrated testing is also progressing on fabricated equipment.

4.2.5 Transmission

During 2021, engineering construction support was provided to complete construction of the second 75-kilometre-long transmission line (5L006). Design support was provided to complete substation and transmission line record drawings as well as the foundation construction drawings for the transmission lines that will connect the Site C substation to the Site C powerhouse

4.2.6 Highway 29

During 2021, engineering support was provided to the various highway segments and the Hudson’s Hope berm as required to progress construction activities.

Engineering design was completed for the Halfway River East boat launch intersection, as well as to prepare the specifications and drawings for the tender package for the Highway 29 decommissioning procurement.

4.2.7 Technical Advisory Board

The Technical Advisory Board is a global panel of engineering and construction experts that report to the Project Assurance Board. Its mandate includes:

- Advising the BC Hydro President and Chief Executive Officer, Executive Vice President, Site C, 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 of key findings and recommendations; and
- Prepare and submit technical reports as required to management and the Board of Directors.

Technical Advisory Board meetings (in person and video conferences) occurred throughout 2021 and focused on the foundation enhancements, generating stations, spillways, completion of the roller-compacted concrete and the foundation and initial construction of the earthfill dam.

A report was issued from the Technical Advisory Board in January 2021 on the overall status of the design and provides context for the foundation enhancements. In addition, four reports were issued by the independent experts in 2021 and a report was issued from the Technical Advisory Board in June 2021 (Technical Advisory Board Report No. 24).

Refer to Appendix E for the reports from the independent experts and Technical Advisory Board in 2021.

4.3 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, and is the framework document for the quality management program.

During the reporting period, the Project team continued its activities to support the Project quality plan, including:

1. Ongoing meetings with the quality management teams of key manufacturers in countries affected by COVID-19;
2. Ongoing meetings with the quality management teams of the site contractors to address quality issues;
3. Quality audits of the site contractors; and
4. Continuing with monthly quality performance indicator assessments for the engineering, manufacturing and construction activities across each sub-project.

4.3.1 Quality Nonconformance Management

The identifying and reporting of nonconformances is an important part of quality management on construction projects like Site C.

The number of nonconformances can vary through the different phases of the Project and will fluctuate depending on the amount and type of work underway, the number of contractors on site, and the number of work locations.

Table 5 summarizes quality nonconformity instances reported and closed during the reporting period.

Table 5 Quality Management Nonconformity Report (NCRs) Metrics Reporting Period – January 2021 to December 2021

Contract	Reported October 1, 2021 to December 31, 2021	Closed October 1, 2021 to December 31, 2021	Reported January 1, 2021 to December 31, 2021	Closed January 1, 2021 to December 31, 2021	Reported as of December 31, 2021	Closed as of December 31, 2021	Open as of December 31, 2021
Main Civil Works	35	8	156	88	1,965	1,900	65
Turbines and Generators[9]	61 (=24+37)	39 (=10+29)	280 (=174+106)	255 (= 173+82)	651 (=528+123)	538 (=458+80)	113 (=70+43)
Generating Station and Spillways Civil Works	104	82	393	385	957	888	69
Large Cranes	1	0	4	5	27	26	1
Hydromechanical Equipment	1	1	21	21	39	39	0
Transmission	0	0	1	1	116	116	0

BC Hydro's ability to travel nationally and internationally to participate in equipment inspections and final acceptance tests continues to be restricted due to the COVID-19 pandemic. In order to mitigate the quality risks associated with these restrictions, BC Hydro continues to meet with our contractors in affected areas to plan upcoming inspections and to coordinate with local quality assurance representatives.

For critical equipment, such the turbines and generators, hydromechanical equipment, large cranes and electrical equipment, BC Hydro continues to have local inspectors maintain a regular presence in the manufacturing facilities to perform quality surveillance, participate in quality witness points and hold points, and issue field reports. With the implementation of these measures, BC Hydro continues to ensure that quality requirements are satisfied prior to equipment being shipped.

During the reporting period, BC Hydro closely monitored the main civil works contractor's operations for processing and placement of materials for the earthfill dam. Key activities performed by BC Hydro to ensure that the specification requirements continue to be met included: participating in quality witness points; performing quality surveillance inspections; reviewing contractor test data; performing selected independent tests on processed materials; and performing quality audits. BC Hydro and the contractor continue to meet weekly to discuss and resolve open nonconformity reports as well as discuss broader topics related to the contractor's quality performance. BC Hydro will be monitoring the contractor's staffing levels for quality inspectors and testing technicians during early 2022 as work ramps back up following the winter shut down.

[9] Total NCRs = manufacturing NCRs + installation NCRs

The quality of the constructed works in the generating station and spillways and intake structures continues to be good. With the onset of winter conditions at site, daily meetings continue to be held between BC Hydro and the generating station and spillways contractor to discuss concrete placements under thermal control and to drive corrective actions when placements are outside of the specified limits. With these measures, the contractor continues to meet the specification requirements for the concrete properties despite the challenges associated with cold-weather placements. The quality of the penstock welding continues to be good and Powertech Labs has maintained its site presence to support the welding quality assurance program.

For the turbines and generators contract, the quality of the manufacturing work continues to be good. BC Hydro continues to meet with the contractor on a weekly basis to discuss upcoming inspections, quality issues and the overall quality assurance program. At site, the quality of the turbine embedded parts welding continues to be good, and Powertech Labs continues to review the welding radiographs.

During the reporting period, BC Hydro completed the evaluation of the proposals received to support BC Hydro’s quality assurance program at site in 2022 and 2023. Proposals were received in December 2021 and a contract is scheduled to be awarded in early 2022.

4.4 Assets In-Service

Prior to the first generating unit coming into service, there are several construction activities that need to be substantially completed both on the dam site and off the dam site.

The first generating unit is scheduled to be in service approximately one year before the sixth and final generating unit goes into service. Activities required on the dam site before the first generating unit is put into service include completing the earthfill

dam, approach channel, powerhouse and spillways; having the first generating unit ready for commissioning; connecting the powerhouse to the substation via transmission lines; removing the right bank cofferdam; watering up the powerhouse and spillways tailraces; and converting the diversion tunnel. Activities required to be completed off the dam site include clearing the reservoir, realignment of Highway 29, and the Hudson's Hope shoreline protection berm.

Before all major pieces of equipment and assets are placed into service on the Project, inspecting, testing, and commissioning activities are completed to ensure that all components are fit for service and safe to transition to operations.

The pre-commissioning testing includes testing of individual pieces of equipment. The offline testing leads up to the signing of a Commissioning Notice to Energize, which states that the asset is safe to connect to the BC Hydro grid to commence the online testing. At the conclusion of the online testing, the signing of a Commissioning Notice to Operate formalizes the handover of the asset to the operations group to operate. The commissioning process undertaken for the earthfill dam and associated assets will form part of the comprehensive dam safety and reservoir inundation plan.

Once assets are placed in service, BC Hydro Operations is responsible for the long-term operations and maintenance of the equipment and assets.

As of December 31, 2021 the following permanent assets have been placed into service on the Project:

- Site C substation;
- 500 kV gas-insulated switchgear expansion at the Peace Canyon substation; and
- The first of two new 500 kV transmission lines.

5 Project Schedule

5.1 Project In-Service Dates

Work to re-baseline the Project continued from 2020 into 2021. In June 2021, Treasury Board approved a new expected in-service date of 2025, which was announced in February 2021. The Project's revised schedule reflects the delays and impacts of the COVID-19 pandemic.

BC Hydro is currently on track to achieve the approved in-service date; however, BC Hydro continues to actively monitor and assess significant risks with potential cost, schedule, and scope implications, including the continuation of the COVID-19 pandemic and potential impacts to on-site construction activities; commercial negotiations with contractors; design finalization for the foundation enhancements and related procurements; aggregate supply; the ability of the Project's contractors to attract and retain sufficient skilled craft workers; and the possibility that the Blueberry River Decision could affect the timing of the issuance of provincial permits required for the completion of the Project.

Despite these challenges, the Project achieved significant milestones in 2021. Table 6 lists the Project milestones completed in 2021.

Table 6 Site C Project Milestones Completed in 2021

Milestones Completed in 2021	Completion Date
Downstream cofferdam complete	January 2021
Turbines and generators 1st component installed (draft tube liner)	January 2021
Upstream cofferdam to elevation 427 metres complete	March 2021
Upstream cofferdam to elevation 433.9 metres complete	April 2021
Unit 4 - unit bay superstructure complete and powerhouse bridge crane ready	May 2021
Contract award – balance of plant mechanical	July 2021

Milestones Completed in 2021	Completion Date
U5 - unit bay superstructure complete and powerhouse bridge crane ready	July 2021
U6 - unit bay superstructure complete and powerhouse bridge crane ready	July 2021
Commence pile installation at the spillway	August 2021
Contract award – balance of plant electrical	September 2021
Roller-compacted concrete dam and core buttress complete	October 2021
Site reclamation supply chain strategy finalized	October 2021
U1 - stay ring and spiral case assembled	December 2021
U2 - stay ring and spiral case assembled	December 2021

BC Hydro and Site C contractors continue to schedule work and explore strategies to accelerate work on the Project delayed by the COVID-19 pandemic. These activities, if successfully implemented, could result in an earlier in-service date; however, achieving an earlier in-service date remains subject to uncertainty and to the risks summarized in this report.

Table 7 shows the status of key Project milestones in relation to the approved in-service date of 2025.

Table 7 In-Service Dates

Description	In-Service Dates based on Approved Budget and Schedule (June 2021)[10]	Status
5L5 500 kV transmission line	October 2020	Complete
Site C substation	November 2020	Complete
5L6 500 kV transmission line	July 2023	On track
Unit 1 (first power)	December 2024	On track
Unit 2	February 2025	On track
Unit 3	May 2025	On track
Unit 4	July 2025	On track
Unit 5	September 2025	On track
Unit 6	November 2025	On track

[10] In-service dates based on Treasury Board's approval of the revised budget in June 2021.

6 Project Governance, Costs and Financing, and Risk

6.1 Project Governance

In February 2021, the Government of British Columbia released an independent review of the Project by special advisor Peter Milburn. Mr. Milburn's review included 17 recommendations aimed at improving oversight and governance and strengthening Site C risk reporting and management. Seven recommendations were specifically related to Project governance. As of September 30, 2021, all recommendations made by Mr. Milburn were fully implemented.

Other activities throughout 2021 that focused on improved Project governance include:

- The commercial sub-committee, appointed by the Project Assurance Board, has been actively providing oversight for ongoing key schedule, cost reporting, claims management, commercial strategy and other commercial matters;
- EY Canada continues to provide independent oversight for the Project, including budget oversight, schedule and commercial management evaluation and risk assessment analysis; and
- During 2021, BC Hydro and EY Canada worked collaboratively on identified improvement opportunities. A major focus in 2021 was the risk enhancement plan that implemented the Milburn recommendations as well as opportunities for improvement identified by EY Canada. Examples of improvement opportunities include updating the cost risk analysis methodology and improving the monthly risk reporting.

6.1.1 Project Budget Summary

On February 26, 2021, the Government of British Columbia announced a revised cost estimate of $16 billion to complete the Site C Project, and a revised schedule with an in-service date in 2025.

In June 2021, following the completion of the Project re-baselining process, Treasury Board approved the revised budget and in-service date.

The revised budget and schedule address significant cost pressures and delays faced by the Project due to the COVID-19 pandemic, as well as the right bank foundation enhancements and other cost pressures being managed by the Project prior to COVID-19, as summarized in previous progress reports.

The impacts and delays due to the COVID-19 pandemic are the single largest contributors to the cost increase, which includes the amount of interest costs financed by the Project for the one year delay, followed by the additional costs for foundation enhancements measures, and other cost pressures prior to the onset of the COVID-19 pandemic.

With the Project more than 55 per cent complete, BC Hydro continues to actively manage potential cost and schedule risks. The two key challenges have been the continuation of the COVID-19 pandemic and its related variants, and the continued work to address the previous geotechnical issues identified on the right bank.

As of December 31, 2021, the life-to-date actual costs are $8.4 billion, which results in an estimated $7.6 billion of remaining costs. The Project remains on track to be completed within the $16 billion budget and meet the Project in-service date in 2025.

6.2 Project Expenditure Summary

Table 8 reflects the Project budget of $16 billion approved in June 2021 by key work area, life-to-date expenditures to December 31, 2021, and the remaining budget.

Table 8 Project Budget by Key Work Area ($ million)

Description	Project Budget[11]	Actuals, life-to-date (as of December 31, 2021)	Remaining Budget (as of December 31, 2021)
Dam, Power Facilities and Associated Structures and Transmission[12]	8,258	4,636	3,622
Offsite Works, Direct Construction Supervision and Site Services[13]	2,895	1,700	1,195
Total Direct Construction Cost	**11,153**	**6,336**	**4,817**
Indirect Costs[14]	2,082	1,187	895
Total Construction and Indirect Costs	**13,235**	**7,523**	**5,712**
Interest During Construction and Contingency	2,765	836	1,929
Total	**16,000**	**8,359**	**7,641**

6.3 Comparison of Plan to Actual Expenditures

Table 9 presents a comparison of the planned total expenditures for the Project by quarter compared to the total actual expenditures, from January 1 to December 31, 2021. The planned expenditures for fiscal 2021 Q4 (January to March 2021) are based on the Project budget prior to the new Project budget of $16 billion approved in June 2021. For the 12-month calendar period, the Project had expenditures of $1,905 million compared to the plan of $2,806, resulting in a variance of $901 million. Refer to variance explanation further below.

11 The total Project budget was approved in June 2021 by Treasury Board.

12 Key items included are river diversion infrastructure, earthfill dam and related works, spillways, powerhouse, generation equipment and transmission and substation work.

13 Key items included are highway re-alignment and reservoir related work, direct construction supervision, and site services such as worker accommodation.

14 Key items included are mitigation and compensation programs, development and regulatory costs, project management, engineering and other support services such as Project controls, contracts management, environmental, and Indigenous relations.

Table 9 Cost Plan for the Calendar Reporting Period: January 2021 to December 2021 ($ million Nominal)

Description	F2021 Q4[15]	F2022 Q1	F2022 Q2	F2022 Q3	Total for Reporting Period
Planned Expenditures	422	752	828	804	2,806
Actual Expenditures	412	545	445	503	1,905
Variance	**10**	**207**	**383**	**301**	**901**

Table 10 presents the Project budget approved in June 2021 and a comparison of the fiscal 2022 year-to-date (**YTD**) plan as of December 31, 2021, to the actual expenditures for the same period. The fiscal 2022 plan amount is based on the 2021/22 to 2023/24 Service Plan, which was published in April 2021. For the fiscal 2022 YTD period, the Project had expenditures of $1,492 million compared to the plan of $2,384 million, resulting in a variance of $892 million. Refer to variance explanation further below.

Table 10 2021/22 to 2023/24 Service Plan Fiscal 2022 YTD to December 2021 ($ million)

Description	Project Budget	2021/22 to 2023/24 Service Plan Fiscal 2022 YTD (December 2021)	Actuals, Fiscal 2022 YTD (December 2021)	Variance
Dam, Power Facilities and Associated Structures and Transmission	8,258	1,524	924	600
Offsite Works, Direct Construction Supervision and Site Services	2,895	400	312	88
Total Direct Construction Cost	**11,153**	**1,924**	**1,236**	**688**
Indirect Costs	2,082	154	86	68
Total Construction and Indirect Costs	**13,235**	**2,078**	**1,322**	**756**
Interest During Construction and Contingency	2,765	306	170	136
Total	**16,000**	**2,384**	**1,492**	**892**

[15] Fiscal 2021 Q4 plan amount was prior to the approved $16 billion budget.

The total variances shown in Table 9 and Table 10 are a result of a combination of the fiscal 2022 plan being set while the new Project budget was still being finalized with preliminary annual cashflow estimates, and timing of work. Due to these reasons, there was lower-than-planned spend on various work fronts such as main civil works, generating station and spillways, right bank foundation enhancements, and turbines and generators. The balance of plant contracts (remaining scope items for the generating station and spillways) were also awarded and mobilized later than planned.

Overall, the Project remains on track to be completed within the $16 billion budget and meet the Project in-service date in 2025.

Details of the variances between actual and plan are in Appendix J.

6.4 Site C Project Financing

Most of BC Hydro's capital projects, including the Site C Project, are debt financed. The Site C Project costs are included as part of BC Hydro's overall borrowing and included in the Government of British Columbia's budget and fiscal plan. The debt and related interest costs are managed corporately by BC Hydro.

6.5 Material Project Risks and Opportunities

Material project risks and opportunities are identified and reviewed by BC Hydro management and the Project Assurance Board on an ongoing basis. Project risks are uncertain events that, if they occur, could result in a negative impact or loss to a project. Similarly, opportunities are uncertain events that, if they occur, could result in a positive impact, or benefit, to a project.

As the Project progresses through implementation phase, the Project risks and opportunities continue to evolve.

In response to recommendations from the independent review of the Project by Mr. Milburn, the criteria for selecting those risks and opportunities to include in internal and external reporting were updated, to include both objective and subjective measures, and these criteria, have been utilized to select the risks and opportunities included in the list below.[16]

Refer to Table 11 for a list of the material Project risks and refer to Table 12 for a list of the material Project opportunities as of December 31, 2021.

[16] The list 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.

1 **Table 11 Material Project Risks**

Risk Description	Impact and Response Plan Summary
Risk that COVID-19 event impacts continuation of construction activities at site or in Vancouver	**Impact**: BC Hydro and contractors do not have access to the required labour for daily construction and project management activities. BC Hydro and contractor costs increase to respond to COVID-19 and schedule delay impacts; camp capacity reduction and/or shutdown due to COVID-19 outbreaks. **Response:** Minimize non-essential travel to site. Screen workers before they travel to site and at site before entry; implemented camp mitigation measures (additional cleaning, closed cafeteria self serve stations, established isolation wings); put in place BC Hydro and contractor worker vaccine policies and protection exposure protocols and plans.
Risk that the Project contractors cannot attract and retain sufficient skilled craft workers	**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, the requirement for specialized workers, and the effects of COVID-19. This may result in potential impacts to schedule, safety, productivity and cost. **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.
Risk of contractor claims	**Impact**: Increased construction management and contract management effort required to respond to and investigate claims; settlement of claims may result in increased costs. **Response**: Ensure sufficient commercial management resources in place, proactively resolve claims as received, and ensure commercial management procedures are in place and are being followed.
Risk of a safety incident resulting in a fatality or disabling injury	**Impact:** Serious worker injury or fatality; project delays and associated costs. **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; regularly hold on site safety conferences; continue to include safety in BC Hydro and contractor on boarding orientations; and continue to promote a strong safety culture.
Risk of erosion along the outlet channel	**Impact**: Cost of remediation; schedule delay and potential generation flow restriction on G.M. Shrum and Peace Canyon generation stations. **Response**: Complete both temporary and permanent solutions to prevent erosion. Monitor outlet area for any signs of erosion.

Risk Description	Impact and Response Plan Summary
Risk of right bank foundation enhancements interface conflicts	**Impact**: Existing contractors' scope of work and schedule impacted by potential new right bank foundation enhancements contractor interfaces. **Response:** Rely on change schedule terms of existing contracts to proceed with change orders for the right bank foundation enhancements work scope.
Risk of insufficient acceptable on-dam site aggregate supply to meet demand	**Impact:** Decreased productivity, schedule delays and increased cost that could impact multiple contracts. **Response:** Increase aggregate stockpiles; work with contractors to minimize waste and maximize aggregate production; release additional contingency aggregate excavation sites; seek out additional aggregate sources and procure off site and haul in additional aggregate.
Risk that regulatory approvals are not available by the date required for construction	**Impact:** Delays to the Project while regulatory approvals are acquired, and an increase in costs. **Response:** Ongoing engagement with contractors, regulators, and First Nations.
Risk that BC Hydro is unable to attract and retain enough skilled BC Hydro employees to work on the Project	**Impact:** Unable to meet Project requirements. **Response:** Increase employee engagement activities to increase retention; develop and implement end of Project resource transition plans and communicate to employees; hire consultants if necessary.

1 **Table 12 Material Opportunities**

Opportunity Description	Impact and Response Plan Summary
Lower interest during construction due to timing of Project contingency expenditures	**Impact**: Lower Project interest costs than the amount budgeted. **Response:** Monitor Project contingency expenditure timing. Where feasible, delay contingency expenditures.

7 Key Procurement and Contract Developments

7.1 Key Procurements

The Site C 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 model. The remaining procurements on the Project are summarized in Table 13.

Table 13 Remaining Major Project Contracts and Delivery Models

Component	Contract	Procurement Model	Anticipated Timing
Reservoir/ Transmission Clearing	Multiple reservoir clearing contracts to be awarded over seven to eight years	Design-Bid-Build	Fifteen contracts completed (reservoir 13, transmission two). Two remaining access and clearing packages are expected to be procured in 2022 or 2023.
Generating Station and Spillways	Balance of Plant – Architectural contract	Design-Bid-Build	Completed evaluation of the proposals. Contract is scheduled to be awarded in January 2022.
	Balance of Plant – Permanent upstream fishway and other structures	Design-Bid-Build	Completed evaluation of the proposals. Contract is scheduled to be awarded in January 2022
	Balance of Plant – Fire detection and protection contract	Design-Build	Request for proposals closed in December 2021 and proposals are being evaluated.
	Balance of Plant – Heating, ventilation and air conditioning contract	Design-Build	Request for proposals closed in December 2021 and proposals are being evaluated.
Reclamation Program	Multiple seeding supply contracts and reclamation contracts to be awarded over three to four years	Design-Bid-Build	Under the pilot program • three seeding supply contracts awarded; and • three reclamation contracts will be awarded in mid 2022. For the full program • packaging of work will be determined once the pilot program is completed in summer 2023.

7.2 Major Construction Contracts Exceeding $50 million

Since inception of the Project, 12 major construction contracts have been awarded that exceed $50 million in value, as shown in Table 14. The contract values reflect the current value including executed approved changes to the end of the reporting period.

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

Table 14 Major Project Construction Contracts Awarded

Contract	Contract Value at December 31, 2021 ($ million)	Contract Execution Date
Site Preparation: North Bank	60	July 2015
Worker Accommodation	566	September 2015
Main Civil Works	2,938	December 2015
Turbines and Generators	466	March 2016
Transmission and Clearing	94	October 2016
Quarry and Clearing	130	February 2017
Generating Station and Spillways Civil Works[17]	2,061	March 2018
Hydromechanical Equipment	70	April 2018
Transmission Line Construction	139	May 2018
Highway 29	377	October 2019
Balance of Plant Mechanical	70	July 2021
Balance of Plant Electrical	157	September 2021

[17] Includes some of the scope of work for the right bank foundation enhancements.

7.3 Contracts Exceeding $10 million

For open contracts procured and awarded in excess of $10 million, refer to Appendix H.

7.4 Contract Management

7.4.1 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 $1.19 billion to reflect approved changes to December 31, 2021. This increase in contract value is primarily the result of a number of contract amendments since contract award in 2015 including three large contract amendments, the first in 2018 the second in 2020 and the third in December 2021.

The generating station and spillways contract is also a unit price contract and, as such, variations in quantities and design are expected over the term of the contract. Since contract award in March 2018, the generating station and spillways contract value has increased by $457 million to reflect approved changes to December 31, 2021.

The balance of plant electrical contract was awarded in September 2021. The procurement process for the balance of plant architectural contract resulted in a single proposal from the same contractor. Following further discussions with the contractor, BC Hydro determined it would be more cost effective to combine the balance of plant architectural contract with the existing balance of plant electrical contract. As a result, the value of the balance of plant electrical contract has increased by $29 million to reflect approved changes to December 31, 2021.

8 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 the 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. Seven agreements have been fully executed and are in various stages of implementation. Impact benefits agreements with McLeod Lake Indian Band, Doig River First Nation, Halfway River First Nation, Prophet River First Nation, and Saulteau First Nations, and Project Agreements with Dene Tha' First Nation and Duncan's First Nations have been publicly announced.

In February 2019, the Government 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. The Government of British Columbia and BC Hydro have since negotiated an agreement with Prophet River First Nation to settle this litigation, which was publicly announced in August 2020. As of January 21, 2022, the trial that was scheduled to begin in March 2022 for the treaty infringement claim filed by West Moberly First Nations in January 2018, as amended, has been adjourned. The parties to the litigation are continuing confidential discussions to seek to settle this litigation.

Engagement on Project construction activities has continued through regular Project update meetings with First Nations. The Environment Forum and Culture and Heritage Resources Committee have also continued to meet regularly, primarily through virtual means. Through the Environmental Forum, BC Hydro collaborates

with Indigenous Groups on a number of project related environmental programs to combine traditional knowledge with western science. The Culture and Heritage Resources Committee has implemented a number of cultural recognition projects, such as a travelling exhibit, commemoration videos, a cultural, curation and archaeology training program, and signage at the Site C viewpoint describing the culture and history of Treaty 8 First Nations communities. The Committee has recently agreed to focus their efforts on a proposed Cultural Centre Development Project and has recently finalized the terms of reference for that project. A Cultural Centre Working Group, comprised of most of the impacted First Nations, has held two visioning workshops and supporting one-on-one meetings to plan for the proposed cultural centre. The Environment Forum has discussed key topics including Project reclamation planning, developing additional aggregate sources, methylmercury monitoring and the operations of the temporary fish passage facility.

Consultation is ongoing with impacted First Nations regarding options and site specific plans for the management of identified burial and cultural sites impacted by reservoir inundation, in particular in the Halfway River and Cache Creek Bear Flats areas. Field investigations have been and will continue to be undertaken to plan management options for these sites. BC Hydro is seeking direction from impacted First Nations on the most appropriate management options and any community support needs.

The cultural monitoring program continues with First Nations monitors observing Project construction at Highway 29 locations as well as environmental enhancement and mitigation programs. Due to COVID-19 safety measures, cultural monitors will not be on the dam site until further notice.

In October 2020, in collaboration with the Project's Culture and Heritage Resources Committee, BC Hydro launched a new interactive travelling exhibit that tells the story of Indigenous peoples in the Peace Region and displays replicas of artifacts found during the construction of Site C. The travelling exhibit has been displayed at Métis

Nation British Columbia, the Fort St. John Visitors Centre, Site C Two Rivers Lodge, the North Peace Museum, and Halfway River First Nation. The exhibit remains on display at Doig River First Nation and Tse'Kwa (a property owned by Treaty 8 First Nations), and will resume travel to additional communities once COVID-19 health orders are lifted.

The exhibit describes past use of the Peace Valley area, tells stories from various communities, and commemorates sites that will be lost to inundation from the future Site C reservoir. It includes important archaeological evidence uncovered from the Site C construction area, which spans from 12,500 years ago until the recent past.

9 Litigation

The details of open proceedings as of December 31, 2021, are summarized in Table 15.

Table 15 Litigation Status Summary

Description		Date
B.C. Supreme Court: Treaty Infringement Claims		
West Moberly First Nations	Civil claim filed.	January 15, 2018
	Injunction application filed.	January 31, 2018
	Injunction hearing date.	July 23 to August 3, 2018 and September 4 to 7, 2018
	Injunction denied (no appeal filed).	October 24, 2018
	Amended civil claim filed.	September 25, 2019
	Scheduled trial date.	Adjourned on January 21, 2022
B.C. Supreme Court: Civil Claims		
Building and Construction Trades Council	Civil claim filed.	March 2, 2015
	Response to claim filed.	April 10, 2015
	No steps have been taken in litigation that require a response from BC Hydro.	
Michael Acko, etal (residents of Old Fort community)	Civil claim filed.	January 18, 2021
	Application for particulars hearing date.	June 25, 2021
	Response to claim filed.	September 8, 2021

Description		Date
Allianz Global Risks US Insurance Company, etal	Civil claim filed. Claim was filed by BC Hydro to preserve BC Hydro's rights to claim under Site C property insurance for losses related to left bank tension crack events	February 5, 2021
Allianz Global Risks US Insurance Company, etal	Civil claim filed. Claim was filed by BC Hydro to preserve BC Hydro's rights to claim under Site C property insurance for losses related to rockfall event near a diversion tunnel inlet portal.	July 13, 2021
B.C. Supreme Court: Civil Claims – Expropriation Act		
Lloyd Stewart Bentley and Katheryn Lynn Bentley	Civil claim filed Response to claim filed	April 23, 2021 November 9, 2021
Joy Eileen Ross	Notices of claim filed to keep open plaintiffs' rights to claim further compensation under the *Expropriation Act.* Further appraisal and other reports are required prior to commencing settlement negotiations. No requirement for BC Hydro to file responses at this time.	July 22, 2019
Chipmunk Holding Ltd., *et al*		July 22, 2019
Samuel James Mahood and Judy Edith Mahood		July 22, 2019
Gordon Roy Kelly and Heather Marie Kelly		May 13, 2020
Kenneth Victor Boon and Arlene Lois Boon (aka Arleen Lois Boon)		January 15, 2021
Lois Caroline Bentley		January 15, 2021
Dale Alvin London and Clara Anne London		January 15, 2021
Carla Jane Salmond		January 15, 2021
Lloyd Stewart Bentley, *et al*		January 15, 2021
Hudson's Hope Historical Society		March 18, 2021
Hudson's Hope Holdings Ltd., Robert Edward Bach and Beverly Jean Bach		March 26, 2021
Butler Ridge Energy Services (2011) Ltd.		April 23, 2021
Gwen Lillian Johansson		August 19, 2021
Robert Edward Bach and Beverly Jean Bach		September 20, 2021

10 Permits and Government Agency Approvals

10.1 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.

BC Hydro continues to be issued permits and authorizations in accordance with its construction timelines. As of December 31, 2021, BC Hydro estimates that approximately 633 permits will be required throughout the life of the Project. Of these permits, 534 (84 per cent) 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 16 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, 2021, all

required conditions and submissions have been met in accordance with the schedule and requirements of the conditions.

Table 16 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 campground 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.
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.

Type	Number of Environmental Assessment Certificate Conditions	Number of Federal Decision Statement Conditions	Notes
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	

10.2 Federal Authorizations

Federal authorizations are required under the *Fisheries Act* (Fisheries and Oceans Canada) and the Canadian *Navigable Waters Act* (Transport Canada). All major federal authorizations for construction and operation of the Site C dam and reservoir were received in July 2016. As of December 31, 2021, one additional *Fisheries Act* authorization is anticipated for the temporary placement of fill material immediately downstream of the downstream cofferdam. Additional *Canadian Navigable Waters Act* (formerly *Navigation Protection Act)* approvals and notifications 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, 2021, a total of 113 federal approvals had been received and are actively being managed. Eighteen future approvals are planned.

10.3 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.

As of December 31, 2021, 412 (84 per cent) of the estimated 491 provincial permits and approvals that are required throughout the life of the Project had been obtained and are actively being managed. These include permits for the dam site area, worker accommodation, Highway 29 realignment, transmission line and eastern, middle, and western reservoir. Future provincial permits are being planned for the remainder of the generating station and spillways construction, fish habitat enhancement sites, reservoir filling and operations as well as decommissioning the existing Highway 29.

On June 29, 2021, the Supreme Court of British Columbia released its decision in *Yahey v British Columbia*, determining that the cumulative impacts from a range of provincially authorized industrial activities (primarily oil and gas and forestry) within Blueberry River First Nations traditional territory constituted an infringement of Blueberry River First Nations Treaty 8 rights. BC Hydro was not a party to that court case.

BC Hydro continues to consult with Blueberry River First Nations and all Treaty 8 First Nations and remains willing to negotiate an impact benefits agreement with Blueberry River First Nations.

10.4 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.

On March 16, 2021, BC Hydro submitted a draft Environmental Assessment Certificate amendment request to the Environmental Assessment Office regarding the use of haul trucks on a contingency basis to transport till material from 85th Avenue Industrial Lands to the dam site area. Prior to submitting the final submission in June 2021, BC Hydro engaged with local governments, Indigenous groups and local residents on the proposed activity and responded to concerns. Hauling will comply with all requirements for the use of public roadways. The amendment request is currently under review by the Environmental Assessment Office. The work associated with this amendment request is scheduled to commence in spring 2022.

On June 14, 2021, BC Hydro submitted a request to amend Condition 40 of the Environmental Assessment Certificate, proposing that BC Hydro amend one of three boat launch locations required by the Certificate from Cache Creek to a location close to Halfway River. The amendment request is currently under review by the Environmental Assessment Office.

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

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.

10.5 Annual Compliance Report

As detailed in 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. The Project has met all required conditions and submitted its third annual compliance report on time on March 31, 2021, which can be found in Appendix G.

11 Environment

11.1 Mitigation, Monitoring and Management

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

Through 2021, focus remained 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 continued to be a focus.

On the right bank, the water treatment plant and holding ponds to treat potentially acid generating rock contact water were fully operational throughout the reporting period.

Field monitoring for noise and dust continued in the Hudson's Hope area related to works within the berm and along the truck haul route, as needed. So far, this monitoring has not identified air quality or noise exceedances coming from the Site C works. Environmental staff continued to monitor the area and worked with inspectors from the Environmental Assessment Office.

Care-of-water systems associated with the till conveyor performed well over the reporting period.

The Environmental Assessment Office completed one physical inspection, and four remote inspections of the Project during 2021. Results from the physical inspection and one of the remote inspections remain outstanding as of December 31, 2021.

The Golata Creek wetland continued to function well over the reporting period. This completed work is being used to inform the approach to the remaining wetland off-set requirements and may result in some re-scoping of planned works. Work was also initiated in 2021 for new wetland construction works in 2022.

Air quality, water, noise and light monitoring continue at various locations throughout the Project with only localized or sporadic elevated readings noted and appropriate mitigations taken. Spot air quality and noise measurements occurred occasionally in Hudson's Hope in response to public concerns.

11.2 Environmental Compliance Inspections and Enforcement

Inspectors from the B.C. Environmental Assessment Office, Department of Fisheries and Oceans Canada, Impact Assessment Agency of Canada, the Independent Environmental Monitor, and the Comptroller of Water Rights, performed more than 1,400 hours of inspections between January 1 and December 31, 2021.

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

- Invasive plants management and procedures. BC Hydro has updated signage/awareness regarding noxious weeds management and potential spread. Signage updates include, but are not limited to, restrictions, control measures, and increased visibility and sediment fencing management around the wetland complex at the 72/2 tower site on the transmission line. BC Hydro has installed fencing near the wetland area to effectively protect the area from runoff. This also includes periodic monitoring to ensure the fence is functioning as intended.

- Ensuring all construction areas are clean of anthropogenic food sources, with garbage stored in verified bear-proof containers. BC Hydro's contractors have continued to make improvements to the management of anthropogenic food waste across the Project. Such improvements include installation of appropriate animal-proof waste containers, increased frequency of toolbox talks to address wildlife attractant issues, and the creation of a waste management team.
- Equipment spill/leak monitoring. BC Hydro continues to promptly identify the presence of leaks and spills on equipment and report the findings in daily logs. Further actions to address issues include continuing to utilize spill pads and drip trays, and monitoring of equipment with appropriate storage and disposal.
- Acid Rock Drainage and Metal Leachate Management Plan: BC Hydro presently has mitigation in place to manage potential acid generated contact water at the Halfway River Bridge site via hauling to potential acid generated disposal sites and lined containment vacuum trucks. Additionally, the environmental protection plan has been updated to reflect the ongoing mitigation at that location;
- Erosion prevention and sediment control within the Halfway River bridge site. BC Hydro continues to apply appropriate erosion and sediment control measures at the site, including seeding and additional erosion control blankets; and
- Agricultural Mitigation and Compensation Plan development. BC Hydro continues discussions with agricultural land owners and tenure holders to jointly develop mitigation plans throughout the construction phase for all farms directly affected by the Project.

BC Hydro completed more than 43,000 environmental compliance inspections in 2021, with a compliant or partial compliant result of 95 per cent across all contractors and works areas.

The Site C Project team meet 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.

Additionally, the Project has engaged both an Independent Environmental Monitor and an Independent Engineer that report directly to provincial regulators. The Independent Environmental Monitor provides 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 works directly with site personnel to proactively identify design issues that may impact the environment and develop mitigation plans to avoid or minimize impacts.

11.3 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 2021 heritage program level of effort was reduced compared to that in previous years, largely due to reaching the milestone of completing archaeological inventory and impact assessment of the Project area in 2020. In 2021, pre-construction archaeological impact assessments and systematic data recovery at selected archaeological sites focused on locations where project design changes required archaeological or heritage consideration. In addition, heritage support was provided for Indigenous burial management and Project construction.

Heritage field work included approximately 20 archaeologists and Indigenous community representatives, and the submittal of two archaeological interim reports for 2021 work. Six archaeological interim reports and two archaeological annual reports for 2021 work are pending submission to the B.C. Archaeology Branch and

Indigenous groups in accordance with *Heritage Conservation Act* permit terms and conditions. One palaeontological chance find report for 2021 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 construction-related field inspections at archaeological sites were performed to ensure compliance. Additionally, eight archaeological and palaeontological chance finds were identified and collected. One *Heritage Conservation Act* permit amendment was received in 2021.

11.4 Temporary Fish Passage Facility

BC Hydro operated the temporary fish passage facility from April 1 to October 31, 2021. This was the first full year of temporary fish passage facility operations. During this period, the facility passed more than 2,400 fish from 11 different species. Fourteen mortalities were observed in 2021, representing 0.6 per cent of all fish sorted in the facility; this figure is in-line with the anticipated levels of mortality during operations.

During times of high water levels or facility shutdown, BC Hydro implemented contingent fish passage measures by capturing fish downstream of the diversion tunnel outlet via boat electroshocking and transporting them upstream of the Project. Contingent measures transported an additional 1,265 fish upstream of the Project.

Table 17 shows the results from the first full season of operation of the temporary fish passage facility.

Table 17 Temporary Fish Passage Facility Operation results

	Number of Fish Passed through Facility (April 1 to October 31, 2021)	Number of Fish Mortalities (April 1 to October 31, 2021)	Number of Fish Passed during Contingent Measures[18] (April 1 to October 31, 2021)
Mountain whitefish	1,300	9	260
Longnose sucker	567	4	364
Largescale sucker	432	1	401
White sucker	57	-	45
Northern pikeminnow	45	-	4
Redside shiner	27	-	-
Bull trout	17	-	151
Arctic grayling	11	-	-
Kokanee	6	-	-
Rainbow trout	2	-	21
Slimy sculpin	1	-	-
Arctic grayling	-	-	14
Northern pike	-	-	3
Lake trout	-	-	1
Burbot	-	-	1
Total	**2,465**	**14**	**1,265**

In general, the number of fish passed and the level of mortality associated with the handling of the fish were consistent with expected results, despite lower-than-anticipated numbers of bull trout and rainbow trout. Several adjustments to the biological and mechanical operation of the facility were made in 2021 to improve sorting facility performance. For example, adjustments to the flow and operations at the top of the fishway in August 2021 enabled the capture of 17 adult bull trout (none were collected prior to the changes). Some of the Arctic grayling and bull trout that were collected at the facility and released upstream were later observed on spawning grounds (Moberly River and tributaries of the Halfway River,

[18] During times of high-water levels or facility shutdown, BC Hydro implemented contingent fish passage measures by capturing fish downstream of the diversion tunnel outlet via boat electroshocking and transporting them upstream of the Project.

respectively), which demonstrates trap and haul as a viable method for providing upstream fish passage.

BC Hydro winterized the facility following the last day of operation on October 31, 2021, to protect mechanical equipment from winter conditions. The team worked collaboratively with provincial and federal fisheries representatives to evaluate facility performance and implement improvements throughout the season.

11.5 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 is the fund administrator and is managing the investment of the funds.

In 2021, 28 Peace Region agricultural projects received approximately $700,000 in funding through the BC Hydro Peace Agricultural Compensation Fund and as of December 31, 2021, nearly $1.3 million has been distributed to 53 projects. The Board established a grant budget of $750,000 for 2022.

BC Hydro and Northern Development Initiative Trust are working to promote increased applications for the fund as the fund has been underutilized.

12 Employment and Training Initiatives and Building Capacity Initiatives

12.1 Labour

Since the beginning of the Project, unions that have participated in the construction of Site C are listed in Table 18.

Table 18 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
Millwrights Union local 2736
Ironworkers, local 97
International Brotherhood of Electrical Workers (IBEW)
MoveUP, local 378
Pile Drivers 2402
Boilermakers, lodge 359
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 labour approach for the Site C balance of plant contract is for the contractors to retain the Construction Labour Relations Association to enter into an agreement, with the Bargaining Council of B.C. Building Trades Unions or another consortium of Building Trades Unions that covers an agreed set of labour requirements.

12.2 Labour Update on Activities at Dam Site due to COVID-19 Pandemic

BC Hydro continues to provide updates to key Project unions on site regarding information that is being shared with workers, including BC Hydro's COVID-19 vaccine policy, that became effective on January 10, 2022.

The latest number of people in camp in isolation, applicable Northern Health orders, and the status of COVID-19 testing results are available on the Site C website.

Over the course of the year, Northern Health declared two COVID-19 outbreaks on the Site C Project. The first outbreak occurred between April 28 and June 23, 2021. In total, 56 lab-confirmed cases were associated with the outbreak (involving separate clusters of COVID-19 activity dating back to March 2021).

The second outbreak occurred between August 18 and October 12, 2021. In total, 92 cases were associated with the outbreak (involving separate clusters of COVID-19 activity); the substantial majority of these cases occurred in unvaccinated workers.

In the case of both outbreaks, work continued on-site and BC Hydro was not directed to shut down the site or stop any work due to the COVID-19 protocols in place.

As per the Northern Health Medical Health Officer orders related to the outbreaks, there was a return to restrictions regarding workers accessing local communities. During the outbreaks, camp workers were restricted from leaving site during their work rotation. Mandatory mask use was also required for both indoor and outdoor areas at site, including when inside a vehicle or while operating equipment with another person for the purpose of work.

In August 2021, Northern Health also ordered industrial projects to collect vaccine status information to determine the percentage of workers who were fully or partially

vaccinated, with a Heath Canada-approved COVID-19 vaccine, as well as those who were not vaccinated.

In October 2021, Northern Health declared the COVID-19 outbreak over and the requirement restricting workers to camp was lifted.

In November 2021, BC Hydro introduced a mandatory vaccination policy requiring COVID-19 vaccinations for all employees and contractors working at BC Hydro work sites, including Site C, to be fully vaccinated by January 10, 2022. BC Hydro worked with its contractors to implement a process to allow all workers to scan their vaccine passport and present photographic government-issued ID at the security gates. BC Hydro started early capture of this data in November 2021. As directed by a Northern Health order to the industrial projects, vaccine status information is to be collected to determine the percentage of workers who were fully or partially vaccinated with a Heath Canada-approved COVID-19 vaccine, as well as those who were not vaccinated.

During the reporting period, BC Hydro and Site C contractors continued working to implement both of these orders.

12.3 Employment

After the initial reduction in the workforce at site in January 2021, and the subsequent gradual staged restart and ramp up of construction activities at site, the employment numbers started to increase in March 2021 to an annual peak of 5,108 in July 2021. This is lower than the Project peak of 5,181 in October 2020.

The generating station and spillways contractor's three main unions have increased their membership numbers on site. The main civil works contractor unions, specifically CLAC and the CMAW carpenters, continue to advance critical Project milestones. The Teamsters, local 213 continues to have members working on site.

Contractors submit monthly workforce data electronically to BC Hydro. Table 19 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 19 Site C Jobs Snapshot Reporting Period – January 2021 to December 2021

Month	Number of B.C. Primary Residents[19]	Total Number of Workers[20]
January 2021	2,862	3,852
February 2021	2,840	3,877
March 2021	3,134	4,321
April 2021	3,269	4,589
May 2021	3,425	4,868
June 2021	3,573	5,046
July 2021	3,578	5,108
August 2021	3,513	5,087
September 2021	3,448	4,963
October 2021	3,259	4,633
November 2021	3,199	4,562
December 2021	2,977	4,175

In December 2021, 71 per cent (2,977 workers) of the workforce was made up of residents of British Columbia, while 24 per cent (840 workers) of the workforce lived in the Peace River Regional District. The on-site contractor workforce number also includes 13 per cent women (435 workers) and 156 workers who are working for various contractors as apprentice carpenters, electricians, millwrights, ironworkers, mechanics and boilermakers.

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

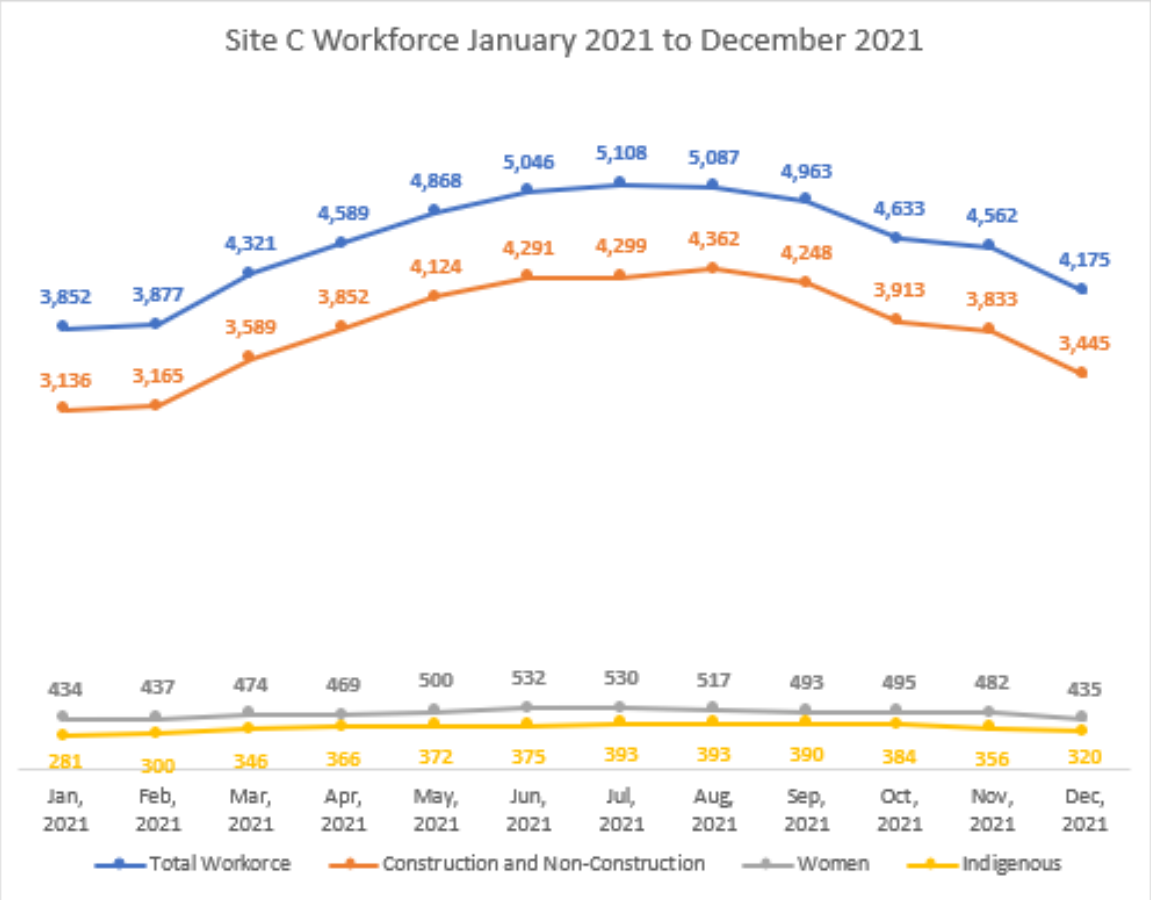
[20] Total workers include:

- 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.

