

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: April 14, 2021 10:44 AM
To: Flint, Amy EMLI:EX
Cc: De Champlain, Rhonda EMLI:EX
Subject: FW:^{s.12;}_{s.13} Treasury Board Submission
Attachments: s.12; s.13

From: MacLaren, Les EMLI:EX <Les.MacLaren@gov.bc.ca>
Sent: April 14, 2021 9:59 AM
To: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Cc: Schmidt, Cathy A EMLI:EX <Cathy.Schmidt@gov.bc.ca>
Subject: s.12; Treasury Board Submission

Hi Rhonda

s.12; s.13

1. Treasury Board submission
2. Attachment A – s.12; s.13
3. Attachment B –
4. Attachment C –
5. Attachment D –

s.12; s.13

Les

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
To: Flint, Amy EMLI:EX
Subject: FW: For Approval Please - TB Sub - s.12; s.13
Attachments: s.12; s.13

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: April 14, 2021 4:09 PM
To: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>; Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>
Subject: For Approval Please - TB Sub - s.12; s.13

Hello,

Attached are the following documents:

1. Treasury Board submission – s.12; s.13
2. Attachment A – s.12; s.13
3. Attachment B –
4. Attachment C –
5. Attachment D –

From Les:

s.12; s.13

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: April 15, 2021 9:29 AM
To: Flint, Amy EMLI:EX
Subject: DM Approval - FW: DM APPROVED - TB Sub **s.12; s.13**

From: Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>
Sent: April 15, 2021 8:13 AM
To: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: DM APPROVED - TB Sub **s.12; s.13**

Hi Rhonda,

DM approved to share for early review.

Thanks,

Monica.

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: April 14, 2021 4:09 PM
To: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>; Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>
Subject: For Approval Please **s.12; s.13**

Hello,

Attached are the following documents:

1. Treasury Board submission – **s.12; s.13**
2. Attachment A **s.12; s.13**
3. Attachment B -
4. Attachment C -
5. Attachment D -

From Les:

s.12; s.13

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
To: Flint, Amy EMLI:EX
Subject: FW: For Approval - TB Submission - s.12; s.13
Attachments: s.12; s.13

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: April 15, 2021 10:29 AM
To: Cuddy, Andrew EMLI:EX <Andrew.Cuddy@gov.bc.ca>; Tseng, Eugene EMLI:EX <Eugene.Tseng@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: For Approval - TB Submission - s.12; s.13

Hello,

Attached are the following documents:

1. Treasury Board submission - s.12; s.13
2. Attachment A – s.12; s.13
3. Attachment B – I
4. Attachment C – I
5. Attachment D –

Documents have been approved by Deputy Minister Fazil Mihar to share with Minister as early drafts.

Note from Les:

s.12; s.13

Please let me know if I can provide anything further.

Thank you.

Rhonda De Champlain

Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Page 007 of 307 to/à Page 010 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 011 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 012 of 307 to/à Page 025 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 026 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 027 of 307 to/à Page 029 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 030 of 307 to/à Page 032 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 033 of 307 to/à Page 035 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 036 of 307 to/à Page 039 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 040 of 307 to/à Page 061 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 062 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.16 ; s.17

Page 063 of 307 to/à Page 064 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17



Attachments:

Attachment A: EY Report

Attachment B: International Expert Report No. 3

Attachment C: Project Dashboard and Progress Update

Attachment D: Progress on the Implementation of the Milburn Recommendations

Page 066 of 307 to/à Page 071 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 072 of 307 to/à Page 075 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 076 of 307 to/à Page 108 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 109 of 307 to/à Page 116 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 117 of 307 to/à Page 118 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 119 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 120 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 121 of 307 to/à Page 123 of 307

Withheld pursuant to/removed as

s.12 ; s.13 ; s.17

Page 124 of 307 to/à Page 146 of 307

Withheld pursuant to/removed as

s.12 ; s.13

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.

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

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.

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

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.