In 2021, the number of workers from the Peace River Regional District peaked at 1,054 in July; this is slightly lower than the Project high of 1,144 Peace Region-based workers, which occurred in October 2020.

Figure 5 shows the monthly Site C workforce over the period from January 1, 2021 to December 31, 2021. The *Industrial Projects Restart Order*, which limited workers returning to site in January and February 2021, continued to impact the construction and non-construction workforce during the reporting period.

Figure 5 Site C Workforce January 2021 to December 2021[21]



[21] The Indigenous and women numbers are a subset of the construction and non-construction contractors workforce number.

12.4 Training and Capacity Building Initiatives

The Contractors Labour Committee, through its Indigenous labour subcommittee, continues to support Indigenous training, labour and employment on Site C through communications, 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.

BC Hydro has included apprentice targets in the generating station and spillways civil works contract, the transmission lines and the substation contracts, the balance of plant contracts and the Highway 29 work procured by BC Hydro, as appropriate.

Northern Lights College Foundation continues to distribute the BC Hydro Trades and Skilled Training Bursary Awards, established in 2013. As of December 2021, a total of 287 students had received bursaries, including 134 Indigenous students who have benefitted from the bursary in programs such as electrical, welding, millwright, cooking, social work, and many others. BC Hydro has worked with the Northern Lights College Foundation to extend the bursary timeline and reserve a portion of 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 as well as other joint pre-skills programs. In March 2021, BC Hydro provided funds to the Northern Lights College Foundation to continue the bursary for an additional year.

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.

On June 15, 2021, the B.C. Construction Association announced that BC Hydro and seven Site C contractors had become the first multi-contractor project to sign the Builders Code, setting a new industry standard with a project-wide commitment to

eradicate hazing, bullying and harassment. Signing this pledge jointly demonstrates the Project's commitment and belief that everyone has a right to be safe and protected at the worksite. This initiative between BC Hydro and Site C contractors demonstrates that inclusion, diversity and respectful workplace behavior is jointly valued on the Project. The Builders Code continues to be implemented on site.

Contractor Indigenous Employment and Training information Session

In February 2021, BC Hydro facilitated the sixth Indigenous Employment and Information session with Site C contractors and employment and training representatives from the Treaty 8 First Nations (the session was held virtually due to COVID-19). In attendance were six site contractors, and representatives from seven different Nations, as well as the North East Native Advancing Society and BC Hydro. The purpose of these meetings is to assist in building relationships between employment and training professionals from the Indigenous communities and key Site C contractors, as well as to share employment and training opportunities.

Site C contractors have noted that certain trades will continue to be in high demand during peak Project construction periods. As such, in early 2020, major on-site contractors started exploring new opportunities for apprentice and other training to take place on-site. BC Hydro worked with Northern Lights College and Site C contractors to develop three on-site pilot programs. The programs included a new program with Northern Lights College designed for local Indigenous candidates interested in becoming heavy equipment operators on the Site C Project, a re-launch of the Pre-Carpentry Skills Program with Northern Lights College delivered in 2019, and a Fish Monitoring Program. These programs were temporarily postponed in March 2020, due to COVID-19. In 2021, the program for local Indigenous candidates interested in becoming heavy equipment operators on the Site C Project was restructured and was successfully delivered in October 2021.

In 2021, the BC Hydro and Northern Lights College Fish Monitoring Program was restructured to contain additional wildlife training and was renamed the Environmental Training Program. With COVID-19 safety plans in place, the program was successfully delivered offsite in June 2021. The program included workforce training certifications in preparation for employment opportunities on the Project. Eight participants from Treaty 8 Nations participated in the online and in-person training program. All candidates successfully completed the program.

13 Community Engagement and Communication

13.1 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 agreements and 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 continued meeting with the Regional Community Liaison Committee and provided updates on actions taken to address the ongoing risks associated with the COVID-19 pandemic. In addition, weekly COVID-19 email updates were sent to the Regional Community Liaison Committee and Indigenous community representatives providing up-to-date COVID-19 information, including cases and vaccination numbers.

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 and the Peace River Regional District advanced negotiations through exchanging supporting

information during this period and staff have worked to implement some of the mitigation measures for the Charlie Lake Wastewater outfall.

The Regional Community Liaison Committee, which is comprised of local elected officials and local First Nations communities, most recently met virtually for its regularly scheduled quarterly meeting on December 8, 2021. Eight local governments and four local First Nations communities (McLeod Lake Indian Band, Doig River First Nation, 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.

As part of the Site C Project, BC Hydro is working with communities to provide lasting benefits for residents of the Peace Region. In 2016, BC Hydro launched the Generate Opportunities (**GO**) Fund, an $800,000 fund to support Peace Region non-profit organizations. The GO Fund is being distributed over an eight-year period to organizations that provide services to vulnerable populations including children, families and seniors.

The GO Fund is administered by Northern Development Initiative Trust on behalf of BC Hydro. In 2021, BC Hydro distributed $75,375 to nine non-profit organizations in the Peace Region and as of December 2021, nearly $575,000 had been distributed to 65 projects since the fund was launched in 2016.

13.2 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, Dawson Creek and Chetwynd prior to COVID-19 restrictions. The Project team sent 13 notifications to the Site C business directory in 2021, which included two notifications in the final quarter of the year.

13.2.1 Community Relations and Construction Communications

BC Hydro continued to implement its construction communications program throughout 2021. 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.

Construction Bulletins

Bi-weekly construction bulletins continued to be issued throughout 2021. These bulletins are posted on the Project website and sent by email to the web-subscriber list. There were 25 construction bulletins and four quarterly construction notification letters issued in 2021, with six and one, respectively, distributed in the final quarter of the year.

Public Enquiries

In total, BC Hydro received 763 public enquiries between January 1 and December 31, 2021. The majority of these enquiries continued to be about employment opportunities on the Project, with limited construction impact concerns from local residents. Table 20 shows the breakdown of some of the most common enquiry types.

In total, BC Hydro has received more than 13,200 enquiries since August 2015.

Table 20 Public Enquiries Breakdown

Enquiry Type[22]	October 1, 2021 to December 31, 2021	2021
Employment Opportunities	28	226
Business Opportunities	11	106
General Information	56	215
Construction Impacts[23]	14	89
Other[24]	11	127
Total	**120**	**763**

13.2.2 Communications Activities

Based on a search using the media database Infomart, there were more than 650 stories about the Site C Project in B.C. news media between January 1 and December 31, 2021.

13.3 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, July 2019, September 2020 and July 2021. The next report will be issued in July 2022.

13.4 Human Health

13.4.1 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

[22] This table is a sample of enquiry types and does not include all enquiry types received.

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

[24] "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.

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 35,387 patient interactions (April 2017 to December 2021). During the last quarter of 2021, there were 3,917 patient interactions, of which 260 were occupational and 3,657 non-occupational. Several preventive health themes were promoted to workers including: influenza, COVID-19, back care and extreme cold.

From the onset of the pandemic in March 2020 to the end of 2021, 354 Site C workers had tested positive for COVID-19. As of December 31, 2021, the onsite medical clinic had administered 4,589 COVID-19 vaccinations, of which 2,233 were first doses, 1,922 were second doses, eight were third doses and 426 were booster doses.

13.5 Property Acquisitions

Property acquisitions required for the Project remain on track. Throughout 2021, BC Hydro secured the remaining land rights required for the highway re-alignment segments (Lynx Creek and Farrell Creek East) and reservoir clearing components (middle and western). BC Hydro also successfully negotiated several land acquisitions required for the reservoir and preliminary impact lines.

14 Impacts on Other BC Hydro Operations

During 2021, the operation of system storage at Williston Reservoir (including GM Shrum and Peace Canyon powerplants) was planned to meet flow releases necessary for Site C construction, and this operation continues. Water releases from the Peace Canyon generating station were maintained at or below the levels

necessary for Project construction. BC Hydro maintained adequate vacant storage in Williston Reservoir to protect Site C construction works from flows that could otherwise exceed the capacity of the diversion works.

15 Risk and Cost Management Assessment Summary and Independent Oversight

Since 2018, EY Canada has provided independent oversight for the Project, including budget oversight, schedule evaluation and risk assessment analysis. Table 21 provides a summary of the EY recommendations and BC Hydro's progress in 2021.

Table 21 EY Findings, Recommendations and BC Hydro Action Plan from 2021

	Area	Category	EY Recommendation	BC Hydro Progress
1	Risk Management	Scenario Analysis	Leverage the improvements made within risk management to provide supporting "what if" analysis for insight on certain decisions that will impact the risk profile. By providing this type of supporting analysis, with potential business cases, it will allow the decision-making process the benefit of a holistic view across the project and further highlights potential threats and opportunities associated with risk management	In Process
2	Risk Management	Opportunity Management	Opportunities require to be managed in the same way as threats to improve the probability of occurrence or maximize the potential outcome. As with threats, a plan to achieve the opportunity should be developed and closely monitored, as is the case with threats where a mitigation plan is often used.	In Process
3	Risk Management	Mitigation Tracking	Continue to develop its mitigation planning and reporting. Following the risk management enhancement plan and recent improvements within the cost risk analysis and schedule risk analysis, it's important that this work is carried on into the day-to-day management of risk.	In Process
4	Risk Management	Schedule Risk Management (Identification and Formal Documentation)	Focus on ongoing and future risks that could impact the schedule risk analysis including availability of labour and materials, safety delays, lower productivity challenges than planned and interface challenges given the pace of the critical activities ahead and increased velocity of risk realization in an accelerated construction environment.	In Process

	Area	Category	EY Recommendation	BC Hydro Progress
5	Risk Management	Schedule Risk Analysis	The risk management team should broaden their participation in Project meetings and continue to initiate and support risk assessment workshops, risk interviews, and questionnaires. EY's discussions with the risk management team will focus on ongoing and future risks that could impact the schedule risk analysis including availability of labour and materials, safety delays, lower productivity challenges than planned and interface challenges given the pace of the critical activities ahead and increased velocity of risk realization and in an accelerated construction environment.	Complete
6	Schedule Management	Schedule Baseline Maintenance	Incorporate schedule updates related to the sub-projects once the details become available to ensure that the baseline schedule remains an accurate source of information for performance reporting. The baseline maintenance work should include updated schedule narratives for the affected sub-projects and an update on any potential changes to the schedule contingency.	In Process
7	Schedule Management	Schedule Assumptions	Earthfill dam and approach channel assumptions and analysis should be revisited later in 2021 to re-validate the underpinning assumptions against advanced right bank foundation enhancement design, realized fill placement production rates, overall progress, and any other learnings from the 2021 summer construction season.	Complete
8	Schedule Management	Schedule Contingency Process	Incorporation of schedule contingency should be a discrete step in the schedule update process based on the schedule risk analysis output that includes a documented process and rationale for the contingency, a supporting narrative of the impact, and summary of all scheduling changes made. This will then increase the transparency and traceability of adding schedule contingency that is not an output from the schedule risk analysis.	Complete
9	Schedule Management	Schedule Contingency Process	While EY agrees that the overall effect of the contingency tasks incorporated to the schedule meets the intent of their stated process on the overall Project, there is an opportunity to improve the consistency of process by clearly defining how schedule contingency is selected to be applied.	Complete
10	Schedule Management	Schedule Documentation	Plan to produce a comprehensive re-baseline schedule narrative once there is more certainty in contractors' schedules. The updated schedules from contractors that reflect COVID-19 delays are a critical input to the Project schedule and are likely to inform changes to the driving critical path activities.	In Process

	Area	Category	EY Recommendation	BC Hydro Progress
11	Schedule Management	Schedule Risk Analysis - Risks Management	Workshops and discussions held through the schedule risk analysis data gathering process should be used as a forum to surface new risks or look at modification to existing risks. The estimating and scheduling team should communicate risks back to the sub-project project managers in the appropriate forum and then incorporate agreed changes into the adjusted in the risk register. Owners should continue to be assigned for ongoing management and monitoring of the identified risks. Periodic risk meetings should happen prior to the next version of the schedule risk analysis, that should then include a formal documentation and update on the risks. Further improvements to this process will be outlined in the Risk Management Enhancement Plan.	Complete
12	Schedule Management	Schedule Risk Data and Documentation	Ensure that schedule duration impacts are incorporated into the risk register and assessed appropriately as part of risk meetings and periodic risk audit process. EY recommends that the Risk Management Enhancement Plan includes more rigorous documentation requirements for the schedule risks identified to substantiate the estimates.	Complete
13	Schedule Management	Risk Management Roles and Responsibilities	Re-evaluate the role of the estimating and scheduling function within the risk analysis process. EY views the role of the estimating and scheduling function as a support role to the risk analysis and management process. Risks that are included in the schedule risk analysis should be fed exclusively from the risk register, without material revisions. Revisions to risk inputs should involve consultation with the individual risk owners. It is EY's view that the risk management function should own both the schedule risk management and cost risk management in terms of day-to-day management and analysis.	In Process
14	Commercial and Claims	Process & Procedures	As the Project continues to build out the commercial team and capability, it is recommended that all key commercial and claims-related activities are identified to ensure that there are corresponding process, guidance, and/or flow diagrams, inclusive of the minimum documentation requirements, available for use on the Project.	In Process
15	Commercial and Claims	Commercial & Claim Reporting	Consider enhancements to commercial and claims reporting to provide the level of visibility and traceability for commercial and claims-related activities that is consistent with other, similar projects of this size, scope and complexity. As EY has been providing feedback on a regular basis with respect to commercial and claims-related reporting, the Project team and EY have discussed reporting enhancements, which will be further detailed and refined in the coming months as part of a commercial management enhancement plan.	In Process

	Area	Category	EY Recommendation	BC Hydro Progress
16	Commercial and Claims	Commercial Strategy & Direction	Consistent with EY's previous recommendation to consider including a resource that has suitable background and experience in commercial and claims management, it is essential that a strong understanding of commercial risk and exposure related to known claims is in place to enable the Project to better manage and mitigate future claim activity. It is also important that a commercial strategy is developed and approved so that the Project can transition towards proactive management of commercial risks and opportunities.	In Process
17	Commercial and Claims	Claim Integration	As part of the commercial management enhancement plan, the Project team will work towards developing an approach to reporting that enables other key Project activities such as risk, cost, and schedule to leverage commercial and claims-related data. However, this is reliant on ensuring reports provide comprehensive representation of commercial risk and exposure relative to the overall Project. It is recommended that the commercial team, estimating team, and risk teams continue to define how they work together so that the claim assessment values are traceable and consistent in the cost risk analysis and schedule risk analysis values. It is therefore further recommended that the Project team seeks to understand and gather requirements for commercial and claims-related data that are required to support other key Project activities.	In Process
18	Commercial and Claims	Claim Assessments	As part of the commercial management enhancement plan, the Project team will work towards developing an approach to reporting that provides transparency and traceability with respect to internal assessed values. However, this is reliant on the accuracy and availability of internal Project assessments of claim. It is therefore recommended that the Project team seeks to develop an approach to internal claim assessments which includes the development of internal claim assessments that correspond to individual claims and which further consider a range of outcomes such as best case, worst case, and most likely case scenarios.	In Process
19	Commercial and Claims	Commercial Management Plan Development	Continue to work towards finalizing and implementing the Commercial Management Plan by April 2021 to ensure that the Project can benefit from a documented approach to commercial management.	Complete
20	Commercial and Claims	Commercial Management Team Resourcing	Continue internal and external recruiting activities to open positions on the commercial management team by June 2021.	Complete

	Area	Category	EY Recommendation	BC Hydro Progress
21	Commercial and Claims	Commercial Management Team Resourcing	Consider including a resource that has suitable background and experience in commercial and claims management to support implementation and oversight of commercial and claims-related activities occurring on the Project. Furthermore, the Project team should provide clarity on the commercial management team roles, their respective responsibilities, and the processes that must be used by the sub-projects in order to enable clear oversight, guidance, and structure for commercial and claims-related activities.	In Process
22	Commercial and Claims	Claims Dashboard Development	Proactively consider future implementation of a process to ensure periodic compliance and oversight of data entered to ensure accurate and complete data is the source of the claims dashboard.	Complete
23	Commercial and Claims	Claims Dashboard Development	Proactively consider opportunities in the claims dashboard that will provide a clear understanding of the initial assessed values, current assessed values, as reported by contractors and BC Hydro, and when applicable, the agreed settlement value to facilitate valuable insight into the trends associated with respect to claims for change assessed and settled values.	Complete
24	Commercial and Claims	Project Commercial Training	Continue to work towards delivering commercial training to all sub-projects and key functions that support the Project.	Complete
25	Commercial and Claims	Commercial Management Plan Implementation	Following implementation of the Commercial Management Plan, proactively transition focus to practical application of the Commercial Management Plan on the basis that the actual and anticipated volume of claims for changes may require refinement and improvement of the Commercial Management Plan activities and tools developed.	Complete
26	Commercial and Claims	Commercial Management Plan Implementation	Consider how the commercial management team can work to establish a leading role in claims administration activities which encourages the various sub-project teams to maintain responsibility and accountability while ensuring that guidance and input on claims administration activities is actively sought from the commercial management team.	Complete
27	Cost Risk Analysis	Risk Resourcing	Both EY and the Milburn report opined on the need for a larger risk management function on the Project.	Complete
28	Cost Risk Analysis	Risk Processes	It is important that the end-to-end risk management process is reviewed and revised to incorporate all of EY's previous recommendations and any new opportunities for improvements identified. This applies to the collection, maintenance, and analysis of both cost and schedule risk.	Complete

	Area	Category	EY Recommendation	BC Hydro Progress
29	Cost Risk Analysis	Application of Risk Methodology	The Project team agrees that in addition to revising the process there is a requirement that associated guidance needs to be changed to support the wider Project when engaging with risk. The Project team will also develop templates and supporting tools to aid risk owners when developing quantitative estimates to support the development of cost and schedule impacts to the Project.	Complete
30	Cost Risk Analysis	Risk Documentation	As part of the risk management enhancement plan, the Project team intends to revise its risk documentation which includes risk management plans, analysis processes, and development of a calendar of risk activities throughout the year. Developing a regular calendar of activities will allow the Project team to produce analysis with greater ease as these will not be triggered by request from the Treasury Board; the Project team will be updating and maintaining the risk register as part of regularly schedule activities, the output of which will be available at regular times.	Complete
31	Cost Risk Analysis	Risk Training	The Project team has agreed that a priority element of the risk management enhancement plan is to ensure that the risk owners are trained and continually updated on the qualitative aspects of risk management, including scoring of risks in terms of probability and impacts and development of mitigation plans. The Project team needs to complete a schedule of training which extends to the wider Project team. EY advised that this training should be targeted, and an assessment of risk knowledge be undertaken to identify each group's needs. Upon completion of this assessment a tiered training program will be undertaken. It is EY's opinion that this should be the focus of the Project team in the next three months as once there is a consistent understanding of risk developed through workshops or on a sub-project by sub-project basis.	Complete
32	Cost Risk Analysis	Risk Reporting	In line with EY recommendations and the Milburn report, EY and the Project team are exploring a range of risk reporting options to meet these recommendations. This includes a mixture of subjective and objective reporting requirements to ensure that reporting is not constrained purely on the basis of its current score. The intent is to also widen the artifacts included in these reports. A pilot report will be produced and discussed with Project Assurance Board to ensure this meets the standard expected going forward.	Complete
33	Cost Risk Analysis	Risk Governance	The Project team will review its current governance of risk including the composition of its risk committee and the associated agenda. Furthermore, the Project team's risk management function will begin to attend sub-project meetings to gain further knowledge of potential emerging risks. The Project team's current process relies on the teams coming to the risk management function to highlight new risks. Having the risk team attend any Project meetings allows the risk management function to integrate risks across the Project on a more enterprise-wide basis.	Complete

16 Look ahead – January 2022 to December 2022

16.1 Construction

The following is a look ahead of activities planned to take place in 2022:

16.1.1 Key Milestones

Table 22 shows the key milestones for activities planned in 2022.

Table 22 Key Milestones planned in 2022

Milestone	Performance Measurement Baseline (June 2021)	Plan Date (Control Date[25])	Forecast[26]	Status[27] (Measured by Month)
Generating Station and Spillways				
Intake Operating Gate and Intake Maintenance Gate Supplied	18-Nov-21	18-Nov-21	05-Apr-22	Late
Unit 4 - Stay Ring and Spiral Case Assembled	21-Jan-22	21-Jan-22	06-Apr-22	Late
Spillway Operating Gates and Guides Supplied	28-Oct-21	28-Oct-21	30-Apr-22	Late
Low Level Outlet Gate and Maintenance Gates and Guides Supplied	07-Apr-22	07-Apr-22	30-Apr-22	At Risk
Headworks Gantry Crane Commissioned and Ready for Travel Load Tests	14-Jun-22	17-Oct-22	09-Oct-22	On Track
Balance of Plant				
Contract Award - Balance of Plant Architectural	17-Dec-21	28-Feb-22	06-Jan-22	Complete
Contract Award - Balance of Plant Out structures	28-Jan-22	28-Jan-22	07-Jan-22	Complete
Contract Award - Balance of Plant HVAC	14-Mar-22	31-Mar-22	14-Mar-22	On Track
Contract Award - Balance of Plant Fire Protection	18-Feb-22	31-Mar-22	14-Mar-22	On Track
Main Civil Works				

[25] Control date reflects plan, adjusted for approved changes to milestone dates.
[26] As of December 31, 2021.
[27] As of December 31, 2021.

Milestone	Performance Measurement Baseline (June 2021)	Plan Date (Control Date[25])	Forecast[26]	Status[27] (Measured by Month)
Earthfill Dam Placement to Elevation 433m Completion	16-Sep-22	16-Sep-22	31-Aug-22	On Track
Turbines and Generators				
Unit 3 - Stay Ring and Spiral Case Assembled	08-Nov-21	08-Nov-21	08-Feb-22	Late
Unit 5 - Stay Ring and Spiral Case Assembled	23-Mar-22	30-Mar-22	24-Mar-22	On Track
Unit 6 - Stay Ring and Spiral Case Assembled	25-May-22	25-May-22	06-Jun-22	At Risk
Unit 1 - Spiral Case Embedded and Generator 2nd Stage Concrete Complete; Pit Free	28-Jan-22	28-Jan-22	28-Jun-22	Late
Highways				
Contract Award - Grading, Paving and Bridge Decommissioning	01-Mar-22	31-May-22	31-May-22	On Track
Construction Finish – Hudson's Hope Berm	15-Jul-22	15-Jul-22	15-Jul-22	On Track
Construction Finish - Highway and Bridge Halfway River	31-Aug-22	31-Aug-22	31-Aug-22	On Track
Construction Finish - Lynx Creek	31-Oct-22	31-Oct-22	31-Oct-22	On Track
Construction Finish - Farrell Creek	31-Oct-22	31-Oct-22	31-Oct-22	On Track
Transmission				
5L6 Transmission Line In-Service Date	27-Jul-22	27-Jul-22	03-Mar-22	On Track

16.1.2 Main Civil Works

In the upcoming year, the focus of the activities for the main civil works scope of work will be primarily on construction of the earthfill dam and advancing placements of dam fill materials. This work includes maximizing the excavation of materials from gravel sources for construction of the shell, as well as large production of till excavation and transportation from the 85th Avenue Industrial Lands.

In early 2022 (winter to mid-spring), the excavation of the approach channel will be a focus of work to be completed. This work can be performed in the cold winter months, and is forecast to be completed in advance of the summer construction season.

Completion of the right bank drainage tunnel final concrete will continue in 2022 and is forecast to be completed this year.

16.1.3 Right Bank Foundation Enhancements

Completion of the spillway pile enhancements within the spillways is scheduled to be completed in the spring of 2022, with the installation of the piles downstream of the powerhouse commencing in the spring and work continuing throughout the year. The powerhouse pile installations are scheduled to be completed in spring 2023.

Within the approach channel, construction of the enhanced lining, drainage and instrumentation will commence in the spring and continue throughout the year. The work is scheduled to be completed in summer 2023.

16.1.4 Generating Station and Spillways

Over the next year, key activities include:

- Powerhouse: complete all second stage concrete for units 1 to 4 (concrete to main floor of powerhouse complete);
- Intakes: complete first stage concrete for all intakes;
- Penstocks: complete all penstock steel and complete all penstock concrete;
- Spillways headworks: complete all spillway first stage concrete except hoist houses. Complete all spillway chutes; and
- Spillways stilling basin: complete all slabs.

16.1.5 Balance of Plant

Over the next year, all contractors will mobilize to site, and start installing the bulk of the electrical and mechanical components. The contractor-designed elements will be submitted for review and the offsite manufacturing of piping will commence. The permanent upstream fishway first stage concrete is scheduled to be completed.

16.1.6 Turbines and Generators

The contractors' factory in São Paulo, Brazil will continue production of the remaining turbines and generators components throughout 2022. Through 2022, design, procurement and manufacturing is expected to be completed for the turbines and generators contract.

Based on the powerhouse construction schedule, the contractor will continue with installation of turbine and generator components in the powerhouse until all units are in service.

16.1.7 Transmission and Substation

Stringing of the second transmission line is scheduled to be completed in 2022 and the line will be energized.

16.1.8 Highways and Hudson's Hope Shoreline Protection Berm

Construction of all six Highway 29 segments (Cache Creek/Bear Flats, Halfway River, Farrell Creek East, Farrell Creek, Dry Creek and Lynx Creek) are scheduled to be completed in 2022.

Relocation of all BC Hydro distribution lines and telecommunications infrastructure onto the new Highway 29 alignments and removal of the old BC Hydro distribution and telecommunications infrastructure is scheduled to be completed.

A contract for the decommissioning of Highway 29 segments will be awarded and construction work is scheduled to begin.

Construction of the Hudson's Hope shoreline protection berm is scheduled to be completed in 2022.

The construction of boat launches at Lynx Creek and Halfway River are scheduled to begin in 2022.

A procurement for the reclamation of the Portage Mountain Quarry is scheduled to be initiated in 2022.

16.1.9 Reservoir

Clearing design work will continue in 2022 for the Watson Slough area. Two additional reservoir clearing contract packages are scheduled to be procured and awarded in 2022. The construction of shoreline contouring and for the relocation of the existing transmission line will continue through 2022.

16.1.10 Infrastructure and Site Operations

Worker Accommodation

BC Hydro will continue to assess potential impacts to the worker accommodation lodge bed requirements in 2022 due to the uncertainty associated with the progression of the COVID-19 pandemic. Initial modelling suggests that there will be an increase in the forecast peak capacity required in 2022. To support the Project, additional off-site lodging options are under review for 2022 should they be required.

Debris Management

BC Hydro's debris management contractor will mobilize to site near the end of March 2022 to re-string the upstream Peace River debris boom and launch the barge. Debris management operations will take place as required on the Moberly and Peace Rivers from April 2022 to approximately November 2022.

16.1.11 Engineering

The engineering team will continue to provide technical and construction support to the Project through 2022, and will focus on the achievement of the contractors' schedules for the foundation enhancements, main civil works contract, the generating station and spillways civil works contract, and the mobilization of the multiple balance of plant contracts. Further, the engineering design team will continue to advance the implementation design for the balance of plant and foundation enhancements and the commencement of record drawings in accordance to the current Project requirements. Integration and review of the large cranes, hydromechanical, balance of plant, and turbines and generators will be ongoing throughout 2022.

Key areas on the main civil works contract will be supported including the ongoing construction of the earthfill dam and completion of the approach channel excavation. Additional support will be provided on an as-needed and when-required basis for all other work activities required to achieve the Project schedule.

With respect to the Highway 29 re-alignment, activities will include the continued technical support and monitoring for the construction activities.

The engineering team will continue to provide the Technical Advisory Board and independent dam experts with Project and construction updates through 2022.

In the year ahead, the remaining enhancements to the water-tightness of the approach channel will be advanced through final design and the team will continue to release construction drawings for the balance of plant contracts.

16.2 Quality Management

In 2022, the quality management team will continue to work with suppliers and contractors to ensure they are satisfying their obligations with regards to quality control of their work. Important areas of focus will include monitoring contractor

quality control and assurance resources at site, auditing the materials testing laboratories at the site, and collating quality documentation for completed manufacturing and site work(s) to facilitate handover of work areas and the transition between construction and commissioning.

16.3 Safety and Security

Safety priorities for 2022 will continue to focus on safety hazard identification and mitigation strategies for construction of the earthfill dam, the right bank foundation enhancements, and continued build-out of the generating facilities (intakes, penstocks, powerhouse, headworks and spillways). The turbines and generators contractor is actively working in the powerhouse, with a comprehensive welding safety program. The two balance of plant contractors for the electrical and mechanical work have also started working in the powerhouse. BC Hydro will continue to focus on its Contractor Safety Program, ensuring current and new contractors are fulfilling their safety responsibilities including safety verifications, prime contractor audits and incident investigations.

16.4 First Nations Consultation

Efforts will continue in 2022 to conclude impact benefits agreements with the remaining First Nation communities with whom BC Hydro has not yet been able to achieve negotiated 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 reservoir inundation and Highway 29 realignment.

16.5 Permits and Government Agency Approvals

Permits and licences are required for various construction activities to be undertaken in 2022. Approximately 77 permit applications are anticipated to be submitted for approval in this time frame. 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 Land, Water and Resource Stewardship (formerly 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 (as allowed given current COVID-19 protocols) with BC Hydro, the main civil works contractor, Independent Engineer and Independent Environmental Monitor regarding Leave to Construct approvals;
- Proactive key stakeholder and First Nations community consultation on Environmental Assessment Certificate condition amendment requests.

16.6 Environment

Site environmental monitoring and mitigation work will continue through 2022. 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. Experts in wildlife, vegetation, physical environment

and fisheries will continue to collect field data and install mitigation features, such as constructed wetlands and fish habitat offsets.

On-site compliance resources will continue to perform daily inspections and work with contractors to ensure environmental compliance. Compliance staff 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, site staff will work closely with the contractors to ensure an immediate focus on environmental compliance.

16.7 Community Engagement and Communications

Community engagement and communication will continue to be a priority with adjustments made in response to the evolving state of the COVID-19 pandemic, including the continued use of virtual presentations and virtual events.

The Regional Community Liaison Committee will continue to meet at least three times to discuss Project progress and areas of community interest. 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 virtual business and chamber of commerce meetings in Fort St. John, Dawson Creek, Chetwynd and Prince George. In addition, Project update virtual presentations will be provided to various organizations as opportunities arise. Discussions will continue with the Peace River Regional District to reach a community measures agreement.

16.8 Property Acquisitions

Over the next year, BC Hydro will continue the property acquisition efforts for the remaining private property owners that will be impacted by reservoir inundation and preliminary impact lines.

16.9 Cost Plan by Quarter F2022 and F2023

Table 23 Annual Cost Plan ($ million Nominal)
Reporting Period: January 2022 to December 2022

Description	June 2021 Approved Budget	F2022 Q4	F2023 Q1	F2023 Q2	F2023 Q3	Total for Reporting Period
Total Project Costs[28]	16,000	577	663	771	542	2,552

16.10 Material Project Risks and Opportunities

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

[28] The amounts are based on the Service Plan filed in February 2022.

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Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

Appendix A

Site Photographs

Figure A-1 An aerial view of the Site C penstocks and intakes under construction (January 2021)

Figure A-2 Unit 1 turbine runner arrives at Site C after travelling from Sao Paulo, Brazil, by ship to Prince Rupert, and transported on a customized truck to the project site (January 2021)

Figure A-3 **Powerhouse steel superstructure construction. The powerhouse construction also includes concrete placements at the powerhouse, intakes and spillways, and the installation of penstock segments (February 2021)**

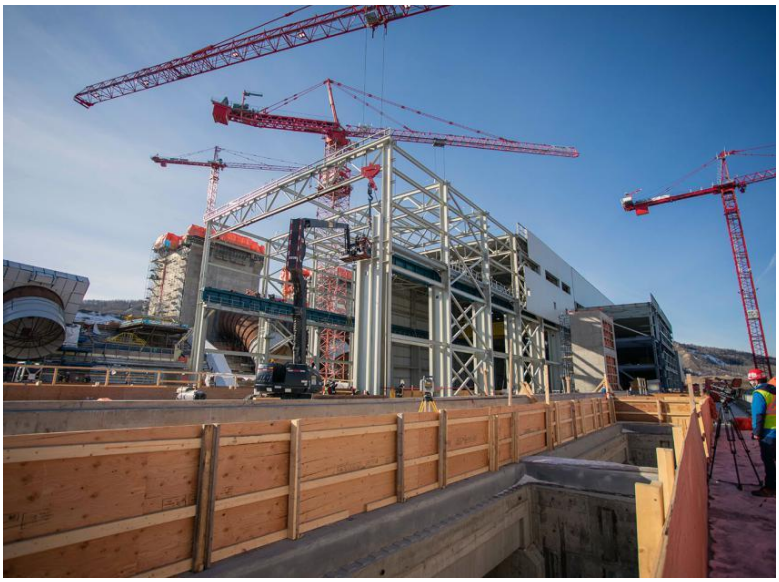

Figure A-4 **The upstream and downstream cofferdams, which divert the Peace River through the two diversion tunnels (February 2021)**

Figure A-5 **Girder installation is complete, and workers remove scaffolding from the Halfway River bridge (March 2021)**

Figure A-6 **The last of 205 transmission towers on the second transmission line was completed at the end of March – eight months ahead of schedule (March 2021)**

Figure A-7 The spillways, headworks and stilling basins (April 2021)

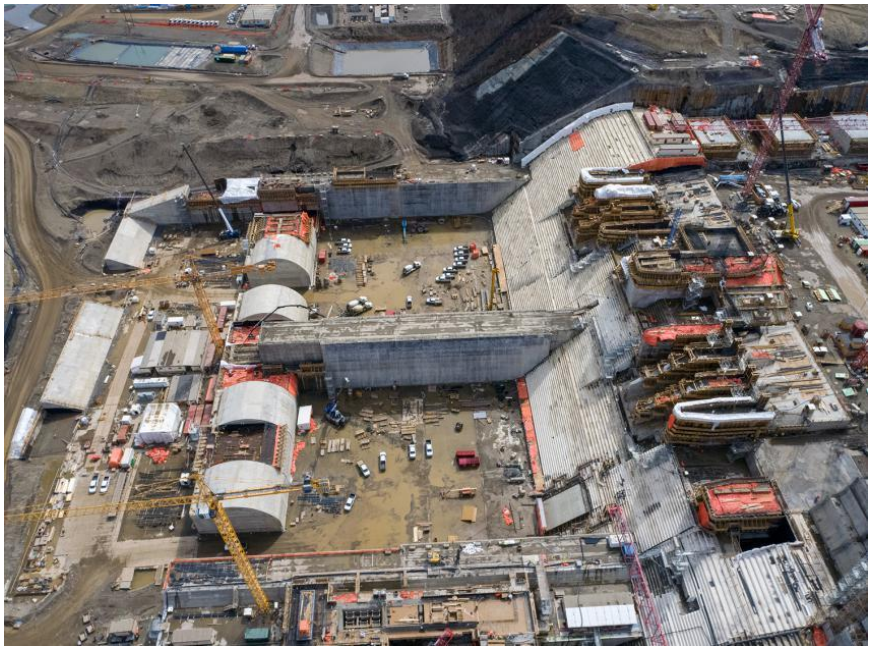

Figure A-8 Transmission towers for two new transmission lines stand side-by-side above the completed Site C substation (April 2021)

Figure A-9 Crews place roller-compacted concrete on the dam and core buttress (May 2021)

Figure A-10 Halfway River bridge showing cast-in-place bridge deck construction. The new bridge is over one kilometre long (May 2021)

Figure A-11 An aerial view of the installation underway on the Unit 5 intake transition penstock section (May 2021)

Figure A-12 Workers inspect the roller-compacted concrete at the dam and core buttress after the formwork is removed (June 2021)

Figure A-13 An upstream view of the approach channel at top left and the powerhouse, generating station, and spillways at centre (June 2021)

Figure A-14 An aerial view of the headpond and debris boom where a barge is used for clearing debris materials from the boom (July 2021)

Figure A-15 Bridge formwork under construction at the Dry Creek section of Highway 29 (July 2021)

Figure A-16 Penstocks for units 1, 2 and 3 (July 2021)

Figure A-17 **Construction progresses at the spillways headworks east low-level outlet gate. The spillways will allow the passage of large volumes of water from the reservoir into the river channel downstream (July 2021)**

Figure A-18 **A top view (from right to left) of the units 1 to 6 intakes and penstocks in varying stages of construction. Unit 4 is going to be the last to be built (July 2021)**

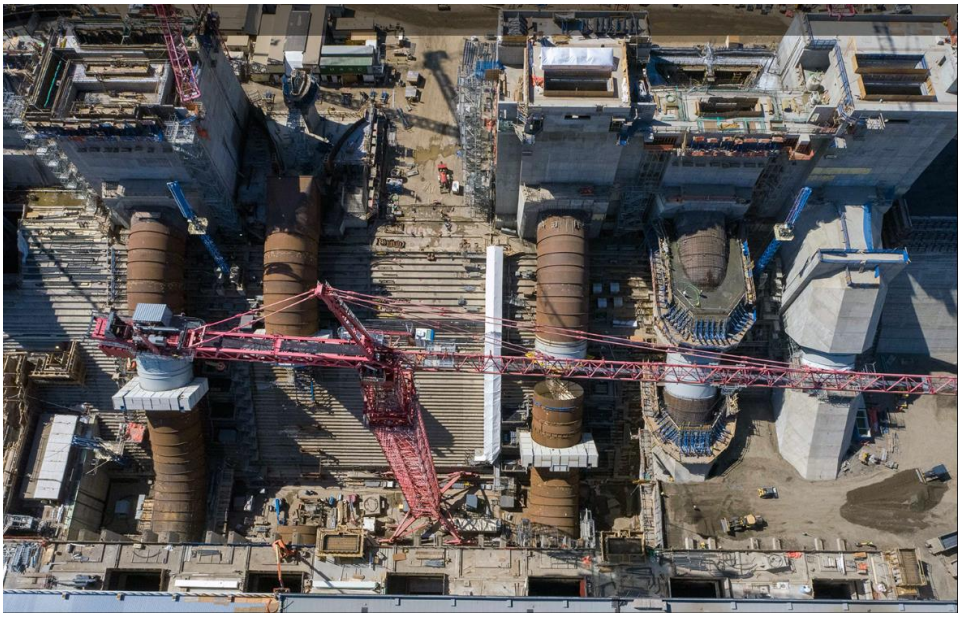

Figure A-19 Glacial till is extracted at the 85th Ave. Industrial Lands and sent by conveyor belt to the dam site (August 2021)

Figure A-20 Highway 29 at Farrell Creek East (October 2021)

Figure A-21 Roller-compacted concrete buttress (October 2021)

Figure A-22 Dry Creek bridge alignment on Highway 29 showing the formwork and rebar for the first concrete deck placement (Fall 2021)

Figure A-23 Roller-compacted concrete ramps are removed from the dam and core buttress, and insulation is installed on the upstream side of the buttress (Fall 2021)

Figure A-24 Steel girder installation is complete on the Lynx Creek bridge (November 2021)

Figure A-25 Powerhouse (December 2021)

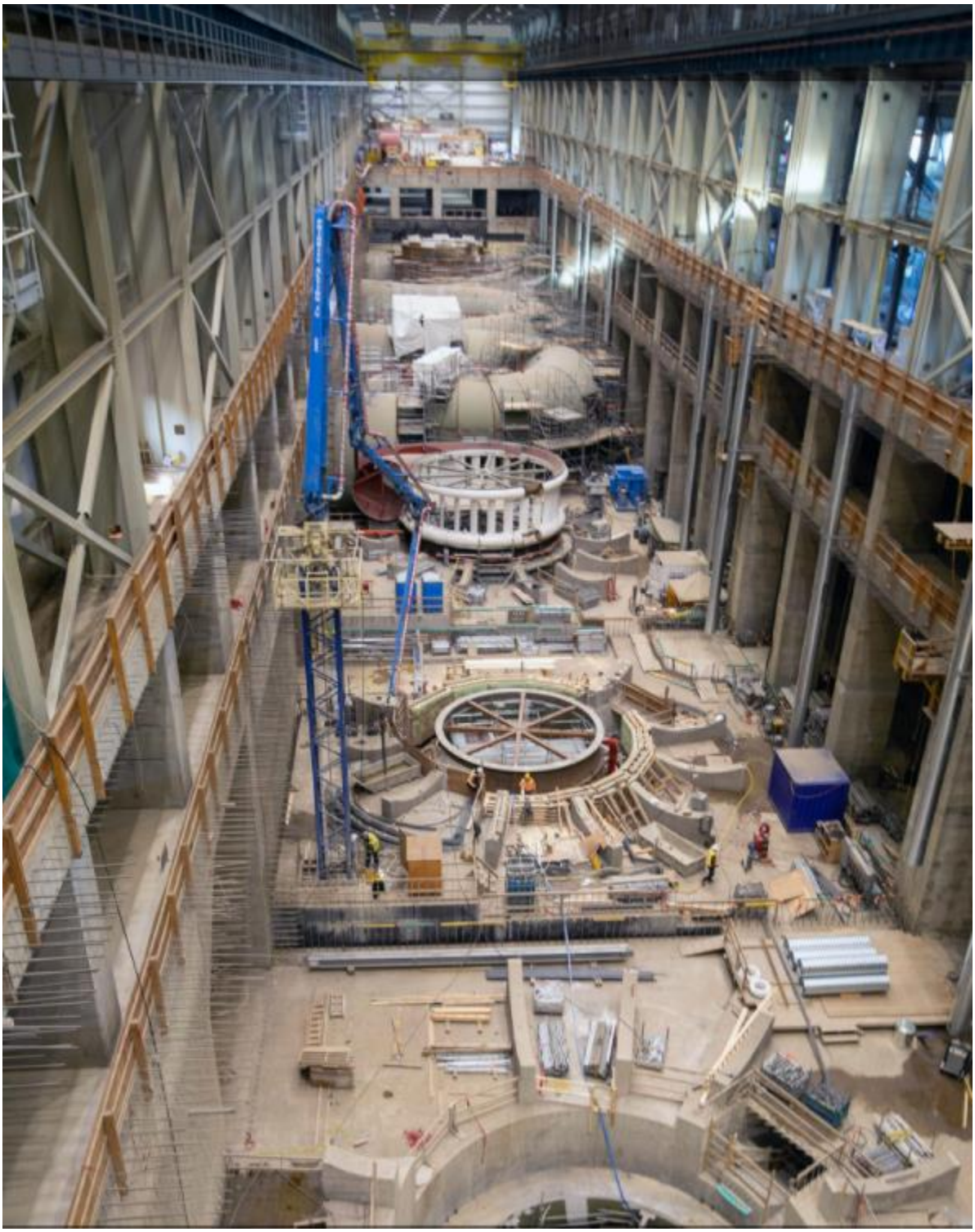

Figure A-26 Approach channel (December 2021)

Figure A-27 A view of the dam construction site with the approach channel pictured on the left (December 2021)

Figure A-28 Crews install the unit 1 pit liner and spiral case inside the powerhouse (December 2021)

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Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

Appendix B

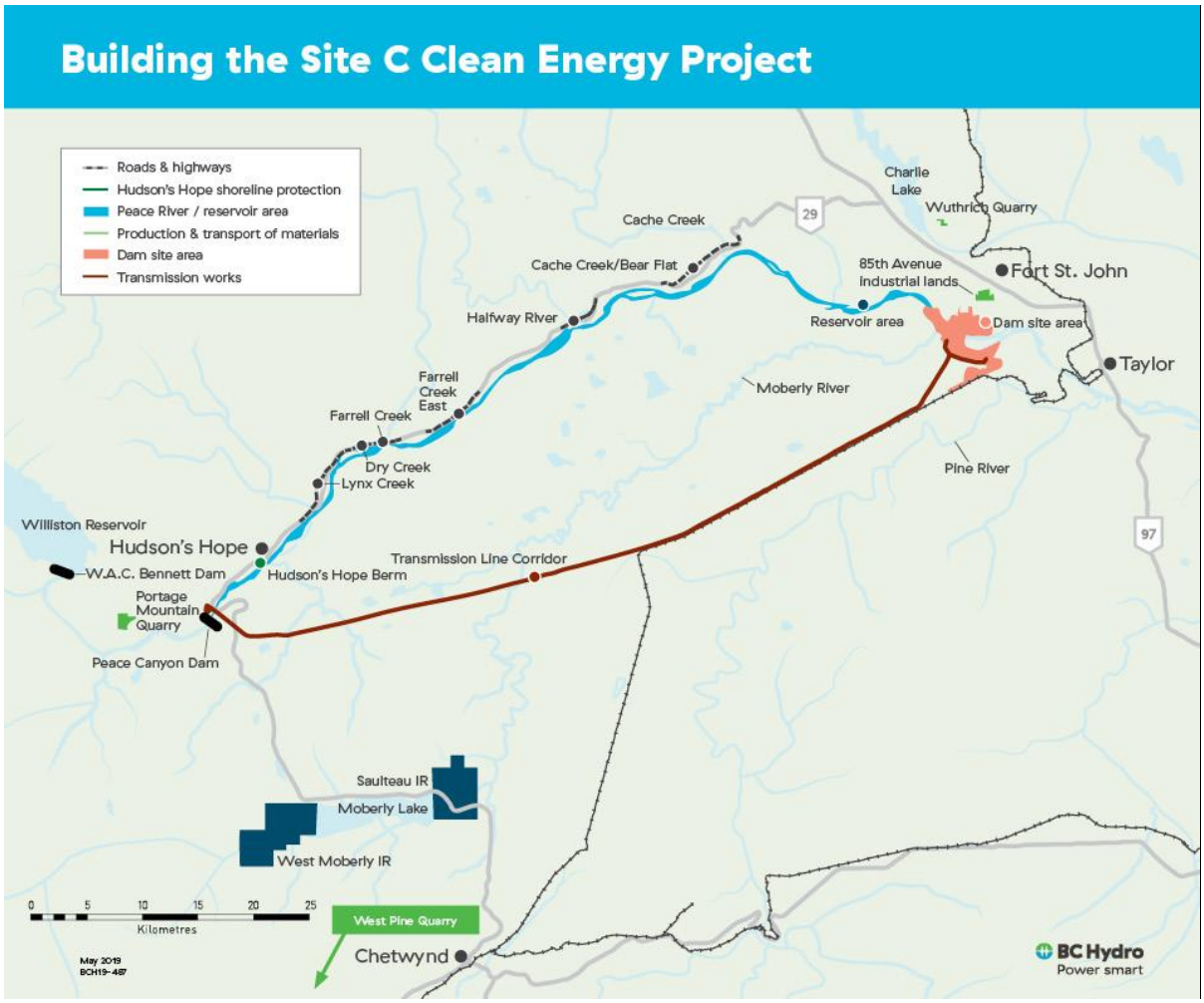
Work Completed Since Project Commencement in 2015

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

- Site preparation, including onsite access roads;
- Clearing of the left and right banks at the dam site and clearing of the lower reservoir area;
- Construction of the worker accommodation lodge and Peace River construction bridge;
- Powerhouse excavation, and the placement of 650,000 cubic metres of roller-compacted concrete in the powerhouse buttress;
- Spillways excavation, and the placement of 600,000 cubic metres of roller-compacted concrete in the spillways buttress;
- Construction of dam site access public roads;
- Construction of the Site C viewpoint;
- Construction of 50 affordable housing units in Fort St. John;
- Fish habitat enhancements downstream of the dam site;
- 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 water from within the foundation under the powerhouse, spillways and dam buttresses and will eventually be connected to services within the powerhouse;
- Clearing activities in the lower reservoir;

- Completion of two river diversion tunnels, which are used to reroute a short section of the Peace River to allow for the construction of the main earthfill dam;
- Completion of the upstream and downstream cofferdams;
- Construction and commissioning of the temporary fish passage facility;
- Diversion of the Peace River around the Site C construction site;
- Completion of the Peace Canyon 500 kV gas-insulated switchgear expansion to enable connection of Site C to the BC Hydro electrical system;
- Completion of the Site C substation and first of two new 500 kV transmission lines;
- Completion of the finishing concrete work inside the 454-metre-long left bank drainage tunnel;
- Dam and core excavation, and the placement of 450,000 cubic metres of roller-compacted concrete in the dam and core buttress, marking the completion of the Project's overall roller-compacted concrete placement program. In total, nearly 1.7 million cubic metres of roller-compacted concrete has been placed since 2017; and
- Completion of the steel super-structure for the powerhouse.

Figure B-1 Site C Project Components



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Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

Appendix C

Safety and Security

Serious Safety Incidents

The 25 serious incidents that occurred during this reporting period include:

1. Cord reel fell from the overhead door in the main service bay area.
2. A worker was observed standing inside an operating conveyor hopper.
3. A worker slipped, fell and fractured their tibia, resulting in a lost time incident due to the need for surgery.
4. While a guyed transmission tower was being lifted, a 7.7 kilograms wedge block fell within the work area zone from 18 metres above.
5. A ventilation system failure within the left bank drainage adit, resulted in silica exposure to exceed occupational exposure limits. Workers who may have been exposed to higher levels of silica were encouraged to record the incident with WorkSafeBC for possible future claims.
6. A worker was observed not being tied off to an approved anchor point and failed to follow the fall protection plan while working on top of the bulkhead.
7. A worker was observed not being tied off to an approved anchor point and failed to follow the fall protection plan while walking on top of a three-metre-high bulkhead.
8. A worker was standing on unsecured rebar approximately 1.2 metres above ground level when the rebar began to fall forward forcing the worker to jump down. The worker suffered a lower leg injury when they hit the ground requiring surgery.
9. A worker was helping to load a conveyor onto a lowbed trailer, which slipped and pinned the worker between the lowbed trailer and conveyor. The worker is expected to make a full recovery.

10. A zoom boom operator drove off the edge of Septimius Siding Road causing the zoom boom to rollover into a ditch. The operator sustained minor lacerations.
11. A worker was removing a tire on a water truck and a sudden pressure released from the tire, which forced the impact wrench to contact the worker.
12. Two workers were changing a 60-pound deflector plate on a concrete mixer in the batch plant, which dropped and contacted a worker's knee. The equipment was not properly locked-out and the workers did not have proper fall protection.
13. A worker was attempting to free a large rock wedged between the inner and outer tires when the inner tire suddenly failed and released pressure. The worker suffered a minor injury to their hand.
14. A worker was observed working from a scaffold platform that was approximately 15 feet high. The worker was wearing fall protection harness with a lanyard connected to it, but the lanyard was not connected to an anchor point.
15. During the installation of section 6 of the unit 5 penstock, a lower portion of the penstock moved about 100 mm out of its original position on the saddles.
16. A trailer contacted a van door, forcing a worker to jump out of the way.
17. A worker was walking on rebar approximately 40 feet in elevation without fall protection.
18. A handfaller was struck by a falling tree. The worker sustained serious injuries.
19. A worker at Dry Creek was struck by a section of the bridge deck formwork that was lifted during extreme wind.
20. A contractor's crushing plant was running without a mechanical exhaust ventilation to control the release of respirable crystalline silica dust.
21. Scaffold was being prepared for removal and was not secured for 80km/hour winds resulting scaffold being blown over.

22. There were several welding and gouging activities in Unit # 3 area at the transition of the mechanical floor into the coupling chamber which caused the exhaust duct to burn.
23. A 100 lbs propane tank had a leak in the hose leading to the regulator.
24. A worker made a non-permitted, unplanned and high risk entry into an oilfield rental tank.
25. A frost fighter had mechanical failures which set off a fire. The fire caused the heater hose to burn towards the insulated tarp and wooden formwork in the headworks area.

All Injury Incidents

The 56 injury incidents that occurred during this reporting period include five lost-time injury and 51 medical attention requiring treatment injuries. Note that serious incidents resulting in an injury will be listed in both the list of serious incidents and the list of All Injury Incidents.

Lost time injury:

1. A worker slipped, fell and fractured their tibia resulting in lost time due to required surgery.
2. A worker was standing on unsecured rebar approximately 1.2 metres above ground level when the rebar began to fall forward forcing the worker to jump down. The worker suffered a lower leg injury when they hit the ground requiring surgery.
3. A worker was helping to load a conveyor onto the lowbed trailer, which slipped and pinned the worker between the lowbed trailer and conveyor.
4. A handfaller was struck by a falling tree. The worker sustained serious injuries.

5. A worker at Dry Creek was struck by a section of bridge deck formwork that was lifted during extreme wind.

Medical attention requiring treatment injuries:

1. A worker pinched their finger when a tool slipped. The worker required stitches.
2. A worker slipped and their head contacted the blade of a grader. The worker suffered a laceration.
3. A worker accidently triggered the pressure water hose and suffered a laceration to their shin.
4. A worker lost their footing on rebar then fell and suffered a laceration to their hand.
5. A worker slipped on ice and their knee contacted the running board of a light duty truck. The worker suffered a laceration.
6. A worker slipped while descending on scaffold stairs and dislocated their shoulder.
7. A worker pinched their finger between two panels. The worker suffered a laceration.
8. A worker's tool slipped and cut their hand that required stitches.
9. A worker's hand got caught between a seat band and wheel hub and the worker suffered an injury to their finger.
10. A worker was pulling nails from a piece of lumber and punctured their finger by a tie wire.
11. A metal dumpster lid closed by wind and worker fractured their hand.
12. A worker was walking along the roller-compacted concrete steps and brushed against a sharp wire. The worker suffered a laceration to their shin.

13. Two metal foreign objects were removed from a worker's eye by a medical practitioner.
14. A worker slipped while descending from a ladder that had a protruding nail. The worker suffered a laceration to their upper leg.
15. A worker was cutting coil rod with a band saw when the material fell forward after the cut and the deenergized band saw made contact with their finger. The worker suffered a laceration.
16. A worker lost their footing on an uneven surface. The worker sprained their ankle.
17. A worker was working underneath a formwork deck installing bolts with an impact drill when a foreign body entered their eye.
18. A pressure washer contacted a worker's boot which caused a small puncture. The worker suffered a wound to their leg.
19. A worker was pinched between a formwork component and a drill. The worker suffered a fracture to their finger.
20. A worker lost their footing on rebar then fell. The worker suffered a laceration to their arm.
21. A worker was drilling into a formwork when the drill jammed, and their finger contacted the flange of the drill. The worker received a laceration to their finger.
22. A worker was standing on unsecured rebar approximately 1.2 metres above ground level when the rebar began to fall forward forcing the worker to jump down. The worker suffered an injury to their lower leg when they hit the ground requiring surgery.
23. A worker suffered an allergic reaction to an insect bite.
24. A worker's wrist contacted the top of the vertical dowels. The worker received a laceration to their wrist.

25. A zoom boom operator drove off the edge of Septimius Siding Road, causing the zoom boom to rollover into a ditch. The operator sustained minor lacerations.

26. A worker pinched a finger when a haul truck belly pan was dropped during installation.

27. A worker scraped their arm on a piece of coil rod. The worker suffered a laceration that required stitches.

28. A worker scraped their elbow the end of an uncapped 35 mm rebar. The worker suffered a laceration that required stitches.

29. A worker was grinding steel tubing and steel debris entered their eye.

30. A worker was cutting rebar with a portable band saw, which jumped and contacted the worker's left index finger. The worker suffered a laceration that required stitches.

31. A worker was rigging panels, as the crane hoisted the panel, the worker pinched their finger between the two formwork walers. The worker suffered a laceration that required stitches.

32. A worker was using a three-pound hammer to punch holes into rubber belting when they struck and fracture their finger with the hammer.

33. A worker was stepping backwards off of rebar cage and tripped, which led to their hand contacting the corner of a coil rod plate. The worker suffered a laceration that required stitches.

34. A worker was using a skill saw when the blade got caught and moved forward. The worker suffered lacerations in two fingers that required stitches.

35. While a worker was rigging a panel, it pivoted and caused the worker to pinch their finger between the panel and concrete wall. The worker suffered a laceration that required stitches.

36. A worker slipped and fell on their knee while exiting a trailer.
37. A worker was attempting to free a large rock wedged between the inner and outer tires when the inner tire suddenly failed and released pressure. The worker suffered a laceration to their hand that required stitches.
38. A worker was using a utility knife to cut strings used to tie down a vacuum hose stack when the knife slipped. The worker suffered a laceration on their arm that required stitches.
39. A worker was performing routine maintenance on the vertical shaft impactor on a crusher. The worker suffered a laceration that required stitches.
40. While a worker was dry packing leak-stopping cement on the dam core the powder got into their eyes. The worker suffered eye irritation.
41. A worker stepped on uneven ground and experienced discomfort in their ankle.
42. A worker was nailing a block for a ledger when they struck and fractured their finger with the hammer.
43. When pulling a welding cable from a cable tree, the cable came into contact with the workers upper lip causing a laceration that required stitches.
44. A worker slipped and tripped on an inclined surface. The worker suffered a fracture to their ankle.
45. A worker was removing a bolt on a deck, which caused the deck to drop. The worker suffered a fracture to their finger.
46. A worker was loading lumber by hand onto forks of a loader when their left hand contacted the tip of the forks. The worker suffered a fracture to their finger.
47. A worker slipped on ice. The worker dislocated their finger.

48. A pressure washer contacted a worker's lips which caused a small laceration that required stitches.

49. An air hose whipped a worker on their nose causing a laceration that required butterfly strips.

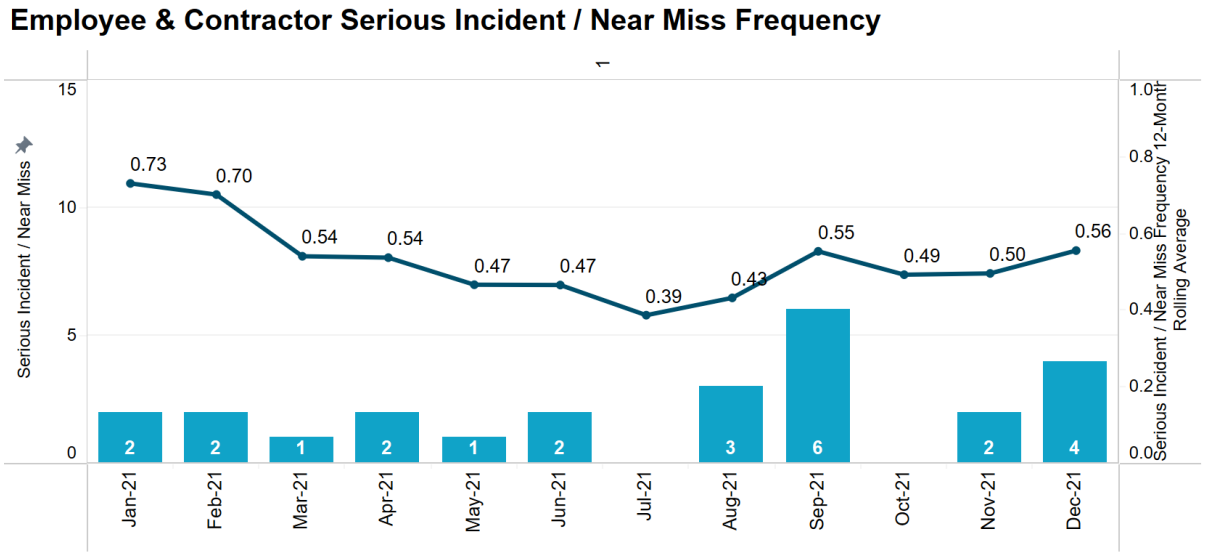
50. A worker suffered back strain while operating a haul truck with malfunction seat belts.

51. A worker's tool slipped and cut their hand. The worker required stitches.

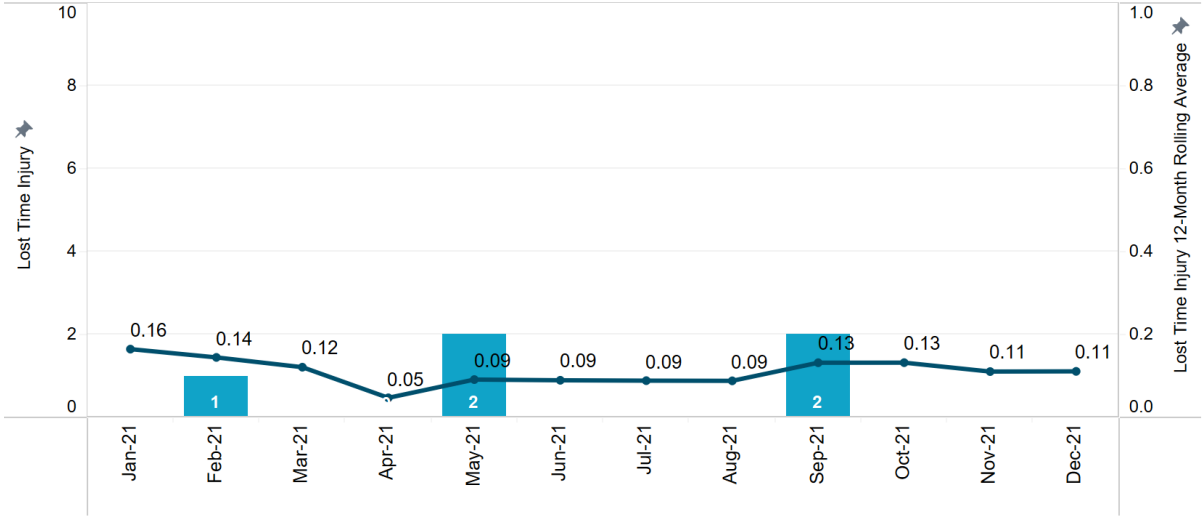
Safety Performance Frequency Metrics

Figure C-1 provides information on employee and contractor serious incidents/near miss frequency, lost-time injury frequency and all injury frequency as of December 31, 2021.

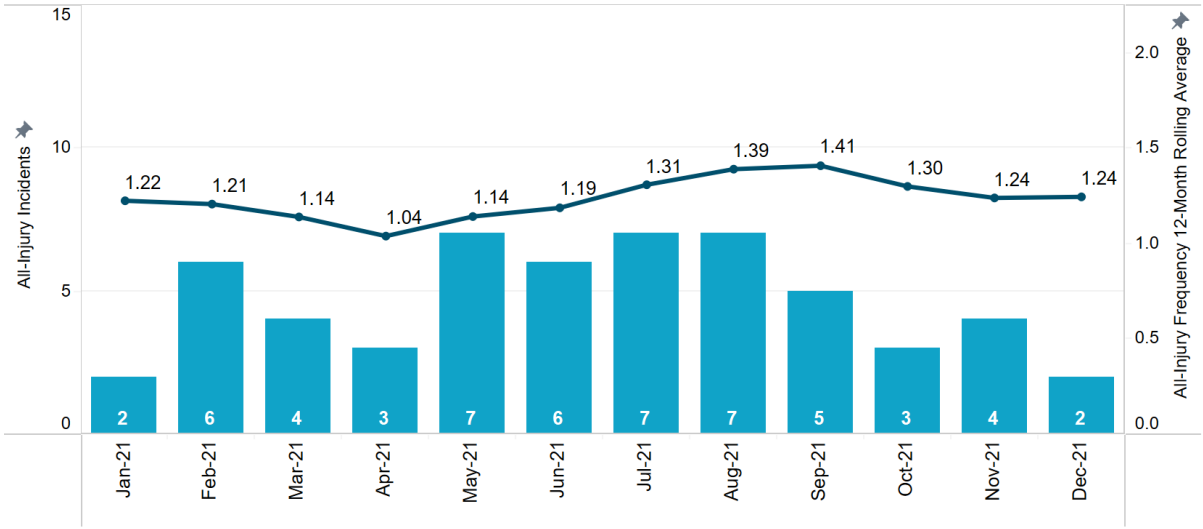
Figure C-1 Employee and Contractor Serious Incidents/Near Miss Frequency, Lost-Time Injury Frequency and All Injury Frequency



Employee & Contractor Lost Time Injury Frequency



Employee & Contractor All-Injury Frequency



Regulatory Inspections and Orders

Table C-1 lists the safety regulatory inspections and orders received from January 1, 2021 to December 31, 2021.

Table C-1 Safety Regulatory Inspections and Orders

WorkSafeBC

January 1, 2021 to March 31, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #1: WorkSafeBC conducted an inspection on the washroom facilities provided by the general contractor for the generating station and spillways structural works of the hydroelectric dam construction project. Washroom facilities: the temporary washroom facility (wash cart) provided at the intake work location was subject to a freeze cycle resulting in an overflow condition. It was stated that the exterior water line froze and backed-up water into the interior portion of the wash cart. The employers service department conducted the necessary repairs, performed initial clean-up, and sanitized the wash cart. There wasn't any septic and/or effluent involved in the overflow condition. Further, clean-up/sanitation of the wash cart was provided by a third-party contractor. It was also noted that the sites additional temporary washroom facilities located at various locations are to be continually monitored and maintained during the extreme cold temperatures (-30 C to -45 C) that were being experienced in the region at the time.			
		No Orders	February 16, 2021
Inspection #2: WorkSafeBC conducted an inspection as part of the 2021-2023 Construction High Risk Strategy. WorkSafeBC's primary goal is prevention of injuries and prevention of serious/fatal injuries in the construction industry. The Construction High Risk Strategy will focus on four risk areas: 1. Falls from elevation inspections will focus on adequate controls to prevent falls from elevation. 2. Struck by inspections will focus on mechanism of injury as related to mobile equipment work activities. 3. Contact with electricity high voltage limits of approach inspections will focus on hierarchy of controls, 30M33 assurance in writing, worker education and training, work arrangements and procedures. 4. Musculoskeletal injury inspections will focus on high potential for time-loss injuries from some repetitive, poorly planned out tasks (material handling), employer must identify potential for musculoskeletal injury inspections (risk assessment), controls to mitigate risk, over exertion and repetitive strain injury.			

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
		No Orders	February 16, 2021
Inspection #3: WorkSafeBC contacted the contractor via telephone as a result of a reported incident. The incident resulted in the inadvertent slip and fall to the same elevation, resulting in contact with the ground surface. Minor injury was reported.			
		No Orders	February 23, 2021
Inspection #4: WorkSafeBC contacted the contractor via telephone as a result of a reported incident. The incident involved injury of a worker. A worker who was operating an excavator exited the cab to assist a mechanic conducting repairs to the bucket, accessed onto a frozen compacted snow-covered area, and slipped resulting in a fall to the ground.			
Low risk	Accident Reporting and Investigation	**Order #1 - WCA68(1)(a):** The contractor failed to immediately notify WorkSafeBC of the slip and fall accident that resulted in a serious injury to a worker.	February 23, 2021
Inspection #5: WorkSafeBC conducted an inspection on the general work activities taking place at the time of the inspection which included tower/mobile crane operation, mobile equipment uses, formwork assembly, steel erection, reinforcing steel installation, concrete preparation/placement, and scaffold erection. During the inspection, health and safety items were discussed, including: access and egress; indoor air quality; hazardous substances and processes; fall protection systems; first aid facilities; and equipment and general.			
		No Orders	February 24, 2021
Inspection #6: WorkSafeBC conducted an inspection to review the contractor's response to the current COVID-19 pandemic in relation to worker health and safety at the workplace. To date, the contractor has implemented the following controls at the workplace to prevent and/or mitigate the risk of contracting COVID-19: • Project and site-specific access screening temperature/questionnaire • A detailed COVID-19 safety plan • Digital touchless sign in procedures and practices via phone app • Daily health check incorporated, with workers required to self-monitor for COVID-19 symptoms, and report symptoms or possible exposure of a suspected or confirmed case to their supervisor • Plexiglass dividers at the reception area to protect workers when social distancing cannot be maintained • Masks are mandatory at all times for workers and visitors on the Project • Hand sanitizer stations and additional wash carts are available at access points throughout the Project • Custom built cubicles incorporated physical barriers to create separation in lunchroom • Additional space for personal items to hang prior to entering lunchroom • Custom exterior phone booth type separation dividers available for workers • COVID-19 physical distancing signage, markers are posted throughout the Project • COVID-19 measures are communicated to workers and supervisors • Enhanced cleaning protocols in place			

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
		No Orders	February 24, 2021
Inspection #7: WorkSafeBC attended the workplace as a result of an incident that involved the release of a large quantity of vermiculite insulation. The employer stated that a garbage truck contacted the outside wall of the building causing a cinder block wall to release vermiculite insulation. The employer removed all staff from the area and contacted an abatement contractor to remove and safely contain any remaining vermiculite. The employer has taken steps to properly address this hazardous material and is being given two directive orders to ensure the health and safety of its staff.			
Low Risk	Procedures	**Order #1 – OHS6.8(1):** BC Hydro is directed to ensure that the vermiculite is removed and further contained in accordance with procedures developed by a qualified person and implemented by a qualified contractor.	February 26, 2021
Low Risk	Hazard materials	**Order #2 - OHS20.112(8):** BC Hydro is directed to have an assurance in writing completed to verify that the vermiculite has been properly removed and contained and ensure that asbestos fibers are below the allowable limit.	
Inspection #8: WorkSafeBC contacted the contractor as a result of a reported COVID-19 transmission to workers at the Project. The Provincial Health Officer (Northern Health Authority) representatives, BC Hydro and worker accommodation contractor were notified of a reported COVID-19 transmission to workers at the Project and conducted a joint review with the contractor. Conditions and/or gaps with the employer's COVID-19 response plan were reviewed to determine findings that may be deficient with the Provincial Health Officer orders and/or contractor's practices at this time. The contractor continues to undertake a full investigation to determine the cause or causes, identify any conditions, acts or procedures that significantly contributed to the transmission, and if gaps and conditions, acts or procedures are identified, determine the corrective action necessary to prevent the recurrence of similar transmission.			
		No Orders	March 23, 2021
Inspection #9: WorkSafeBC conducted an inspection on March 26, 2021 following a reported crane incident involving a described minor contact between a tower crane and mobile crane in the spillway area. The preliminary causation is when the tower crane slewed into the overlap zone resulting in the tower crane jib trolley sheave to contact and sever the mobile crane's communications lines affixed to the extended boom.			

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Low Risk	Certification following incident	**Order #1 - OHS14.16(2):** The contractor failed to remove the tower crane from service until a professional engineer had certified it was safe for use, following the incident**.**	March 26, 2021
Inspection #10: WorkSafeBC responded a report from the contractor as a result of an incident that involved the potential for a serious injury to a worker.			
		No Orders	March 31, 2021

April 1, 2021 to June 30, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #1: WorkSafeBC conducted an inspection at the upstream section of the Site C Project. The purpose of the inspection is to review the contractor's response to the current COVID-19 pandemic in relation to worker health and safety at the workplace.			
		No Orders	April 16, 2021
Inspection #2: WorkSafeBC conducted an inspection at the upstream of the Site C Project, to assess compliance with the Occupation Health and Safety regulation and the Workers Compensation Act. The workplace consists of a 2.6-kilometre-long shoreline protection berm along the shore of Hudson's Hope. The berm has been described as a large barrier made of riprap, rocks and gravel, that reinforces the Peace River shoreline from the potential erosion once the Site C reservoir is filled. This inspection was conducted as part of the 2021-2023 – Construction High Risk Strategy. WorkSafeBC primary goal is prevention of injuries and prevention of serious/fatal injuries in the construction industry. The Construction High Risk Strategy will focus on four risk areas: 1. Falls from elevation 2. Struck by 3. Contact with electricity 4. Musculoskeletal Injury			
		No Orders	April 16, 2021
Inspection #3: WorkSafeBC contacted the contractor via telephone as a result of a reported COVID-19 transmission to workers at the Site C Project. The Provincial Health Officer (Northern Health Authority) representatives, BC Hydro and worker accommodation contractor have been notified, and are currently engaged in conducting a joint review with the contractor to investigate the possible transmission of the COVID-19 virus at this workplace and review conditions and/or gaps with the contractors COVID-19 response plan and determine findings that may be deficient with the Provincial Health Officer orders and/or employers practices at this time.			
		No Orders	April 16, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
nspection #4: WorkSafeBC conducted an inspection as result of an incident that involved a serious injury to a worker. It was stated that a worker was found lying on the ground in front of a rock truck operated by the worker. This incident is considered as a non-occupational incident.			
		No Orders	April 24, 2021
Inspection #5: As a result of an incident that involved a worker having a suspected abdominal injury in the left bank dam core operation, when a worker engaged in a blow-down activity, was struck in the abdominal area when the airline being utilized became disconnected from the Chicago-type fitting.			
		No Orders	May 10, 2021
Inspection #6: WorkSafeBC conducted a site inspection as result of an incident that involved an injury of a worker. The incident occurred during the operation of the hopper at the main civil works roller-compacted concrete batch plant. A worker had been performing related operation/monitoring duties and controlling the product placement (roller-compacted concrete) loose material into the rock trucks for transportation on site. This work operation area was conducted at an elevated hopper control room situated adjacent to the material conveyor and above the hopper. It was stated the worker complained about feeling dizzy and having a headache on the access/egress catwalk to the control room, when the worker accessed the lunchroom, the emergency response team was initiated by co-workers. This incident is considered as a non-occupational incident.			
		No Orders	May 12, 2021
Inspection #7: WorkSafeBC participated in an informal virtual meeting to obtain information from the contractors involved in an upcoming shotcrete repair work activity at the left bank tunnel inlet portal area. The contractor has been contracted by BC Hydro to conduct this particular high-risk work activity at the diversion tunnels, which involves remediation of two areas where the shotcrete has detached, exposing the underlying rock surface in order to mitigate deterioration of the exposed rock surface and remaining shotcrete, also installation of additional protective measures for the remaining shotcrete on the west slope bench and north slope bench. During this meeting, the health and safety items discussed with the representative of BC Hydro, main civil works prime contractor and the contractor, included the following: - Scaling operations - Rappelling ropes - Variance orders - Acceptances			
		No Orders	May 17, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #8: WorkSafeBC participated in an informal meeting via teams to obtain information from the contractors involved in an upcoming shotcrete repair work activity at the left bank tunnel inlet portal area. The contractor has been contracted by BC Hydro to conduct this particular high risk work activity at the diversion tunnels, which involves remediation of two areas where the shotcrete has detached exposing the underlying rock surface in order to mitigate deterioration of the exposed rock surface and remaining shotcrete, also installation of additional protective measures for the remaining shotcrete on the west slope bench and north slope bench. During this meeting, the health and safety items that were discussed but were not limited to, with the representative of BC Hydro, main civil works prime contractor and the contractor were as follows: - Scaling Operations - Rappelling Ropes - Variance Orders - Acceptances			
		No Orders	May 17, 2021
Inspection #9: WorkSafeBC participated in an informal meeting via teams to obtain information from the contractors involved in an upcoming shotcrete repair work activity at the left bank tunnel inlet portal area. The contractor has been contracted by BC Hydro to conduct this particular high risk work activity at the diversion tunnels, which involves remediation of two areas where the shotcrete has detached exposing the underlying rock surface in order to mitigate deterioration of the exposed rock surface and remaining shotcrete, also installation of additional protective measures for the remaining shotcrete on the west slope bench and north slope bench. During this meeting, the health and safety items that were discussed but were not limited to, with the representative of BC Hydro, main civil works prime contractor and the contractor were as follows: - Scaling Operations - Rappelling Ropes - Variance Orders - Acceptances			
		No Orders	May 17, 2021
Inspection #10: WorkSafeBC contacted the contractor via a telephone conversation as a result of a reported incident that involved a worker sustaining a minor right finger injury, at the main civil works right bank maintenance shop. A worker engaged in the of re-connection of a hitch-pin to the frame of the all-terrain forklift received a minor injury when the workers right finger got pinched between the hitch-pin and frame.			
		No Orders	May 17, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #11: WorkSafeBC conducted a site inspection as a result of a reported incident that presented a high risk of serious injury to a worker. That incident resulted from two workers accessing the internal portion of a rock impact crusher to replace the wear plates and were standing on the rotor assembly when one worker stepped off the rotor, causing the rotor to shift and rotate, pinning the other worker's leg between the rotor and the horizontal shaft impactor. The orders cited in this report are to address items, noted at the workplace, that need attention prior to conducting more work with the horizontal shaft impactor crusher equipment and horizontal shaft impactor access. An observation of the rotor locking pin assembly for horizontal shaft impactor revealed excessive wear to the receiver pocket and excessive play/movement to the locking pin engagement mechanism (device).			
Low Risk	General requirement	**Order #1 - OHS3.5:** The contractor failed to ensure that regular inspections are made of the rotor locking pin assembly on the horizontal shaft impactor crusher equipment and work methods/practices, at intervals that would prevent the development of unsafe working conditions.	June 9, 2021
Low Risk	Remedy without delay	**Order #2 - OHS3.9:** The horizontal shaft impactor rotor locking pin assembly was found to be in an unsafe condition.	
Inspection #12: WorkSafeBC responded to a reported serious injury at the BC Hydro Site C Hydroelectric dam project located on the Peace River near Fort. St. John. A main civil works subcontractor has been contracted to provide the reinforcing steel erection and assembly at the main civil works roller-compacted concrete upstream wall portion at this location. This incident resulted from a described fall from elevation to previously placed roller-compacted concrete when a worker accessed a vertical reinforcing steel (rebar) wall structure at the roller-compacted concrete upstream bay 2. The worker was stated to be assisting with the relocation of a horizontal reinforcing steel bar (rebar) to accommodate a waterstop component and while performing this task the bay 2 reinforcing steel (rebar) wall structure became unstable and became separated from the formwork panel causing the worker to lose balance and fall approximately 1.2 metres (4 feet) causing a serious lower leg injury. The subsequent investigation indicated the wall structure was not unstable and did not become separated.			

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Low Risk	Safe access	**Order#1 - OHS20.4(1):** An observation of the work area and vertical rebar wall work location utilized by three to four workers to conduct the described activity revealed an approximate initial elevation step of three feet above grade with no other access/egress provided. A risk assessment / plan was not available nor explained by the employer for the work of untying/tying, re-positioning horizontal rebar and working from the elevated vertical rebar section prior to the work being performed and no ladder, steps and/or platforms were available for the workers use.	June 10, 2021
Low Risk	Temporary support	**Order #2 - OHS20.14:** an inspection of the ~4.2 metres x 18 metres (14 feet height x 60 feet width) reinforcing steel (rebar) bay 2 wall structure revealed the temporary support / securement (two-strand tie wire to 3/4' formwork panel via 3-1/2 duplex nail, or four-strand tie wire wrapped around 2x6 waler) had been removed (cut) to accommodate a waterstop feature resulting in the reinforcing steel wall structure to be unsupported and unstable. The contractor has failed to ensure that the roller-compacted concrete upstream bay 2 reinforcing wall structure was supported.	
Inspection #13: A worker inadvertently contacted their hand with a hammer resulting in an injury that involved a worker having a suspected thumb fracture. WorkSafeBC discussed incident with the contractor.			
		No Orders	June 29, 2021
Inspection #14: As a result of a reported inadvertent concrete splash that contacted a worker's face and eyes during an adjacent concrete vibration activity, WorkSafeBC discussed this incident with the contractor.			
		No Orders	June 29, 2021
Inspection #15: As a result of a reported heat related event involving a worker at the end of a roller-compacted concrete work area scheduled shift, WorkSafeBC discussed this incident with the contractor.			
		No Orders	June 29, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #16: WorkSafeBC conducted a site inspection that is related to a telescopic handler equipment incident and worker injury. The workplace consisted of a BC Hydro designed road to access the Septimus rail siding/lay down work location for the purpose of loading/unloading various materials from rail cars and/or transport trailers to support the construction activities at this BC Hydro Hydroelectric Dam Project. The incident resulted when a telescopic handler had been traversing a temporarily constructed gravel road section to access the Septimus siding work location when the telescopic forklift inadvertently left the road surface and continued down a ~ 2.4 metre (8 feet) incline, flipped on its right side and subsequently came to rest at the bottom right hand side ditch area adjacent to a water filled wetland/slew.			
Low Risk	Arrangement of work areas	**Order #1** - OHS4.33(1): BC Hydro failed to ensure a work area must be arranged to allow the safe movement of people, equipment and materials.	June 30, 2021
Inspection #17: WorkSafeBC conducted a site inspection that is related to a telescopic handler equipment incident and worker injury. The workplace consisted of a BC Hydro designed road to access the Septimus rail siding/lay down work location for the purpose of loading/unloading various materials from rail cars and/or transport trailers to support the construction activities at this BC Hydro Hydroelectric Dam Project. The incident resulted when a telescopic handler had been traversing a temporarily constructed gravel road section to access the Septimus siding work location when the telescopic forklift inadvertently left the road surface and continued down a ~ 2.4 metres (8 feet) incline, flipped on its right side and subsequently came to rest at the bottom right hand side ditch area adjacent to a water filled wetland/slew.			
Low Risk	Arrangement of work areas	**Order #1** - OHS4.33(1): The contractor failed to ensure a work area must be arranged to allow the safe movement of people, equipment and materials.	June 30, 2021
Inspection #18: WorkSafeBC conducted a site inspection that is related to a telescopic handler equipment incident and worker injury. The workplace consisted of a BC Hydro designed road to access the Septimus rail siding/lay down work location for the purpose of loading/unloading various materials from rail cars and/or transport trailers to support the construction activities at this BC Hydro Hydroelectric Dam Project. The incident resulted when a telescopic handler had been traversing a temporarily constructed gravel road section to access the Septimus siding work location when the telescopic forklift inadvertently left the road surface and continued down a ~ 2.4 metres (8 feet) incline, flipped on its right side and subsequently came to rest at the bottom right hand side ditch area adjacent to a water filled wetland/slew.			
Low Risk	Arrangement of work areas	**Order #1** - OHS4.33(1): The contractor failed to ensure a work area must be arranged to allow the safe movement of people, equipment and materials.	June 30, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #19: WorkSafeBC conducted a site inspection that is related to a telescopic handler equipment incident and worker injury. The workplace consisted of a BC Hydro designed road to access the Septimus rail siding/lay down work location for the purpose of loading/unloading various materials from rail cars and/or transport trailers to support the construction activities at this BC Hydro Hydroelectric Dam Project. The incident resulted when a telescopic handler had been traversing a temporarily constructed gravel road section to access the Septimus siding work location when the telescopic forklift inadvertently left the road surface and continued down a ~ 2.4 metres (8 feet) incline, flipped on its right side and subsequently came to rest at the bottom right hand side ditch area adjacent to a water filled wetland/slew.			
Low Risk	Special inspections	**Order #1 - OHS3.7:** A special inspection must be made when required by malfunction or accident.	June 30, 2021
Low Risk	Vehicle travel areas	**Order #2 – OHS4.63:** A curb must be installed, where practicable, whenever there is a danger of a vehicle or other equipment running off the edge of an elevated area.	
Low Risk	Securing tools and equipment	**Order #3 – OHS16.35:** The operator failed to maintain the cab, floor and deck of mobile equipment free of material, tools or other objects which could create a tripping hazard, interfere with the operation of controls, or be a hazard to the operator or other occupants in the event of an accident.	

July 1, 2021 to September 30, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #1: WorkSafeBC contacted the contractor via telephone as a result of a reported injury that involved a worker having a suspected wrist fracture. While workers were carrying a 4x6 piece of timber, one worker dropped it and inadvertently causing the other worker's wrist to be caught in between the 4x6 piece of timber and a scaffold rail.			
		No Orders	July 2, 2021
Inspection #2: WorkSafeBC contacted the contractor via telephone as a result of a reported injury that involved a worker having a suspected finger fracture. While a worker had been repositioning a belly pan for final install, the belly pan inadvertently shifted, pinning the workers hand in between the pan and concrete floor.			
		No Orders	July 2, 2021
Inspection #3: WorkSafeBC contacted the contractor via telephone as a result of a reported medical event involving a worker at the end of a scheduled work shift.			
		No Orders	July 6, 2021
Inspection #4: WorkSafeBC contacted the contractor via telephone as a result of a reported injury that involved a worker having a suspected hand fracture; while lifting a pipe a worker's hand inadvertently became pinched in between the pipe being lifted and rebar.			
		No Orders	July 19, 2021
Inspection #5: WorkSafeBC conducted a site inspection as a result of an incident that involved a high potential for a serious injury and issued a stop use order in this inspection report. WorkSafeBC was notified that a service provider employee was potentially injured and transported to hospital. The worker was called to site by the contractor to change/repair a tire that had been suspected of being flat. While attempting to remove the tire, the side wall failed and released pressure, impacting the worker.			
Low Risk	Special Inspections	**Order #1 - OHS3.7**: The tire was on the second of three axles and was the outside tire. Eight of the twelve lug nuts were removed when the rear sidewall failed releasing enough pressure to throw the worker away from the tire. Due to the release of stored pressure, the contractor is being directed to conduct a special inspection of all adjacent under carriage components that could be impacted by pressure and pieces of the tire sidewall.	August 3, 2021

High Risk	Order to Stop Using	**Order #2 - WCA89(1)**: The contractor is ordered to immediately stop use of the water truck until WorkSafeBC is satisfied that the water truck is safe and complies with the Occupational Health and Safety (OHS) provision and the regulations and this order is cancelled by the board.	
Inspection #6: WorkSafeBC conducted a site inspection as a result of an incident that involved a high potential for a serious injury to a worker. WorkSafeBC was notified that the contractor's worker was potentially injured and transported to the hospital. The worker was called to site by the generating station and spillways contractor to change / repair a tire that had be suspected of being flat. While attempting the remove the tire the side wall failed and the released pressure, impacting the worker. The worker was assessed on site by the first aid attendant and transported to the hospital where they were released with only minor injuries. The sub-contractor is requested to provide the following document by August 4, 2021: 1. Procedures relating to changing heavy duty tires; 2. Procedures for changing heavy duty tires that have been damaged/run at low pressure and air up again; 3. Job hazard assessment or similar form of hazard/risk assessment for the water truck; 4. The e-mail requesting service from the client and other communications relating to the hazard(s) of the work to be completed; and 5. Training records for the injured worker to the above noted procedures.			
		No Orders	August 3, 2021
Inspection #7: On August 3, 2021, the sub-contractor was called to repair/replace an industrial tire on a three-axle water truck at Site C. The sub-contractor dispatched a mobile technician to conduct the work. As a result of this work the worker was injured and taken to the hospital for further assessment after the tire sidewall failed while under pressure.			
High Risk	Mobile Equipment	**Order #1 - OHS16.47(1)(a)**: The subcontractor did not establish and implement a complete safe work procedure for servicing mobile equipment tires, rims and wheels, as the procedure provided did not include procedures for inspecting suspected damaged tires and steps to address damaged tires.	August 3, 2021
High Risk	Mobile Equipment	**Order #2 - OHS16.48(1)**: The technician failed to deflate the tire before demounting.	

Low Risk	General Duties of Employers	**Order #3 - WCA21(2)(e)**: The subcontractor did not provide the worker / technician with adequate information, instruction, training and supervision 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 as it does not have procedures that outline how to treat suspected damaged tires.	
Inspection #8: WorkSafeBC conducted site inspection as a result of worker being injured by the release of stored pressure in an industrial tire. On the morning of August 3, 2021, the contractor and owner of the water truck noted a low/flat tire and called a local tire service company to attend its workplace and repair/replace the tire as a result of the previous night shift truck operator noted the tire was low and the night shift foreman notified the deputy equipment manager of this damaged tire. The deputy manager then sent an email requesting service. In between the tire being serviced and the service company arriving on site the morning shift driver attempted to use the truck and had to be stopped by the deputy equipment manager as the equipment was not locked/tagged out. The contractor also had their day shift mechanic check the tire pressure and it was noted to be 70 psi. The mechanic then inflated the damaged tire to 100 psi (normal operating pressure). The truck was then parked. The service worker was not informed that the tire they were being asked to work on had leaked to 70 psi from 100 psi and then re-inflated to 100 psi prior to them working on the tire. Industrial tires have a steel construction and when run at low pressure the steel belts/cords can be damaged and this damage can result in tire failure after pressure is added. All parties involved had workers that were aware of this fact. The owner of the truck and the contractor at the workplace did not review the tire service technicians' procedures to ensure they completed the job properly and did not have procedure of their own to ensure their work and that of tire technician were done properly. The hazard of the damaged and re-inflated tire was not communicated to the visiting worker and the truck was not locked out and tagged out resulting in its own worker attempting to use a truck with a damaged tire. This is all evidence that the contractor did not ensure the health and safety of all workers present at its workplace and resulted in an injury to the visiting worker.			
High Risk	Work on Energized Equipment	**Order #1 - OHS10.2:** If the unexpected energization or start up of machinery or equipment or the unexpected release of an energy source could cause injury, the energy source must be isolated and effectively controlled.	August 3, 2021

High Risk	Mobile Equipment	**Order #2 - OHS16.47(1)(a):** The contractor failed to establish and implement safe work procedures for servicing mobile equipment tires, rims and wheels, including safe procedures for inspecting tire, rim, and wheel components.	
Low Risk	General Duties of Owners	**Order #3 - WCA25(b):** The contractor failed to provide sub-contractor at the workplace the information known to the contractor that is necessary to identify and eliminate or control hazards to health or safety of persons at the workplace.	
Low Risk	General Duties of Employers	**Order #4 - WCA21(1)(a):** The contractor failed to ensure the health and safety of all workers working for the contractor and any other workers present at the workplace at which that contractor's work is being carried out.	
Inspection #9: WorkSafeBC conducted a site inspection at the Cache Creek bridge as part of the construction high risk strategy and as part of the occupational disease strategy, specifically crystalline silica.			
Low Risk	Special Inspections	**Order #1 - OHS3.17(1):** The contractor failed to develop up-to-date written procedures for providing first aid at the worksite as they have part of the requirements in and among other Emergency Response Plan information but content is missing such as: equipment supplies attendants; location and the authority of the attendant.	August 3, 2021
Low Risk	Basic Requirements	**Order #2 – OHS3.16(1.2):** The quality, maintenance and use of equipment, facilities and methods of transportation used by the contractor at this site must be acceptable to the WorkSafeBC. The medical transport centre (MTC) had construction supplies inside the MTC, the MTC was not secured properly and there was no step mounted for access into the MTC.	

Low Risk	Vehicle Inspections	**Order #3 – OHS17.2(b):** If workers are to travel in a worker transportation vehicle, the contractor must ensure that an inspection of the worker transportation vehicle has been conducted by a qualified person before first use on a work shift.	
Low Risk	General Requirement for Employer to Establish Joint Committee	**Order #4 – WCA31:** The contractor failed to re-establish and maintain a joint health and safety committee: (a) in each workplace where 20 or more workers of the employer are regularly employed; and (b) in any other workplace for which a joint committee is required by order.	
Low Risk	Employer Must Post Committee Information	**Order #5 – WCA44:** The contractor failed to post and keep posted: (a) the names and work locations of the joint committee members; (b) the reports of the three most recent joint committee meetings; and (c) copies of any applicable orders under this Division for the preceding 12 months.	
Low Risk	Supplier SDS	**Order #6 – OHS5.14(2):** The Safety Data Sheets (SDS) for concrete curing compound were out of date. When a supplier SDS obtained under subsection (1) for a hazardous product is three years old, the contractor must obtain an up-to-date supplier SDS in respect of any of that hazardous product in the workplace at that time.	
High Risk	Incomplete Risk Assessment	**Order #7 – OHS6.112.1(1):** Risk assessment indicated that a worker was or may be exposed to silica dust and the contractor failed to ensure that a qualified person developed and implemented an exposure control plan.	

High Risk	Hazard Assessment	**Order #8 – OHS9.9(1)(b):** The contractor failed to conduct a hazard assessment for each work activity, or group of work activities which present similar hazards, to be performed inside a confined space.	
Low Risk	Qualifications	**Order #9 – OHS9.11(1)(a):** The hazard assessment and written confined space entry procedures must be prepared by a qualified person who has adequate training and experience in the recognition, evaluation and control of confined space hazards.	
Low Risk	Procedures	**Order #10 – OHS9.10:** Written procedures specifying the means to eliminate or minimize all hazards likely to prevail must be developed, based on the hazard assessment required by section 9.9.	
Low Risk	Mechanical Ventilation	**Order #11 – OHS9.32(1):** A ventilation system for the control of airborne contaminants in a confined space must be designed, installed and maintained in accordance with established engineering principles and must be specified in the written procedures.	
Low Risk	Testing	**Order #12 – OHS13.23(1)(a)**: A vehicle-mounted elevating work platform and a self-propelled boom-supported elevating work platform must be inspected in accordance with good engineering practice at least every 12 months.	
Low Risk	Maintenance of Records	**Order #13 – OHS13.22(2):** If the inspection and maintenance records, other than pre-shift inspections, are not available, the equipment must not be used until it has been inspected and certified safe for use by the manufacturer or a professional engineer.	

Low Risk	Authority to conduct inspections	**Order #14 – WCA75(3)(g):** The contractor failed to produce within a reasonable time records in the person's possession or control that may be pertinent to an inspection by a WorkSafeBC officer.	
High Risk	General Duties of Employers	**Order #15 – WCA21(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 #16 – WCA21(1)(a):** The contractor failed to ensure the health and safety of all workers working for the contractor, and any other workers present at a workplace at which that contractor's work is being carried out.	
Inspection #10: WorkSafeBC contacted the contractor as a result of an incident that involved a hand injury to a worker at the workplace. A worker was cutting a piece of plywood when the skill saw kicked/jammed then their fingers contacted the blade. The worker required stitches.			
		No Orders	August 9, 2021
Inspection #11: WorkSafeBC conducted a site inspection as a result of an incident that involved the potential for a serious injury or death of a worker. Two workers were required to change the deflector plates on a concrete mixer. One worker was positioned on top of the mixer chute/drum undoing bolt assemblies and the other worker was under the plates supporting them. When the last bolt was undone, the worker could not hold the plate and was struck in the knee injuring the worker.			