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

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,


John W. France


Kaare Hoeg

Page 153 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 154 of 307 to/à Page 165 of 307

Withheld pursuant to/removed as

s.13

Page 166 of 307 to/à Page 195 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Jang, Monica EMLI:EX

From: s.15; s.19
Sent: April 19, 2021 12:38 PM
To: Mihlar, Fazil EMLI:EX; MacLaren, Les EMLI:EX; Wieringa, Paul EMLI:EX
Cc: s.15; s.19 XT:Scott, Mora GCPE:IN; Alexis, Greg
Subject: RE: COVID-19 cases at Site C

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Good afternoon,

Further to my email below, we will be providing an update on the Site C COVID-19 website shortly about this situation. Our Site C Community Relations representative will also be reaching out to local elected officials this afternoon to provide them with an update.

Thank you,

s.15:

s.15; s.19 | Manager of Policy, Research & Strategic Communications

BC Hydro

333 Dunsmuir St, 15th floor
Vancouver, BC V6B 5R3

P 604 623 4008

M 236 993 0338

s.15; s.19

bchydro.com

Smart about power in all we do.

From: s.15; s.19
Sent: 2021, April 19 12:10 PM
To: 'Mihlar, Fazil EMPR:EX' ; 'MacLaren, Les EMPR:EX' ; Wieringa, Paul EMLI:EX
Cc: s.15; s.19 ; Scott, Mora
Subject: COVID-19 cases at Site C

Good afternoon Fazil, Les and Paul,

As Chris updated on our call this morning, we have seen an increasing number of related COVID-19 cases at Site C over the past week and a half. We have been notified by health professionals that there are currently 11 active worker contractor cases as a result of workplace transmission. While these cases have not been deemed an outbreak, it's something that we are taking very seriously.

In total, there have been 12 cases that are connected since April 6 – one person has since recovered. There are also currently 11 people isolating in camp and 54 people isolating at home. The majority of these are related to this cluster.

As you know, our top priority on the Site C project will always be the health and safety of our employees, workers and members of the public. We have been in regular contact with Northern Health about the cluster since it was first identified and they support the contact tracing and containment measures that have been taken so far.

As you know, we have taken significant steps since early last year to protect workers on site, including continuously adjusting our work to align with guidelines and directives issued by government and health authorities, increasing cleaning and physical distancing at the worker lodge (i.e. eliminating self-service stations in the dining room and setting up tables to help workers adhere to physical distancing guidelines) and requiring workers prior to boarding flights to complete the Ministry of Health self-assessment and confirm results with their employer. We are also screening every person accessing site daily, including a temperature scan, at the gate before entering, and we have set up thermal scanners at various exit and entry points of the worker accommodation lodge that are used before workers board crew buses or leave camp to go to various project work sites.

As we have more information about this situation, I will pass it along. Please let me know if you have any questions.

Thank you,

s.15;

s.15; s.19 | Manager of Policy, Research & Strategic Communications

BC Hydro

333 Dunsmuir St, 15th floor
Vancouver, BC V6B 5R3

P 604 623 4008

M 236 993 0338

E s.15; s.19

bchydro.com

Smart about power in all we do.

This email and its attachments are intended solely for the personal use of the individual or entity named above. Any use of this communication by an unintended recipient is strictly prohibited. If you have received this email in error, any publication, use, reproduction, disclosure or dissemination of its contents is strictly prohibited. Please immediately delete this message and its attachments from your computer and servers. We would also appreciate if you would contact us by a collect call or return email to notify us of this error. Thank you for your cooperation.

Jang, Monica EMLI:EX

From: s.15; s.19
Sent: April 29, 2021 10:07 AM
To: Mihlar, Fazil EMLI:EX; MacLaren, Les EMLI:EX; Wieringa, Paul EMLI:EX
Cc: s.15; s.19 XT:Scott, Mora GCPE:IN
Subject: RE: COVID-19 outbreak to be declared at Site C

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Good morning – I wanted to follow up on my note from yesterday. The outbreak declaration was delayed, but it was announced this morning at 9:30 a.m. Here is the link to Northern Health's announcement:

<https://stories.northernhealth.ca/news/covid-19-outbreak-declared-bc-hydro-site-c-project-contractor-workforce>.

We also issued an info bulletin to province-wide media this morning:

https://www.bchydro.com/news/press_centre/news_releases/2021/covid-19-outbreak-declared-at-site-c.html. We expect today's announcement will result in significant media coverage.

If you have any questions, please let me know.