Low Risk	First Aid Procedures	**Order #1 – OHS3.17(1):** The contractor failed to keep up-to-date written procedures for providing first aid at the worksite including (a) the equipment, supplies, facilities, first aid attendants and services available; (b) the location of, and how to call for, first aid; (c) how the first aid attendant is to respond to a call for first aid; (d) the authority of the first aid attendant over the treatment of injured workers and the responsibility of the employer to report injuries to WorkSafeBC; (e) who is to call for transportation for the injured worker, and the method of transportation and calling; and (f) pre-arranged routes in and out of the workplace and to medical treatment.	August 10, 2021
Low Risk	Basic Requirements	**Order# 2 - OHS3.16(1)(a):** The contractor failed to provide each workplace, such as, equipment, supplies, facilities, first aid attendants and services as are adequate and appropriate for: (a) promptly rendering first aid to workers if they suffer an injury at work; and (b) transporting injured workers to medical treatment.	
Low Risk	Risk Identification	**Order #3 - OHS4.47:** The contractor failed to identify factors in the workplace that may expose workers to a risk of musculoskeletal injury.	
Low Risk	General Duties of Employers	**Order#4 - WCA21(1)(a):** The contractor failed to ensure the health and safety of all workers working and any other workers present at a workplace at which that contractor's work is being carried out.	

Low Risk	Reporting Unsafe Conditions	**Order #5 – 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 the employer, 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.	
High Risk	General Requirement	**Order #6 - OHS10.2:** If the unexpected energization or start up of machinery or equipment or the unexpected release of an energy source could cause injury, the energy source must be isolated and effectively controlled.	
High Risk	Lockout Procedures	**Order #7 - OHS10.4(2):** The contractor failed to ensure that each worker required to lockout has ready access to sufficient personal locks to implement the required lockout procedure.	
High Risk	Obligation to Use Fall Protection	**Order #8 - OHS11.2(1)(a):** The contractor failed to ensure that a fall protection system is used when work is being done at a place from which a fall of three metres (10 feet) or more may occur.	
High Risk	Certification by Engineer	**Order #9 - OHS11.8:** The following types of equipment and systems, and their installation, must be certified by a professional engineer: (a) permanent anchors; (b) anchors with multiple attachment points; (c) permanent horizontal lifeline systems; and (d) support structures for safety nets.	

Low Risk	Contents of Program	**Order #10 - OHS3.3(c)**: The occupational health and safety program must be designed to prevent injuries and occupational diseases, and without limiting the generality of the foregoing, the program must include appropriate written instructions, available for reference by all workers, to supplement this Occupational Health and Safety Regulation.	
Low Risk	Safe Access	**Order #11 - OHS20.4(1)**: Where practicable, suitable ladders, work platforms and scaffolds meeting the requirements of Part 13 (ladders, scaffolds and temporary work platforms) must be provided for and used by a worker for activities requiring positioning at elevations above a floor or grade.	
Low Risk	Safe Workplace	**Order #12 - OHS4.1**: A workplace must be planned, constructed, used and maintained to protect from danger any person working at the workplace.	
High Risk	Exposure Control Plan	**Order #13 - OHS6.112.1(1)(a):** If a risk assessment indicates that a worker is or may be exposed to respirable crystalline silica (RCS) dust, the employer must: (a) ensure that a qualified person develops an exposure control plan meeting the requirements of sections 5.54 and 5.57(2), and of subsection (3) of this section.	
Low Risk	Instruction and Training	**Order #14 - OHS6.112.7(b):** The contractor failed to ensure that a worker who is or may be exposed to RCS dust receives adequate instruction and training in all of the following: (b) safe work practices and procedures.	

Low Risk	General Duties of Employers	**Order #15 - WCA21(1)(a)(i):** The contractor failed to ensure the health and safety of all workers working for the contractor.	
High Risk	General Duties of Employers	**Order #16 - WCA21(2)(e):** The contractor failed to provide to the workers information, instructions, training and supervision necessary to ensure the health and safety of workers in carrying out their work and to ensure the health and safety of other workers at the workplace.	
Low Risk	Immediate Notice of Certain Accidents	**Order #17 - WCA68(1)(a):** The contractor failed to immediately notify WorkSafeBC of the occurrence of any accident that resulted in serious injury to or the death of a worker.	
Inspection #12: This inspection report forms a part of the Inspection #11. This report also provides evidence that workers were not given enough information, instruction, training and supervision to be successful in their employment.			

Low Risk	Young or new worker orientation and training	**Order #1 – OHS3.23(2)**: The contractor did not ensure that all of the following topics were included in the young or new worker's orientation and training: (a) the name and contact information for the young or new worker's supervisor; (d) hazards to which the young or new worker may be exposed, including risks from robbery, assault or confrontation; (g) personal protective equipment; (h) location of first aid facilities and means of summoning first aid and reporting illnesses and injuries; (j) instruction and demonstration of the young or new worker's work task or work process; and (m) contact information for the occupational health and safety committee or the worker health and safety representative, as applicable to the workplace.	August 10, 2021
Low Risk	Young or new worker orientation and training	**Order #2 – OHS3.23(1)**: The contractor failed to ensure that before a young or new worker begins work in a workplace, the young or new worker is given health and safety orientation and training specific to that young or new worker's workplace.	
Inspection #13: WorkSafeBC conducted a site inspection as a result of an incident that involved a serious injury to a worker. Two workers were required to change the deflector plates on a concrete mixer. One worker was positioned on top of the mixer chute/drum undoing bolt assemblies and the other worker was under the plates supporting them. When the last bolt was undone the worker could not hold the plate and was struck in the knee injuring the worker.			

Low Risk	First Aid Procedures	**Order#1 – OHS3.17(1):** The contractor failed to keep up-to-date written procedures for providing first aid at the worksite including: (a) the equipment, supplies, facilities, first aid attendants and services available; (b) the location of, and how to call for, first aid; (c) how the first aid attendant is to respond to a call for first aid, (d) the authority of the first aid attendant over the treatment of injured workers and the responsibility of the employer to report injuries to WorkSafeBC; (e) who is to call for transportation for the injured worker, and the method of transportation and calling; and (f) pre-arranged routes in and out of the workplace and to medical treatment.	August 10, 2021
High Risk	Coordination at Multiple-Employer Workplaces	**Order #2 – WCA24(1)(b):** The prime contractor of this multiple-employer workplace has not been doing everything that is reasonably practicable to establish and maintain a system or process ensure compliance, as a sub-contractor received 17 orders based on the above noted inspection reports, some of which are high risk.	
Inspection #14: WorkSafeBC contacted the contractor as a result of an incident that involved a heat stress related injury to a worker.			
		No Orders	August 12, 2021

Inspection #15: WorkSafeBC contacted the contractor via telephone as a result of a reported incident that involved minor injury to a worker. That incident is currently under investigation by WorkSafeBC and may result in orders being issued, in addition to any orders that are included in this inspection report.			
Low Risk	Mobile Equipment	**Order #1 - OHS16.47(1)(a)**: The contractor failed to establish and implement safe work procedures for servicing mobile equipment tires, rims and wheels, including safe procedures for inspecting tire, rim and wheel components.	August 17, 2021
Inspection #16: WorkSafeBC contacted the contractor via telephone as a result of a reported worker sustaining a suspected lower leg injury. While in the process of moving a ladder the worker stepped on an uneven surface at the roller-compacted concrete placement work area.			
		No Orders	September 14, 2021
Inspection #17: WorkSafeBC contacted the contractor via telephone as a result of a reported worker sustaining a suspected lower back injury, while in the process of loader operations.			
		No Orders	September 16, 2021
Inspection #18: WorkSafeBC contacted the contractor via telephone as a result of a reported worker sustaining an eye injury. While in the process of stripping the formwork, a gust of wind picked up and blew debris into the worker's face.			
		No Orders	September 24, 2021
Inspection #19: WorkSafeBC contacted the contractor via telephone as a result of a reported non-work related COVID-19 positive testing of a worker.			
		No Orders	September 24, 2021
Inspection #20: WorkSafeBC attended the workplace as a result of an incident that involved the serious injury of a subcontractor worker. A hand falling worker was injured when a danger tree was struck by a felled tree that subsequently rebounded and hit the worker.			

Low Risk	First Aid Procedures	**Order #1 - OHS3.17(1)**: The contractor did conduct a written first aid assessment. The contractor is directed to keep up-to-date written procedures for providing first aid at the worksite including: (a) the equipment, supplies, facilities, first aid attendants and services available; (b) the location of, and how to call for, first aid; (c) how the first aid attendant is to respond to a call for first aid; (d) the authority of the first aid attendant over the treatment of injured workers and the responsibility of the employer to report injuries to WorkSafeBC; (e) who is to call for transportation for the injured worker, and the method of transportation and calling; and (f) pre-arranged routes in and out of the workplace and to medical treatment.	September 25, 2021
Low Risk	Immediate Notice of Certain Accidents	**Order #2 - WCA68(1)(a)**: The contractor did not notify WorkSafeBC of the serious injury that occurred, nor did they ensure that its subcontractor notified WorkSafeBC. The employer is directed to immediately notify WorkSafeBC of the occurrence of any accident that results in serious injury to or the death of a worker. This is in contravention of the Workers Compensation Act section 68 (1)(a).	
Inspection #21: WorkSafeBC attended the workplace due to a worker being seriously injured. The inspector inspected a mobile treatment center that was present while on site. The MTC was a rental unit from an Alberta supplier. The MTC requires numerous mounting points. The four tie downs were all loose. The two-rear bolt, washer and nut assemblies were not present and the driver's side rear bolt through the leg of the roll cage was not tied to the trucks frame as required by the manufacturer and the regulation. As the unit is not attached to the chassis as required, it was deemed not safe for transporting injured workers and a stop use order was issued.			

Low Risk	Safe Machinery and Equipment	**Order #1 - OHS4.3(2)** - The installation, inspection, and maintenance of the Sundowner Mobile Treatment Center is not being carried out in accordance with the manufacturer's instructions. The contractor must remove the unit from service or have the MTC installed as per the manufacturer's instructions which were provided to the contractor.	September 25, 2021
High Risk	Order to Stop Using or Supplying Unsafe Equipment	**Order #2 - WCA89(1)** - The employer was ordered to immediately stop use of the MTC. Pursuant to section 89(4) of the Workers Compensation Act, the MTC subject to this order must not be used until WorkSafeBC is satisfied that this MTC is safe and complies with the OHS provisions and the regulations and this order is cancelled by the WorkSafeBC.	
Inspection #22: WorkSafeBC inspector attended the workplace as a result of an incident that involved the serious injury of a worker. This incident resulted from a ~50 metre deck section of the installed bridge overhang slab support formwork failed along the eastern downstream portion at the Project. The workers were in the process of investigating and cordoning-off a ~9 metre identified hazard area when the failure occurred, contacting the worker.			
High Risk	Safe Buildings and Structures	**Order #1 - OHS4.2**: The contractor has failed to ensure that the temporary bridge overhang slab support formwork erection and/or installation structures in a workplace is capable of withstanding any stresses likely to be imposed on it.	September 30, 2021

High Risk	Stop-Work Orders	**Order #2 - WCA90(1)**: Based upon the violation(s) 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. WorkSafeBC, in accordance with subsection (2), may order that work at a workplace or any part of a workplace stop until the order to stop work is cancelled by WorkSafeBC.	

1 ***October 1, 2021 to December 31, 2021***

Risk Level	**Theme**	**Inspection Reports and Orders Received**	**Date of Inspection**
Inspection #1: WorkSafeBC conducted a site inspection at Lynx Creek Boat Launch as part of Forestry High Risk Strategy (hand falling).			
Low risk	Employer's responsibilities	**Order #1-OHS17.2(b):** the contractor failed to ensure that a vehicle inspection of the worker transportation vehicle, had been conducted by a qualified person before first use on a work shift.	October 18, 2021
High risk	Planning and conducting a forestry operation	**Order #2-OHS26.2(2):** the contractor failed to ensure that hand falling practices are both planned and conducted.	
Inspection #2: WorkSafeBC conducted a site inspection at West of Lynx Creek Bridge on Aggregate Crushing.			
Low risk	Coordination at multiple-employer workplaces	**Order#1-WCA24(1)(b):** the contractor failed to ensure that everything wa**s** reasonably practicable to establish a system that would ensure compliance with the OHS provisions.	October 18, 2021
Inspection #3: WorkSafeBC conducted an inspection as part of the Forestry High Risk Strategy (hand falling). The inspection of the prime contractor and hand falling contractor took place on October 18, 2021. WorkSafeBC also conducted an office inspection in Fort St. John on October 21, 2021.			
		No Orders	October 21, 2021

Inspection #4: WorkSafeBC conducted a site inspection as part of the Construction High Risk Strategy as well as the Occupational Disease Initiative at aggregate crushing at Hudson's Hope.			
High risk	Crushing plants	**Order #1 - OHS6.114(a):** The jaw and cone crushers did not have a mechanical exhaust system and none were available on site.	November 2, 2021
High risk	Safeguarding requirement	**Order #2 - OHS12.2(b):** The contractor failed to ensure that machinery and equipment was fitted with adequate safeguards which ensure that a worker cannot access a hazardous point of operation.	
High risk	Stop-work orders	**Order #3 - WCA90(1)(a):** The WorkSafeBC orders that aggregate crushing and screening activities at the workplace are immediately stopped.	
Inspection #5: WorkSafeBC conducted a site inspection as part the Construction High Risk Strategy as well as the Occupational Disease Initiative at the aggregate crushing plant in Hudson's Hope.			
High Risk	Lockout procedures	**Order #1 - OHS10.3(1)(c):** The aggregate crushing plant was having a conveyor assembly serviced while the specific circuit breaker nor the main power were locked out by the Occupational Health and Safety Regulation	November 2, 2021
Inspection #6: WorkSafeBC conducted a site inspection near Husdon’s Hope as part of the Forestry High Risk Strategy (general and hand falling). At the time of inspection the contractor had a log processor, skidder, buncher and loader, hand faller’s, bridge construction and a river boat working on their prime contractor site clearing the Site C reservoir.			
		No Orders	November 4, 2021
Inspection #7: WorkSafeBC contacted the contractor as a result of a reported injury that involved a worker that slipped on uneven ground while conducting a pre-trip inspection of the excavator equipment, sustaining a fractured ankle.			
		No Orders	November 5, 2021
Inspection #8: WorkSafeBC contacted the contractor as a result of a reported incident that involved a worker that slipped and fell on the same elevation sustaining a shoulder injury.			
		No Orders	November 8, 2021

Inspection #9: WorkSafeBC conducted a site inspection at the generating station and spillways Auxiliary Spillway Area 20 as a result of a reported incident that presented a risk of injury to the contractor's workers. This incident resulted from a partial collapse of an engineered pre-assembled bridge system scaffolding that was currently being stored on location. A preliminary determination to the cause has been stated, that the system scaffolding was in the initial stages of dismantle, when a wind event occurred, causing the scaffold assembly to be lifted vertically (~1m) and came to rest on its side. The system scaffold was stated to be ~17 metres length x 1.2 metres wide x 3 metres height. No workers were in the area at the time and no injuries were reported.			
		No Orders	November 30, 2021
Inspection #10: WorkSafeBC contacted the contractor as a result of a reported minor injury when the seat belt assembly malfunctioned on a rock truck while being operated by the worker.			
		No Orders	December 8, 2021

Ministry of Energy, Mines and Low Carbon Innovation

January 1, 2021 to March 31, 2021:

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
No Inspections or orders issued during this reporting period.			

April 1, 2021 to June 30, 2021:

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #1: Ministry of Energy, Mines and Low Carbon Innovations conducted site inspection at the West Pine Quarry. The quarry (benches, faces, dumps, access points) and explosives magazine area were inspected. Overall good mining practices were observed for the quarry. One order resulted for the explosives magazine area for danger trees.			
Low Risk	Workplace conditions	**Order #1 - Section 1.9.1 Health, Safety and Reclamation Code for Mines:** at the time of inspection, several danger trees were present at the explosive's magazine area. Some of the trees have dead and dry branches overhanging in the cleared magazine area itself. The danger trees pose the risk of falling into the magazine/work areas as well as pose a fire hazard. The immediate area is prone to lightning strikes and one tree that was previously struck by lightning was observed.	April 27, 2021
Inspection #2: Ministry of Energy, Mines and Low Carbon Innovation conducted a site inspection at the West Pine Quarry's fuel island.			
Low Risk	Design and Construction	**Order #1 - Section 4.1.1 Health, Safety and Reclamation Code for Mines:** the contractor failed to ensure self-sealing breakaways fittings are installed on all fuel delivery hoses.	May 11, 2021

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Low Risk	Lifting Devices	**Order #2 - Section 4.4.9 (4) Health, Safety and Reclamation Code for Mines:** the contractor failed to ensure each component that may affect the safe operation of a lifting device shall be examined and tested by a qualified person before initial use and thereafter at intervals not exceeding one year, and a record shall be kept showing dates, findings and names of the qualified persons performing the examinations and tests and the record shall be kept available for inspection.	
Low Risk	Workplace Conditions and Storage of Hazardous Materials	**Order #3 - Sections 1.9.1 and 2.3.3 Health, Safety and Reclamation Code for Mines:** the contractor failed to store the potentially hazardous materials in the designated storage areas.	
Low Risk	Portable Ladders	**Order #4 - Section 4.4.20 Health, Safety and Reclamation Code for Mines:** the contractor failed to ensure portable ladders shall meet the requirements of CSA Standard CAN3-Z1 1-M81 "Portable Ladders" or other equivalent standard.	
Low Risk	Vehicle Requirements	**Order #5 - Section 4.9.4 (2d) Health, Safety and Reclamation Code for Mines:** the contractor failed to ensure all mobile equipment be maintained in working condition.	

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Low Risk	Moving Parts of Machinery	**Order #6 - Section 4.4.2 Health, Safety and Reclamation Code for Mines:** the contractor failed to ensure every drive belt, chain, rope or pulley, sprocket, flywheel, geared wheel and every opening through which any belt, pulley or wheel operates, and every bolt, key, set screw and every part of any wheel or other revolving part that projects unevenly from the surface shall be effectively enclosed, covered or guarded.	
Inspection #3: Ministry of Energy, Mines and Low Carbon Innovation conducted a site inspection at the West Pine Quarry. The focus of the inspection was on the electrical and mechanical equipment located on the mine site.			
Low Risk	Codes and Standards	**Order #1 - Section 5.1.1 Health, Safety and Reclamation Code for Mines:** the contractor failed to ensure that the openings noted above are filled with an approved device by or under the supervision of, a certified worker in accordance with Section 12 of the Canadian Electrical Code (C22. 1-18).	May 11, 2021
Low Risk	Codes and Standards	**Order #2 - Section 5.1.1 Health, Safety and Reclamation Code for Mines:** the contractor failed to ensure that all circuits on the panel identified above clearly and legibly indicate which portion of the installation they protect or control in accordance with Section 2 of the Canadian Electrical Code (C22. 1-18).	

July 1, 2021 to September 30, 2021:

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
Inspection #1: Ministry of Energy, Mines and Low Carbon Innovations inspected the Portage Mountain Quarry site. The previous contractor had removed their equipment and operation. The new contractor was planning to mobilize their equipment and crew into site shortly and begin mining. The laydown, stockpile and processing areas were compliant, but the haul road and quarry area up top had a couple of issues that needed to be addressed prior to mining.			
High Risk	Excavations	**Order#1 - 177775-S1-O1**: It was observed that there are portions of the quarry walls that are overhung. Some overhung rocks have tension cracks on top/behind that indicate they could come loose and fall down on to haul roads, catchment berms and potentially the quarry floor. This is a risk to anyone who would be in the quarry area, so it must be addressed prior to workers being in the top quarry area.	September 27, 2021
High Risk	Road Design	**Order #2 - 177775-S1-O2**: It was observed that within the quarry area up top of the haul road, there were multiple working faces and haul roads that vehicles can access with drop offs greater than three metres and sections with no berms at all, sections with berms <3/4 the height of the largest tire, and sections where the berm was at the edge of the drop off and falling down the working face to the floor and road below.	

October 1, 2021 to December 31, 2021:

Risk Level	Theme	Inspection Reports and Orders Received	Date of Inspection
No Inspections or orders issued during this reporting period.			

BC Hydro
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Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

Appendix D

Workforce Review

Table D-1 Current Site C Jobs Snapshot (January 2021 to December 2021)[29]

	Number of BC Workers and Total Workers	Construction and Non-construction Contractors[30] (Including some Subcontractors). Excludes Work Performed outside of B.C. (e.g., Manufacturing)	Engineers and Project Team[31]	TOTAL
January 2021	BC Workers	2,197	665	2,862
	Total Workers	3,136	716	3,852
February 2021	BC Workers	2,181	659	2,840
	Total Workers	3,165	712	3,877
March 2021	BC Workers	2,457	677	3,134
	Total Workers	3,589	732	4,321
April 2021	BC Workers	2,589	680	3,269
	Total Workers	3,852	737	4,589
May 2021	BC Workers	2,731	694	3,425
	Total Workers	4,124	744	4,868
June 2021	BC Workers	2,874	699	3,573
	Total Workers	4,291	755	5,046
July 2021	BC Workers	2,881	697	3,578
	Total Workers	4,356	752	5,108
August 2021	BC Workers	2,834	679	3,513
	Total Workers	4,362	725	5,087
September 2021	BC Workers	2,786	662	3,448
	Total Workers	4,248	715	4,963
October 2021	BC Workers	2,583	676	3,259
	Total Workers	3,913	720	4,633
November 2021	BC Workers	2,523	676	3,199
	Total Workers	3,833	729	4,562
December 2021	BC Workers	2,297	680	2,977
	Total Workers	3,445	730	4,175

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

30 Construction and non-construction contractors includes work performed on Site C dam site, transmission corridor, reservoir clearing area, public roadwork, worker accommodation and services.

31 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.

BC Hydro has contracted companies for major contracts, such as main civil works, who have substantial global expertise. During the month of December 2021 there was one worker in a specialized position working for Site C construction and non-construction contractors, which was subject to the Labour Market Impact Assessment process under the Federal Temporary Foreign Worker Program. Additionally, there were 30 management and professionals working for Site C construction and non-construction contractors through the Federal International Mobility Program.

Table D-2 Preliminary Site C Apprentices Snapshot (January 2021 to December 2021)

Month	Number of Apprentices
January 2021	100
February 2021	123
March 2021	143
April 2021	186
May 2021	168
June 2021	176
July 2021	189
August 2021	197
September 2021	183
October 2021	168
November 2021	162
December 2021	156

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

Table D-3 Current Site C Job Classification Groupings

Biologists and laboratory	Carpenters	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 D-4 Indigenous Inclusion Snapshot (January 2021 to December 2021)

Month	Number of Indigenous Workers
January 2021	281
February 2021	300
March 2021	346
April 2021	366
May 2021	372
June 2021	375
July 2021	393
August 2021	393
September 2021	390
October 2021	384
November 2021	356
December 2021	320

The information shown has been provided by BC Hydro's on-site[32] construction and non-construction contractors and their subcontractors that have a contractual requirement to report on Indigenous inclusion in their workforce.

[32] 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 Table D-4.

As with any construction project, the number of workers, and the proportion from any particular location, will vary month-to-month and 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 2021, the number of women working for the Site C construction and non-construction contractors increased throughout the year peaking in June 2021. At the peak, there was 14 per cent of women working on site. 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 2021 calendar year.

Table D-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, 2021	474
June 30, 2021	532
September 30, 2021	493
December 31, 2021	435

BC Hydro
Power smart

Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

Appendix E

Technical Advisory Board and Independent Expert Reports

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, PhD
REPORT NO. 1
January 22, 2021

EXECUTIVE SUMMARY

The Project Team has, with the support of the independent Technical Advisory Board, decided on the installation of drilled piles downstream of the powerhouse and spillway structures as the preferred right bank foundation enhancement approach. In our opinion, the proposed approach is sound and capable of making the right bank structures both safe and serviceable, however, several details still need to be addressed in the analysis and design. The Project Team is currently progressing the analyses and designs to address these details, and we look forward to reviewing the work as it progresses.

Significant investigations of the right abutment at Site C were completed during the pre-design and design phases of the project, and additional investigations have been completed after the observation of unexpected movements in the right abutment during excavation. The additional investigations showed that there are low strength, persistent bedding planes even deeper in the foundation than anticipated. The investigations, analyses, and evaluations have been and are being completed following current best professional practice methods. In our opinion, the available information, in combination with information being developed from on-going investigations and evaluations, provides adequate data for the design of the foundation enhancements.

Drilled piles were selected as the preferred foundation enhancement after consideration of a range of possible options and completion of a multiple accounts analysis to compare alternatives. We are not aware of any appropriate structural foundation enhancement alternatives that were not considered in this evaluation, and the selection of the drilled pile alternative is reasonable and well supported.

As part of the design development for the foundation enhancement, the final pile system configuration will be optimized, after final selection of design and performance criteria. We look forward to reviewing the optimization work.

INTRODUCTION

Data from geotechnical instrumentation for the Site C Project has indicated that the right bank foundation has lower strengths and stability than anticipated in the original design, and that remedial measures are required.

Hydroelectric projects are considered low risk – high consequence structures. BC Hydro has concluded that the subsurface movements, and related potential instabilities, that have been

identified on the right bank pose undue risks. Certain foundation enhancements have been proposed by the Project Team to address these risks.

The Technical Advisory Board (TAB) for the project has been involved in the development of the remedial measures. Nevertheless, given the scope, cost and schedule implications of the proposed remedial measures, the Project Assurance Board (PAB) has decided to have an additional Third-Party Due Diligence Review undertaken of the proposed remedial measures. That review is being completed by a Technical Review Panel (Panel) composed of two individuals: Mr. John W. France of the United States and Dr. Kaare Hoeg of Norway. The Panel has been tasked with reviewing the following aspects of the work being completed by the Project Team:

- The characterization of the rock and the properties of the rock mass, bedding planes, shears, etc.
- The design of the seepage control measures in and under the approach channel.
- The water loads assumed in the rock given the seepage control measures.
- The multiple accounts evaluation leading to the selection of piles as the preferred enhancement.
- The results of the field trials to determine the lateral pile load/deflection characteristics.
- The methods of analysis being used to estimate the behaviour of the completed works on the right bank, including stability and deformations under the range of expected normal loads to extreme loads, and unanticipated performance of the seepage control measures.
- The acceptance criteria proposed for normal and extreme loads, including target factor of safety and displacement thresholds.
- The methods used to translate the results of the factor of safety based geotechnical analyses to the structural requirements for the piles, considering applicable limit states and structural codes.
- The process to be used for optimization of the number, size, and spacing of the piles and the resulting optimized configuration.

BC Hydro further asked the Panel to address the following six questions:

1. Do the geotechnical investigations completed to date, coupled with the information from the geotechnical instrumentation at the site and the proposed field-testing program, provide adequate data on which to base the design of the foundation enhancements?
2. Is the proposed approach to the right bank foundation enhancements capable of making the right bank structures:

a) safe – i.e. meet the Canadian Dam Association Dam Safety Guidelines and stability requirements set out in the Project Design Basis[1] provided by BC Hydro?
b) serviceable – i.e. displacements and deformations within the limits set out in the Project Design provided by BC Hydro?

3. Is the proposed approach to optimization of the right bank foundation enhancements (number, size and spacing of piles) capable of resulting in a cost-effective solution that can accommodate any reasonably foreseeable geological conditions encountered during construction? Are there any value engineering considerations that could be included in the design program?
4. Is the proposed approach to estimating, scheduling and procuring the enhancements reasonable? Are there other things that could be considered that would increase the level of confidence in the cost estimate prepared by BC Hydro?
5. Were the engineering attributes considered in the multiple accounts evaluation thorough?
6. Are there any other foundation enhancement measures that could have been considered?

Work completed by the Panel to date includes participation in introductory Project Team briefings to the Panel, participation in web-based Project Team briefings to the TAB, participation in web-based discussion sessions with the Project Team, review of documents provided to the Panel by the Project Team, Panel Team discussions, and preparation of this report.

FINDINGS

The analysis and design work related to the planned foundation enhancements for the right abutment of Site C is still in progress at the time of preparation of this report. In the remainder of this section, the Panel provides its initial responses to the six questions posed by BC Hydro based on the information that has been presented to the Panel to date. The Panel's responses to the six questions will be updated in future reports based on further work to be done by the Project Team.

[1] As amended to:
1. Update foundation properties based on recent investigations, including lateral pile tests.
2. Update the sliding stability analysis for the right bank including geological model, load cases, method, and criteria.
3. Specify design approach and acceptance criteria.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, PhD
REPORT NO. 1
January 22, 2021

1. *Do the geotechnical investigations completed to date, coupled with the information from the geotechnical instrumentation at the site and the proposed field-testing program, provide adequate data on which to base the design of the foundation enhancements?*

   In our opinion, yes, the available information, in combination with information being developed from on-going investigations and evaluations, provides adequate data for the design of the foundation enhancements.

   Significant investigations of the right abutment at Site C were completed during the pre-design and design phases of the project, and additional investigations have been completed after the observation of unexpected movements in the right abutment during excavation. The investigations have included geologic mapping of surface exposures and exploratory adits, small and large diameter drill holes, geophysical surveys, and advanced field and laboratory testing.

   Field instrumentation was installed to monitor the buttress slopes during excavation and to update the geological model and geotechnical shear strength and deformation parameters (following the "observational method"). Experts with previous experience with similar shale foundation conditions have participated in the geotechnical evaluations.

   After the unexpected right bank slope movements, back analyses were completed to evaluate the movements, and additional investigations were undertaken to provide input for design of the foundation enhancements. It was found that persistent bedding planes with low shear strength exist even deeper in the foundation than previously anticipated, which has significant impact on the foundation enhancement measures considered and designed.

   The work completed at the site has allowed for a very good characterization of the geological, geotechnical, and engineering conditions in the right abutment, including the rock mass, rock stratification, bedding planes, relaxation joints and shears. Analyses and evaluations have been completed following current best professional practice methods.

   Some of the key conclusions that have been reached in the analyses and evaluations are:

1. An active wedge has not developed in the rock mass behind the roller compacted concrete (RCC) buttress; the rock mass consists of strata of intact rock between numerous, nearly horizontal bedding planes, with only limited shears between bedding planes.
2. Close to the excavation face, steeply dipping relaxation joints likely are present, as observed in other locations along the river.
3. Shear strengths on the bedding planes have likely been reduced to near their residual values. Persistent bedding planes with low shear strength exist even deeper than anticipated under the RCC buttress shear key.
4. A release plane does not appear to have been developed in the passive resistance zone (break-out zone) downstream of the powerhouse and spillway structures.

Based on the information provided to us, these conclusions appear to be well supported by the available data, the analyses, and the evaluations performed.

2. *Is the proposed approach to the right bank foundation enhancements capable of making the right bank structures:*
   c) safe – i.e. meet the Canadian Dam Association Dam Safety Guidelines and stability requirements set out in the Project Design Basis provided by BC Hydro?
   d) serviceable – i.e. displacements and deformations within the limits set out in the Project Design provided by BC Hydro?

The Project Team has, with the support of the independent Technical Advisory Board, decided on the installation of drilled piles downstream of the powerhouse and spillway structures as the preferred right bank foundation enhancement approach and concept. In our opinion, the proposed approach is sound and capable of making the right bank structures both safe and serviceable, however, several details still need to be addressed.

The Project Team is currently developing the specific design basis criteria that will be used to design the pile foundation enhancement. The principal design criterion will be to limit the deformations in the foundation to provide both safety and serviceability. The Panel agrees with this approach. Limiting the foundation deformations will provide for safety by preventing the development of an active wedge in the rock behind the RCC buttress and preventing rupture of the lining system to be installed in the approach channel. To address serviceability, the foundation deformations must be limited so that deformations of powerhouse

components and spillway gate systems remain within acceptable limits. Stability of the foundations (factors of safety) is being checked to demonstrate compliance with CDA safety guidelines and project design basis requirements.

Some aspects of the planned deformation and stability analyses are currently being developed and finalized. However, with proper application of available characterization information, the resulting design should appropriately address safety and serviceability.

3. *Is the proposed approach to optimization of the right bank foundation enhancements (number, size and spacing of piles) capable of resulting in a cost-effective solution that can accommodate any reasonably foreseeable geological conditions encountered during construction? Are there any value engineering considerations that could be included in the design program?*

   The optimization of the pile design is currently in process. The Project Team is considering alternate pile configurations (e.g. diameters, steel configuration, etc.) as part of the process. The initial estimates of the number of required piles were based on stability analyses that considered the possible presence of or development of an active wedge behind the RCC buttress. Currently, stability analyses are being completed based on a sliding block model, bounded on the upstream side by either a single, full-height relaxation joint or a sliding plane along the rock mass-buttress interface. For both cases, the required numbers of piles are significantly less than originally estimated with the active wedge model.

   Value engineering considerations were included in the multiple accounts analyses (MAA) commented on below.

   A number of details must be worked out for the pile optimization, but we are confident that a pile design can be developed that is cost-effective and capable of accommodating reasonably foreseeable geological conditions encountered during construction.

4. *Is the proposed approach to estimating, scheduling and procuring the enhancements reasonable? Are there other things that could be considered that would increase the level of confidence in the cost estimate prepared by BC Hydro?*

   The approach to estimating, scheduling, and procuring the enhancements is awaiting finalization, or at least further development, of the designs of the piles. Our comments on this question will be provided after further development and specifications of the design.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, PhD
REPORT NO. 1
January 22, 2021

5. *Were the engineering attributes considered in the multiple accounts analysis thorough?*

   Based on a review of the information provided to us concerning the multiple accounts analysis of the potential foundation enhancement alternatives, the engineering attributes considered appear to have been systematic, thorough, and reasonable.

6. *Are there any other foundation enhancement measures that could have been considered?*

   We are not aware of any other structural foundation enhancement alternatives that could have been considered.

   Additional drainage measures may be used to reduce lateral water pressures and uplift forces under the RCC buttresses. At this time, such additional measures do not appear to be required. If water pressures during the lifetime of the structures rise to values higher than anticipated during design, suitable mitigating drainage measures may be implemented without making any structural changes. Recognition of possible changes in drainage conditions over time and the inclusion of design measures to accommodate drainage mitigation measures are not unusual in current dam design practice.

STATEMENT OF LIMITATIONS

The Panel functioned as independent reviewers of the methodologies used by the Project Team for analysis and design of the proposed enhancements, based on information provided by the Project Team. Given the large amount of work being completed by the Project Team and the associated documentation, it was not possible for the Panel to perform a detailed review of all of the material in the available time. In particular, the Panel has not performed detailed checks of calculations and designs completed by the Project Team. Such detailed checks are provided by the quality control/quality assurance programs for the project. The Panel provides its opinions concerning the methods and approaches being used based on information provided by the Project Team. However, the ultimate decisions and responsibilities for the designs remains with the BC Hydro.

Our review services were performed within the limits prescribed by BC Hydro in a manner consistent with the level of care and skill normally exercised in the current standard of professional engineering practice. No other representation to BC Hydro, expressed or implied, and no warranty or guarantee is included or intended.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, PhD
REPORT NO. 1
January 22, 2021

Respectfully submitted,

[redacted]
John W. France

[redacted]
Kaare Hoeg

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, PhD
REPORT NO. 2
February 15, 2021

EXECUTIVE SUMMARY

Additional analyses of the earthfill dam are still in progress, in light of performance observed on the right abutment. However, based on the studies that have been completed to date, we are confident that a safe earthfill dam structure can be constructed at Site C meeting the Canadian Dam Association (CDA) Dam Safety Guidelines. Further, it is our opinion that the earthfill dam type is a particularly appropriate choice for the foundation conditions at Site C, because of 1) the ability to accommodate the low strength foundation bedding planes with flatter earthfill dam slopes, as necessary to provide stability and 2) the earthfill dam's tolerance of deformations, particularly when designed with wide core, filter, and transition zones, as is the case for the Site C earthfill dam design.

The available analyses indicate that for long term steady state conditions, after construction-generated pore water pressures have dissipated, the current earthfill design meets CDA stability guidelines for both the Most Likely Case (MLC) and the Reasonably Worst Case (RWC), both of which we believe have been reasonably estimated. Analyses completed to date also indicate that, for construction conditions including estimated pore water pressure generation and dissipation during construction activities, the CDA stability guidelines can be met with the current earthfill dam design for the MLC and with the addition of a relatively modest amount of stabilizing fill at the downstream slope and toe for the RWC. Further, analyses have indicated that increases of up to 20 percent in factor of safety can be achieved by readily constructible additional berm and toe fill configurations if that should be needed.

In our opinion, the Project Team's estimates of construction-generated pore water pressures are reasonable based on available data. However, the construction-generated pore water pressures constitute one of the greatest uncertainties in the analysis, which must be and are being recognized in evaluating dam safety and the construction schedule/cost risks.

It is our understanding that the additional berm and toe fill configurations referenced above which could increase construction phase stability beyond that required for the RWC are within the Project Team's current budgetary proposal. Part of the Project Team's mitigation strategy to reduce the risk of impacting the schedule during construction is a plan for placement of additional fill downstream of the downstream cofferdam to create a staging area and provide additional stability during construction. The additional staging area fill is sufficient to meet CDA guidelines for the RWC.

In the very unlikely, but not impossible, event that observed deviation from expected performance is greater than expected (deviates from the RWC), such deviations could still be safely addressed by additional downstream fill placements or temporarily pausing fill placement to allow construction-generated pore water pressures to dissipate. However, such measures could further impact cost and schedule.

In our opinion, the available geotechnical and geological data are satisfactory to characterize foundation conditions for purposes of the earthfill dam design, and the planned observational approach and instrumentation program for the earthfill dam is reasonable and appropriate for monitoring and responding to construction-generated pore water pressures and movements during construction so that adequate stability and safety can be maintained.

INTRODUCTION

The Technical Review Panel's (Panel's) original assignment did not include review of the Site C earthfill dam design and construction, but BC Hydro subsequently asked the Panel to expand its assignment to include review of this structure and the Panel agreed.

The geotechnical investigations for the Project did not include the portion of the earthfill dam foundation beneath the main river channel, as it was not considered safe to use barge mounted equipment due to the river currents.

Portions of the earthfill dam core trench have been excavated on the left and right banks. The exposed bedrock at the base of the core trench in these locations has been mapped and foundation grouting is being performed.

Mapping and grouting of the right bank portion of the core trench identified shears that affected the stability of the right bank section of the earthfill dam. A shear key has been added to improve stability and reduce dam displacements for the right bank section of the earthfill dam, and a three-dimensional analysis has been undertaken to verify that acceptance criteria will be met.

Installation of piles in the cutoffs of the upstream and downstream cofferdams and the associated investigations have provided more information on the foundation across the main river channel.

After completion of the upstream and downstream cofferdams, the remainder of the core trench will be excavated, mapped, and grouted. Until this work has been completed and assessed, there is uncertainty about the foundation conditions for the earthfill dam and whether the current design will meet the acceptance criteria or whether some further enhancements will be required.

There are also uncertainties concerning the piezometric response of both the bedding planes in the foundation and the till core and the strengths of discontinuities (bedding planes and shears) in the foundation.

In Report 21A the Technical Advisory Board (TAB) introduced the concepts of the Most Likely Case (MLC) and the Reasonably Worst Case (RWC) and how these concepts should be considered in the design.

The observational approach is planned to verify the design of the earthfill dam during construction. The geotechnical instrumentation will directly measure the piezometric responses in the core and on the foundation bedding planes and inclinometers will indirectly indicate the strength of the foundation. If the observations indicate that the RWC is developing, design modifications would be implemented to meet acceptance criteria.

The TAB for the Project has been involved in the development of the design for the earthfill dam. Nevertheless, given the possibility of required design changes and the experience with unexpected performance during right abutment excavations, the Project Assurance Board (PAB) has decided to have an additional Third-Party Due Diligence Review completed for the earthfill dam design by this Technical Review Panel. The Panel has been tasked with reviewing the following aspects of the work being completed by the Project Team:

- The geotechnical investigations for the earthfill dam completed to date and the geotechnical instrumentation for the earthfill dam and cofferdams.
- The characterization of the rock and the properties of the rock mass, bedding planes, shears, etc. that control the stability of the earthfill dam and its foundations.
- Pore pressure assumptions during and at the end of construction.
- Adaptations of the design and stability analysis that have been identified to date in consideration of experience on the right abutment.
- Strategies to be adopted to further adapt the design, if necessary, based on mapping of the core trench across the riverbed and/or information obtained from geotechnical instrumentation during construction.

Work completed by the Panel to date related to the earthfill dam includes participation in three web-based Project Team briefings/discussion sessions with the Team, participation in web-based Project Team briefings to the TAB, review of documents provided to the Panel by the Project Team, and preparation of this report.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, PhD
REPORT NO. 2
February 15, 2021

FINDINGS

Updates to the Site C earthfill dam design in light of the right abutment experience are still in progress at the time of preparation of this report. In particular, the Project Team is completing three-dimensional stability and deformation analyses for the earthfill dam. The Panel has been briefed on the foundation geology and earlier analyses, which have included parametric studies evaluating ranges of estimates for shear strengths and pore water pressure generation during dam construction. In the remainder of this section, the Panel provides initial findings based on the information that has been presented to the Panel to date. The Panel's findings will be updated in future reports based on further work to be completed by the Project Team.

Based on the information that has been presented, the Panel provides initial findings regarding earthfill dam safety, construction schedule/cost risks, geotechnical/geological investigations, and the observational approach and instrumentation.

Earthfill Dam Safety

The available analyses indicate that for long term steady state conditions, after construction generated pore water pressures have dissipated, the current earthfill design meets CDA stability guidelines for both the Most Likely Case (MLC) and the Reasonably Worst Case (RWC).

The Project Team has estimated pore water pressures that will be generated during construction in the earthfill dam core and in the foundation bedding planes for the MLC and RWC. The estimated construction pore water pressures are consistent with pore water pressures measured to date during construction of the upstream cofferdam and the Relocated Surplus Excavated Material (RSEM) sites, and these estimated pore water pressures seem reasonable. However, the construction-generated pore water pressures constitute one of the greatest uncertainties in the analysis, which must be and are being recognized in evaluating dam safety and the construction schedule/cost risks.

Analyses completed to date indicate that, for the estimated construction pore water pressure generation and dissipation, the CDA stability guidelines can be met with the current earthfill dam design for the MLC and with the addition of a relatively modest amount of stabilizing fill at the downstream slope and toe for the RWC. Analyses have indicated that increases of up to 20 percent in factor of safety can be achieved by readily constructible berm and toe fill configurations, if that should be needed.

Based on the range of parametric studies that have been completed, we are confident that a safe earthfill dam structure can be constructed at Site C meeting the Canadian Dam Association (CDA) Dam Safety Guidelines.

In our opinion, the earthfill dam type is a particularly appropriate choice for the foundation conditions at Site C. The slopes of an earthfill dam can be flattened as necessary to provide stability even with the low strength foundation bedding planes. In addition, an earthfill dam is tolerant of deformations, particularly when designed with wide core, filter, and transition zones, as is the case for the Site C earthfill dam design.

Construction Schedule/Cost Risks

The Project Team is well aware of potential impacts to schedule and cost that could result from higher than expected construction-generated pore water pressures or other unexpected foundation and earthfill dam performance, and strategies are being developed to limit the impacts of such occurrences.

Based on the completed analyses, downstream toe berm and fill placements within the currently planned contingencies will most likely address any observations. As noted above, readily constructible berms and fills, which we understand would be within the current budgetary proposal, could increase factors of safety by up to 20 percent, according to the completed analyses. The challenge would be to implement any required changes in a manner that does not adversely affect schedule and cost.

The Project is planning for placement of additional fill downstream of the downstream cofferdam to create a staging area and provide additional stability during construction. The additional staging area fill is sufficient to meet CDA guidelines for the RWC. This additional stability is part of a mitigation strategy to reduce the risk of impacting the schedule during construction, if higher than anticipated pore water pressures are encountered.

Although we believe that it is very likely that any observed unexpected performance could be addressed within the current budgetary proposal, the possibility of deviations from expected behavior greater than the RWC cannot be entirely ruled out. Such greater deviation from expectations could still be safely addressed by additional downstream fill placements or temporarily pausing fill placement to allow construction-generated pore water pressures to dissipate. However, such measures could further impact cost and schedule.

Geotechnical/Geological Investigations

Although geotechnical and geological investigations have been limited to areas outside of the riverbed, we believe that the available data from the earthfill dam investigations and the construction of cofferdams, combined with knowledge of the rock formations obtained from the right abutment investigations, is satisfactory to characterize foundation conditions for purposes of the earthfill dam design.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, PhD
REPORT NO. 2
February 15, 2021

Observational Approach and Instrumentation

In our opinion, the planned observational approach and instrumentation program for the earthfill dam are reasonable and appropriate. After the experience on the right abutment, the Project Team has added instruments to the originally planned three earthfill dam instrumentation sections and added two more earthfill dam instrumentation sections. The planned instruments should be sufficient to monitor the construction-generated pore water pressures and movements during construction so that adequate stability can be maintained.

STATEMENT OF LIMITATIONS

The Panel functioned as independent reviewers of the methodologies used by the Project Team for analysis and design of the earthfill dam, based on information provided by the Project Team. Given the large amount of work being completed by the Project Team and the associated voluminous documentation, it was not possible for the Panel to perform a detailed review of all of the material in the available time. In particular, the Panel has not performed detailed checks of calculations and designs completed by the Project Team. Such detailed checks are provided by the quality control/quality assurance programs for the Project. The Panel provides its opinions concerning the methods and approaches being used based on information provided by the Project Team. However, the ultimate decisions and responsibilities for the designs remains with BC Hydro.

Our review services were performed within the limits prescribed by BC Hydro in a manner consistent with the level of care and skill normally exercised in the current standard of professional engineering practice. No other representation to BC Hydro, expressed or implied, and no warranty or guarantee is included or intended.

Respectfully submitted,

[redacted]
John W. France

[redacted]
Kaare Hoeg

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, ScD, NAE
REPORT NO. 3
April 6, 2021

EXECUTIVE SUMMARY

This report presents an update to the Technical Review Panel's (Panel's) findings subsequent to Panel Reports Nos. 1 and 2, issued on January 22, 2021 and February 15, 2021, respectively.

In the Panel's opinion, the Engineering Design Team (EDT) has been proceeding well with the design of the right bank enhancements. The principal focus of the recent work has been on analyses to define the number, size, and depth of the pile system, so that the steel for the piles can be ordered. The Panel agrees with this focus, since ordering the steel for the piles soon is required to limit schedule and cost risks.

The optimization work has resulted in a recommended pile system consisting of:

1. A total of 96 concrete-filled steel pipe piles.
2. Each pile will be installed in a 2.4-m diameter drilled shaft.
3. Each pile will include 2.0-m diameter steel casing with 38mm thick wall.
4. This configuration results in a 200-mm thick, concrete-filled annulus outside the steel wall.
5. 50% of the piles will extend to 350-m Elevation and the other 50% of the piles will extend to 360-m Elevation.

The recommended pile system is substantially reduced from the preliminary design developed after the discovery of the unexpected movements beneath the roller compacted concrete (RCC) buttress. The preliminary design consisted of 255 piles, all with 3.0 m diameter. The principal reasons that the recommended pile system is significantly less than that in the preliminary design are that 1) investigations have established that an active wedge does not exist in the rock behind the RCC buttress and is very unlikely to develop due to the deformation restraint from the pile system, and 2) additional investigations, including lateral pile load tests, have provided improved understanding of bedrock properties.

The pile system recommendation is supported by detailed numerical analyses indicating calculated displacements that are less than design criteria established in a revised Design Basis Memorandum (DBM) for all cases identified. In addition, "stress test" deformation analyses indicate that the recommended pile system has reserve capacity to limit deformations for loads even greater than those identified in the DBM. Stability analyses completed by the EDT indicate that the design configuration meets CDA stability guidelines without inclusion of the piles for all load cases identified in the DBM. Hence, including the piles to meet deformation criteria will provide reserve stability capacity beyond that required to meet CDA guidelines.

In the Panel's opinion, the analyses have been completed following best professional practices and the recommended pile system is well supported. It is reasonable to proceed to procure the steel for the recommended system. It is possible that the pile system could be refined and optimized somewhat further, but the risks of costly delay claims from the contractor would likely more than offset the benefits of further optimization.

The EDT has also been progressing a risk analysis for the approach channel water control features and a hydrogeological analysis of the right bank. In the Panel's view, the risk analysis has been thorough and complete and has identified opportunities for refinement of the final design of the water control features. The hydrogeological analysis of the right bank will help to inform decisions on the final design of the water control features for the right bank.

The Panel looks forward to reviewing the final design of the right bank enhancements, supported by the finalization of the numerical analyses, stability analyses, approach channel risk analysis, and hydrogeological analysis.

There have been no significant changes in the earthfill dam design or stability analysis since Panel Report No. 2 issued on February 15, 2021. The Panel's findings remain unchanged from those stated in Report No. 2. BC Hydro has advised the Panel that fill for a construction laydown area will be placed at the downstream toe of the earthfill dam before embankment fill will be advanced to significant height. As noted in Report No. 2, placement of this fill increases the stability of the earthfill dam, and the Panel supports the decision to proceed with its placement.

As the Project prepares for the upcoming resumption of core trench preparation and fill placement, the Panel was recently briefed on the identification of deterioration of some of the protective shotcrete previously placed in the core trench excavation and of a limited depth of the shale underlying the shotcrete. The Panel supports BC Hydro's plan to remove all of the previously placed shotcrete from the cutoff trench excavation and then to excavate any deteriorated shale and prepare the surface immediately before placement of cutoff trench fill to address this critical aspect of the earthfill dam construction.

INTRODUCTION

At the request of BC Hydro, the Technical Review Panel (Panel) has prepared this report as an update to the Panel's previous Reports Nos. 1 and 2, dated January 22, 2021 and February 15, 2021, respectively.

Since February 15, the Panel has attended briefings to the Technical Advisory Board (TAB) by the Engineering Design Team (EDT) on February 24, March 12, and March 29, 2021, during which the EDT updated the TAB on activities related to both the right bank and the earthfill dam. The Panel has also reviewed project information provided by BC Hydro.

Based on the information provided to date, the Panel provides updated findings concerning the proposed right bank design upgrades and the earthfill dam.

FINDINGS

Right Bank Design Enhancements

In the Panel's opinion, the EDT has been proceeding well with the design of the right bank enhancements. The principal activities completed since February 15 include optimization of the pile system design, a risk analysis for the approach channel water control features, and a hydrogeological analysis of the right bank. Work remaining to be done includes finalization of the configuration of the pile cap in the powerhouse tailrace, the approach channel, the foundation drainage system, and the foundation grouting program; compilation of the drawings and specifications for the enhancements; and preparation of a design report documenting the analyses of record for the design.

Pile System Design – The principal focus of the recent work has been on analyses to define the number, size, and depth of the pile system, so that the steel for the piles can be ordered. The Panel agrees with this focus, since ordering the steel for the piles soon is required to limit schedule and cost risks.

The optimization of the pile system design was based on updated design criteria established in revisions to the Design Basis Memorandum (DBM). As noted in Panel Report No. 1, the principal design criterion is to limit the deformations in the foundation to provide both safety and serviceability. The design criteria also include required stability factors of safety to conform to Canadian Dam Association (CDA) guidelines. The design criteria are being considered for a number of assumed loading conditions, ranging from the best estimate of normal operation loading to a loading resulting from the extremely unlikely case of failure of the approach channel lining and failure of the right bank foundation drainage system, such that water pressures in open joints in the foundation rock and at the contact with the rock and the roller compacted concrete (RCC) buttress rise to levels corresponding to the reservoir level (a condition designated Extreme 4).

The criterion established for limiting deformation was a calculated horizontal displacement no greater than 10 mm at the most upstream line of piles. Deformation at the downstream edge of the approach channel liner was also checked in the analyses. The Panel supports both the selected displacement limit at the piles and the check of deformations at the liners.

Furthermore, the computed displacements for the maximum design natural earthquake and estimated seismic events induced by hydraulic fracturing for petroleum development must also be less than the horizontal displacement criterion.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, ScD, NAE
REPORT NO. 3
April 6, 2021

The optimization work has resulted in a recommended pile system consisting of:

1. A total of 96 concrete-filled steel pipe piles.
2. Each pile will be installed in a 2.4-m diameter drilled shaft.
3. Each pile will include 2.0-m diameter steel casing with 38mm thick wall.
4. This configuration results in a 200-mm thick, concrete-filled annulus outside the steel wall.
5. 50% of the piles will extend to 350-m Elevation and the other 50% of the piles will extend to 360-m Elevation.

For optimization of the pile system design, Extreme 4 was the controlling load case. Numerical analyses of this case for the recommended pile system that have been presented to the Panel to date, resulted in calculated horizontal displacements of 5mm at the upstream piles for both the powerhouse and the spillway, and calculated deformations of 11mm and 9mm at the approach channel liner for the powerhouse and the spillway, respectively. The analyses also included consideration of variations in the plan layout of the piles to limit tensile stress development in rock surrounding the piles. Numerical analyses completed to date have also indicated that, for all cases identified in the DBM except Extreme 4, the calculated deformations at the upstream piles are less than 2 mm.

To further test the robustness of the recommended pile system, the EDT completed additional numerical analyses for loads more severe than the Extreme 4 case (i.e. stress testing). The results indicated that the enhanced design with the recommended pile system has significant reserve capacity.

Stability analyses completed by the EDT indicate that the design configuration meets CDA stability guidelines without inclusion of the piles for all load cases identified in the DBM. Hence, including the piles to meet deformation criteria will provide reserve stability capacity beyond that required to meet CDA guidelines.

In the Panel's opinion, the analyses have been completed following best professional practices and the recommended pile system is well supported. It is reasonable to proceed to procure the steel for the recommended system. It is possible that the pile system could be refined and optimized somewhat further, but the risks of costly delay claims from the contractor could likely more than offset the benefits of further optimization. The recommended pile system is substantially reduced from the preliminary design developed after the discovery of the unexpected movements beneath the RCC buttress. For comparison, the preliminary design consisted of:

1. A total of 255 concrete-filled steel pipe piles.
2. Each pile to be installed in a 3.2-m diameter drilled shaft.
3. Each pile to include 3.0-m diameter steel casing with 22-mm thick wall.

4. All piles extending to 350-m Elevation.

In addition, the much larger number of piles of larger diameter in the preliminary design would have required larger and more expensive pile caps. The Panel notes that the principal reasons that the recommended pile system is significantly less than that in the preliminary design are that 1) investigations have established that an active wedge does not exist in the rock behind the RCC buttress and is very unlikely to develop due to the deformation restraint from the pile system, and 2) additional investigations, including lateral pile load tests, have demonstrated the rock is stronger and stiffer than the values provided from the earlier investigations.

Detailed specifications for pile installation remain to be developed, but large diameter drilled pile installations have a long-standing history of application in the construction industry, so established precedents exist for developing the required specifications. Further, successful installation of drilled piles at the site was demonstrated by the installation of the two piles used for the lateral load tests. The Panel looks forward to reviewing the final drawings and specifications for the pile system to be included in the right bank enhancements.

Approach Channel Risk Analysis – The EDT has been completing a risk analysis of the various water control features to be included in the approach channel and the right bank. These features include the approach channel liners and associated under-drains, foundation grout curtains in the vicinity of the approach channel, and right bank drainage features (the right bank drainage tunnel and drilled drain holes). The purpose of the risk analysis is to identify potential measures to improve the robustness and resiliency of the water control features.

The EDT has presented the results of the risk analysis in briefings to the TAB and the Panel. In the Panel's view, the risk analysis has been thorough and complete and has identified opportunities for refinement of the final design of the water control features. The Panel looks forward to reviewing the final design of these features.

Right Bank Hydrogeological Analysis – The EDT has been performing a detailed hydrogeological analysis of the right bank to help inform decisions on the final design of the water control features for the right bank. The analysis is still in progress, and the TAB and the Panel have been briefed on the results to date. The Panel looks forward to reviewing the final analysis and its application to final design of the right bank water control features.

Earthfill Dam

There have been no significant changes in the earthfill dam design or stability analyses since Panel Report No. 2 issued on February 15, 2021. The Panel's findings remain unchanged from those stated in Report No. 2. BC Hydro has advised the Panel that fill for a construction laydown area will be placed at the downstream toe of the earthfill dam before embankment fill will be advanced to significant height. As noted in Report No. 2, placement of this fill increases the stability of the earthfill dam and the Panel supports the decision to proceed with its placement.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, ScD, NAE
REPORT NO. 3
April 6, 2021

The Project has been appropriately focused on the foundation preparation and grouting for the main dam and the upcoming resumption of core trench preparation and fill placement. The Panel was recently briefed on the identification of deterioration of some of the protective shotcrete previously placed in the core trench excavation and of a limited depth of the shale underlying the shotcrete. BC Hydro has advised the Panel, that the planned approach is to remove all of the previously placed shotcrete from the cutoff trench excavation and then to excavate any deteriorated shale and prepare the surface immediately before placement of cutoff trench fill. The contact between the cutoff trench fill and the underlying shale foundation is a critical aspect of the earthfill dam construction, and the Panel supports BC Hydro's plan for addressing this aspect of construction.

STATEMENT OF LIMITATIONS

The Panel functioned as independent reviewers of the methodologies used by the EDT for analysis and design of the right bank enhancements and the earthfill dam, based on information provided by the EDT. Given the large amount of work being completed by the EDT and the associated voluminous documentation, it was not possible for the Panel to perform a detailed review of all of the material in the available time. In particular, the Panel has not performed detailed checks of calculations and designs completed by the EDT. Such detailed checks are provided by the quality control/quality assurance programs for the Project. The Panel provides its opinions concerning the methods and approaches being used based on information provided by the Project Team. However, the ultimate decisions and responsibilities for the designs remains with BC Hydro.

Our review services were performed within the limits prescribed by BC Hydro in a manner consistent with the level of care and skill normally exercised in the current standard of professional engineering practice. No other representation to BC Hydro, expressed or implied, and no warranty or guarantee is included or intended.

Respectfully submitted,

[redacted]

John W. France

[redacted]

Kaare Hoeg

Site C Clean Energy Project

Technical Advisory Board

Summary Statement on Safety of Dam Structures

January 22, 2021

Table of Contents

1. Introduction

The design of the Site C Project was conceived on the basis of satisfying all Canadian Dam Association (CDA) guidelines for ensuring the safety of such structures. This was supplemented by worldwide expertise and the experience that BC Hydro together with its engineering consultants has in designing, building and operating such structures. Parameters were developed for Site C that assured CDA compliance would be met, and these were incorporated in a Design Basis Memorandum (DBM), which has been followed as the project developed.

The Project Assurance Board has requested a summary assessment from the Technical Advisory Board (TAB) related to their confidence in the design of the dam structures associated with the Site C Project, particularly with respect to safety and the adoption of best practices. The context of the request is to assist the Project Assurance Board in the evaluation of the technical integrity of the Project as it proceeds to finalize the foundation enhancements that have been found necessary in the right bank of the main dam.

The summary assessment has been developed in response to five questions which are addressed sequentially below.

2. Questions

1. Were the analysis and investigations that formed the basis of the design at the time of the authorization for construction of the Project appropriate and in accordance with best practices?

Investigations for the Site C Project began in 1973. In 1978, it was confirmed that the current site was preferable. The current project was approved in 2014. The specific site investigations that began in 1975 and continued to project approval are listed in Appendix A.

In accordance with best practices:

i. BC Hydro is an experienced dam owner/operator and together with its engineering consultants had intimate knowledge of the geological challenges associated with dam construction at Site C. This arose from their experience elsewhere along the Peace River, an awareness of how severe geotechnical considerations prevail eastward in Alberta and Saskatchewan, and a detailed appreciation of the valley rebound geomechanics that created the complex conditions that had to be addressed.

ii. BC Hydro retained independent Technical Advisory Boards for the period 1978-1989 when feasibility of the Base Case design was evolving and thereafter from 2010 to date when the project was renewed and progressed through final design into construction. This is an established practice for major hydroelectric projects and

allows for leading international experience to be introduced into the planning, design and construction.

iii. BC Hydro and the Engineering Design Team (EDT) retained individual Subject Matter Experts (SME) as appropriate for additional advice throughout the process.

iv. Notwithstanding the comprehensive investigations carried out in the 1970s, additional investigations were initiated in 2008 which concluded that the geological/geotechnical model that had been developed and the associated Base Case design remained valid. This involved diversion tunnels within the left bank of the river valley, an embankment fill dam across the valley, and the powerhouse/spillway structure at the right bank of the valley.

In 2010 the EDT undertook an optimization to compare alternate arrangements to either validate the Base Case or modify it before proceeding to final design. This was an important step in the evolution of the design, and the TAB recommended that a formal structured decision-making process be adopted. It was heavily weighted to minimize geotechnical risk. The earthfill dam with the RCC buttress was confirmed as the preferred general arrangement and this conclusion was supported by the SMEs and the TAB.

At the time of the implementation design in 2014, the deepest bedding plane shear that was identified as potentially impacting the stability of the right bank structure was bedding plane BP 33 at El. 378 m. Hence the foundation of the RCC buttress was set at El. 375 m, 3 m below BP 33. An assessment of a bedding plane shear below this level was also undertaken. However, the assumed resistance for this feature did not indicate a concern with respect to satisfying safety design criteria.

Finally, the need for adoption of the Observational Method was recognized and implemented as an integral part of assessing safe design, construction and long-term performance.

In the view of the TAB, the evolution of the design to the time of authorization, both consistently and diligently, was in accordance with best practices.

2. Were the practices being used during construction of the Project to confirm foundation conditions in accordance with best practices?

The final design adopted for construction employed an RCC buttress on the right bank primarily because this configuration was assessed to be optimal among the alternative choices to manage the geotechnical challenges associated with constructing on or adjacent to the right bank. Nevertheless, uncertainties existed, and they were recognized.

Best practices in the face of geotechnical uncertainties is to employ the Observational Method (OM). This relies on comprehensive instrumentation to validate that the ground

response is performing in a manner consistent with the design intent. To be effective, it also assesses the practicality of invoking mitigative measures if observations and related analyses reveal that they are necessary. The OM to be adopted at Site C is documented in detail in the project records (see Appendix B). It relies on both skillful installation of the appropriate instruments and diligent interpretation. It also relies on validation of the geological model by observations and mapping to confirm that conditions being encountered are as anticipated or whether design modifications are required. BC Hydro has considerable experience with the application of the OM and it was implemented in an effective manner.

Considerable monitoring of the RCC buttress excavation and construction was intended to be executed from the Right Bank Drainage Tunnel (RBDT) prior to the start of the RCC excavation. The construction of the RBDT did not occur in a timely manner, which resulted in an incomplete history of the response of the rock during the excavation of the powerhouse buttress foundation. This was ultimately addressed by instrumentation and drainage measures installed from the surface. As anticipated, excavation-induced movements were observed but none were regarded as sufficiently consequential to affect the design.

In concert with these observations, detailed geological mapping was conducted and compiled in state-of-the-art software that integrated all geological information obtained on site in a three-dimensional framework. This attention to detail, which is invaluable, provides another example of best practices employed at Site C.

Following the recorded movement history associated with the powerhouse excavation and RCC placement, the instrumentation to monitor the spillway excavation was revised and inclinometers that monitor bedding plane slip were installed to depths below El. 375 m, the bottom of the RCC foundation. While potential slip at greater depths had been considered in the design, the resistance along these deeper bedding planes was assessed to be too high to make them critical to the design.

As excavation continued for the spillway, small movements, about 5 mm, developed at El. 372 m at a location now referred to as BP 33e. In many projects, monitoring to this accuracy either would not be undertaken or would not be reliable, and such small movements would not be regarded as consequential. A measure of the best practices executed at Site C is the reliability of the data and the commitment to interpret all data that informs matters of safety.

This latter commitment, making use of numerical modelling techniques that have only become practical and reliable in recent years, revealed that the frictional resistance was significantly less than presumed values adopted in the design for bedding planes. These low values were consistent with lower bound values determined from laboratory tests. When used in design, the factors of safety associated with extreme load cases, as

specified for the project, appeared to be no longer satisfied, prompting a comprehensive study of foundation enhancements to assure dam safety.

The application of the OM produced results as intended in an expedient manner. It is the view of the TAB that without the commitment to best practices, reliable monitoring of the small displacements of concern could not be assured and the related interpretation may have been highly uncertain. The OM in practice relies on a contingency design to be implemented in the event conditions are worse than anticipated and observed. In this case, the contingency case for bedding plane slip at depths below El. 372 m adopted a frictional resistance of 16º. Neither the EDT nor the TAB anticipated that these apparently tight features would mobilize a resistance of ≈11º, near the lower limit encountered in laboratory testing. It could be surmised that had they done so, the mitigation design might have involved foundation enhancements similar to those currently under consideration.

3. Has the project team evaluated and identified the appropriate changes to the design for the RCC buttress foundation?

The project team has identified and evaluated appropriate changes to the design for the RCC buttress foundations. This was accomplished by utilizing field geologic information, evaluating field instrumented data and engaging in a detailed and intensive program of "state-of-the-art" structural analysis based upon the information gained from the detailed geologic, hydro-geologic and structural engineering.

Findings in the right bank arising from the geological / geostructural synthesis have raised concerns with respect to satisfying some of the original Design Basis Memorandum (DBM) requirements. The assessment of these concerns has progressed along a path that originally considered that factors of safety associated with extreme loading cases would not be satisfied. This is no longer the case since newly obtained data on rock strength and stiffness at depth support the view of the TAB that such factors of safety can be satisfied. However, the reassessment of the design has recognized the need to provide measures that would reduce deformations of the supported rock to the degree practical and this is now the primary focus of the foundation enhancements. This will prevent the evolution of loading conditions associated with substantial rock weakening that were not specifically foreseen in the original DBM with the data available at that time for analysis. In addition, extra foundation enhancements provide the robustness and resilience to respond to residual uncertainties that might exist. The TAB and the Engineering Design Team (EDT) engaged in extensive discussions evaluating the new information, the logic of past design assumptions, particularly for the extreme case, the appropriate analyses to be used going forward to analyze the situation in more detail, and a schedule to develop executable enhancement measures.

As a result of recent information and understanding of the foundation conditions within the right bank, the EDT had investigated several foundation enhancements options to

increase the stability of the right bank powerhouse and spillways buttresses. Systems containing shear walls, large diameter piles, prestressed anchors, and concrete filled tunnels were considered.

Since it was and is a very complex condition to analyze both geologically and structurally, an evaluation was conducted using a Multiple Accounts Analysis (MAA). This process helps establish an optimal solution to meet the project objectives; dam safety, regulatory, and engineer-of-record requirements; and achieve owner and operator acceptance. The optimal solution considers construction safety, environmental issues, the long-term quality of the project infrastructure, technical risk, constructability, operability, schedule and cost.

The MAA is effective in integrating multiple points of view, with flexibility in efficiently doing sensitivity studies by modifying the weightings if there is interest in assessing the robustness of the conclusions. It also provides a valuable record of the decision-making process.

The MAA was conducted on both the powerhouse and spillway buttresses and considered several options to increase the stability of the structures. Various options were considered to reduce the driving forces, such as controlling the water load on the structures by introducing drainage facilities and others introduced restraining forces such as anchors and tendons. Still others considered structural foundation features developed within the structures and anchored within the rock foundations, such as shear walls and large diameter piles.

4. Does the design of the Project, including processes followed during construction, incorporate principles of a safe design?

The Site C Project does incorporate safe design as well as construction processes and principles for safe development of a large hydroelectric project. As described in the response to Question 1 above, the best practices have incorporated BC Hydro's and its consulting design team's experiences as well as the advice of several independent and world-wide technical experts. Various alternative project arrangements were evaluated in favor of a more robust and safe design, as well as construction. The safe design principles have been practiced throughout the project, beginning with geotechnical studies in the 1970s and continue through to today, where numerous good practices, like the Observational Method of monitoring the performance of structures during construction, perform a safety function. In other areas, geologic studies and mapping of foundations are conducted to verify anticipated properties and thus safe and efficient designs. The geologic maps and geotechnical studies that are developed during construction not only facilitate and guide competent designs and construction but also form a record for both construction and future reference, should it be necessary.

In addition, the TAB anticipates that the operations manual will ensure that all elements of the facility that are critical for safety will continue to perform as intended.

Methods used in developing safe hydraulic structures at Site C utilize both numerical as well as physical modelling for design of hydraulic structures. The hydraulic structures are major structures and demand special attention for safe and efficient functioning. Major hydraulic structures like the spillways, gates and penstocks are designed to withstand extreme events like floods and earthquakes and must be designed to safely handle these events while also being constructible.

A significant feature of the safety in design is developing and adhering to design criteria developed for the project. This establishes the criteria required by BC Hydro to ensure overall safety and the commitment by the EDT to meet them. Specific criteria are established and factors of safety, which reflect the reserve resistance of the structures against failure, are defined. Different load cases are also specified that must be investigated. The criteria and load cases are consistent with international practice and the practice recommended by the Canadian Dam Association. In addition to meeting the target factors of safety, the current design also recognizes the need to satisfy the limiting deformation criteria. The TAB expects that BC Hydro's existing dam safety program will embrace the long-term assurance of safe performance through its operations manuals and other aspects of its safety program.

Analyses have shown that the biggest factor contributing to the potential instability of the spillway and powerhouse RCC buttresses is water loading within the right bank hillside. A recent hydrogeologic study was conducted to determine and evaluate the in-situ permeability of the various rocks in the right bank. This concern and ability for rock formations to conduct water, both laterally and vertically within the formations, was recognized in the tender design with the provision of a Right Bank Drainage Tunnel and by minimizing the potential for water ingress into the hillside from above by water-proofing the approach channel above the slope. However, the behaviour of the hillside upon excavation has shown an extended potential for relaxation movement and cracking, possibly extending into the approach channel. This has necessitated the robustness of channel waterproofing arrangements to be reviewed as well as the means of generally ensuring the drainage of the hillside. Maximum reliability is essential to achieve the controlling loading requirements in the design. Various arrangements are now being developed and evaluated by the Engineering Design Team (EDT), all of which the TAB supports in principle, with some comments on matters of detail. A detailed Failure Mode Analysis (FMA) is presently being conducted to evaluate all aspects of the approach channel watertightness and robustness.

The evolution of the selected design strategies is documented in a report on the structured decision-making analyses based on the Multiple Account Analysis methodology. In this

procedure, a distinction is made between “musts” and “wants”. Not violating the design criteria, as reflected by the DBM, is categorized as a “must”. With respect to the approach channel, the current FMA also emphasizes the need to minimize risk through adoption of the As Low As Reasonably Practicable (ALARP) considerations.

The development of good and safe practices both during design and during construction is founded in the following elements and principles in order of importance, namely Safety, Quality, Schedule and Budget. Safety is a “must” principle and must be adhered to and practiced, ensuring the safety of all involved in the project. Quality during design, as well as quality of the constructed project, is also a “must” element and feature, since the completed project is a minimum 100-year commitment to the Owner. Quality is an element that ensures both safety in design as well in construction. The elements of Schedule and Budget are “wants” and affect both design and construction.

5. What is the status of the earthfill dam with regard to safe design?

These issues have recently been addressed in TAB reports 21A, 22 and 23. Excerpts follow. The current status remains unchanged.

Excerpt from TAB Report 21A, dated April 2020

Question 4. Does the Board have any comment on the earthfill dam foundation review?

The status of design of the stability of the earthfill dam on its foundation was summarized, together with the past foundation characterization that controlled stability. Detailed assessment of current conditions suggests that this foundation characterization be revised based on the more detailed information currently available.

Progress with respect to this revision suggests that the controlling foundation conditions are more severe than previously used in design with respect to 1) residual strength 2) additional roughness, 3) continuity and depth of controlling bedding planes, and 4) post peak brittleness. The magnitude of pore pressures both at the end of construction and with post construction dissipation remain uncertain and this also has to be considered in the reassessment of stability.

The TAB supports the current effort to advance revised operational properties and to update the stability analysis related to the original design criteria. In so doing, the TAB recommends the following:

1. A distinction should be made for a most likely case (MLC) and reasonably worst case (RWC). Appropriate factors of safety should be recommended for each case and it is recognized that the observational method should be used where appropriate to identify if the reasonably worst case is developing. If the RWC is

developing, a default design will have to be implemented to bring the RWC up to the appropriate standard and must be demonstrated as feasible.

2. It is conceivable that the distinction between the MLC and the RWC will not be large given the significant brittleness displayed by the laboratory data with respect to the shear strength of the bedding planes.

3. It should be recognized that many agencies adopt lower factors of safety when design is based on residual strength or close to it.

The role of the application of the 3D analysis should be considered in these analyses because of the potential large 3D contributions to stability.

Excerpt from TAB Report No. 22, dated June 2020

Question 6. Does the TAB have any comment on the status of the studies on the foundation conditions for the earthfill dam?

Arising from the new findings at the Right Bank, it was timely to undertake an updated assessment of the design of the earthfill dam, particularly related to its foundation. This was presented to the TAB for review on May 8, 2020.

The update contained: 1) a review of the foundation geology, 2) a review of the shear strength mobilized along bedding planes, 3) a review of the rock mass strength, 4) a consideration of the model adopted to forecast pore pressures, 5) stability analyses in both two and three dimensions, 6) an assessment of Right Bank deformations, and 7) a summary of the proposed path forward utilizing the observational method.

New information had become available not only from the Right Bank investigation, but also from studies for the design of the cofferdam by the Contractor and from foundation responses. This has resulted in improved foundation characterization leading to some minor changes in excavation for the dam core trench. Shear strength characterization is little changed from that adopted in design but knowledge of deeper weak bedding planes has revealed some potential reduction in Factor of Safety without involving three-dimensional considerations. There has been increasing reliance on three-dimensional restraints in practice and the TAB is of the view that they can be adopted at Site C, given precedence elsewhere. There has been limited advance with respect to pore pressure response during construction. Stability analyses have assumed that they will dissipate during construction, prior to reservoir filling and this remains a matter of observational confirmation.

One matter of conceptual advance in the design of the earthfill dam is the re-casting of the design in terms of a Most Likely Case (which is the business case and has a Factor of Safety of 1.5) and the Reasonable Worst Case (which is the contingency case and has

a Factor of Safety of 1.1). Observations during construction will be designed to discover whether conditions consistent with the Reasonable Worst Case might be developing. Invoking a Factor of Safety of 1.1 limits the opportunity for unacceptable deformations to develop while a Factor of Safety acceptable for operating conditions is being restored. The updated design has demonstrated that adding downstream berms is one practical method to increase stability if warranted.

Based on this updated review and extension of the observational method to formally recognize both the Most Likely Case and the Reasonable Worst Case, the TAB is content with the status of the studies on the foundation conditions for the earthfill dam and the proposed way forward.

Excerpt from TAB Report No. 23, dated October 2020

> *Question 3 - Does the TAB believe the information presented to date from the u/s cofferdam (pile installation, grouting and piezometric response) and the core trench (mapping, grouting and performance monitoring) supports the Most Likely Case or is the trend towards a Reasonably Worse Case for the earthfill dam?*

The status of the studies on the foundation conditions for the earthfill dam was last reviewed and discussed in Report No. 22, submitted in June 2020. As presented, best practice for the design and construction of dams on clay shale foundations employs the observational method in a precautionary-based design. A distinction is made in design between the Most Likely Case (MLC) which is the basic business case and requires a Factor of Safety under operational conditions of 1.5 and the Reasonably Worst Case (RWC) which is evaluated to recognize the residual uncertainties that exist prior to construction and requires a Factor of Safety of 1.1. The RWC is evaluated to ensure that no uncontrollable displacements could develop while a contingency design is implemented to provide adequate reserve resistance for the service conditions. The development of the required mitigation measures is part of the RWC design assessment.

To date, no information from any studies on performance observations have been obtained to modify the design basis for the earthfill dam. Observations and assessment of performance have always been part of the design. Comprehensive monitoring of deformation and pore pressure are being adopted and if either indicate that conditions are leading to the RWC condition, downstream slope-flattening is recognized as a proven mitigation measure in such cases and would most likely be favoured. Depending on the detailed response, additional advanced deformation analyses might be undertaken to assess the consequences of the trends observed.

However, at the right abutment of the dam, the powerhouse restricts the opportunity to invoke such measures to a large extent and tolerable deformations are more restricted. Recent construction for the earthfill dam indicates that foundation movements are

directed toward the river valley, and not toward the powerhouse. These are favourable observations. Nevertheless, consistent with precautionary-based design, it would be prudent to assess local structural details at the powerhouse service bay boundary that would accommodate additional foundation deformations if they were to occur in this direction. However, deformations in this critical direction are already restrained by three-dimensional effects which limit the scale and likelihood of the need for any mitigation.

3. Summary

In the view of the Technical Advisory Board, the requirements for safe design have been honoured as an over-arching principle in all phases of the Project, from initial feasibility to current construction. In addition, best practices have been adopted from the initial site investigation studies to the current implementation phase. They are expected to continue to the end of construction and thereafter into operation.

Respectfully submitted,

Dr. Norbert R. Morgenstern

Dr. Wynfrith Riemer

Mr. Joseph L. Ehasz, P.E.

Dr. Peter J. Mason

Appendices

Appendix A – List of Site Investigations

Site investigations at Site C began in 1975. At the time of project approval in 2014, the following investigations had been completed:

- 211 diamond drill holes with a total length of over 13,600 m
- 29 large diameter (0.9 m) drill holes (LDH) with a total length of 1,810 m. The deepest LDH was 96 m
- 202 percussion drill holes with a total length of over 3440 m
- 271 rotary holes with a total length of over 18,180 m
- 10 sonic drill holes with a total length of over 610 m
- 10.4-m-wide 45 m long test chamber on the left bank
- 5 exploratory adits (tunnels) with a combined length of 950 m. Adits 3 and 5 are on the right bank
- 268 test pits with a total depth of 1230 m
- 12 exploratory trenches with a total length of 1,220 m
- 29 seismic lines with a total length of over 13,000 m

Appendix B – References

Site C (2017) Site C Clean Energy Project - Implementation Design RCC Buttress - Observational Method, prepared by Klohn Crippen Berger Ltd. and SNC-Lavalin Inc. for BC Hydro. BKS-03-122

Technical Advisory Board (April 2020) - Site C Clean Energy Project - Meeting No. 21A Report

Technical Advisory Board (June 2020) - Site C Clean Energy Project - Meeting No. 22 Report

Technical Advisory Board (October 2020) - Site C Clean Energy Project - Meeting No. 23 Report

Site C Clean Energy Project

Technical Advisory Board Meeting No. 24

Report

(May 10, 13 and 14, and June 16 and 17, 2021)

June 2021

Table of Contents

List of Attachments

1. Introduction

The 24th meeting of the Site C Technical Advisory Board (TAB) was convened via MS Teams conference calls on May 10, 13 and 14, and June 16 and 17, 2021. The meeting did not include a site visit. The primary objectives were to assess the progress and performance of the project, as well as review some recent design re-assessments. Technical considerations focussed primarily on the Main Civil Works (MCW).

1.1 Meeting Organization

Since the last meeting, Meeting No. 23 in October 2020, the TAB has convened for a number of technical updates via MS Teams which are recorded in the following documents:

1. Notes from other technical updates of November 18, November 26 and December 21, 2020, and January 5, January 19, January 27, February 24, March 12, March 29 and April 23, 2021. These notes are filed on the TAB Sharepoint site and are available on request.

The agendas for these technical updates are included in Attachment A.

The agendas for this meeting are included as Attachment B.

1.2 Meeting No. 24

Most of the recent meetings concentrated on the critical right bank design issues of foundation enhancement and the approach channel design. This meeting was intended to be a more general update and assessment. No specific questions were put to the TAB. Instead, this report summarizes briefly the various updates to the TAB and where comments are warranted by the TAB, they are presented in a **bold font**.

Attachment C is a list of attendees during the meeting. A debriefing is scheduled to be conducted with members of the Project Team and Executives of BC Hydro (BCH), and the Project Assurance Board on June 24, 2021.

The TAB wishes to acknowledge the excellent overviews and presentations that it received. It recognizes the substantial effort that goes into the preparation for the TAB meeting and the technical update conference calls. It appreciates the frank and informative discussions that take place during the meetings.

2. Project Update

As indicated above, the TAB was updated on both the engineering as well as construction progress during the several meetings and workshops conducted during the later months

of 2020 and up to the present in 2021. Although held virtually, these meetings and workshops did keep the TAB up to date on the Project's progress. The focus of many meetings was concentrated on the Right Bank Foundation Enhancements as well as the improvements within and along the Approach Channel. A recent aerial photo of the project is shown below. The descriptions and updates below are concentrated on the Generating Station and Spillways (GSS) and Main Civil Works (MCW) areas.

2.1 GSS Update

The GSS Civil Works design and engineering is well advanced, with 99% of the drawings issued for construction (IFC) design. The photograph presented below illustrates the status of the activities.

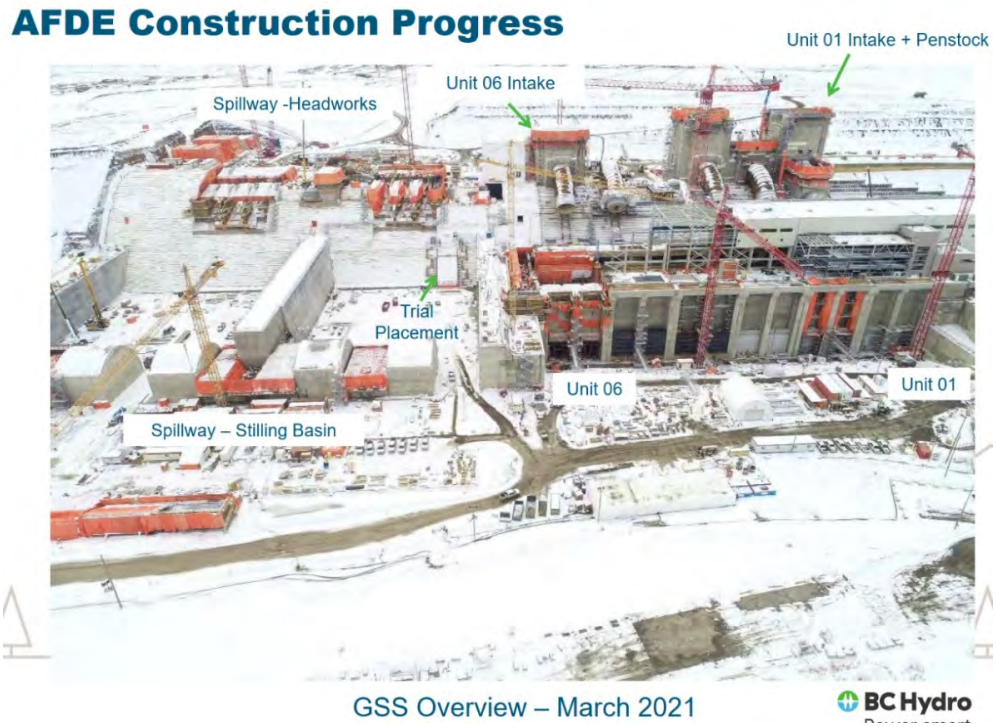
The work is divided into three main civil packages, namely (Intake/Penstocks/Transition Block, Powerhouse, Spillway). The IFC drawings for each package have been issued.

The package total and number of IFC drawings issued to date are:

- Intake, Penstock and Transition Block: 266 total and 266 issued
- Powerhouse: 1,141 total and 1,126 issued
- Spillway: 654 total and 654 issued

- **TOTAL: 2,061 and 2,046 (99%) issued**

The TAB regards this as a significant achievement.



2.1.1 Hydromechanical Equipment Update

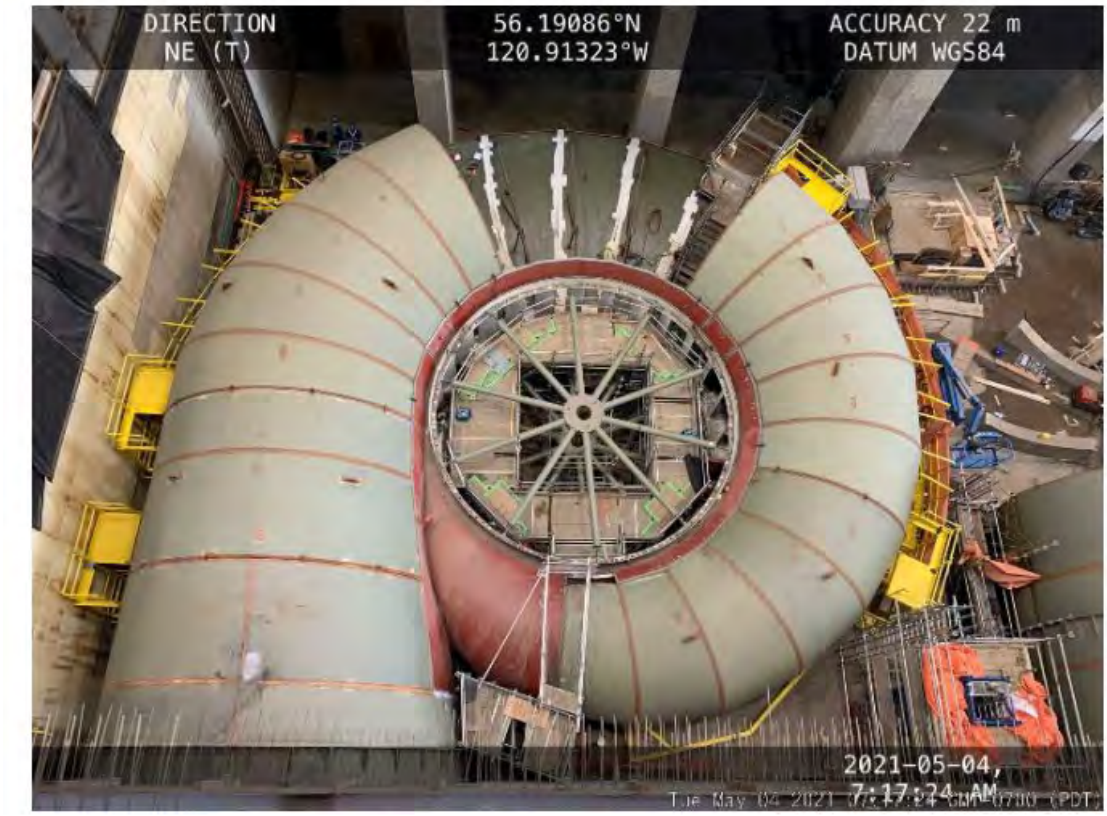
All the Hydromechanical Equipment, including the large gates, valves and stoplogs, are in design and manufacture with ATB Riva Calzoni. This equipment is presently on schedule for delivery and will be installed by AFDE. At present, the support to construction continues with either delivery to the site location or to storage facilities near the site.

This is a significant achievement considering the problems associated with managing the worldwide supply as well as the effects of COVID-19.

2.2 Turbine and Generator Update

The Turbines, Generators, Exciters, and Governors design, manufacture and installation are by Voith Hydro. The Turbine and Generator parts and equipment are being manufactured throughout the world and delivered and installed at the site on schedule. As with other equipment, it is either installed directly or stored on site or in a prepared and protected storage facility nearby. The magnitude of this undertaking is illustrated by the photograph of the Turbine scroll case installation shown below.

The TAB note above also applies here.



2.3 Balance of Plant Update

The original concept regarding Balance of Plant equipment (BoP) and installation was that it was to be a completion contract supplied and/or installed by a single large installation contractor. The one large contract was to encompass all the final completion items of the Project, essentially a completion contract. However, the bids for the completion contract were too excessive and above the Engineers Estimate. BCH chose to divide the BoP completion work into several smaller contracts and manage the various contracts.

The TAB supports the judgement of BCH's decision in this regard and it is being implemented in an effective manner.

2.4 Update on Quality

Quality is one of the Project's most significant areas of importance within the Project design and construction. It falls within the Project mission statements of Safety, Quality, Schedule, Budget and Environmental.

The Project quality areas of focus in 2021 are 1) the MCW and 2) the GSS Civil Works. Project quality is measured in the following areas and aspects:

- Each contractor is responsible for its own Quality Control
- BC Hydro is responsible for overall Quality Assurance
- For offsite manufacturing Quality Assurance, BC Hydro is supported by subcontractors skilled in Quality Assurance and BC Hydro's Powertech Labs for onsite welding quality assurance
- For onsite construction Quality Assurance, BC Hydro teams supporting the Quality Assurance processes are:
    - Site Quality Team
    - Resident Engineering Team
    - Construction Management Team
    - Engineering Design Team (Klohn Crippen and SNC Lavalin)
    - Owner's Engineering Team (BC Hydro)

The areas of focus in 2021 are:

- Main Civil Works
    - Foundation grouting for main dam
    - Earthworks construction
    - Roller Compacted Concrete (RCC) completion
    - MCW contractor (PRHP) materials testing laboratory and implementation of lessons learned from cofferdam construction
    - Monitoring of PRHP quality resources (inspectors)
- GSS Civil Works
    - Concrete (thermal control; strength)
    - Penstock welding and coating
    - Hydromechanical equipment installation
- Turbines and Generators (site)
    - Embedded part installation and alignment
    - Spiral case welding and testing
- Offsite manufacturing
    - Coordination of local inspectors (Italy, Brazil, Canada, USA, Korea)
    - BC Hydro remote participation in factory acceptance tests (COVID-19)

Each of the quality aspects were evaluated regarding engineering, manufacturing and construction. The TAB was advised that Quality Performance Indicators were developed that indicate that good quality is being obtained in a consistent manner. This is indicated by the table below.

Quality Performance Indicators for May 1, 2021

		Engineering	Manufacturing	Construction
Main Civil Works (MCW)	Main Dam (MND)		*N/A*	
	RCC Buttress (RCC)		*N/A*	
GSS Civil Works (GSS)	Generating Station (STA)			
	Intake and Penstocks (IAP)			
	Spillway (SPL)			
GSS Equipment Supply	Hydromechanical (HME)			
	Large Cranes (CRA)			
Turbines-Generators (TG)				
Balance of Plant Contract (BoP)	Balance of Plant Contract (BoP)			
	Transformers (TXM)			
	Generator terminal Equipment (GTE)			
	AC Station Service (ACS)			
Transmission & Substation	Transmission Lines (TRM)			
Highway 29 Realignment (HWY)				
	Legend:		*= No Risk to Quality*	
			= Potential Risk to Quality	
			= Actual Risk to Quality	

Another indicator of quality in the constructed Project is to monitor the number of non-conformance reports (NCRs). The majority of the NCRs for the GSS work are focused on thermal control of concrete, reinforcing bar detailing and procedural processes. With recognition of these aspects through the NCR process, these areas are being corrected and better quality can be maintained in these areas in the future.

As with the GSS work, the MCW can also be monitored and controlled by reviewing and studying the range and distribution of the NCR's.

The TAB wishes to commend the project for its high diligence to addressing quality assurance matters and communicating the outcome in an effective manner.

On a matter of detail, the TAB was advised in May about an earlier steady decline in GSS concrete strengths during parts of 2020. Reasons for this were being explored and changed or modified. Fly ash supplies seem to be the likely culprit. The TAB was advised that strengths have now stabilized and remain at acceptable levels.

Given the high volumes of GSS concrete placement that are planned for 2021, and indeed which are currently underway, the TAB would emphasise the need for continued vigilance over this aspect of quality control of concrete.

2.5 Earthfill Dam Construction Update

i. Cofferdam

The TAB was presented with a summary of construction and testing of the Stage II cofferdams during several review meetings and on May 10, 2021. The Contractor performed their own QC; however, BCH utilized an independent testing firm and laboratory to check the procedures and testing of the cofferdam earthworks. The observation and testing of this cofferdam construction were determined to be beneficial to the future work of constructing the Main Dam. Since the Main Dam earthworks will begin this summer, this cofferdam earthwork placement, compacting and testing essentially served the purpose of a "test fill program" for the upcoming Main Dam. The following information and benefits were gained with these additional quality and control and testing verification efforts.

- Contractor utilized the cofferdam as an opportunity to fine tune testing procedures and communication protocols (QC to production) for the Main Dam work
- QA/QC testing demonstrated good agreement – offered more confidence in the contractor
- Contractor utilized seasoned inspectors and testing technicians
- Appeared to be good communication between contractor QC and production – minimized remove/replace corrective action
- Good relationship between BC Hydro QA and PRHP QC

The installation of the geomembrane placed on the upstream cofferdam was discussed in detail. The Contractor performed this work very well.

ii. Foundation Preparation and Fill Placement

Now that the river has been diverted and the central portion of the dam has been dewatered and exposed, the original riverbed overburden materials have been excavated. The foundation rock is being exposed and the foundation is being mapped and studied. Sections of both the Right and Left Banks of the rock foundations are being treated with dental concrete and the foundation grouting is underway. The consolidation grouting is complete, and the curtain grouting is presently nearly complete. Refer to the grouting discussion and details in Section iii. Dam Foundation Grouting below.

Sections of the Main Dam foundations along both the left and right areas that have been mapped, grouted and treated, are prepared for the core placement in accordance with the specifications. These areas of the foundation that have been finally treated and photographed are prepared by moisture treatment and covered with the select core

materials and compacted in place. Water misters and portable blowers are used to moisten and clean small debris from the foundation ahead of the till placement. This is the first placement of the Main Dam embankment. Foundation preparation for the fill dam has been ongoing since April and has accelerated more recently as presented in the meeting on June 16.

The first fill on the foundation is illustrated in the photograph below.

The TAB is favourably impressed with the careful attention being paid in the field to foundation mapping and treatment, control of construction equipment, and recognition of the care required at all material interfaces. The TAB is of the view that the direction of the data gathering, control of construction and material management are at the highest level. This early phase earthworks also validates that the material selections and specifications are fit for purpose.

iii. Dam Foundation Grouting

Status

On occasion of the workshop organized in September 2019, the TAB had inspected ongoing grouting works in the core foundation on the left bank. Since then, the river has been diverted and grouting works for the blanket/consolidation and the main curtain continued. BC Hydro recurrently informs on the progress of the grouting works. A teleconference dedicated specifically to this subject was held on April 23, 2021 (see Appendix A), and on May 10 (see Appendix B) a summary of the progress was presented. On June 16, BC Hydro updated on the progress of the grouting works and elaborated on previous comments of the TAB. To date, the consolidation grouting is complete, except

for the upper left abutment, and more than 90 % of curtain grouting has been accomplished (not considering the pending work at the approach channel).

Criteria

The following closure criteria for the grouting works had been considered:

1. absorption rate 0.3 litres/m/minute for a duration of 10 minutes
2. absorption 35 kg/m
3. hydraulic conductivity, final Lugeon value to be less than 3 l/m/min (at 10 bar)

Additionally, it was specified that the injection pressure should not exceed 25 kPa per metre of depth. However, during the performance of the work, pressures up to 40 kPa per metre have locally been admitted, subject to control of surface heave, limited to max. 2 mm. The Design Team recognized that such precautions taken in this relation are appropriate, as evidenced by the highly sensitive reaction of the rock mass to changes in pore pressures experienced during construction.

As BC Hydro explains, the criteria 1 and 2 derive from precedence with dams on comparable foundations. The Lugeon criterion is not conventional in Canada but was added for the deep curtain of Site C. As judged by standard practice, the criteria are conservative. But, in the context of Site C project, their individual weights are not identical and need to be assessed.

Criteria 1 and 2 essentially deal with the technical viability and efficiency of the applied methodology. The technical objectives of the grouting works have to be considered, as they are typically:

1. reducing seepage losses
2. homogenizing important areas of the dam foundation
3. preventing erosion from the embankment
4. preventing erosion/suffosion in the foundation
5. enhancing geotechnical characteristics in respects of shear strength and deformations
6. controlling uplift pressures

Item 1 is not critical at Site C. The experience with the cofferdams has demonstrated that underseepage discharge is insignificant. Regarding item 2, the variation of rock mass quality in the core foundation is moderate but the grout takes concentrated in the area

affected by the Little Ricky Shear indicate a favorable effect of the grouting works. Item 3 is addressed primarily by the thorough foundation treatment and, the observed limitation to the penetration of the particularly fine-grained cement shows that migration of fines from the core are not a hazard. The foundation rock itself is of moderate strength but the sequence does not include erodible strata. For item 5 the respective analyses, carried out with conservative parameters, show acceptable performance of the dam with its foundation. Thus, item 6 remains as a topic to be discussed. This item has to be viewed in relation with the Lugeon value, which informs on the permeability of the foundation rock. Another observation to be considered in this relation is the occurrence of confined water or gas found in some boreholes.

Specific Observations

The Project recognized that the Lugeon requirement does not correspond well with grout take and that strictly satisfying this criterion throughout as indicated in the specifications could be relaxed. While the information obtained by the Lugeon testing was of value, modifications had been made to the design basis to reduce the requirements of the Lugeon test results. High Lugeon values can be found in areas that have been adequately grouted in terms of grout acceptance criteria.

Suspensions

The suspensions are prepared with a Type III cement. It has a Blaine value of 6110 cm²/g and the maximum grainsize measures 0.045 mm. The following table states properties of batches prepared with this cement.

Mix ID	W/C	Plasticizer	Marsh Viscosity
	by weight	%	sec
1	1	1	29
2	0.85	0	32
3	0.75	0	35

Mixes 1 and 2 have a very favourable viscosity and should also display acceptable stability. The Blaine value is favorably high. The cement is considerably more-fine grained than commonly used for grouting in rock. The effectiveness of grouting is much related to grout mix adopted and the nature of the cement employed in the mixture. The Design Team has employed mixes appropriate for the intended application and cements which are finer than commonly used in rock. Even so, the grain size will limit penetration into fine fissures as reflected by the Lugeon data mentioned above.

Methodology

Site staff have judiciously raised the injection pressure, exploring the limits admissible at this specific site.

Some fairly wide seams of grout found in check holes indicate that jacking has occurred locally but that the applied grout mix has satisfactorily filled and effectively sealed the cracks.

Concluding Remarks

As the TAB suggested on previous occasions, the results of the grouting works are being assembled in a 3D model for visualization and analysis. Sections generated with this model show grout takes concentrating on the shear in the valley centre and on bedding plane BP32 at depth. Thus, the grouting has been effective on these particularly important elements.

The grout take of the curtain holes has accumulated 105 t of cement. In relation to the area covered by the completed holes, the take barely averages 10 kg/m². This is a low value but is consistent with the foundation consisting predominantly of massive shale, mudstone and marl.

The limit of technical viability of cement grouting in this kind of rock has been reached. Still, the aspired 3 LU have not been rigidly obtained. Reflecting on information provided from check holes and televiewer scans, a notable proportion of the high Lugeon values appears restricted to narrowly localized conditions, not pervasively affecting the rock mass.

The experience with the grouting works also expands our understanding of some general hydrogeological characteristics of the foundation rock:

- There is a significant anisotropy in hydraulic conductivity, capable of generating confined and even artesian conditions.

- The overall conductivity is very low but stratigraphic and structural conditions produce heterogeneous and complex hydrogeological conditions.

One item of detail to be pursued as performance of the foundation continues to be monitored is the development of small deformations in the left abutment at BP28 reported to the TAB. The TAB looks forward to further information on these circumstances in the context on the remaining grouting to be completed on the upper Left Bank.

The TAB wishes to emphasize that the successful completion of the grouting to such a high standard is a major milestone of the Project. The grouting programs are developed with a model and when they are successfully completed without challenges to the model, it constitutes a significant achievement. The TAB wishes to complement the Project Team and the Contractors on achieving this milestone with such high quality.

3. Earthfill Dam Ongoing Analysis

3.1 Right Bank – Shear Key Foundation Excavation and Powerhouse Interaction

The implications of a sliding plane loaded by the Earthfill Dam impacting the Powerhouse has been recognized for some time. To address this issue, a shear key was excavated to El. 390, extensive inclinometer installations were placed adjacent to the shear key, from the Earthfill Dam to the Service Bay at the Powerhouse, and monitoring was undertaken both during shear key excavation and backfilling. The local geology is complicated not only by the presence of bedding planes, but also due to a complex shear zone at this location. The TAB received a summary of the analyses that revealed the influence of the shear zone on the magnitude and direction of slip in the bedding planes.

The TAB appreciates the detailed consideration of what might have been a complex interaction of the Earthfill Dam with the Powerhouse and the insightful analysis of the local movements. From a practical perspective, all movements observed are in favourable directions and no adverse interaction with the Powerhouse due to the construction of the Earthfill Dam is anticipated. This was further reinforced by comprehensive FLAC analyses that the TAB accepts.

3.2 FLAC 3D Earthfill Dam – Modelling Approaches

Confirmation that the Earthfill Dam is behaving as intended will rely on FLAC 3D modelling. This modelling has already demonstrated its capability for including the substantial degree of complexity needed to assess the response of the foundation at Site C to dam construction. It is proposed to adopt two models to simulate the evolving complex behaviours:

i. Model 1 – will predict deformations at the end of Year 1 (El. 414 m) ignoring construction sequencing. It will adopt simplifying properties for the fill material but will conduct sensitivity checks on the influence of the strength of the bedding planes on foundation response.

ii. Model 2 – will initiate simulation in support of performance-based design by incorporating geological structures as uncovered and revisions of models of fill material behaviours and pressures to match observed behaviours. This incremental updating will continue to the end of construction and subsequent filling following the construction sequences.

The application of performance-based design relies on early installation of reliable instrumentation to a degree that is greater than normally adopted in precautionary-based design (the “Observational Method”) and this is recognized in the project planning. In

addition, a Leapfrog geological model for the Earthfill Dam has been created so that the results of ongoing mapping can be integrated in the Model 2 analysis.

In keeping with current best practices, the Design Team is adopting performance-based design to verify that the Earthfill Dam is behaving as intended during construction and will ultimately satisfy design criteria. The TAB is content that the Design Team has formulated an effective approach to performance-based design, and it looks forward to receiving updates on findings throughout the period of construction and first filling. Performance-based design provides a more authoritative basis for assuring that dam safety is being addressed in a timely and effective manner than the more traditional Observational Method. The capacity for conducting projections to future performance based on continuous monitoring is embodied in performance-based design. One site issue already managed by performance-based design is the successful determination that the Earthfill Dam will not impact the construction of the adjacent Powerhouse as mentioned in section 3.1 above.

Successful execution of performance-based design involves an intimate interaction within the Design Team to assess all current information in a timely manner. This includes all instrumentation being monitored by GeoViewer, geological data being integrated within Leapfrog and other aspects of performance relevant to the process. The TAB recommends that the Project Team provide a brief on its current capacity to continue to conduct performance-based design for discussion and review with the TAB.

3.3 Options to Add Passive Resistance

The Design Team has assessed the options available to improve downstream stability by adding passive resistance. There are two feasible choices: i) additional fill on the downstream slope, and ii) extend the downstream toe farther downstream. A comprehensive study of stability enhancement associated with alternative configurations has been conducted. In the short term, the Project proposes to exploit this opportunity temporarily by establishing a laydown area beyond the current location of the downstream toe of the dam, which would be removed incrementally for operation of the Powerhouse and Spillway. The laydown would be constructed to El. 418-420 m. The TAB was advised that the temporary stockpile and associated permitting are being undertaken, but any additional buttressing would remain a contingency measure.

The TAB is pleased to see that these extra stabilization measures have been assessed. Design of the Earthfill Dam consistent with design criteria is based on a Most Likely Case (MLC), which is the current design basis and a Reasonably Worst Case (RWC), which requires a contingency design. The options to add passive

resistance has been recognized in the event that the RWC is encountered, and contingency measures are required.

3.4 Left Bank Colluvium

A deposit of colluvium exists of about 18,000 m^3 along the left abutment downstream of the core of the Dam. Under normal circumstances, this would be removed; however, the TAB was advised that in the present circumstances due to stability considerations, it is difficult to remove. Characterization studies have been performed based on sampling and penetration testing. The deposit is about 6.6 m thick and partly saturated. Under its current condition, leaving it in place does not significantly impact stability and the anticipated settlements would not impact the coarse filter. The Design Team concludes that drainage trenches that had been proposed are not needed.

The TAB was also advised that the Project has recently undertaken FLAC analyses to explore whether wetting and softening of the colluvium might affect the functionality of the downstream filter or the core. These analyses have concluded that the potential deformations associated with these processes would not be significant.

The TAB was pleased to learn about the more recent analyses that would support the view that the colluvium could be left in place untreated. However, before agreeing with this position, further degree of analyses should be conducted involving the following activities.

1. **Undertake saturation collapse testing of undisturbed samples related to the Proctor density reference data to determine how collapsible the material might be.**

2. **If significant, repeat the analyses conducted by FLAC by using prescribed displacement to simulate the collapse and determine its implications.**

At this time the TAB does not anticipate that the above recommendation will alter the conclusions presented so far.

4. Dam and Core Buttress Updates

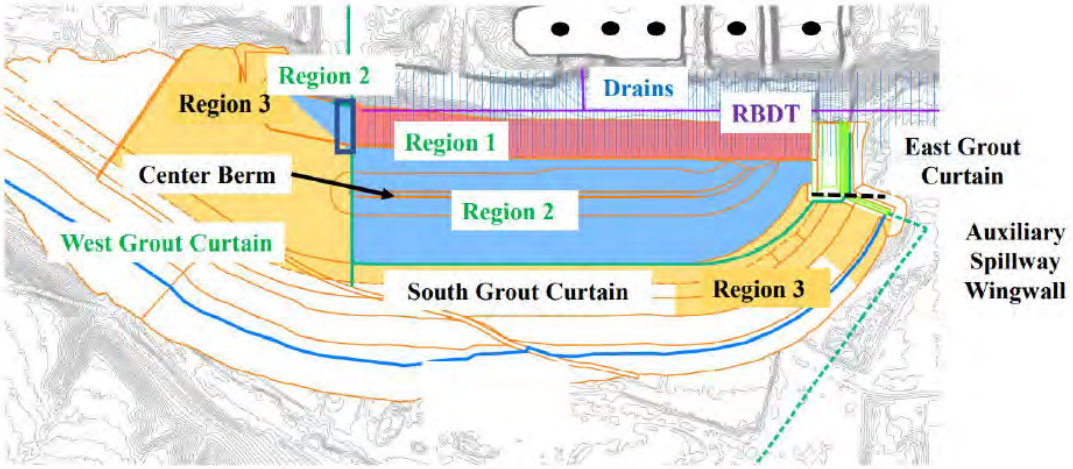
RCC placement of both Dam and Core Buttresses started in 2020 and the season finished with the Dam Buttress at El. 434.3 m sloping to the Core Buttress at El. 414.2 m. Placement has now re-commenced at the Core Buttress. In both cases, a 130/80 (fly-ash/cement) mix has been adopted. This mix has already been successfully used to construct both the Spillway and Powerhouse Buttresses. As trials have shown, exchanging 20 kg/m^3 of cement for fly-ash makes little change to temperature peaks and might well introduce other detrimental effects such as reduced early tensile strengths.

In terms of crack control, one key is minimizing temperature differentials within the buttresses and presented data indicated that acceptable differentials were being achieved. Cylinder strength testing also showed good batch control with 180 and 365 day mean strengths of 30.8 and 36.4 MPa, respectively, and low associated coefficients of variation of just 8.1 and 9.4%.

In view of the above, the TAB would recommend no change to the 130/80 mix being used at this stage for the Dam and Core Buttresses. The TAB would, however, recommend continued core testing of the in-situ Dam and Core Buttresses concrete to confirm that the good control implied by the cylinder testing is being translated into an equally good final in-situ product.

5. Approach Channel Update

The TAB was pleased to see the continued developments and elaboration of the arrangements for the Approach Channel and the clear delineation between region 1, incorporating Carpi membranes, region 2, incorporating HDPE membranes and outer regions 3 utilizing just plastic till protected by riprap and associated bedding material (see the plan below). However, these developments and elaborations have now also produced a total of 10 sub-regions within the umbrella of the main three.



Simplified Plan of Approach Channel showing key regions

Region 1 will be compartmentalized to ensure that any leakages stay localized and so facilitate leakage location detection. **The TAB would recommend that some form of compartmentalization, but perhaps less elaborate, is also extended into region 2 for the same reasons.**

The proposed connection details between the regions were also elaborated for the first time during the discussions. The TAB was pleased to note that these will now be further

discussed with the Contractors and with joint Contractor discussions where different contracts overlap. The TAB would stress the importance of these negotiations so that both Contractors buy into the details finally adopted. While appreciating that some intricacy may be inevitable at such interconnections, the TAB would stress the need for simplicity wherever possible. As already discussed, there may also be merit in amending some region boundaries so as to coincide with other features and changes, such as geometrical ones.

In the case of region 2, connections will also take place between smooth HDPE linings and textured linings and the TAB was pleased to note that this had also been thought through, as well as the need to ensure that any texturing was in place on both sides of the HDPE membrane concerned.

Regions 1 and 2 will be isolated by a triple grout curtain extending down to El.410 m installed on the south and east sides from an anchored concrete plinth. This will connect with a plinth and grouting gallery on the west side and with the central line of that grout curtain taken down to El. 380 m to transition into the main dam grout curtain. Similarly, the gallery concerned will connect to the main core buttress grouting gallery and the main headworks gallery via a water-tight bulkhead door. The TAB would commend the degree of detail to which all these works are now being developed and coordinated. At the same time, benefit can be gained by coordinating such aspects with the relevant Contractor. The TAB was pleased to note that the EDT fully appreciated the level of detail and quality to which the bulkhead door will need to be both manufactured and installed.

The TAB was advised that while the critical path for Site C completion remains with the construction of the Main Dam, the completion of the Approach Channel is also now seen as having very little float. Some long-standing aspects of the design still remain to be confirmed, such as the final connection and interface arrangements between different regions. This is again why the TAB would stress the need for a focus on robustness, simplicity and ease of construction as arrangements are finalized. It is also why the TAB would again stress the need for associated discussions and agreements with the Contractors involved in developing final arrangements.

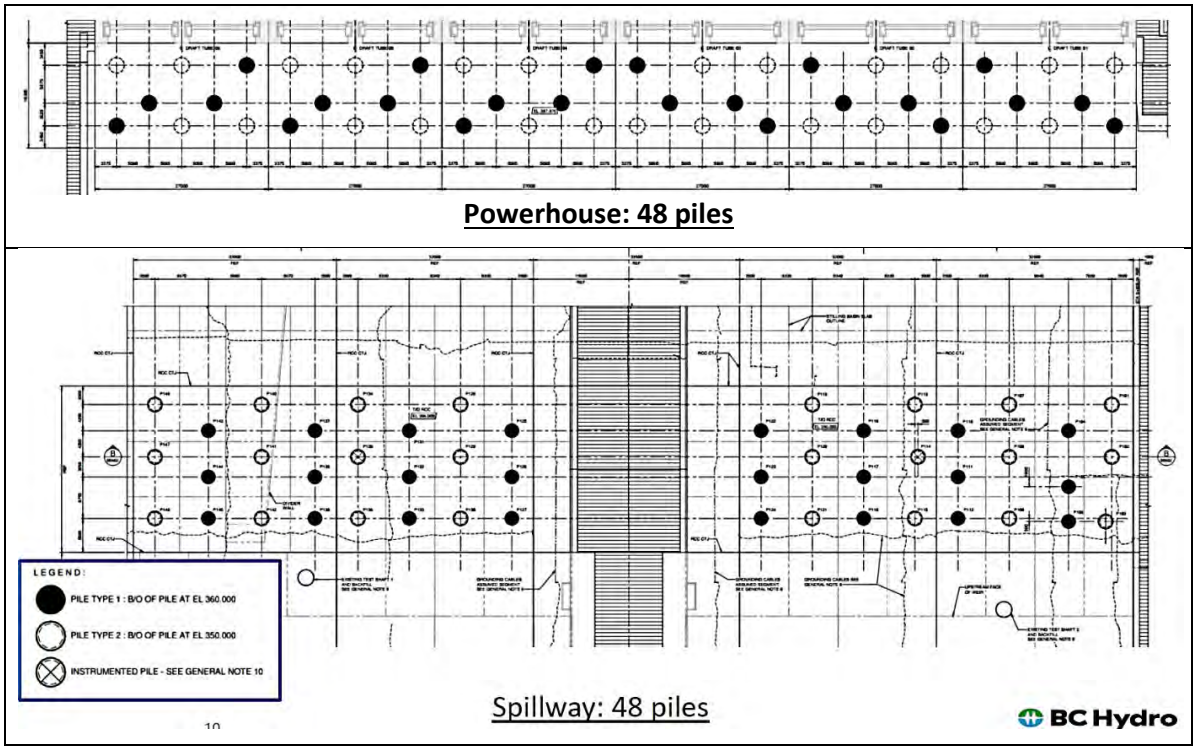
6. Powerhouse and Spillway Piles Update

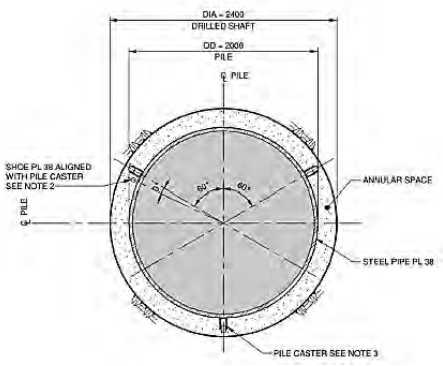
An uncommonly comprehensive program of geological and geotechnical investigations identified highly sensitive conditions and, considering the complexity of the combination of rock mass properties, geohydraulic effects and ambient stress patterns, an observational approach for the construction works had been adopted to handle inevitable uncertainties. This approach detected deformations in the rock mass beyond the depth to which likely responses had been envisaged. As these deformations threatened to affect

the shear strength of the rock mass and, in consequence, the stability of the structures, the need for intervention was seen.

A wide range of options, suitable for enhancing the performance of the foundation, was developed. From a meticulously performed Multiple Accounts Analysis, large diameter piles emerged as the optimal solution in all relevant regards. State-of-the-art geotechnical analysis demonstrated that limiting deformations on bedding planes to 10 mm would be required. Thus, stiffness of the pile system became decisively important for the stability of the structures built against the right bank slope. In-situ, full scale lateral load tests with complementary tests (e. g. pressuremeter), started in October 2020 and in combination with monitoring in the rock mass supplied the necessary information. Incidentally, the tests found an increase of the rock mass modulus over the values of the DBM starting at a depth of El. 370 m, helping the performance of the piles.

Coordinated analysis by FLAC 3D and ABAQUS guided the final design of the piles. The finally adopted design includes 48 piles each for spillway and powerhouse, arranged in parallel rows, drilled on laterally shifted centers and staggered in depth to El. 350 and 360 m, respectively (see the figures below).





Layout of piles at powerhouse (above) and spillway and cross section of pile

Stability and performance of the structures was evaluated by Finite Difference and Finite Element simulation as well as by sliding wedge analysis. The results demonstrate compliance with the guidelines of the Canadian Dam Association, applying the analysis defined by the USACE method and prevent inadmissible deformations in the foundation.

Whereas the piles at the spillway will be drilled through the concrete of the stilling basin and thus directly connect to the structure, at the powerhouse a pile capmust be added at the outlets. The required excavation has to proceed such as to avoid excessive relaxation effects and the most appropriate methodology for this target is still being assessed. Details currently under discussion concern the connection granting the load transfer between the existing powerhouse concrete and the pile cap.

Other features as alignment of boreholes, cleaning of the borehole, centering and concreting of the pile have been satisfactorily considered.

A selected number of piles will be instrumented for remote read-out. Options for the range of instrumentation – deformation, strain, pore pressures – and selection of suitable techniques have been discussed and respective decisions will be taken shortly.

The construction sequence for the Powerhouse pile caps currently envisages the excavation of the necessary pits and then constructing the piles and pile caps sequentially in discrete elements. The TAB notes that the excavated pits will become increasingly congested by the steel piles rising 3+ metres above excavated base level. This will restrict operational access for the necessary piling rigs, the plant and equipment needed to load and haul the muck from the excavations, any brushing or jet wash equipment for the piles, the equipment necessary for pile placement, pile cap rebar placement and concreting. The pile sequencing proposed suggests that all these operations could be taking place in a single pit at the same time. It will also involve considerable trafficking of the excavated base which then might need further treatment before concreting of the pile cap can take place.

Alternative sequencing and staging options may be possible, and the TAB recommends that all potential options are explored, finalized and agreed in conjunction with the Contractors involved.

7. Future Meetings

The TAB recommends that the next TAB meeting be virtual and the date to be determined. In addition, TAB update teleconferences will convene as follows: July 16 and August 5, 2021. Other conference calls will be scheduled as required.

Respectfully submitted,

Dr. Norbert R. Morgenstern

Dr. Wynfrith Riemer

Mr. Joseph L. Ehasz, P.E.

Dr. Peter J. Mason

Attachment A – Technical Update Conference Calls Agendas

BC Hydro
Power smart

Site C Clean Energy Project
Technical Advisory Board
Conference Call
18 November 2020

Location: Conference Call and Screenshare

AGENDA

1. Project update [redacted]
2. Approach Channel Region 2 Liner – HDPE versus LLDPE [redacted]
3. Right Bank Geological Model – Update [redacted]
4. Powerhouse and Spillway – Design Approach [redacted]

BC Hydro
Power smart

Site C Clean Energy Project
Technical Advisory Board
Conference Call
26 November 2020

Location: Conference Call and Screenshare

AGENDA

1. Introduction [redacted]
2. Geomorphological information refresh on right bank [redacted]
3. Criteria & Stability Cases – continued discussion [redacted]

BC Hydro
Power smart

Site C Clean Energy Project
Technical Advisory Board
Conference Call
21 December 2020

Location: Conference Call and Screenshare

AGENDA

1. Project update [redacted]
2. Right Bank Foundation Enhancement
   a) Lateral Load Tests – Update [redacted]
   b) Design Basis and Proposed Changes to DBM [redacted]
   c) Powerhouse and Spillway Stability Analyses Update [redacted]
   d) Powerhouse and Spillway Pile Options [redacted]
3. Approach Channel – Design Optimization Process
   a) Framework [redacted]
   b) Review of Right Bank Foundation Hydrogeology [redacted]
   c) Preferred Layout [redacted]

BC Hydro
Power smart

Site C Clean Energy Project
Technical Advisory Board
Conference Call
05 January 2021

Location: Conference Call and Screenshare

AGENDA

1. Project Update [redacted]
2. Approach Channel Design Assessment
   a) Framework [redacted]
   b) Preferred Layout [redacted]
   c) Risk Assessment Approach [redacted]
   d) Right Bank Foundation Hydrogeology – Discussion [redacted]
3. Bedding Planes Pore Pressures [redacted]

BC Hydro
Power smart

Site C Clean Energy Project
Technical Advisory Board
Conference Call
19 January 2021

Location: Conference Call and Screenshare

AGENDA

1. Project Update	[redacted]	20 min
2. Right Bank Foundation		
a) Lateral Load Test Results	[redacted]	45 min
b) RCC Buttress Design Criteria	[redacted]	30 min
c) Powerhouse and Spillway Stability Results	[redacted]	30 min
d) Powerhouse and Spillway Economic Analysis and Pile Layout	[redacted]	20 min
~~3. Approach Channel FMEA~~	[redacted]	~~30 min~~
~~4. Right Bank Historical Buried Channel~~	[redacted]	~~20 min~~

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
27 January 2021

Location: Conference Call and Screenshare

AGENDA

1. Project Update [redacted]
2. Right Bank Foundation – Proposed changes to DBM (Discussion) [redacted]
3. Approach Channel FMEA [redacted]
4. Right Bank Historical Buried Channel [redacted]
5. Quality Assurance (QA) Update [redacted]

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
24 February 2021

Location: Conference Call and Screenshare

AGENDA

1. Project Update [redacted]
2. Powerhouse and Spillway RCC Buttress
    a) Review of Loading Cases [redacted]
    b) Stability Analyses Update [redacted]
    c) Deformation Analyses under Static Loading Conditions (FLAC) [redacted]
    d) Deformation Analyses under Seismic Loading Conditions [redacted]
    e) Update on Pile Design [redacted]

Break (10 min)

3. Approach Channel Risk Assessment [redacted]
4. Discussion – Topics and timing for forthcoming meetings
    a) Mid to late March (Hydrogeology, RCC Buttress stability and final pile design)
    b) April (Earthfill Dam and Right Bank foundation drainage)
    c) May (Approach channel progress)

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
12 March 2021

Location: Conference Call and Screenshare

AGENDA

1. Project Update [redacted]
2. Powerhouse and Spillway RCC Buttress
   a) Action Items from previous TAB Meeting
      - Breakout Zone – Sensitivity analyses [redacted]
      - Extreme 5 Loading Case – Contribution of Cohesion to FoS [redacted]
      - Deformation Analyses under Seismic Loading Conditions [redacted]
      - Strain-Weakening and Tensile Strength Parameters [redacted]
      - Spillway Buttress – Reduction of piles vs. impact on deformations [redacted]
   b) Summary of Stability Analyses [redacted]
   c) Proposed Pile Layout and Design Update [redacted]
   d) Pile Parameters – Equivalent vs. Explicit Pile [redacted]
   e) Summary of Deformation Analyses under Static Loading Conditions (FLAC) [redacted]
   f) Powerhouse Buttress – Decompression Zone (Abaqus) [redacted]
3. Right Bank Foundation – Hydrogeology Review [redacted]

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
29 March 2021

Location: Conference Call and Screenshare

AGENDA
Revision 1

1. Project Update [redacted]
2. Right Bank Foundation – Hydrogeology Review [redacted]
3. Powerhouse and Spillway Buttress – Pile Layout vs. Tensile Stresses in Rock [redacted]
4. Earthfill Dam
    a) Grouting Update [redacted]
    b) Earthfill Dam Foundation Preparation [redacted]

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
23 April 2021

Location: Conference Call and Screenshare

AGENDA

1. Grouting Update [redacted]
2. Lugeon vs Grout Take [redacted]

Attachment B – Meeting Agenda

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
May 10, 13 and 14 2021

Location: Conference Call and Screenshare

AGENDA

MAY 10, 2021

1. Project Update [redacted]
2. GSS Update [redacted]
3. BoP Update [redacted]
4. Project Quality Update [redacted]
5. Earthfill Dam
    a) Cofferdam Construction and QA/QC Results [redacted]
    b) Earthfill Dam Foundation Preparation and Fill Placement – Status Update [redacted]
    c) Earthfill Grouting Update [redacted]

MAY 13, 2021

5. Earthfill Dam
    d) Shear Key Excavation and Backfilling – Review of BPs response [redacted]
    e) Shear Key Excavation – Flac3D Calibration [redacted]
    f) Simplified 3D Deformation Model – Prediction of Deformations at Service Bay [redacted]
    g) Work Plan for Flac3D deformation modelling [redacted]
    h) Benefit of Temporary Laydown Area on Dam Stability [redacted]

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
May 10, 13 and 14 2021

Location: Conference Call and Screenshare

i) Left Bank Abutment – Colluvium Berm Settlement Assessment [redacted]

6. Dam and Core RCC Buttress – Update [redacted]

MAY 14, 2021

7. Approach Channel – Update [redacted]
8. Powerhouse and Spillway Piles
   a) IFC drawings and Specifications Update [redacted]
   b) Tailrace Cap Connection to the Powerhouse [redacted]
   c) Tailrace Excavation and Sequence of Work [redacted]
   d) Instrumentation [redacted]

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Site C Clean Energy Project
Technical Advisory Board
Conference Call
June 16, 2021

Location: Conference Call and Screenshare

AGENDA

1. Project Update [redacted]
2. Earthfill Dam
    a) Grouting Update [redacted]
    b) Fill Placement [redacted]
    c) Left Bank Colluvium Berm – Assessment of Deformations using FLAC3D [redacted]
3. Powerhouse Pile Cap – Design Update
    a) Pile Cap Layout [redacted]
    b) Pile Cap Reinforcement [redacted]
    c) Rock Trap Serviceability [redacted]
    d) Instrumentation [redacted]

Attachment C - List of Meeting Attendees

TAB Members:

Joe Ehasz
Norbert Morgenstern
Wynfrith Riemer
Peter Mason

BC Hydro:

[redacted]

Other:

[redacted]

John France – Independent Reviewer
Kaare Høeg – Independent Reviewer

Site C Engineering:

[redacted]

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, ScD, NAE
REPORT NO. 4
August 12, 2021

EXECUTIVE SUMMARY

This report presents an update to the Technical Review Panel's (Panel's) findings subsequent to Panel Reports Nos. 1, 2, and 3, issued on January 22, 2021, February 15, 2021, and April 6, 2021, respectively.

The Panel's opinions expressed in the previous reports remain unchanged. The work associated with the right bank design enhancements, the design of the approach channel, and the earthfill dam has been progressing as anticipated at the time of preparation of Panel Report No. 3.

The pile designs for the right bank enhancement have been completed. Steel pipe for the piles has been ordered and is expected to begin arriving on site soon. Pile installation is expected to commence later this year and be completed by Spring 2023.

With the steel pipe ordered, the Engineering Design Team (EDT) has turned its attention to progressing the work related to the approach channel. Designs are being advanced in anticipation of continuation of excavation of the approach channel commencing later this year and channel liner installation commencing in Spring 2022. The EDT is currently anticipating five work packages with two contractors and is in discussions with the contractors to finalize the work plans. As the EDT finalizes the approach channel design, the Panel encourages the team to give strong preference to construction of the Region 2 polyvinyl chloride (PVC) liner as a continuous liner beneath the center berm, rather than constructing the liner over the top of the berm.

The EDT is considering improvements to the existing right bank drainage tunnel (RBDT), in light of several local shotcrete liner failures that previously have occurred in the tunnel. The RBDT must be made safe, as it is indispensable for the future drainage work.

There have been no changes to the earthfill embankment design since early this year. Foundation grouting has progressed to near completion in the valley, and reported grouting records indicate an effective program and high-quality execution. Earthfill placement has commenced. Foundation preparation for earthfill placement appears to be carefully and appropriately done. Foundation conditions observed in the core trench have been quite favorable. The limited shears that have been found have been treated appropriately. Quality control / quality assurance (QC/QA) testing of the earthfill placed to date indicates placements and compaction in accordance with the project specifications.

The Panel concurs with the EDT's conclusion that the area (berm) of colluvium to be left in place beneath the earthfill embankment at the left bank will have no significant effect on the dam core and filter performance after reservoir filling.

The EDT has developed instrumentation data presentation templates and a three-dimensional FLAC deformation model which will both be helpful in evaluating earthfill dam performance during construction and first reservoir filling.

INTRODUCTION

At the request of BC Hydro, the Technical Review Panel (Panel) has prepared this report as an update to the Panel's previous Reports Nos. 1, 2, and 3, dated January 22, 2021, February 15, 2021, and April 6, 2021, respectively.

Since April 6, the Panel has attended briefings to the Technical Advisory Board (TAB) by the EDT on April 23, May 10, May 13, May 14, June 16, July 16, and August 5, 2021, during which the EDT updated the TAB on activities related to the right bank enhancements, the approach channel, and the earthfill dam. The Panel has also reviewed project information provided by BC Hydro.

Based on the information provided to date, the Panel provides updated findings concerning the proposed right bank design upgrades, the approach channel, and the earthfill dam.

FINDINGS

Right Bank Design Enhancements

In the Panel's opinion, the EDT has been proceeding well with the implementation of the right bank enhancements. The principal activities completed since April 6 have been finalization of the pile system design, placing orders for the steel pile casings, and advancements of concept designs and details for the approach channel. Work remaining to be done includes finalization of designs for the pile caps downstream of the powerhouse, the approach channel, the foundation drainage system, and the approach channel foundation grouting program. A detailed schedule has been established for the remaining activities.

The Panel has been regularly updated on the various activities related to the right bank design enhancements through the TAB briefings.

Pile System Design – Subsequent to our Report No. 3, the EDT finalized the number, size, and configuration of piles to be installed downstream of the spillway and powerhouse. The steel pipe for the piles has been ordered and is expected to begin arriving on site soon. Installation of the piles is scheduled to begin later this year and be completed in Spring 2023. The EDT is still finalizing some details of the pile cap design for the powerhouse piles, but this should not affect the overall schedule.

The EDT has completed its documentation of the stability, displacement, and stress analyses to support the pile design.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, ScD, NAE
REPORT NO. 4
August 12, 2021

Approach Channel – With the pile design completed and documented and the steel pipe ordered, the EDT has turned its attention to progressing the design of the approach channel. Final selection of materials and configuration of the approach channel liner is currently in progress. The EDT is in discussions with contractors concerning the approach channel work. At this time, the EDT anticipates five work packages to be completed by two different contractors. The current estimated schedule, to be finalized after completion of designs and discussion with the contractors, is for continuation of excavation of the approach channel to begin later this year and liner installation to commence in Spring 2022. The current estimated completion date for the approach channel is in the middle of 2023.

In its design activities, the EDT is attempting to simplify construction, while still preserving the planned functions of the approach channel water control features. Among options being considered is to construct the Region 2 PVC liner as a continuous liner beneath the center berm, rather than constructing the liner over the top of the berm. In the Panel's opinion, the horizontal liner configuration seems significantly superior to the over-the-berm alternative and should be given strong preference.

Right Bank Drainage Features – The EDT is currently using the results of hydrogeological analysis of the right bank to complete the final design of the right bank water control measures and drainage features, with construction of these features scheduled to commence in 2022.

The EDT is considering improvements to the existing RBDT, in light of several local shotcrete liner failures that previously have occurred in the tunnel. As the Panel has stated previously, the RBDT provides access for some of the contingency actions for the right abutment, if such contingency actions are found to be needed. The RBDT also provides access for observation of right bank drainage and for conveyance of collected drainage. As such, the RBDT must be made safe, as it is indispensable for the future drainage work.

Earthfill Dam

There have been no significant changes in the earthfill dam design or stability analyses since Panel Report No. 2 issued on February 15, 2021. The Panel's findings remain unchanged from those stated in Report No. 2.

Foundation grouting for the earthfill dam has progressed substantially since Panel Report No. 3 issued on April 6, 2022. Consolidation grouting and curtain grouting in the valley section of the dam are nearly complete, with only some grouting in the abutments remaining to be done. Reports of grouting results presented at the TAB briefings indicate an effective and high-quality grouting program.

Placement of earthfill has commenced since Panel Report No. 3. Photographs presented at the TAB briefings indicate the foundation is being prepared appropriately before fill is placed. Foundation conditions observed in the core trench have been quite favorable. The Little Ricky Shear and an associated conjugate shear are the only significant shear zones observed in the core

trench foundation. These shears have been appropriately treated. Only minor shears have been observed elsewhere in the core trench foundation.

Records of QC/QA test results for the embankment fill indicate that the fill is being placed and compacted in accordance with the project specifications.

In our opinion, earthfill dam construction has started well.

The EDT has evaluated the potential consequences of leaving an area (berm) of colluvium in place beneath the earthfill dam on the left abutment and concluded that this will have no significant effect on the dam core and filter performance after reservoir filling. The Panel concurs with this conclusion.

The EDT has developed templates for plotting embankment dam instrumentation data and has populated these templates with initial data. The team is also developing a three-dimensional FLAC deformation model to evaluate predicted versus actual performance of the earthfill dam and its foundation. The instrumentation templates and the FLAC model will be valuable in assessing performance as construction proceeds and during first reservoir filling after construction.

STATEMENT OF LIMITATIONS

The Panel functioned as independent reviewers of the methodologies used by the EDT for analysis and design of the right bank enhancements, the approach channel, and the earthfill dam, based on information provided by the EDT. Given the large amount of work being completed by the EDT and the associated voluminous documentation, it was not possible for the Panel to perform a detailed review of all of the material in the available time. In particular, the Panel has not performed detailed checks of calculations and designs completed by the EDT. Such detailed checks are provided by the quality control/quality assurance programs for the Project. The Panel provides its opinions concerning the methods and approaches being used based on information provided by the Project Team. However, the ultimate decisions and responsibilities for the designs remains with BC Hydro.

Our review services were performed within the limits prescribed by BC Hydro in a manner consistent with the level of care and skill normally exercised in the current standard of professional engineering practice. No other representation to BC Hydro, expressed or implied, and no warranty or guarantee is included or intended.

Site C Technical Review Panel
John W. France, P.E., D.GE, D.WRE and Kaare Hoeg, ScD, NAE
REPORT NO. 4
August 12, 2021

Respectfully submitted,

[redacted]

John W. France

[redacted]

Kaare Hoeg

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Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

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 of December 31, 2021.

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-environmental-management-plan-CEMP-rev-10.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

1 **Table E-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 Communication Plan 2016-2017 Annual Report	https://www.sitecproject.com/sites/default/files/aboriginal-group-communications-plan-2016-2017-annual-report.pdf
Aboriginal Group Communication Plan 2017-2018 Annual Report	https://www.sitecproject.com/sites/default/files/Aboriginal-Group-Communications-Plan-2017-2018-Annual-Report.pdf
Aboriginal Group Communication Plan 2018-2019 Annual Report	http://sitecproject.com/sites/default/files/aboriginal-group-communications-plan-2018-2019-annual-report.pdf
Aboriginal Group Communication Plan 2019-2020 Annual Report	http://sitecproject.com/sites/default/files/Aboriginal%20Group%20Communications%20Plan%202019-2020%20Annual%20Report.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 Plant Use Mitigation Plan 2018-2019 Annual Report	http://sitecproject.com/sites/default/files/aboriginal-plant-use-mitigation-plan-2018-2019-annual-report.pdf
Aboriginal Plant Use Mitigation Plan 2019-2020 Annual Report	http://sitecproject.com/sites/default/files/Aboriginal%20Plant%20Use%20Mitigation%20Plan%202019-2020%20Annual%20Report.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
Aboriginal Training and Inclusion Plan 2018-2019 Annual Report	http://sitecproject.com/sites/default/files/aboriginal-training-and-inclusion-plan-2018-2019-annual-report.pdf
Aboriginal Training and Inclusion Plan 2019-2020 Annual Report	http://sitecproject.com/sites/default/files/Aboriginal%20Training%20and%20Inclusion%20Plan%202019-2020%20Annual%20Report.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
Accidents and Malfunctions Plan 2018 Annual Update	http://sitecproject.com/sites/default/files/accidents-and-malfunctions-plan-2018-annual-update.pdf
Accidents and Malfunctions Plan 2019 Annual Update	http://sitecproject.com/sites/default/files/Accidents%20and%20Malfunctions%20Plan%202019%20Annual%20Report.pdf
Accidents and Malfunctions Plan 2020 Annual Update	https://www.sitecproject.com/sites/default/files/Accidents_and_Malfunctions_Plan.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-Condtion-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
Acid Rock Drainage and Metal Leachate Management Plan – Water Quality Annual Report 2018	Part 1: http://sitecproject.com/sites/default/files/acid-rock-drainage-and-metal-leachate-management-plan-water-quality-2018-annual-report-part-1.pdf Part 2: http://sitecproject.com/sites/default/files/acid-rock-drainage-and-metal-leachate-management-plan-water-quality-2018-annual-report-part-2.pdf

Acid Rock Drainage and Metal Leachate Management Plan – Water Quality Annual Report 2019	Part 1: http://sitecproject.com/sites/default/files/Acid%20Rock%20Drainage%20and%20Metal%20Leachate%20Management%20Plan%20-%20Water%20Quality%202019%20Annual%20Report%20Part%201.pdf Part 2: http://sitecproject.com/sites/default/files/Acid%20Rock%20Drainage%20and%20Metal%20Leachate%20Management%20Plan%20-%20Water%20Quality%202019%20Annual%20Report%20Part%202.pdf Part 3: http://sitecproject.com/sites/default/files/Acid%20Rock%20Drainage%20and%20Metal%20Leachate%20Management%20Plan%20-%20Water%20Quality%202019%20Annual%20Report%20Part%203.pdf
Acid Rock Drainage and Metal Leachate Management Plan – Water Quality Annual Report 2020	Part 1: Acid Rock Drainage and Metal Leachate Management Plan - Water Quality 2020 Annual Report Part 1 Part 2: Acid Rock Drainage and Metal Leachate Management Plan - Water Quality 2020 Annual Report Part 2 Part 3: Acid Rock Drainage and Metal Leachate Management Plan - Water Quality 2020 Annual Report Part 3 Part 4: Acid Rock Drainage and Metal Leachate Management Plan - Water Quality 2020 Annual Report Part 4
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
Agriculture Monitoring and Follow-up Program 2019 Annual Report	http://sitecproject.com/sites/default/files/Agriculture-Monitoring-Annual-Report-2019.pdf
Agriculture Monitoring and Follow-up Program 2020 Annual Report	http://sitecproject.com/sites/default/files/Agriculture%20Monitoring%20and%20Follow-up%20Program%202020%20Annual%20Report.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
Air Quality Management Plan 2018 Annual Report	http://sitecproject.com/sites/default/files/Air-Quality-Management-Plan-2018-Annual-Report.pdf
Air Quality Management Plan 2019 Annual Report	http://sitecproject.com/sites/default/files/Air%20Quality%20Management%20Plan%202019%20Annual%20Report.pdf

Air Quality Management Plan 2020 Annual Report	https://www.sitecproject.com/sites/default/files/Air%20Quality%20Management%20Plan%202020%20Annual%20Report.pdf
Annual Compliance Report - Status of Compliance with EAC Conditions and Schedule B – 2015-2016	https://www.sitecproject.com/sites/default/files/EAC%20Annual%20Compliance%20Report%202015.pdf
Annual Compliance Report – Status of Compliance with EAC Conditions and Schedule B – 2016-2017	https://www.sitecproject.com/sites/default/files/EAC%20Annual%20Compliance%20Report%202016.pdf
Annual Compliance Report – Status of Compliance with EAC Conditions and Schedule B -2017-2018	https://www.sitecproject.com/sites/default/files/EAC%20Annual%20Compliance%20Report%202017.pdf
Annual Compliance Report – Status of Compliance with EAC Conditions and Schedule B -2018-2019	https://www.sitecproject.com/sites/default/files/EAC%20Annual%20Compliance%20Report%202019.pdf
Annual Compliance Report – Status of Compliance with EAC Conditions and Schedule B -2019-2020	https://www.sitecproject.com/sites/default/files/EAC%20Annual%20Compliance%20Report%202020.pdf
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
Business Participation Plan 2018 - 2019 Annual Report	http://sitecproject.com/sites/default/files/business-participation-plan-annual-report-20190726.pdf
Business Participation Plan 2019 - 2020 Annual Report	http://sitecproject.com/sites/default/files/2019-2020-Annual-Report-Business-Participation-Plan.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
Construction Communications 2018 - 2019 Annual Report	http://sitecproject.com/sites/default/files/Site-C-Construction-Communications-2018-2019-Annual-Report.pdf
Construction Communications 2019 - 2020 Annual Report	http://sitecproject.com/sites/default/files/2019-2020-Site-C-Construction-Communications-Annual-Report.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
Cultural Resources Mitigation Plan 2018-2019 Annual Report	http://sitecproject.com/sites/default/files/cultural-resources-mitigation-plan-2018-2019-annual-report.pdf
Cultural Resources Mitigation Plan 2019-2020 Annual Report	http://sitecproject.com/sites/default/files/Cultural%20Resources%20Mitigation%20Plan%202019-2020%20Annual%20Report.pdf
Fisheries and Aquatic Habitat Management Plan 2015-2016 Annual Report	https://www.sitecproject.com/sites/default/files/Annual-Report-Fisheries-Aquatic-Habitait-Managment-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 Management Plan 2018 Annual Report	http://sitecproject.com/sites/default/files/fisheries-and-aquatic-habitat-management-plan-2018-annual-report.pdf
Fisheries and Aquatic Habitat Management Plan 2019 Annual Report	http://sitecproject.com/sites/default/files/Fisheries%20and%20Aquatic%20Habitat%20Management%20Plan%202019%20Annual%20Report.pdf
Fisheries and Aquatic Habitat Management Plan 2020 Annual Report	https://www.sitecproject.com/sites/default/files/Fisheries%20and%20Aquatic%20Habitat%20Management%20Plan%202020%20Annual%20Report.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
Fisheries and Aquatic Habitat Monitoring and Follow up Program 2018 Annual Report	http://sitecproject.com/sites/default/files/Fisheries-and-Aquatic-Habitat-Monitoring-and-Follow-Up-Program-2018-Annual-Report.pdf
Fisheries and Aquatic Habitat Monitoring and Follow up Program 2019 Annual Report	http://sitecproject.com/sites/default/files/Fisheries%20and%20Aquatic%20Habitat%20Monitoring%20and%20Follow-up%20Program%202019%20Annual%20Report.pdf
Fisheries and Aquatic Habitat Monitoring and Follow up Program 2020 Annual Report	https://www.sitecproject.com/sites/default/files/Fisheries%20and%20Aquatic%20Habitat%20Monitoring%20and%20Follow-up%20Program%202020%20Annual%20Report.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

Heritage Resource Management Plan 2018 Annual Report	http://sitecproject.com/sites/default/files/heritage-resources-management-plan-2018-annual-report.pdf
Heritage Resource Management Plan 2019 Annual Report	http://sitecproject.com/sites/default/files/Heritage%20Resources%20Management%20Plan%202019%20Annual%20Report.pdf
Heritage Resource Management Plan 2020 Annual Report	https://www.sitecproject.com/sites/default/files/Heritage%20Resources%20Management%20Plan%202020%20Annual%20Report.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
Vegetation and Wildlife Mitigation and Monitoring Plan 2018 Annual Report	Part 1: http://sitecproject.com/sites/default/files/vegetation-and-wildlife-mitigation-and-monitoring-plan-2018-annual-report-part-1.pdf Part 2: http://sitecproject.com/sites/default/files/vegetation-and-wildlife-mitigation-and-monitoring-plan-2018-annual-report-part-2.pdf

Vegetation and Wildlife Mitigation and Monitoring Plan 2019 Annual Report	Part 1: http://sitecproject.com/sites/default/files/Vegetation%20and%20Wildlife%20Mitigation%20and%20Monitoring%20Plan%202019%20Annual%20Report%20Part%201.pdf Part 2: http://sitecproject.com/sites/default/files/Vegetation%20and%20Wildlife%20Mitigation%20and%20Monitoring%20Plan%202019%20Annual%20Report%20Part%202.pdf
Vegetation and Wildlife Mitigation and Monitoring Plan 2020 Annual Report	Part 1: https://www.sitecproject.com/sites/default/files/Vegetation%20and%20Wildlife%20Mitigation%20and%20Monitoring%20Plan%202020%20Annual%20Report%20Part%201.pdf Part 2: Vegetation and Wildlife Mitigation and Monitoring Plan 2020 Annual Report Part 2 Part 3: Vegetation and Wildlife Mitigation and Monitoring Plan 2020 Annual Report Part 3

BC Hydro
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Site C Clean Energy Project

Annual Progress Report No. 6
(Combined with Quarterly Progress Report No. 24)

Appendix G

Environmental Assessment Certificate
Annual Compliance Report

Environmental Assessment Certificate #E14-02 Annual Compliance Report

Site C Clean Energy Project
March 31, 2021

Site C Clean Energy Project
Status of Compliance with the Conditions of the EAC #E14-02
March 31, 2021

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) #E14-02 setting 77 conditions under which the Project can proceed. On May 27 and November 24, 2020, respectively, the Environmental Assessment Office issued two amendments 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, covering the period January 1, 2020 to December 31, 2020.

Summary of Compliance

EAC #E14-02 now contains 79 conditions which comprise 617 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
- Highway 29 Realignment – Cache Creek Segment, Noise Monitoring and Mitigation

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 BC Hydro.

Summary of Compliance with 79 Conditions:

- No conditions have been assessed as being in non-compliance
- **11** conditions have not yet required implementation – all of the requirements in these conditions are in planning stages and will be implemented at a future time, such as during reservoir filling or operations
- **68** conditions are underway and have been assessed as having requirements that are "in compliance" 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, but are deemed in compliance

Summary of Compliance with 617 Requirements:

Table 2 summarizes the status of compliance with each of the requirements in the 79 conditions of EAC #E14-02. The table shows that the total 617 requirements are assessed as being in compliance.

Summary of Inspections by EAO:

BC Hydro was inspected by Regulatory Agencies multiple times during the reporting period, including eight inspections by the Environmental Assessment Office. These written inspection reports included 22 separate findings of non-compliance related to site specific and often isolated issues, such as missing spill trays, wildlife mitigation, erosion and sediment control, and waste management. BC Hydro responded to each finding of non-compliance, corrected the deficiency, and provided evidence of this correction 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 and commitments for the Project.

The ACMT includes a mobile inspection tool that provides geography-specific and theme-specific record of environmental compliance at site. 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.

Between January 1, 2020 to December 31, 2020 BC Hydro used the ACMT to inspect 36,732 inspection results against conditions of the Environmental Assessment Certificate #E14-02 (EAC), for the Site C Project. Of the 16 categories described in the EAC #E14-02, the ACMT currently inspects against the following 10 categories:

- Aquatic Environment
- Community
- Current Use of Land and Resources for Traditional Purposes
- Environmental Management Plans, Follow-up and Monitoring
- Fish and Fish Habitat
- Heritage Resources
- Human Health
- Transportation
- Vegetation and Ecological Communities
- Wildlife Resources

Table 3 details a summary of compliance and deficiencies, against EAC #E14-02, identified by BC Hydro using the ACMT from January 1, 2020 to December 31, 2020. From the 36,732 inspection results, BC Hydro was able to verify the compliance status against 88,345 EAC requirements. BC Hydro recorded compliance against 80,134 (91%) of these compliance statements and identified 8,211 (9%) deficiencies.

BC Hydro actively worked with its contractors to remedy these deficiencies. Most deficiencies are corrected when identified in the field, and some deficiencies are corrected following formal communication between BC Hydro and responsible contractors. As of December 31, 2020, 46 of the deficiencies identified between January 1, 2020 to December 31, 2020 were open.

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

Amendment No.	Issued	Amendment to EAC #E14-02
1	March 12, 2018	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: • 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	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.
		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 Saulteau First nations, West Moberly First Nations, the District of Hudson's Hope, the District of Chetwynd, and the Ministry of Transportation and Infrastructure.
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.

Amendment No.	Issued	Amendment to EAC #E14-02
5	December 13, 2019	Amends Schedule A (Project Description) Section 4.3.4.1, Table 4.5 to reflect a longer bridge and no causeway for the crossing of Highway 29 realignment at Cache Creek. Also amends the design of the overall alignment of this segment, per Figure 4.33 of the EAC.
		Amends Schedule B (Conditions) in response to Amendment #5 above to require that BC Hydro develop a Noise Monitoring Plan to assess potential vehicle traffic noise impacts from the Highway 29 realignment at Cache Creek to the sweat lodge (the receiver location) identified in the application to amend the Certificate. The plan must be developed in consultation with West Moberly First Nations.
6	December 13, 2019	Amends Schedule A (Project Description) Section 4.3.6, and subsections, to reflect the expansion of the worker accommodation to permit up to 2,400 workers during peak periods.
7	May 27, 2020	Amends Schedule A (Project Description) Section 4.3.4.1 and Figures 4.28-4.30 to modify the design of the Highway 29 realignment crossings of Farrell Creek, Dry Creek and Lynx Creek.
8	November 24, 2020	Amends Schedule A (Project Description) Section 4.3.5.2, Table 4.7, and Figure 4.11 to develop and use the Halfway River East Borrow Source.

Table 2. Summary of Compliance with Requirements of EAC #E14-02 Conditions

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "In Compliance" (Completed or Ongoing)	# of Requirements "In Non-Compliance"
Aquatic Environment	Hydrology	1	11	11	0	0
	Fluvial Geomorphology and Sediment	1	17	0	17	0
	Water Quality	1	12	0	12	0
Fish and Fish Habitat	Fish and Fish Habitat	4	52	14	38	0
Vegetation and Ecological Communities	Vegetation and Ecological Communities	7	67	0	67	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	5	15	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

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "In Compliance" (Completed or Ongoing)	# of Requirements "In Non-Compliance" (Completed or Ongoing)
Outdoor Recreation and Tourism	Outdoor Recreation and Tourism	3	15	3	12	0
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	0	11	0
	Noise and Vibration	2	14	1	13	0
	Methylmercury	1	13	12	1	0
Heritage Resources	Visual Resources	1	4	0	4	0
	Physical Heritage and Cultural Heritage	3	22	4	18	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" (Completed or Ongoing)	# of Requirements "In Non-Compliance"
Environmental Management Plans, Follow-up and Monitoring	Environmental Management Plans, Follow-up and Monitoring	10	98	30	68	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	0	13	0
Highway 29 Realignment – Cache Creek Segment, Noise Monitoring and Mitigation	Highway 29 Realignment – Cache Creek Segment, Noise Monitoring and Mitigation	1	7	3	4	0
TOTAL		**79**	**617**	**107**	**510**	**0**

Table 3. ACMT results against EAC #E14-02 from January 1, 2020 to December 31, 2021.

Area	# of Inspection Results	# of Identified Compliance Results	# of Identified Partial Deficiency Results	# of Identified Deficiency Results	% of Compliance
Aquatic Environment	3,725	3,327	281	117	89%
Community	17,363	15,890	1,348	125	92%
Current Use of Land and Resources for Traditional Purposes	4	4	0	0	100%
Environmental Management Plans, Follow-Up and Monitoring	48,177	43,066	4,250	861	89%
Fish and Habitat	2,541	2,392	106	43	94%
Heritage Resources	388	368	16	4	95%
Human Health	4,178	4,126	40	12	99%
Transportation	89	84	2	3	94%
Vegetation and Ecological Communities	2,178	1,975	167	36	91%
Wildlife Resources	9,702	8,902	657	143	92%
TOTAL	**88,345**	**80,134**	**6,867**	**1,344**	**91%**

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, Natural Resource Operations and Rural Development
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 #E14-02
Covering period January 1, 2020 to December 31, 2020
Submitted March 31, 2021

No.	EAC Condition	Implementation Status	Compliance Status	2020 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:	Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro has entered into agreements with the downstream communities that have identified potential infrastructure impacts and established commitments to monitor and/or mitigate impacts. Additionally, BC Hydro continues to collect present state field data to inform future changes and associated downstream impact assessments. BC Hydro coordinated the Peace River flow change information updates with the Government of Alberta for the 2020 diversion period. Pre-diversion meetings, weekly updates during diversion and a post-diversion meeting were completed with the Alberta representatives. BC Hydro and Alberta staff agreed the diversion flow coordination served as a valuable experience that will inform the reservoir filling plan. BC Hydro intends to begin further engagement and reservoir filling plan preparations 2021, following the establishment of the Site C reservoir filling schedule.
EAC 01	· The Holder must maintain a minimum release of 390 cubic meters per second from the Site C dam	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	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.	Planning	Future Requirement	BC Hydro coordinated the Peace River flow change information updates with the Government of Alberta for the 2020 diversion period. Pre-diversion meetings, weekly updates during diversion and a post-diversion meeting were completed with the Alberta representatives. BC Hydro and Alberta staff agreed the diversion flow coordination served as a valuable experience that will inform the reservoir filling plan. BC Hydro intends to begin further engagement and reservoir filling plan preparations 2021, following the re-establishment of the Site C reservoir filling schedule.
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;	Planning	Future Requirement	BC Hydro is working with Government of Alberta representatives to assess potential risks to infrastructure caused by river diversion. This effort is expected to inform plans for reservoir filling.
EAC 01	· Provisions for obtaining baseline and operational flow information;	Planning	Future Requirement	BC Hydro is working with Government of Alberta representatives to assess baseline and operational flow information ahead of river diversion. This effort is expected to inform plans for reservoir filling.
EAC 01	· Provisions for obtaining information on any current impacts to infrastructure attributable to low water flows caused by the Project;	Planning	Future Requirement	BC Hydro is working with Government of Alberta representatives to identify any impacts to infrastructure associated with river diversion. This effort is expected to inform plans for reservoir filling.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 01	· Identification of any impacts to infrastructure attributable to low water flows caused by the Project; and	Planning	Future Requirement	BC Hydro is working with Government of Alberta representatives to identify any impacts to infrastructure associated with river diversion. This effort is expected to inform plans for reservoir filling.
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.	Planning	Future Requirement	BC Hydro is working with Government of Alberta representatives to identify any impacts to infrastructure associated with river diversion. This effort is expected to inform plans for reservoir filling.
EAC 01	The EAC Holder must submit the plan to EAO a minimum of 30 days prior to reservoir filling.	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.	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 CEMP contains Appendix I and J, which provide 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).	Complete	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	The Plan must identify areas of high erosion and sediment potential. The Erosion	Ongoing	In Compliance	The CEMP requires that Contractor EPPs identify water management plans to control runoff and direct it away from

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	Prevention and Sediment Control Plan must include at least the following:			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.
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 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	· 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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 02	· Identify and isolate work areas to prevent sediment from entering the downstream environment.	Ongoing	In Compliance	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. 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.
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	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. 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.
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	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 02	· Salvage and stockpile clean surface soils for site restoration.	Ongoing	In Compliance	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.
EAC 02	· Establish vegetative cover on the soils stockpiled to prevent erosion.	Ongoing	In Compliance	The CEMP requires contractors to establish vegetative cover on the soils stockpiled to prevent erosion. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. Topsoil stockpiles are monitored to assess the re- vegetation success as well as invasive occurrences by both BC Hydro and PRHP's QEP's.
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.
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 monitoring, and was monitored for compliance with the Fisheries Act Authorizations' severity of ill effects limits.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	In Compliance	The Erosion and Sediment Control Plan is described in Section 4.4 of the Construction Environmental Management Plan (CEMP). 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.
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.	Complete	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 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	The Erosion and Sediment Control Plan is described in Section 4.4 of the Construction Environmental Management Plan (CEMP). 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.
	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	2020 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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 to Q3 2020. In September 2020, all wells were decommissioned in accordance with the Groundwater Protection Regulation prior to head pond inundation, and the groundwater monitoring program at the dam site concluded.
EAC 03	· Identification of potential mitigation measures if water quality impacts observed; and	Ongoing	In Compliance	Potential mitigation measures to be implemented if water quality impacts are observed are described in CEMP Appendix E, Section 7.4. 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). This facility maintained operation throughout 2019 and 2020. In 2020, the contract to operate the facility was renewed for a period of two years, and the facility was relocated to RSEM R6 in order to accommodate planned approach channel excavation activities. For the reporting period, PAG-contact water quality exceedance events at RSEM sediment pond discharges (at RSEM R5b and RSEM R6) occur primarily during spring freshet. The Comptroller of Water Rights issued an Order under Section 93 of the Water Sustainability Act to BC Hydro on February 27, 2019, regarding the implementation of Care of Water measures to address the release of potentially acid generating rock into the Peace River. In accordance with this Order, BC Hydro worked with its contractors 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 exceedance events. However, the order is still open with the

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				CWR and BC Hydro is working with the contractor to address one item regarding the construction of a diversion ditch for the approach channel.
EAC 03	· Process for implementing mitigation measures to address water quality impacts.	Ongoing	In Compliance	Potential mitigation measures to be implemented if water quality impacts are observed are described in CEMP Appendix E, Section 7.4. 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). This facility maintained operation throughout 2019 and 2020. In 2020, the contract to operate the facility was renewed for a period of 2 years, and the facility was relocated to RSEM R6 in order to accommodate planned approach channel excavation activities. For the reporting period, PAG-contact water quality exceedance events at RSEM sediment pond discharges (at RSEM R5b and RSEM R6) occur primarily during spring freshet. The Comptroller of Water Rights issued an Order under Section 93 of the Water Sustainability Act to BC Hydro on February 27, 2019, regarding the implementation of Care of Water measures to address the release of potentially acid generating rock into the Peace River. In accordance with this Order, BC Hydro worked with its contractors 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 exceedance events. However, the order is still open with the CWR and BC Hydro is working with the contractor to address one item regarding the construction of a diversion ditch for the approach channel.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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.	Complete	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). Revision 5 was issued on February 19, 2019, Revision 5.1 on April 19, 2019 Revision 6 on July 15, 2019 and Revision 7 on September 4, 2020.
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 2019 construction activities was submitted to the EAO on March 31, 2020. The next report (covering 2020 construction activities) will be submitted to the EAO by June 1, 2021.
EAC 03	The final water quality monitoring program must be detailed in the Acid Rock Drainage and Metal Leachate Management Plan,	Complete	In Compliance	The water quality monitoring program is described in Section 4.14 and Appendix E - Section 7.0 of the CEMP (Revision 7).
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 2020 construction activities) will be submitted to the EAO on or before June 1, 2021.
	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	Ongoing	In Compliance	BC Hydro developed a Fisheries and Aquatic Habitat Management Plan and is implementing measures in accordance with the plan.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	measures detailed in a Fisheries and Aquatic Habitat Management Plan.			
EAC 04	The Fisheries and Aquatic Habitat Management Plan must be developed by a QEP.	Complete	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). · Amended in February 2019 to: "Maintain a 15 m 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.	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. 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. BC Hydro audited compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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. Mainstem channel contouring is underway with completion expected by 2023.
EAC 04	· Incorporate fish habitat features into the final capping of material relocation sites upstream of the dam.	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	Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Section 6.2.3.4 of the FAHMP (Dam Site Material Relocation Site Enhancement) describes this requirement.
EAC 04	Incorporate fish habitat features into the final design of the Highway 29 roadway that would border the reservoir, east of Lynx Creek.	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition. Section 6.2.3.2 of the FAHMP (Highway 29 Realignment Fish Habitat) describes this requirement. The initial construction stages of the Highway 29 roadway that would border the reservoir, east of Lynx Creek, are underway with completion expected in 2022.
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.	Complete	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.	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition. Section 6.2.3.3 of the FAHMP (Hudson’s Hope Shoreline Protection Fish Habitat) describes this requirement. The initial construction stages of the Hudson’s Hope Shoreline Protection are underway with completion expected by 2023.
EAC 04	· Contour Highway 29 borrow sites prior to decommissioning to provide littoral fish habitat in the reservoir.	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition. Section 6.2.3.1 of the FAHMP (Site C Reservoir Shoreline Enhancement) describes this requirement.
EAC 04	· Cap material repositioning areas with gravel and cobble, and contour to enhance	Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Section 6.2.3.4 of the FAHMP (Dam Site Material Relocation

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	fish habitat conditions.			Site Enhancement) describes this requirement.
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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition. Section 6.2.3.5 of the FAHMP (Reservoir Shoreline Riparian Planting) describes this requirement.
EAC 04	· Increase wetted habitat by creating new wetted channels and restoring back channels on the south bank island downstream of the dam.	Ongoing	In Compliance	BC Hydro completed phase 1 of the new wetted channels and restored back channels on the south bank island downstream of the dam in 2019. Section 6.2.1.1 of the FAHMP (Peace River Channel Contouring and Side Channel Enhancement) describes the plan for the new and restored back channels on the south bank island downstream of dam, associated with this condition. Phase 2 design is underway with construction completion expected by the end of 2023.
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 substantially completed construction of the new wetted channels and restored back channels on the south bank island downstream of the dam in 2019. The side channel enhancements planned for the north bank of the Peace River are under review, given geotechnical concerns associated with the landslide that occurred at these channels in 2018. Section 6.2.1.1 of the FAHMP (Peace River Channel Contouring and Side Channel Enhancement) describes the plan for the side channel enhancements, associated with this condition.
EAC 04	· Manage reservoir fluctuation within a 1.8 m maximum normal operating range from the maximum operating level of 461.8 m.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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.	Complete	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:	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 05	· Minimize levels of total dissolved oxygen gas in the tailwater;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 05	· Minimize levels of dissolved gas super-saturation	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 05	These operational procedures must be developed in consultation with FLNR and MOE prior to reservoir filling, and include monitoring activities.	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.	Ongoing	In Compliance	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 revised Fish Passage Management Plan, which includes updates since submission of the EIS, was 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 prepared an updated revision to the Fish Passage Management Plan in November 2019, which was reviewed by regulatory agencies and Indigenous groups and finalized in June 2020.The revised Fish Passage Management Plan takes into account input from Indigenous groups that has been received and taken, information on the progress of the design and construction of the temporary and permanent fish passage facilities, plans for the operation of the facilities, and a protocol to address genetic differences for small fish species. The plan also references 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	2020 Description
EAC 06	The Fish Passage Management Plan must be developed by a QEP.	Complete	In Compliance	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 revised Fish Passage Management Plan, which includes updates since submission of the EIS, was 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. The revised Fish Passage Management Plan took into account input from Indigenous groups that has been received and taken, information on the progress of the design and construction of the temporary and permanent fish passage facilities, plans for the operation of the facilities, and a protocol to address genetic differences for small fish species. The plan 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. Progress with the EAC requirements related to Fish and Fish Habitat in 2019 helped to prepare for river diversion, which occurred in September 2020. Monitoring of fish and fish habitat continued to document conditions prior to and during river diversion. As well, an updated Fish Passage Management was prepared and reviewed with Indigenous groups and fisheries agencies. A Fish Passage Management Plan, developed by QEPs, was submitted to the EAO on June 3, 2020.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Ongoing	In Compliance	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 revised Fish Passage Management Plan, which includes updates since submission of the EIS, was 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 prepared an updated revision to the Fish Passage Management Plan in November 2019, which was reviewed by regulatory agencies and Indigenous groups and finalized in June 2020. The revised Fish Passage Management Plan takes into account input from Indigenous groups that has been received and taken, information on the progress of the design and construction of the temporary and permanent fish passage facilities, plans for the operation of the facilities, and a protocol to address genetic differences for small fish species. The plan also references the monitoring of fish movement and fish passage that is described in the Project's Fisheries and Aquatic Habitat Monitoring and Follow-up Program. Progress with the EAC requirements related to Fish and Fish Habitat in 2020 helped to prepare for river diversion, which occurred in September 2020. Monitoring of fish and fish habitat continued to document conditions prior to and during river diversion. As well, an updated Fish Passage Management was prepared and reviewed with Indigenous groups and fisheries agencies.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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.	Ongoing	In Compliance	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 revised Fish Passage Management Plan, which includes updates since submission of the EIS, was 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 prepared an updated revision to the Fish Passage Management Plan in November 2019, which was reviewed by regulatory agencies and Indigenous groups and finalized in June 2020. The revised Fish Passage Management Plan takes into account input from Indigenous groups that has been received and taken, information on the progress of the design and construction of the temporary and permanent fish passage facilities, plans for the operation of the facilities, and a protocol to address genetic differences for small fish species. The plan also references the monitoring of fish movement and fish passage that is described in the Project's Fisheries and Aquatic Habitat Monitoring and Follow-up Program. Progress with the EAC requirements related to Fish and Fish Habitat in 2020 helped to prepare for river diversion, which occurred in September 2020. Monitoring of fish and fish habitat continued to document conditions prior to and during river diversion. As well, an updated Fish Passage Management was prepared and reviewed with Indigenous groups and fisheries agencies.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 06	· Design the installation and use of a trap and haul facility.	Ongoing	In Compliance	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 revised Fish Passage Management Plan, which includes updates since submission of the EIS, was 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 prepared an updated revision to the Fish Passage Management Plan in November 2019, which was reviewed by regulatory agencies and Indigenous groups and finalized in June 2020. The revised Fish Passage Management Plan takes into account input from Indigenous groups that has been received and taken, information on the progress of the design and construction of the temporary and permanent fish passage facilities, plans for the operation of the facilities, and a protocol to address genetic differences for small fish species. The plan also references the monitoring of fish movement and fish passage that is described in the Project's Fisheries and Aquatic Habitat Monitoring and Follow-up Program.BC Hydro constructed, commissioned and operated the temporary upstream fish passage facility in 2020.
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.	Planning	Future Requirement	Revision 0 of the Fish Passage Management Plan was included in the Environmental Impact Statement, dated January 12, 2012. Revision 1 (draft) was shared with Indigenous groups and regulatory agencies on November 18, 2019.
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	Planning	Future Requirement	Revision 2 of the Fish Passage Management Plan, the "final plan", was shared with Indigenous groups, DFO, MOE and FLNORRD on June 2-3, 2020.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	impact upstream fish passage.			
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.	Ongoing	In Compliance	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.	Complete	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 ongoing. Monitoring of fish stranding sites is ongoing for Mon-12, the fish stranding monitoring program.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 07	· 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.	Ongoing	In Compliance	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 ongoing. Progress with the EAC requirements related to Fish and Fish Habitat in 2020 helped to prepare for river diversion, which occurred in September 2020. Monitoring of fish and fish habitat continued to document conditions prior to and during river diversion.
EAC 07	· 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.	Ongoing	In Compliance	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 ongoing.
EAC 07	· 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 ongoing. Monitoring of fish stranding sites is ongoing for Mon-12, the fish stranding monitoring program.
EAC 07	· Total dissolved gas.	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	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: · Continued effectiveness of	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	environmental protection measures undertaken during construction to mitigate effects on fish and fish habitat.			
EAC 07	· Total dissolved gas.	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	· Meeting monitoring commitments as per the Fish Passage Management Plan.	Ongoing	In Compliance	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 is underway.
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 ongoing. Monitoring of fish stranding sites is ongoing for Mon-12, the fish stranding monitoring program.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 is ongoing) 3) Mon-2 Peace River Fish Community Monitoring Program (ongoing) 4) Mon-3 Peace River Physical Habitat Monitoring Program (ongoing) 5) Mon-4 Site C Reservoir Riparian Vegetation Monitoring Program (ongoing) 6) Mon-5 Peace River Riparian Vegetation Monitoring Program (ongoing) 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 (ongoing) 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 (ongoing) The monitoring plans are included as Appendices A – J of the Fisheries and Aquatic Habitat Monitoring and Follow-up Program.
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	Complete	In Compliance	This requirement is addressed in Section 7.0 of the FAHMFP (Framework to Implement Future Compensation Actions).

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	compensation options that are technically and economically feasible will be implemented.			
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, 2020. 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.	Complete	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.	Complete	In Compliance	The final FAHMFP was submitted to regulatory agencies and Indigenous groups on December 22, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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	BC Hydro intends to submit the 2020 Annual Report for the FAHMFP on March 1, 2021. The report will describe the status of each component of the FAHMFP. All of the monitoring programs that were scheduled to occur in 2020 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: - 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.
	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.	Complete	In Compliance	The Soil Management, Site Restoration, and Re-vegetation Plan are 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. 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. Revision 6 of the CEMP was issued July 15, 2019.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 08	The Soil Management, Site Restoration, and Re-vegetation Plan must be developed by a QEP.	Complete	In Compliance	The Soil Management, Site Restoration, and Re-vegetation Plan are 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 Vegetation and Wildlife Technical Committee (VWTC) composed of members from the MOE, the MFLNRO and Canadian Wildlife Services. 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.
EAC 08	The Soil Management, Site Restoration, and Re-vegetation Plan must include at least the following: · 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	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.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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. Rev 5 of the CEMP has revised text to allow for the use of non-native seed mixes, together with native seed mixes, during initial site revegetation. The revisions are intended to improve effectiveness of erosion control measures at site while continuing to meet the project's long-term objective of achieving a sustainable native species ecosystem.
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.	Complete	In Compliance	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, Revision 4 in July 2016 (Revision 3 was not formally published), Revision 5.1 in May 2019, Revision 6 in July 2019, Revision 6.1 in December 2019 and Revision 7 in September 2020.
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.	Complete	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). Revision 5 was issued on February 19, 2019, Revision 5.1 on April 19, 2019 Revision 6 on July 15, 2019 and Revision 7 on September 4, 2020.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.
EAC 09	The Vegetation and Invasive Plant Management Plan must be developed by a QEP.	Complete	In Compliance	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. 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.
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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 09	· Invasive plant control measures to manage established invasive species populations and to prevent invasive species establishment.	Complete	In Compliance	Section 4.15 of the CEMP requires that Contractor EPPs address this requirement. BCHydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.The Invasive Weed Mitigation and Adaptive Management Plan (IWMAMP) include 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.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 2019 across all areas of the project and this will continue for the remainder of the project lifespan.The Main Civil Works contractor has retained an invasive plant species specialist to advise on invasive plant species management. BC Hydro installed two temporary rinse 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. Construction of the permanent rinse station was completed by Oct 2019 and operations began in 2020.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 09	**Rare Plants and Sensitive Ecosystems** · 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	Complete	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	· 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.	Ongoing	In Compliance	For 2020, pre-construction rare plant surveys were focused on access roads on both sides of the Halfway River, and on the remaining segments of Highway 29 realignment corridors on the north side of the Peace River. The complete 2020 program report will be provided in the 2020 Annual Report for the VWMMP, which will be provided to agencies by 31 March 2021.
EAC 09	These pre- construction surveys must target rare plants as defined in Section 13.2.2 of the EIS —including vascular plants, mosses, and lichens.	Ongoing	In Compliance	Pre-construction surveys are targeting rare plants as defined in Section 13.2.2 of the EIS. The complete 2020 program report will be provided in the 2020 Annual Report for the VWMMP, which will be provided to agencies by 31 March 2021.
EAC 09	· 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.	Ongoing	In Compliance	A spatial database of rare plant occurrences in the vicinity of Project Components is captured in the spatial Environmental Features Database. The Environmental Features Database was updated with the 2020 rare plant data on 18 August and 7 December 2020, when it was available to contractors for use in planning.
EAC 09	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.	Ongoing	In Compliance	A spatial database of rare plant occurrences in the vicinity of Project Components is captured in the spatial Environmental Features Database. The Environmental Features Database was updated with the 2020 rare plant data on 18 August and 7 December 2020, when it was available to contractors for use in planning. The 2020 rare plant data were submitted to the Program Botanist at the BC Conservation Data Center, MOE on 18 January, 2021.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 09	· 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.	Ongoing	In Compliance	Section 4.17 of the CEMP requires avoiding impacts to Important Wildlife Areas, such as wetlands, to the degree feasible. Except within the dam site area, on designated access roads and during clearing, construction activities shall be prohibited within 15 m of the Ordinary High Water Mark of streams or wetlands, unless the activity was described in the EIS and is accepted by BC Hydro. Rare plant occurrences are identified through focused surveys, and impacts to rare plant occurrences are avoided to the degree feasible, as described in Sections 4.15 and 4.18 of the CEMP. Impacted occurrences of rare plants are mitigated through implementation of the Experimental Rare Plant Translocation Program.
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.	Ongoing	In Compliance	Tufa seeps are present on the south bank of the eastern reservoir, where clearing occurred in 2019. Mitigation to minimize impacts on the tufa seep consisted of no ground equipment within the feature, and trees were directionally felled away from the tufa seep to the degree feasible. 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 is planned to protect areas of the tufa seep that can be avoided. No impacts to the tufa seep occurred in 2020. The protection berm has been designed to minimize impacts to the tufa seep, but some impacts are expected in 2021.A tufa seep is present on the north bank pf the Peace River at Bear Flat/Cache creek. Clearing occurred in the vicinity of the tufa seep in 2020. The Pier 1 Berm for the Cache Creek Bridge is planned to be constructed in 2021, and some impacts to the tufa seep may occur at that time.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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	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 is planned to protect areas of the tufa seep that can be avoided.
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.	Complete	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.	Complete	In Compliance	The final Vegetation and Invasive Plant Management Plan was submitted to regulatory agencies and Indigenous groups on June 5, 2015.
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	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. 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. 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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 2019 and is scheduled to continue until the end of the project. 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. Construction of the permanent rinse station was completed by Oct 2019 and operations began in 2020.
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.	Complete	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 (Utricularia ochroleuca), including field, herbaria, and genetic work in consultation with FLNR and the MOE (BC Conservation Data Centre).	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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	The experimental rare plant translocation program continued in 2020. This program will enhance habitat by increasing the density of rare plans in suitable habitat, using propagules that were salvaged from all areas that will be impacted by the Project. Work to collect seeds and salvage rare plants under this program occurred in 2020, along with propagation trials and translocation. The 2020 Annual Report for the VWMMP, which will be submitted to regulatory agencies and Indigenous groups by March 31, 2021, outlines the status of the program as of the end of December 2020.
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 Report for the VWWMP.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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	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. Consultation is ongoing. Consultation with FLNRORD and MOE is occurring through the VWTC. Consultation with Indigenous Groups is occurring through Permitting Forums and Environmental Forums.
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 was 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 QEPs who prepared the plan.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 12	The Wetland Mitigation and Compensation Plan must include at least the following: · Information on location, size and type of wetlands affected by the Project;	Ongoing	In Compliance	Data on wetland location, size and type gathered during baseline surveys are summarized in Section 7.3.3 of the VWMMP.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. The complete 2020 program report will be provided in the 2020 Annual Report for the VWMMP, which will be provided to agencies by 31 March 2021.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 engaged a forestry consultant to design access roads and clearing prescriptions along the transmission line. A hydrologist on staff with the forestry consultant reviewed the design to ensure that the hydrology of wetlands along the transmission line is maintained. Most access road construction works were completed in 2019. The design and construction of any remaining roads required for stringing or decommissioning of the 138 kV lines will continue 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).	Complete	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.
EAC 12	· A defined mitigation hierarchy that prioritizes mitigation actions to be undertaken, including but not limited to: - Avoid direct effects where feasible; - Minimize direct effects where avoidance is not feasible; - Maintain or improve hydrology where avoidance is not feasible; - Replace like for like where wetlands will be lost, in terms of functions and compensation in terms of area; - Improve the function of existing wetland habitats; and - 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 further compensation opportunities on fee simple and 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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.	Complete	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.	Complete	In Compliance	The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015.
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. To date, BC Hydro has secured 2 properties for wetland compensation and is in the process of identifying further compensation opportunities on fee simple and Crown land to contribute towards fulfilling the plan requirements while also facilitating the current use of lands and resources by Indigenous groups.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 13	The EAC Holder must develop the Vegetation Clearing and Debris Management Plan.	Complete	In Compliance	Revision 3 of the VCDMP was submitted to regulatory agencies and Indigenous groups on July 29, 2019.
EAC 13	The Vegetation Clearing and Debris Management Plan must be developed by a QEP.	Complete	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 contactors 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.
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	2020 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, eastern reservoir and middle 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).
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 - 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.	Ongoing	In Compliance	This Condition was amended in February 2019, allowing for the selective use of mechanical clearing in riparian zones where safety prohibits manual falling. BC Hydro audited 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	2020 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.	Complete	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.	Complete	In Compliance	The final VCDMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015, respectively. The VCDMP was updated in July 2019 to reflect the following changes: -Clarified that clearing contractors may be granted the merchantable timber as part of their clearing contract - Indicated that work within riparian areas may be requirement for the management of natural woody debris -Indicated that islands may be accessed by fording machinery/equipment, in addition to other methods - Expanded the description of naturally occurring woody debris and the need for its removal prior to river diversion
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.
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.	Complete	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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 14	The Vegetation and Ecological Communities Monitoring and Follow-up Program must include at least the following: · 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 2020 Annual Report for the VWMMP, to be submitted by March 31, 2021, 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 2020 Annual Report for the VWMMP, to be submitted by March 31, 2021, provides an update on the status of the translocation program.
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 2020, the rare plant translocation program continued to collect propagules (seeds, whole plants) and identify suitable planting sites, while also conducting 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, and has submitted subsequent annual reports before 31 March of each year. The 2020 Annual Report will be submitted by March 31, 2021.
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.	Complete	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. The VCDMP was updated in July 2019 as noted above.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	In Compliance	The final VWMMP was submitted to regulatory agencies and Indigenous groups on June 5, 2015. The VCDMP was updated in July 2019 and provided to regulatory agencies and Indigenous groups.
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 2020 Annual Report for the VWMMP will be submitted by March 31, 2021.
	WILDLIFE RESOURCES			
EAC 15	The EAC Holder must develop a Wildlife Management Plan.	Complete	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. The final VWMMP was developed and submitted to regulatory agencies, governments and Indigenous groups on June 5, 2015.
EAC 15	The Wildlife Management Plan must be developed by a QEP.	Complete	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.
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.	Complete	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.	Complete	In Compliance	Resulting data were used to update the models and the ranking of habitats. BC Hydro is using this information, along with additional baseline data collected since that as part of vegetation and wildlife monitoring plans, to assess habitat losses and plan for mitigation efforts.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 blasting timing 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. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC Environmental Assessment Office (EAO).
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. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC Environmental Assessment Office (EAO).

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC Environmental Assessment Office (EAO).
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. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC Environmental Assessment Office (EAO).
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.	Complete	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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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.	Complete	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.	Complete	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 EPPs.
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: · 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 planned for the dam site (Area A), which is to include fish-free areas. Additional compensation options for wetlands, still in development, will also include fish-free areas. In 2019, BC Hydro and Ducks Unlimited constructed about 50 ha of fish-free wetland area at Golata Canyon Ranch. In 2020, BC Hydro worked with Ducks Unlimited Canada to identify further compensation opportunities on fee simple and Crown

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				land to contribute towards fulfilling the plan requirements while also facilitating the current use of lands and resources by Indigenous groups.
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. Six garter snakes hibernacula were installed by 19 July 2020, and one additional snake den is planned to be constructed in association with the Cache Creek Bridge, which is planned for construction in 2023.
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 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. By the end of 2020, 266 nest boxes have been installed.
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.	Complete	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 are no longer planned to 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	2020 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. 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. Road construction and production blasts occurred in summer of 2019, 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 in 2018, 2019 and 2020 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 (CWD) piles for fisher have been created within the dam site area and 63 have been constructed along the transmission line. BC Hydro has installed signs that advise people to remain distant from the piles. Additional CWD piles for fisher are also being planned near the reservoir clearing boundaries on the south side of the Peace River.
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.	Complete	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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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, with subsequent annual reports providing updates.
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: · 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 EAC 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. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC Environmental Assessment Office (EAO).
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. The Sharp-tailed Grouse lek mitigation program was developed through the VWTC. Mitigation specifically for Sharp-tailed Grouse was integrated into Section 4.17 of the CEMP Revision 3 in 2016. That mitigation was subsequently revised based on discussions with the VWTC and provided in Section 4.17 of CEMP Revision 5 issued 15 February 2019.
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 2020 data on known nest locations was provided to FLNR and MOE on 19 December 2020.
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 appropriate implementation of the EPP. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				Environmental Assessment Office (EAO).
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 appropriate implementation of the EPP. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC Environmental Assessment Office (EAO).
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: · 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	· 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.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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	Complete	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	2020 Description
	commencement of construction.			
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.	Complete	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Subsequent revisions to the CEMP have not resulted in changes to the Human-Wildlife Conflict Management Plan (Revision 2 of the CEMP was issued in February 2016 and Revision 4 in July 2016 (Revision 3 was not formally published). Revision 5 was issued on February 19, 2019, Revision 5.1 on April 19, 2019, Revision 6 on July 15, 2019 and Revision 7 on September 4, 2020.
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	BC Hydro is using reasonable efforts to avoid and reduce injury and mortality to amphibians and snakes. Section 4.17 of Rev 4 of the CEMP outlines mitigation for snakes and amphibians. For amphibian salvage and relocation, BC Hydro has obtained Wildlife Act permit FJ16- 226024, which is valid until 31 December 2023. 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 in 2017, and integrated into the CEMP Revision 5 as Appendix L. This Procedure has been passed to all relevant contractors since its completion 21 July 2017, for inclusion in appropriate EPPs. Amphibian salvage and translocation activities in 2020 are described in the 2020 Annual Report for the VWMMP, to be submitted by March 31, 2021.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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	A 15 m long 1,000 mm diameter culvert has been installed along the access road to Portage Mountain, following guidance described in Best Management Practices for Amphibians and Reptiles in Urban and Rural Environments in British Columbia (BC MWLAP 2004).
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.	Complete	In Compliance	Section 2.3 of the VWMMP lists the QEPs who prepared the plan.
EAC 21	The Vegetation and Wildlife Mitigation and Monitoring Plan must include at least the following: · Monitor Bald Eagle nesting populations adjacent to the reservoir, including their use of artificial nest structures.	Ongoing	In Compliance	Monitoring of Bald Eagle nesting productivity occurred two times over May and June in 2020. Bald Eagle nest productivity monitoring was planned to occur three times in 2020, but the first monitoring session was missed due to complications related to the COVID-19 pandemic. The annual bald eagle nest monitoring report will be provided in the 2020 Annual Report of the VWMMP, which will be submitted by March 31, 2021.
EAC 21	· 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 2019. The annual waterbird monitoring report will be provided in the 2020 Annual Report of the VWMMP, which will be submitted by March 31, 2021.
EAC 21	· Monitor amphibian use of migration crossing structures installed along Project roads.	Ongoing	In Compliance	A 15 m long 1,000 mm diameter culvert has been installed along the access road to Portage Mountain, following guidance described in Best Management Practices for Amphibians and

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				Reptiles in Urban and Rural Environments in British Columbia (BC MWLAP 2004). Monitoring of amphibian use of the crossing structure was conducted from April 1 through September 30, following the requirements of the Site C Western Toad Management Procedure. That monitoring involved surveys for western toad activity that occur weekly during the caution period of April 1 to May 31 and August 16 to September 30, and daily surveys from June 1 to August 15. No western toad use of the crossing structure has yet been documented, but western toad activity in general has been low.
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 2020. The results of those surveys will be included in the 2020 Annual Report of the VWMMP, which will be submitted by March 31, 2021.
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 2020 will be included in the 2020 Annual Report of the VWMMP, which will be submitted by March 31, 2021. The next surveys for this program are scheduled to occur in 2025.
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 2020 Annual Report for the VWMMP, which will be submitted to regulatory agencies and Indigenous groups by March 31, 2021.
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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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 2020 will be summarized in the 2020 Annual Report for the VWMMP, which will be submitted by March 31, 2021.
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. Environmental audits to evaluate compliance with the CEMP and EAC and Federal Decision Statement Project approval conditions are also conducted by the Independent Environmental Monitor (IEM) and the BC Environmental Assessment Office (EAO).
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. The VCDMP

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				was updated in July 2019 and provided to regulatory agencies and Indigenous groups as noted above.
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	In 2020, fisher (Pekania pennanti), which was previously Blue-listed provincially for all populations combined, was reassessed and divided into a Boreal and a Columbian population. The Boreal population of fisher, which overlaps with the Site C Project area, is also Blue-listed. Also in 2020, there were no changes to the conservation status of plants that have been observed during surveys for Site C.
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 in November 2017, 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.
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.	Complete	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.	Complete	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	2020 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	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. No groundtruthing was conducted during this reporting period, due in large part to First Nation concerns about covid exposure. BC Hydro has been operating a cultural monitoring program that also provides opportunities for local First Nation representatives to identify areas of cultural significance in order to avoid, mitigate or otherwise protect them from construction and associated project activities. This program has been ongoing throughout the reporting period. To update and inform Indigenous communities of construction progress and upcoming milestones, BC Hydro continued to provide dam site, Highway 29, and boat tours along the Peace River with authorised covid safety plans. Additionally, BC Hydro produced virtual drone tours and river diversion animations to share with First Nations as not all people were comfortable participating in tours during the pandemic. BC Hydro remains engaged with Saulteau 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.BC Hydro continues to consult with Indigenous groups regarding construction plans and sent invitation letters in April and September 2017, January, June and August 2018, March, June and August 2019, and May 2020 highlighting areas where construction is planned in order that Indigenous groups could

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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.BC Hydro is coordinating with interested nearby/proximal Indigenous groups to coordinate preclearing harvesting activities in construction areas prior to ground disturbance or clearing activities.
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	Based on the results of ground truthing to date, a number of plant species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2019-2020 APUMP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021. BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing ground truthing 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. 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).

No.	EAC Condition	Implementation Status	Compliance Status	2020 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	The Aboriginal Plant Use Mitigation Plan (June 2015) is available on the Project website. Based on the results of ground truthing to date, a number of plant species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2019-2020 APUMP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021.BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing ground truthing 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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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	The Aboriginal Plant Use Mitigation Plan (June 2015) is available on the Project website. Based on the results of ground truthing to date, a number of plant species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2019-2020 APUMP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021. BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing ground truthing 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.
EAC 26	Relocate when deemed necessary by a QEP.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition. 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. 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” (Acorus americanus) is the only rare plant species of traditional Indigenous value identified through ground truthing

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				(currently Red-listed in BC by the BC Conservation Data Centre).
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	Future Requirement	Based on the results of ground truthing to date, a number of plant species with cultural, food and medicinal value have been identified and are listed in the Aboriginal Plant Use Mitigation Plan (APUMP) annual reports. The 2019-2020 APUMP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021. BC Hydro continues to work with Indigenous groups to identify plant species of traditional Indigenous value through ongoing ground truthing 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. 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).
EAC 26	And undertake restoration of those ecological communities where deemed necessary by a QEP.	Planning	Future Requirement	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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				and the Soil Management, Site Restoration and Revegetation Plan (Appendix H of the CEMP).
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 Saulteau First Nation.	Planning	Future Requirement	BC Hydro has entered into a contract with Twin Sisters Nursery (an indigenous nursery owned by West Moberly First Nations and Saulteau First Nations) for supply and delivery of live native seedling stock to support re-vegetation and reclamation activities. Seeds of local plant species of traditional Indigenous value will continue to be collected by Twin Sisters and 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.	Planning	Future Requirement	BC Hydro has entered into a contract with Twin Sisters Nursery (an indigenous nursery owned by West Moberly First Nations and Saulteau First Nations) for supply and delivery of live native seedling stock to support re-vegetation and reclamation activities. Seeds of local plant species of traditional Indigenous value will continue to be collected by Twin Sisters and 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.	Complete	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.	Complete	In Compliance	The final Aboriginal Plant Use Mitigation Plan was submitted to regulatory agencies and Indigenous groups on June 5, 2017.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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	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. The 2019-2020 APUMP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021. 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.
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	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. The 2019-2020 AGCP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021. The AGCP will be updated as required to reflect evolving project communications with Indigenous Groups through to the end of construction.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Ongoing	In Compliance	As described in Section 5.0 of the Aboriginal Group Communication Plan (AGCP), BC Hydro will communicate the results of the Fisheries and Aquatic Habitat Monitoring and Follow-up Program to Indigenous groups. This includes the Site C Reservoir Fish Community monitoring program, which assesses the effects of river to reservoir transformation on the fish community in the Site C Reservoir and associated tributaries. Indigenous groups will be provided with monitoring reports annually. Community-based meetings with Indigenous groups could also be held to share these results and inform the communities on changes to fish community composition. The 2019-2020 AGCP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021.
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.	Complete	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.	Complete	In Compliance	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous groups on June 5, 2015. Revision 5.0 of the CEMP was issued in February 2019, Revision 5.1 in April 2019, Revision 6.0 in July 2019 and Revision 6.1 in December 2019.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 2019-2020 AGCP Annual Report, describing activities from April 2019 through March 2020, was submitted to the EAO on March 31, 2020 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 2020-2021 Annual Report will describe activities from April 2020 to March 2021.
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.	Complete	In Compliance	BC Hydro has signed agreements with registered trapline holders where the loss of structures were identified and confirmed through ground-truthing. In addition, BC Hydro remains engaged with Saulteau 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. 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. 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.
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	Complete	In Compliance	BC Hydro has signed agreements with registered trapline holders where the loss of structures were identified and confirmed through ground-truthing. In addition, BC Hydro remains engaged with Saulteau registered trapline holders

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	groups and FLNR to establish measures to compensate for the loss of such structures prior to the loss of the structures.			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.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.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.
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	BC Hydro has signed agreements with registered trapline holders where the loss of structures were identified and confirmed through ground-truthing. In addition, BC Hydro remains engaged with Saulteau 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. 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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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.
	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	Agreements have also been reached with the 2 out of 4 guide outfitters impacted by construction activities.
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	To date BC Hydro has obtained a total of nine agreements from the 11 trapline holders that are impacted by construction activities. Since the previous compliance report, three agreements are under development. One offer has been rejected may be renegotiated.
	Agriculture			
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.	Complete	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.	Complete	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	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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	measures consistent with industry compensation standards, to mitigate effects or compensate for losses.			part of the property acquisition process.
EAC 30	The Agricultural Mitigation and Compensation Plan must include at least the following: · 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	· 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	· Funding for mitigation actions for disruptions to agricultural land owners and tenure holders, including but not limited to the provision of alternative / replacement: - Livestock movement options and compensation for associated increased costs; - Infrastructure (irrigation and drainage improvements); - Water supplies; - Relocation of quality soil in selected locations; - Farm and field access; - Highway crossings; - Utility crossings; - Livestock watering and drainage works during construction, and restore original works after construction is completed; and	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	2020 Description
	- Fencing.			
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 held the third grant intake with $250,000 in funding available in fall 2020. As of December 2020, $599,736 has been distributed to 24 projects. The next intake for $250,000 will be held from December 2020 - January 2021 with another intake in fall 2021.
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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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.
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.	Complete	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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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 began in 2019 five years prior to reservoir filling and has been on-going since.
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	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 began in 2019, five years prior to reservoir filling. Baseline climatic data collection has been on-going since the environmental assessment.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	indices, and farm operator interviews.			
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 began in 2019, five years prior to reservoir filling and has been on-going since.
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 fifth annual report on the implementation of the Agriculture monitoring and Follow-up Program in July 2020. The sixth annual report will be provided in July 2021.
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 fifth annual report on the implementation of the Agriculture monitoring and Follow-up Program in July 2020. The sixth annual report will be provided in July 2021.
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	Complete	In Compliance	The draft Agricultural Monitoring and Follow-up Program was submitted to regulatory agencies and governments on October 23, 2015.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	after the commencement of construction.			
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.	Complete	In Compliance	The final Agricultural Monitoring and Follow-up Program was submitted to regulatory agencies and governments on December 22, 2015.
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 fifth annual report on the implementation of the Agriculture monitoring and Follow-up Program in July 2020. The sixth annual report will be provided in July 2021.
	Other Resource Industries			
EAC 32	The EAC Holder must develop an Oil, Gas and Energy Monitoring and Follow-up Program.	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.	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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	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.	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.	Complete	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.
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 continues to work with MoTI to satisfy the commitments in the MOU. Material designs have been developed to provide the most efficient use of the Portage Mountain Quarry product which will minimize the disturbance of the quarry material. This will ensure a greater quantity of usable material remains in the quarry for future use.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	In Compliance	No mineral tenures appear to overlap with the Project Activity Zone and preliminary impact lines. 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. 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.
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.	Complete	In Compliance	No mineral tenures appear to overlap with the Project Activity Zone and preliminary impact lines.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.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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				impact lines.
EAC 34	Efforts made by the EAC Holder to enter into such agreements must be documented.	Complete	In Compliance	No mineral tenures appear to overlap with the Project Activity Zone and preliminary impact lines. 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. 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.
	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	This requirement is addressed in the final Construction Safety Management Plan (CSMP), Section 5.4 Traffic Management Plan. 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.
EAC 35	The Traffic Management Plan must be developed by a QEP.	Complete	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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				plan.
EAC 35	The Traffic Management Plan must include at least the following: · 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	· 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	· Control and/or restrict access where required, and as discussed with MOTI.	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 affected 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.	Complete	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, and the segments of Highway 29 that are to be realigned (e.g., at Cache Creek, Halfway River, Farrell Creek, Dry Creek and Lynx Creek).
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.	Complete	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.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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.	Complete	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	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. 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.
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 was not implemented during the pandemic due to physical distancing guidance by the provincial health authority. The program will resume when permitted. Preferred carpool parking is designated in the main site parking lot.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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: https://www.sitecproject.com/job-opportunities/why-work-here 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. These measures were put on hold during the pandemic due to physical distancing guidance by the provincial health authority.
EAC 36	The EAC Holder must consult with the affected local communities, including Aboriginal communities in the development of a carpool and commuter program.	Complete	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.	Complete	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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 37	The Transportation Monitoring and Follow-up Plan must include at least the following: · 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: - Beattie Drive in Hudson's Hope - Clarke Avenue in Hudson's Hope - Highway 29 and Canyon Drive in Hudson's Hope - Highway 29 and Jackfish Lake Rd - Highway 97 / Highway 29 in Chetwynd - Highway 97 intersections in Fort St. John, including: ▪ Highway 97 at Old Fort Road in Fort St. John ▪ Highway 97 at 100th Street in Fort St. John ▪ Highway 97 at 85th Avenue in Fort St. John	Ongoing	In Compliance	Intersection monitoring was carried out quarterly in Year 5 of construction with quarterly monitoring of the dam site entrances. The Traffic and Pavement Monitoring report for the fifth year of construction was submitted to regulatory agencies and local governments on January 21, 2021. The next intersection monitoring data collection will occur in April - May 2021.
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 quarterly in Year 5 of construction with quarterly monitoring of the dam site entrances. The Traffic and Pavement Monitoring report for the fifth year of construction was submitted to regulatory agencies and local governments on January 21, 2021. The next intersection monitoring data collection will occur in April - May 2021.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 McMahon Drive, and intersection lightning at Highway 97 and Pine Avenue, 103rd Avenue, and Cherry Avenue	Complete	In Compliance	Continuous lighting was installed in 2015 and is operating in Taylor along Highway 97in 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.	Complete	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.	Complete	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 4 Traffic and Pavement Monitoring report on January 21, 2021.
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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	In Compliance	The final CSMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015.
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	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. The Traffic and Pavement Monitoring report for the second year of construction was submitted regulators and local communities on January 21, 2021.
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.	Complete	In Compliance	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.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.Public Safety Management Plans are key deliverables by all Primes and major contactors at Site C and must be approved before the contractor can mobilize to site. The PSMP the Construction Phase is updated every 6 months, with the next revision is expected to be completed in January or February 2021.
EAC 38	The Public Safety Management Plan must be developed by a QEP.	Complete	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	2020 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 last public safety site inspection was conducted on 26-28 October 2020. Recommendations related to river work hazards have either been implemented or are scheduled to be implemented when the cofferdams are completed in the spring of 2021.
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. The Peace River portage program is now operational on a seasonal basis, with information broadly communicated to public. 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 and Canadian Navigable Waters Act and approvals issued under these Acts.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 38	· Manage public water-based access during construction and for the first 5 years of operation.	Ongoing	In Compliance	The Diversion Security and Public Safety Plan has been completed. Appendix 2 of this Plan details the public safety signs (including flashing lights) that will be installed in advance of the completion of the upstream debris boom on the Peace River. Additional measures, including buoys and a triggered audible alarm are recommended as additional controls to protect the public associated with Diversion.
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.	Complete	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.	Complete	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	2020 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	The Public Safety Management Plan (PSMP) for the Construction Phase is reviewed every 6 months and updated accordingly. The latest public safety review was carried out 26 to 28 October 2020. Recommendations from that review have been implemented or scheduled for implementation when construction reaches the appropriate stage. The PSMP, which incorporates these recommendations, will be re-issued in February 2021. The next public safety review will be conducted in late spring 2021.
	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition. 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.
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	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.
EAC 40	The Outdoor Recreation Mitigation Plan must be developed by a QEP.	Complete	In Compliance	Section 5.0 of the Outdoor Recreation Management Plan lists the QPs who prepared the plan.
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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 two new boat launch and day use sites including the connections to Highway 29 is complete. The design of one new boat launch and day use sites is ongoing. Procurement and construction will be scheduled based on other project works in the area.
EAC 40	· Establish at least one public viewpoint at the Site C dam site.	Complete	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.	Complete	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 commenced in 2019 but there were no applicants. BC Hydro plans to hold another intake in 2021 after more pre-application engagement with stakeholder groups.
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 commenced in 2019 but there were no applicants. BC Hydro plans to hold another intake in 2021 after more pre-application engagement with stakeholder groups.
EAC 40	· Fund the development of a BC Peace River/Site C Reservoir Navigation and Recreation Opportunities Plan	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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				development will be funded by BC Hydro and initiated within one year after reservoir filling.
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.	Complete	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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	In Compliance	The sections required for Highway realignment at Cache Creek due to the redesign have all been acquired under Section 3 Agreements.
EAC 41	Where it is both physically and economically feasible, the costs to relocate facilities will be included in the agreements.	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.
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).	Complete	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. Meetings were also held in fall 2018 and 2019. A meeting was not held in fall 2020

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				due to COVID-19. The Health Clinic works closely with the NHA to manage COVID-19 cases related to the project.
EAC 42	· Establish a process for providing new resident workers and their families with local information about health, education and social services.	Complete	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.	Complete	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.	Complete	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 29, 2019 with Northern Health, WorkSafe BC and physicians from the local Division of Family Practice. A meeting was not held in fall 2020 due to COVID-19. The Health Clinic works closely with the NHA to manage COVID-19 cases related to the project.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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: · Contract for provision of emergency services (fire services and medical transport)	Ongoing	In Compliance	No update from 2020. Audits continue on a regular basis of contractors emergency response systems. This includes liaising with local emergency responders (IE. Fort St John Fire Department).
EAC 43	· Communicate Project emergency management plans to all emergency service providers, and provide updates as plans are amended	Ongoing	In Compliance	The Site C Emergency Planning Guide was provided to key agencies and local governments to support them in their role in responding to an emergency prior to diversion. BC Hydro met with and reviewed the draft Guide with key response agencies and local governments in prior to issuing the final version. BC Hydro also hosted a tabletop exercise for the Guide with key agencies and local governments.
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 work 'hand-in-hand' with the local authorities to ensure quick and efficient access to the Site C construction zone. The BC Hydro on-site security manager meets regularly with the local RCMP and perimeter security Contractor to discuss current and potential upcoming issues that may need additional planning or focus.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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.	Complete	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 acknowledges and understands this condition.
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, 2020. BC Hydro will provide updated information in July 2021.
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 September 8, 2020. The next report will be issued in July 2021. Monthly project consolidated

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				workforce numbers are also posted monthly on the Site C Website.
EAC 46	The EAC Holder must develop a Waste Management Plan.	Complete	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.	Complete	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: · 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	· 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	· 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	· 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	· 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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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
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.	Complete	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). Revision 5 was issued on February 19, 2019, Revision 5.1 on April 19, 2019 Revision 6 on July 15, 2019, Revision 6.1 on December 12, 2019 and Revision 7 on September 4, 2020.
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.	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 worked with the PRRD to identify and implement mitigation required for their Charlie Lake Outfall prior to diversion. BC Hydro is working with the PRRD to establish a similar agreement for the mitigation or monitoring required due to creation of the reservoir. 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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition
	Housing			

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 complete. BC Hydro is currently renting 25 units and the other units are being administered by BC Housing.
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.	Complete	In Compliance	The Housing Plan and Housing Monitoring and Follow-up Program Revision 2 described 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,	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 complete. BC Hydro is renting 25 of the units and the other units are being administered by BC Housing.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	the 40 worker housing units will be made available to low to moderate income households.			
EAC 48	· Expand RV accommodation by building 20 new temporary long-stay RV accommodations.	Complete	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.	Complete	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 2019 was submitted in May 2020. The report for 2020 will be submitted in May 2021.
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.	Complete	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.	Complete	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 - 2020 was submitted to the City and BC Housing on February 4, 2021 due to a delay in CMHC posting the rental data. The First Nations Net Migration report for 2020 will be submitted in May 2021.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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 - 2020 was submitted to the City and BC Housing on February 4, 2021 due to a delay in CMHC posting the rental data. The First Nations Net Migration report for 2020 will be submitted in May 2021. 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.
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.	Complete	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 - 2020 was submitted to the City and BC Housing on February 4, 2021 due to a delay in CMHC posting the rental data. The First Nations Net Migration report for 2020 will be submitted in May 2021. 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	2020 Description
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 2019 was submitted in May 2020. The report for 2020 will be submitted in May 2021. BC Hydro has requested Indigenous communities to provide information they would like included in the report for 2020.
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.	Complete	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 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.	Complete	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. BC Hydro submitted Revision 2 of the Housing Plan and Housing Monitoring and Follow-Up Program on Dec 12, 2016. 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).

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	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.
EAC 51	The EAC Holder must develop and implement a Business Participation Plan (Plan).	Ongoing	In compliance	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. Information about BC Hydro-issued public procurement opportunities are posted to BCBid, on the Site C website (where appropriate) and emailed to the Site C business directory. In this period, 15 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. 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. 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				satisfies the requirement to build relationships and increase awareness in the region. 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 vendors lists. BC Hydro provides information to businesses.
EAC 51	The Plan must include at least the following: · Increase awareness in the business community about Project procurement opportunities.	Ongoing	In compliance	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. Information about BC Hydro-issued public procurement opportunities are posted to BCBid, on the Site C website (where appropriate) and emailed to the Site C business directory. In this period, 15 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. 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. 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				awareness in the region. 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.
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	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.Information about BC Hydro-issued public procurement opportunities are posted to BCBid, on the Site C website (where appropriate) and emailed to the Site C business directory. In this period, 15 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. 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.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.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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				active vendor's lists.
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.	Complete	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.	Complete	In Compliance	The final Business Participation Plan was submitted to regulatory agencies and governments on June 5, 2015.
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 2019-2020 Annual Report for the Business Participation Plan was made available on the Site C website in July 2020. The 2020-2021 annual report will be available on the Site C website in July 2021.
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	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". 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 provides 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. All information is available on website: www.northerndevelopment.bc.ca/funding- programs/capacity-building/bc-hydro-go-fund . Applications will be accepted

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				continuously with four intake reviews (November, February, May, and August).
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 September 8, 2020. The next report will be issued in July 2021.
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: - Prior to March 18, 2020 Site C contractors continued to participate in regional jobs fairs throughout the reporting period. This includes participating in job fairs in the Indigenous communities, local job fairs, and job fairs throughout B.C. included Vernon, Kelowna and Vancouver Island. Contractors have started participating in virtual career fairs and a restructured local job fair in Fort St John in October 2020. - 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. One session was held in February 2020. - 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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. - BC Hydro was unable to host a Site C Employment and Training Information session for local employment agencies and training organizations at Site in 2020, due to Covid. We will look at hosting this again in 2021. This session is 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 worker 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.
EAC 53	· Resources and funding arrangements with education providers to ensure required training and skill development programs are available.	Ongoing	In Compliance	BC Hydro has undertaken the following initiatives described in the Plan to date: - continued to support trades and skilled training through the BC Hydro Trades and Skilled Training Bursary Awards program through Northern Lights College. As of December 2020, 274 students had received bursaries, including 122 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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 local workers with trades programs directly needed for project work. If there are funds remaining, this will be reviewed again in December 2021. As a part of this agreement, funds were set aside for the BC Hydro and Northern Lights College Pre-Carpentry Skills Pilot Program, Site C. BC Hydro and the Northern Lights College Foundation can also agree to other joint BC Hydro and Northern Lights College (NLC) pre-skills programs as appropriate. - 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	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.In August 2013, Northern Lights College Foundation started distributing the BC Hydro Trades and Skilled Training Bursary Awards. As of December 2020, 274 students had received bursaries, including 122 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 local workers with trades programs directly needed for project work. If there are funds remaining, this will be reviewed again in December 2021. As a part of this agreement, funds were set aside for the BC Hydro and Northern Lights College Pre-Carpentry Skills Pilot Program, Site C. BC Hydro and the Northern Lights College Foundation can also agree to other joint BC Hydro and Northern Lights College (NLC) pre-skills programs as appropriate.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 53	· Identification of apprenticeship opportunities during construction	Ongoing	In Compliance	BC Hydro has undertaken the following initiatives described in the Plan to date: - 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. - 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. Apprentice targets will also be included in the Balance of Plant contracts, as appropriate. -BC Hydro meets regularly with Site C Contractors via the Contractors Labour Committee. A part of this meeting's agenda also includes determining what support is required for training workers for upcoming project required skills. - A pilot BC Hydro and Northern Lights College Fish Monitoring program was completed in July 2020, with 8 local indigenous students completing the program. This program was structured to accommodate Covid-19 safety protocols. This program included workforce training certification in preparation for employment opportunities. The program also included electrofishing and swift water training. Students received a cheque from The BC Hydro Trades & Skilled Training Indigenous Award as completion/stipend amount for finishing the program.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				- Prior to March 18, 2020 major site contractors were preparing for a new pilot pre-heavy equipment operator and another pre-carpentry programs to take place on site. These programs were 14-day programs designed for new workers or workers new to the trade with preference given to local Indigenous candidates. The courses were to be partly run at the worker accommodation camp and the 14 days were intended to reflect a typical Site C schedule. Due to COVID-19, both programs have been postponed. Going forward, BC Hydro, Site C contractors, and Northern Lights College will be exploring opportunities for implementing these programs, or restructured programs that allow for possible physical distancing and/or smaller cohorts, in the future
EAC 53	· Provision of additional day-care spaces in Fort St. John to increase spousal participation in the labour market.	Complete	In Compliance	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.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.
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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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 September 8, 2020. The next report will be issued in July 2021.
EAC 54	The EAC Holder must develop an Aboriginal Training and Inclusion Plan.	Complete	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
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 has undertaken the following initiatives described in the Plan to date: -BC Hydro continues to post Site C Project job opportunities on the WorkBC and Employment Connections websites and links to these postings on the Site C Project website. These sites and the hyperlinks are provided as standing information in the bi-weekly information updates sent out by email to Indigenous groups. BC Hydro's Indigenous Employment and Training 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. -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. One session was held in February 2020.

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				- A pilot BC Hydro and Northern Lights College Fish Monitoring program was completed in July 2020, with 8 local indigenous students completing the program. This program was structured to accommodate Covid-19 safety protocols. This program included workforce training certification in preparation for employment opportunities. The program also included electrofishing and swift water training. Students received a cheque from The BC Hydro Trades & Skilled Training Indigenous Award as completion/stipend amount for finishing the program. - Prior to March 18, 2020 major site contractors were preparing for a new pilot pre-heavy equipment operator and another pre-carpentry programs to take place on site. These programs were 14-day programs designed for new workers or workers new to the trade with preference given to local Indigenous candidates. The courses were to be partly run at the worker accommodation camp and the 14 days were intended to reflect a typical Site C schedule. Due to COVID-19, both programs have been postponed. Going forward, BC Hydro, Site C contractors, and Northern Lights College will be exploring opportunities for implementing these programs, or restructured programs that allow for possible physical distancing and/or smaller cohorts, in the future. - 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 2019-2020 ATIP Annual Report, describing activities from April 2019 to March 2020 was submitted to the EAO on March xx, 2020. The 2020-2021 Annual Report will describe activities from April 2020 to March 2021.During this reporting period, the reported number of Indigenous people working on Site C ranged from 158 to 412.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 54	· Inclusion of evaluation criteria for hiring and training Aboriginal persons in contractor procurement packages.	Ongoing	In Compliance	BC Hydro has included Indigenous participation in the evaluation criteria for the major Site C contracts, including worker accommodation, main civil works, generating station and spillways civil works, transmission line construction, substation construction, generating station and spillways powerhouse bridge and gantry cranes, hydro-mechanical equipment, Peace Canyon 500kV GIS expansion, turbines and generators, and balance of plant.
EAC 54	· 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.	Ongoing	In Compliance	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; Site C tours; Career Energizers with BC Hydro; Driver Training; Construction Safety Training System 09; ATCO Kitchen Skills and Housekeeping Program; Try-a-Trade program; Power System Safety Protection (PSSP), Electro-Fishing Training course; Environmental Monitoring training; BC Hydro and Northern Lights College pre-carpentry skills pilot and Fish Monitoring Program, Site C. 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.
EAC 54	· 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.).	Complete	In Compliance	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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	In August 2013, Northern Lights College Foundation started distributing the BC Hydro Trades and Skilled Training Bursary Awards. As of December 2020, 274 students had received bursaries, including 122 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 local workers with trades programs directly needed for project work. If there are funds remaining, this will be reviewed again in December 2021. As a part of this agreement, funds were set aside for the BC Hydro and Northern Lights College Pre-Carpentry Skills Pilot Program, and Fish Monitoring, Site C. BC Hydro and the Northern Lights College Foundation can also agree to other joint BC Hydro and Northern Lights College (NLC) pre-skills programs as appropriate.
EAC 54	· Aboriginal Business Participation Strategy to maximize opportunities for Aboriginal businesses, incorporating at least the following: - 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	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. Indigenous businesses have been awarded work on the Site C Project in the following areas: vegetation clearing; site preparation, roads and bridges; highway construction; grass seed supply; wetland mitigation; safety buoys; project health clinic; substation work; environmental monitoring; fish habitat enhancement; civil construction; warehouse construction; erosion and sediment control; quarry development and rip rap production. BC Hydro continues to communicate with the First

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				Nations about potential procurement opportunities, sharing information about upcoming work, updating inventories on First Nation owned and affiliated businesses, and pro-actively informing them about upcoming tenuring events.
EAC 54	- 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 First Nations, Site C Contractors, the Site C business directory, job fairs and procurement process support.
EAC 54	- 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.	Complete	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.	Complete	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 2019 -2020 ATIP Annual Report, describing activities from April 2019 to March 2020 was submitted to the EAO on March 31, 2020. The 2020-2021 Annual Report will describe activities from April 2020 to March 2021. BC Hydro will

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				update the ATIP as required based on new information, and will continue to implement initiatives described in the plan throughout construction.
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.
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.	Complete	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.	Complete	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 1-6 of the Project.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	HUMAN HEALTH			
	Potable and Recreational Water Quality			
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	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. A voluntary well monitoring program was subsequently initiated starting in fall 2016. For those willing to participate in the monitoring program, BC Hydro requested information on wells, and if used for drinking water, requested approval to complete well water testing. This program has been ongoing ever since, with baseline water quality analysis and/or questionnaire completion with well owner permission in one or more year of 2016 through 2020. Monitoring in fall 2017 expanded the program to include well yield testing where feasible. Monitoring in 2020 was conducted in the fall (1 well was sampled and 17 questionnaires completed) and winter (12 questionnaires completed). 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. 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				completed on an as-needed basis in private drinking water wells, if potential changes or concerns are identified.
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.	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			
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.	Complete	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 Smoke Management Plan was updated on December 12, 2019 to reflect regulatory changes.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 57	The Air Quality Management Plan and Smoke Management Plan must include at least the following to describe how the EAC Holder: · 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	With financial support from BC Hydro, several Indigenous groups conducted traditional use studies to document Indigenous use of lands and resources in the Site C project area. Study reports identified areas of high use by Indigenous groups and were submitted to BC Hydro. BC Hydro is monitoring air quality at 5 locations, which includes an additional station that was installed in fall 2020 prior to the start of construction of the Hudson's Hope Berm. The data completeness target of 75% will be maintained through 2021. Data is shared with the BC Ministry of Environment and Climate Change. 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	· 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.
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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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.	Complete	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.	Ongoing	In Compliance	Shoreline protection works at Hudson's Hope commenced in fall 2020. An air quality monitoring station was installed in Hudson's Hope (at Dudley Drive) in September 2020, prior to the start of this construction. This monitoring will be ongoing 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.	Complete	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.	Complete	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 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). Revision 5 was issued on February 19, 2019, Revision 5.1 on April 19, 2019 Revision 6 on July 15,

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				2019 and Revision 7 on September 4, 2020.
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.	Complete	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.	Ongoing	In Compliance	The CEMP Section 4.11 describes noise mitigation measures that apply to Hudson's Hope shoreline protection works. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs. Noise monitoring is conducted in response to complaints, as warranted.
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 2019-2020 Annual Report for the Construction Communications Plan was posted on the Site C website on July 27, 2020. The 2020-2021 Annual Report will be posted in July 2021. 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				releases about key project milestones, site tours, project website, responses to public enquiries, and advertising.
EAC 58	· Retain or erect acoustic barriers, fencing, and vegetative screens as appropriate.	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	· Develop and implement noise monitoring and adaptive management as required.	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	· 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 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. Noise monitoring is conducted in response to complaints, as warranted.
EAC 58	· Construct perimeter fencing and retain or plant tree screens at 85th Avenue Industrial Lands	Planning	Future Requirement	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 58	· Design a work and noise management schedule that allows an uninterrupted eight hour sleep schedule	Complete	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.
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.
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.	Complete	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.	Complete	In Compliance	The final Noise and Vibration Management Plan is described in Section 4.11 of the CEMP. (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). Revision 5 was issued on February 19, 2019, Revision 5.1 on April 19, 2019, Revision 6 on July 15, 2019 and Revision 7 on September 4, 2020.
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	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 as per the CEMP

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	appropriate plans.			
	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.	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition. In 2020, BC Hydro engaged with the FNHA, Northern Health Authority and Indigenous groups in the initial discussions regarding the development of the Methylmercury Monitoring Plan (MMP). This engagement included the sharing of a methylmercury background documents and discussions at environment forums and Site C Methylmercury-subcommittee. Indigenous group and health authorities expressed interest in providing input on MMP study design during the MMP development, and expressed the importance of communications to support meaningful input by Indigenous groups. BC Hydro intends to implement the MMP during the river diversion stage of Project construction to collect additional baseline data prior to reservoir filling. Collaboration with the FHNA, NHA and Indigenous groups will be described in the draft and final MMP.
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;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 60	· 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: - 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; - fish meal sizes by age group and gender; - fish meal frequency; - parts of fish consumed; - fish preparation methods; and - other relevant consumption information (e.g. events where consumption is higher over a short period of time such as a camping event); and	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	· Use of baseline methylmercury levels in representative fish species consumed by Aboriginal Groups and non-aboriginal harvesters.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	Requirements for monitoring the trend and evolution of methylmercury concentrations in fish. Monitoring requirements must include the following: · proposed geographic extent; · proposed monitoring parameters; · proposed monitoring locations; and · proposed monitoring timelines and frequency.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	Measures to enable people to limit exposure to methylmercury to avoid risk to human	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	health such as:			
EAC 60	· 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	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 60	· 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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
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.	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.	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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 60	The EAC Holder must develop, implement and adhere to the final Methylmercury Monitoring Plan, and any amendments, to the satisfaction of EAO.	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: · 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 reviewed the design of the shoreline protection berm and the day use area and car-topper boat launch with the District and presented it for feedback at public meetings in 2019.
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.
EAC 61	· Set objectives and requirements for establishing and building workforce accommodation camps on previously disturbed areas or areas generally hidden from key viewpoints.	Complete	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			

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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	The Heritage Resources Management Plan (HRMP) is available on the Project website at: https://www.sitecproject.com/heritage-resources-management-plan . Annual reports for field work completed in 2020 under HCA permits and for paleontological resources will be submitted to regulatory agencies by March 31, 2021.
EAC 62	The Heritage Resources Management Plan must be developed by a QEP.	Complete	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	Implementation of this requirement is described in the HRMP and has included: -the opportunity for Indigenous groups to comment on Heritage Conservation Act permit reports and 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 archaeological crew field assistant employment opportunities for Indigenous people.
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	Implementation of this requirement is described in the HRMP and 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 archaeological crew field assistant employment opportunities for Indigenous peoples. -providing funding to support additional ground-truthing activities and studies for the identification of potential or confirmed burial sites that may be affected by the Project. - continuing to work with Indigenous groups to implement appropriate burial management solutions. -developing and seeking input from Indigenous groups on the addendum to the Project's Heritage Chance Find Procedures

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				(CFPs) outlining a revised procedure to be followed in the event of a chance find of human remains.
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.	Complete	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 12.2 (formerly Section 14) Heritage Inspection permits, and -undertaking any land-altering work in accordance with Heritage Conservation Act Section 12.4 (formerly Section 12) 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 2020 under these permits, and for palaeontological resources, will be submitted to regulatory agencies on March 31, 2021.
EAC 62	The Archaeology Impact Management Program must be developed by a QEP qualified to hold Section 12.2 (formerly Section 14) Heritage Inspection and Investigation Permits.	Complete	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	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	protected archaeological sites and other heritage resources			
EAC 62	· Implement mitigation measures, systematic data recovery or emergency salvage operations in accordance with the Heritage Resources Management Plan.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition. BC Hydro estimates that between 5 and 10 archaeological sites could be affected by diversion. Depending on river flows post-diversion, these sites could be wholly or partially covered by water. For every site that could potentially be affected by diversion, all archaeological investigations have been completed, all regulatory requirements have been met, and each is listed in the Site Alteration Permit which allows for alterations to the sites to occur.
EAC 62	· Establish a reporting structure for reporting to Aboriginal Groups and the Archaeology Branch beginning 180 days following the commencement of operations.	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.	Complete	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 2020 under these permits and for paleontological resources will be submitted to regulatory agencies by March 31, 2021.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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	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. The 2019-2020 CRMP Annual Report, describing activities from April 2019 to March 2020 was submitted to the EAO on March 31, 2020. The 2020-2021 Annual Report will describe activities from April 2020 to March 2021. 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 worked 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. In December 2018, BC Hydro provided Indigenous groups with a draft request to amend the Project's Environmental Assessment Certificate to reflect the revised alignment which was selected through the Structured Decision Making process. A final EAC amendment request was submitted to the Environmental Assessment Office in May 2019. After completion of EAO's consultation on the request, the EAC amendment was issued in December 2019.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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.
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	The 2019-2020 CRMP Annual Report, describing activities from April 2019 to March 2020 was submitted to the EAO on March 31, 2020. The 2020-2021 Annual Report will describe activities from April 2020 to March 2021. 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 2019 Revision of the CRMP (rev. 3) includes clarification of the role and structure of the Cultural and Heritage Resource Committee. 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 11 of the Indigenous groups have participated actively in the Committee (Doig River, Blueberry River, Halfway River, Dene Tha', Duncan's, Horse Lake First Nation, McLeod Lake Indian Band, Saulteau First Nations, Prophet River First Nation, Métis Nation BC, and Kelly Lake Métis Settlement Society). The Committee has continued to work collaboratively on cultural resources mitigation initiatives,

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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 completed include a travelling exhibit that will travel to Indigenous communities. BCH also anticipates completion of a commemoration video on the impacts of Site C from an Indigenous perspective. Initiatives underway include signage shelters at the Site C north bank viewpoint, a future permanent exhibit at the Fort St John Museum, a calendar of community events, commemoration videos on the impacts of the Site C project from the perspective of Indigenous groups, and exploring the feasibility of a cultural centre at or near Site C. The Committee has also allocated funding from the overall committee budget to support commemoration and cultural activities that will be implemented individually by each of the 13 Indigenous groups. The Committee is currently working on other projects within their regional sub-groups that will identify measures to commemorate, identify and name key cultural sites, document historical use of the area and provide cultural awareness and orientation of the workforce.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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: · 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 completed include a travelling exhibit that will travel to Indigenous communities. BCH also anticipates completion of a commemoration video on the impacts of Site C from an Indigenous perspective. Initiatives underway include signage shelters at the Site C north bank viewpoint, a future permanent exhibit at the Fort St John Museum, a calendar of community events, and exploring the feasibility of a cultural centre at or near Site C. The Commitee has also allocated funding from the overall committee budget to support commemoration and cultural activities that will be implemented individually by each Indigenous group. In early 2017, BC Hydro secured a facilitator in an effort to make Committee meetings more effective. The facilitator facilitated five meetings during this reporting period and improved Committee meetings by focusing on specific projects and initiatives. A consulting design team, researcher and videographer have participated in Committee meetings to engage Committee members and advance initiatives through the Committee's input and guidance. The Committee continues to meet as a whole and break out into regional sub-groups during Committee meetings, in order to discuss initiatives from regional perspectives.
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.	Complete	In Compliance	The draft Cultural Resources Mitigation Plan was submitted to Indigenous groups on October 17, 2014.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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 2019-2020 CRMP Annual Report, describing activities from April 2019 to March 2020 was submitted to the EAO on March 31, 2020. The 2020-2021 Annual Report will describe activities from April 2020 to March 2021.
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.	Ongoing	In Compliance	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. In fall 2018, $18,000 was provided to the Fort St John North Peace Museum associated with accepting the archaeological artifacts from the Site C Project.
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.	Ongoing	In Compliance	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. In fall 2018, $18,000 was provided to the Fort St John North Peace Museum associated with accepting the archaeological artifacts from the Site C Project.
	ENVIRONMENTAL PROTECTION AND MANAGEMENT			
	Greenhouse Gas Emissions			

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 65	· Protocols for monitoring and reporting GHG emissions during operation and maintenance activities.	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.	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.	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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
	ENVIRONMENTAL MANAGEMENT PLANS, FOLLOW-UP AND MONITORING			

No.	EAC Condition	Implementation Status	Compliance Status	2020 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.	Complete	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 2020, BC Hydro inspectors checked for compliance with individual contractor EPP commitments 39,816 times.
EAC 66	The EAC Holder must submit the draft Environmental Oversight Program to EAO 90 days prior to commencing construction.	Complete	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.	Complete	In Compliance	The final CEMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016, Revision 4 in July 2016 (Revision 3 was not formally published), Revision 5.1 in May 2019, Revision 6 in July 2019, Revision 6.1 in December 2019 and Revision 7 in September 2020.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 66	The EAC Holder must develop, implement and adhere to the final Environmental Oversight Program, and any amendments, to the satisfaction of EAO.	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 2020, BC Hydro inspectors checked for compliance with individual contractor EPP commitments 39,816 times.
EAC 67	The EAC Holder must appoint an IEM acceptable to EAO, at least three months prior to construction.	Complete	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.
EAC 67	The IEM will be responsible for monitoring the course of construction of the Project as directed by EAO.	Complete	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.	Complete	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.	Complete	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.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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	BC Hydro is auditing the implementation of measures in the CSMP by: - 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. 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.
EAC 68	The Construction Safety Management Plan must be developed by a QEP.	Complete	In Compliance	Section 6.0 of the CSMP lists the QPs who prepared the plan.
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. Additionally, the Safety department has engaged a Safety Engineer who has responsibilities for reviewing all Fire Safety Plans.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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. The third party vendor has reviewed Public Safety again since diversion. BC Hydro is in the process of implementing the recommendations.
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.
EAC 68	· Worker Safety and Health Management Plan;	Ongoing	In Compliance	The Worker Safety and Health Management Plan is contained in CSMP Section 5.5 and its sub-sections. BC Hydro is auditing the implementation of measures in the CSMP by: - 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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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. 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.
EAC 68	Each component plan in addition to plan specific conditions in this document must include the following: · Clear statement of Objectives;	Ongoing	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. The CSMP contains a clear statement of objectives.
EAC 68	· Description of potential Project effects and safety hazards, through consideration of baseline conditions and sensitive receptors;	Ongoing	In Compliance	BC Hydro is auditing the implementation of measures in the CSMP by: - 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. 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.
EAC 68	· Clear documentation of all measures to be implemented and actions to be taken to mitigate potential effects and safety hazards;	Ongoing	In Compliance	Unexpected hazards encountered during construction are communicated to all contractors. This is accomplished through Site Wide Notices or special meetings.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 68	· Description of worker qualifications and training requirements pertaining to the Construction Safety Management Plan;	Ongoing	In Compliance	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. BC Hydro and Work Safe BC also audit for compliance with worker qualifications.
EAC 68	· Description of reporting requirements; and	Ongoing	In Compliance	BC Hydro is auditing the implementation of measures in the CSMP by: - 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. BC Hydro has also required that the Prime contractors retain independent third party auditors to conduct safety audits on an annual basis. The draft and final CSMPs were submitted to regulatory agencies, governments, and Indigenous groups on October 17, 2014 and June 5, 2015, respectively. 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.
EAC 68	· Process for revising and updating the Construction Safety Management Plan.	Ongoing	In Compliance	The CSMP is updated as needed and if conditions on site change.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	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.	Complete	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.
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	BC Hydro is auditing the implementation of measures in the CSMP by: - 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. BC Hydro has also required that the MCW contractor retain independent third party auditors to conduct safety audits on an annual basis.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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	The current version of the CEMP Rev 7 is dated September 4, 2020. BC Hydro is auditing those measures of the CEMP by: - 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.
EAC 69	The CEMP must be developed by a QEP.	Complete	In Compliance	Section 6.0 of the CEMP lists the QPs who prepared the plan.
EAC 69	The CEMP must provide details on how potential adverse effects will be avoided, mitigated, or compensated.	Complete	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;	Complete	In Compliance	Appendix E of the CEMP contains the Acid Rock Drainage and Metal Leachate Management Plan.
EAC 69	· Air Quality Management Plan;	Complete	In Compliance	Appendix B of the CEMP contains the Air Quality Monitoring Program.
EAC 69	· Blasting Management Plan;	Complete	In Compliance	Blasting Management is described in Section 4.2 of the CEMP
EAC 69	· Contaminated Sites Management Plan;	Complete	In Compliance	Contaminated Sites Management is described in Section 4.3 of the CEMP.
EAC 69	· Erosion Prevention and Sediment Control Plan;	Complete	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;	Complete	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;	Complete	In Compliance	Fuel Handling and Storage Management is described in Section 4.6 of the CEMP.
EAC 69	· Groundwater Protection Plan;	Complete	In Compliance	Groundwater Protection is described in Section 4.7 of the CEMP.
EAC 69	· Hazardous Waste Management Plan;	Complete	In Compliance	Hazardous Wastes Management is described in Section 4.8 of the CEMP.
EAC 69	· Heritage Resources Management Plan;	Complete	In Compliance	Heritage Resource Management is described in Section 4.9 of the CEMP.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 69	· Ice Management Plan;	Complete	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;	Complete	In Compliance	Noise and Vibration Management is described in Section 4.11 of the CEMP.
EAC 69	· Smoke Management Plan;	Complete	In Compliance	Appendix A of the CEMP contains the Smoke Management Plan (SMP) - Rev 3 of the SMP was published December 12, 2019.
EAC 69	· Soil Management, Site Restoration, and Revegetation Plan;	Complete	In Compliance	Appendix H of the CEMP contains the Soil Management, Site Restoration, and Revegetation Plan
EAC 69	· Spill Prevention and Response Plan;	Complete	In Compliance	Spill Prevention and Response is described in Section 4.13 of the CEMP.
EAC 69	· Surface Water Quality Management Plan;	Complete	In Compliance	Surface Water Quality Management is described in Section 4.14 of the CEMP.
EAC 69	· Vegetation and Invasive Plant Management Plan;	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. 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. 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.
EAC 69	· Waste Management Plan; and	Complete	In Compliance	The Waste Management Plan is described in Section 4.16 of the CEMP.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 69	· Wildlife Management Plan.	Complete	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	CEMP Rev 7 update published in September 2020
EAC 69	The CEMP is to be prepared by BC Hydro.	Complete	In Compliance	The process for revising and updating the CEMP is described in Section 2.6 of the CEMP.
EAC 69	Detailed Environmental Protection Plans will be developed which must include the following: · 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.	Complete	In Compliance	CEMP Rev 7 dated September 4, 2020 was provided to indigenous groups for comment prior to publishing

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	In Compliance	The final CEMP was submitted to regulatory agencies, governments, and Indigenous groups on June 5, 2015. Revision 2 of the CEMP was issued in February 2016, Revision 4 in July 2016 (Revision 3 was not formally published), Revision 5.1 in May 2019, Revision 6 in July 2019 and Revision 6.1 in December 2019.
EAC 69	The EAC Holder must develop, implement and adhere to the CEMP, and any amendments, to the satisfaction of EAO.	Ongoing	In compliance	CEMP Rev 7 dated September 4, 2020 was provided to EAO for comment prior to publishing
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 the mitigation and monitoring plans developed to date, as required by the EAC.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 70	Each mitigation and monitoring plan in addition to plan specific conditions in this document must include the following: · 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	Final mitigation plans have been submitted to the EAO in accordance with the requirements of the EAC. These plans address the content requirements set out by the EAC. Plans submitted to date are as follows: - 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 -Portage Mountain Development Plan - 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	The EAC Holder must manage environmental protection and management by implementing measures in the following Development Plans:	Ongoing	In compliance	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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	· Del Rio Pit Development Plan;			environmental management, and site reclamation strategy (as appropriate). To date, no activities have taken place at Del Rio Pit.
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	Ongoing	In compliance	The draft and final Portage Mountain Quarry Development Plan were submitted to regulatory agencies, governments and Indigenous groups on May 4, 2019 and July 10, 2019 respectively. (No changes were made from the draft to the final plan). The plan sets out the plan purpose, scope, details, safety and environmental management, and site reclamation strategy as appropriate.
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	Complete	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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	Aboriginal Groups for review a minimum of 90 days prior to the commencement of construction activities that require an applicable Development Plan.			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.	Complete	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.
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 quarries are conducted in accordance with the Final Development Plans. The 2020 Annual Summary Reports for quarries will be submitted to regulatory agencies and Indigenous groups by March 31, 2021
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

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
				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.
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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	The Operations Safety Management Plan must include the following component plans: · Public Safety Management Plan (including the Reservoir Shoreline Monitoring and Management Plan); and	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Worker Safety and Health Management Plan.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 73	Each component plan must include the following: · Clear Statement of Objectives;	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;	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;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Clear documentation of compliance and effectiveness monitoring to be undertaken;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Description of worker qualifications and training requirements pertaining to the Plan(s);	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Description of reporting requirements; and	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 73	· Process for revising and updating the Operations Safety Management Plan.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
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	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	minimum of 30 days prior to the commencement of operations.			
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.	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).	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The OEMP must be developed by a QEP.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	The OEMP must include the following plans: · Hazardous Waste Management Plan;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Ice Management Plan;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Vegetation and Invasive Plant Management;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Waste Management Plan (including Materials Management); and	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Water Management Plan.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	Each plan must include the following: · A Clear Statement of Objectives;	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;	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;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 74	· Clear documentation of compliance and effectiveness monitoring to be undertaken;	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Description of reporting requirements; and	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 74	· Process for revising and updating the Plan.	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.	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.	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.	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			

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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,	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.	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.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
	WEST PINE HAUL ROUTE TRAFFIC MANAGEMENT PLAN			
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.	Complete	In Compliance	BC Hydro acknowledges and understands this condition. BC Hydro developed the West Pine Haul Route Traffic Management Plan in consultation with affected communities in 2019. Requirement for West Pine Quarry Material was not realized in 2019. Construction in 2020 will require material from West Pine Quarry and BC Hydro intends to comply with this condition
EAC 78	The Plan must be developed in consultation with Saulteau 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)	Complete	In Compliance	BC Hydro acknowledges and understands this condition. BC Hydro developed the West Pine Haul Route Traffic Management Plan in consultation with affected communities in 2019. The final plan, dated April 2019, is posted to the Project website. Material for the construction of Highway 29 realignment segments was not required in 2019.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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;	Complete	In Compliance	Section 3 of the West Pine Haul Route Traffic Management Plan describes the Mobility and Safety and Mobility impacts and mitigation measures of the haul route. Section 4 of the Management Plan describes potential community impacts and mitigation measures.
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);	Complete	In Compliance	Section 3 of the West Pine Haul Route Traffic Management Plan describes the Mobility and Safety and Mobility impacts and mitigation measures of the haul route. Section 4 of the Management Plan describes potential community impacts and mitigation measures.
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;	Complete	In Compliance	Section 5 of the West Pine Haul Route Traffic Management Plan describes how monthly updates regarding the use of the haul route will be provided to affected Communities.
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	Complete	In Compliance	Section 5 of the West Pine Haul Route Traffic Management Plan describes how communication and data sharing will occur during use of the haul route.
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.	Complete	In Compliance	Section 5 of the West Pine Haul Route Traffic Management Plan describes how communication and data sharing will occur during use of the haul route.

No.	EAC Condition	Implementation Status	Compliance Status	2020 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.	Complete	In Compliance	BC Hydro provided the West Pine Haul Route Traffic Management to Affected Communities and MOTI on April 17, 2019. No material from West Pine was used for Highway 29 realignment works was used in 2019. The route is planned to be used in 2020.
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.	Complete	In Compliance	BC Hydro understands and acknowledges this condition. EAO did not provide any comments on the plan.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
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.	Complete	In Compliance	BC Hydro provided the West Pine Haul Route Traffic Management to Affected Communities and MOTI on April 17, 2019, along with a description of the consultation with Affected Communities and MOTI that took place during development of the plan.
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	Complete	In Compliance	BC Hydro provided the West Pine Haul Route Traffic Management to Affected Communities and MOTI on April 17, 2019, along with a description of the consultation with Affected Communities and MOTI that took place during development of the plan.
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.	Complete	In Compliance	BC Hydro provided the West Pine Haul Route Traffic Management to Affected Communities and MOTI on April 17, 2019, along with a description of the consultation with Affected Communities and MOTI that took place during development of the plan.
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	Ongoing	In Compliance	BC Hydro acknowledges and understands this condition. The haul route plan will be updated as required during construction of the Highway 29 realignment segments.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
	Hudson's Hope, and areas of the reservoir requiring protection during reservoir filling.			
	HIGHWAY 29 REALIGNMENT – CACHE CREEK SEGMENT, NOISE MONITORING AND MITIGATION			
EAC 79	The Holder must retain a Qualified Professional to develop a noise monitoring plan to assess potential vehicle traffic noise impacts from the Highway 29 realignment at Cache Creek to the sweat lodge (the receiver location) identified in the application to amend the Certificate.	Complete	In Compliance	BC Hydro has retained RWDI Consultants to provide QP support on noise monitoring at the Cache Creek location.
EAC 79	The plan must be developed in consultation with West Moberly First Nations.	Ongoing	In Compliance	The plan was developed and submitted to West Moberly First Nations for review and comment on February 5, 2020. West Moberly First Nations responded on March 10, 2020, shortly after BC Hydro communicated our intention to set up the noise monitoring equipment at or near the sweat lodge. West Moberly First Nations indicated that no equipment should be set up in the sweat lodge area. BC Hydro communicated a desire to work collaboratively to ensure respect for their cultural practices and that we would not be installing the noise monitoring equipment at that time. In order to continue with the noise monitoring program, and, to not miss a season for measurement, BC Hydro asked for the First Nations views on a proxy location approach. The Noise Monitoring Plan was amended to reflect the use of proxy locations and shared with the First Nation on October 16, 2020, with a request for comment. BC Hydro continues to reach out to West Moberly First Nations for comments on the amended plan.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 79	The plan must be developed to the satisfaction of the EAO and include at least the following: a) Methods to monitor noise levels at the receiver location during all four seasons, with Highway 29 operating in the: i. Current location approximately 235 m away from the sweat lodge (pre-realignment); and ii. Realigned location approximately 370 m from the sweat lodge (post-realignment).	Ongoing	In Compliance	The amended Noise Monitoring Plan includes details on the proxy locations for undertaking noise monitoring, as a means to avoid impacting the First Nations cultural use of the sweat lodge area. BC Hydro continues to consult with West Moberly First Nations and request feedback on the amended Noise Monitoring Plan.
EAC 79	b) Efforts undertaken to consult with West Moberly First Nations on the draft plan and the opportunities made available to them to participate and provide their views, and how their views have been considered and addressed or why their views have not been addressed.	Ongoing	In Compliance	BC Hydro continues to consult with West Moberly First Nations and request feedback on the amended Noise Monitoring Plan. BC Hydro will provide a summary of this engagement on submission of the plan to the EAO.
EAC 79	c) The Holder must retain a Qualified Professional to develop a report and provide it to the EAO, West Moberly First Nations no later than 90 days after Highway 29 has been operating in its realigned location for one year. The report must include at least the following: i. Monitoring results from a);	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

No.	EAC Condition	Implementation Status	Compliance Status	2020 Description
EAC 79	The report must include at least the following: i. Monitoring results from a); ii. Identification of noise level thresholds for post-realignment, compared to noise levels at the current highway alignment that, if exceeded, would trigger the need for mitigation; iii. Mitigation measures that the Holder will implement to reduce noise levels to below the thresholds in ii) if monitoring results in a) shows that these thresholds were exceeded; and iv. Monitoring plan to assess effectiveness of mitigation measures, if required under this condition.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.
EAC 79	The Holder must provide the plan to the EAO and West Moberly First Nations no later than 90 days prior to operation of the realigned Cache Creek Segment of Highway #29.	Planning	Future Requirement	BC Hydro acknowledges and understands this condition.

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Appendix H

Summary of Individual Contracts
Exceeding $10 Million

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Appendix I

Project Progression

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Appendix J

Detailed Project Expenditure

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