Thank you,

s.15;

s.15; s.19 | Manager of Policy, Research & Strategic Communications

BC Hydro

333 Dunsmuir St, 15th floor
Vancouver, BC V6B 5R3

P 604 623 4008

M 236 993 0338

E s.15; s.19

[bchydro.com](https://www.bchydro.com)

Smart about power in all we do.

From: s.15; s.19
Sent: 2021, April 28 2:42 PM
To: 'Mihlar, Fazil EMPR:EX'; 'MacLaren, Les EMPR:EX'; 'Wieringa, Paul EMPR:EX'
Cc: s.15; s.19 ; s.15; s.19
Subject: COVID-19 outbreak to be declared at Site C

Good afternoon – The Medical Health Officer of Northern Health has informed us that they will declare a COVID-19 outbreak at Site C this afternoon. As you know, we have seen an increase of case numbers at site over the past several weeks and this step is being taken to ensure the health and safety of our workforce and members of the public.

While we don't have all the details at this time, declaring an outbreak typically results in health officials, WorkSafeBC and the company involved continuing to monitor and respond to the outbreak. We understand that Northern Health has determined there is no need for closure orders for the project or individual work fronts. The outbreak declaration will remain in place for at least 28 days.

The outbreak is among workers of Peace River Hydro Partners, the project's main civil works contractor, specifically those working in the staff office complex and on the dam core excavation. Since the beginning of March, there have been 41 cases of COVID-19 reported at Site C. There are currently 11 active cases and 100 workers isolating at home or on site. Of those 11 cases, seven cases (in two active clusters) are directly linked to the outbreak declaration. We have been in regular contact with Northern Health about these cases and they have supported the contact tracing and containment measures that we've taken so far.

In addition to the COVID-19 measures already in place at site, we've taken additional steps in recent weeks as we've been managing these cases. Immediate actions included identifying and isolating any employees who may have been exposed, as well as evacuating and thoroughly disinfecting the contractor's construction offices. Anyone who was in the offices before they were disinfected is currently working from home and monitoring for symptoms. With the support of Northern Health, asymptomatic testing of people in isolation is also being conducted to support further contact tracing.

The health and safety of our workers and the public remains our top priority. We continue to work with Northern Health to manage this outbreak and ensure all health guidelines to protect workers and community members are being followed.

I recognize that there are many unanswered questions, and will provide more information as soon as it's available, including what this means for construction as well as any additional steps we may take to maintain the health and safety of our employees, contractor workers and the public.

In the meantime, please let me know if you have any questions.

Thank you,

s.15;

s.15; s.19 | Manager of Policy, Research & Strategic Communications

BC Hydro

333 Dunsmuir St, 15th floor

Vancouver, BC V6B 5R3

P 604 623 4008

M 236 993 0338

E s.15; s.19

bchydro.com

Smart about power in all we do.

This email and its attachments are intended solely for the personal use of the individual or entity named above. Any use of this communication by an unintended recipient is strictly prohibited. If you have received this email in error, any publication, use, reproduction, disclosure or dissemination of its contents is strictly prohibited. Please immediately delete this message and its attachments from your computer and servers. We would also appreciate if you would contact us by a collect call or return email to notify us of this error. Thank you for your cooperation.

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: April 29, 2021 3:21 PM
To: Flint, Amy EMLI:EX
Subject: FW: Materials for May 6 TB
Attachments: [s.12](#); [s.13](#)

From: MacLaren, Les EMLI:EX <Les.MacLaren@gov.bc.ca>
Sent: April 29, 2021 3:13 PM
To: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Cc: Schmidt, Cathy A EMLI:EX <Cathy.Schmidt@gov.bc.ca>
Subject: Materials for May 6 TB

Hi Rhonda:

[s.12](#); [s.13](#)

Les MacLaren

Assistant Deputy Minister
Electricity and Alternative Energy Division
BC Ministry of Energy, Mines and Low Carbon Innovation
Office: 778-698-7183

[s.15](#)

Energizing BC—clean, sustainable and productive

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: April 30, 2021 8:34 AM
To: Flint, Amy EMLI:EX
Subject: FW: DM APPROVED ~~s.12;~~
s.13 - Materials for May 6 TB

From: Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>
Sent: April 30, 2021 7:57 AM
To: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: DM APPROVED ~~s.12;~~ Materials for May 6 TB

Morning Rhonda,

DM has reviewed and approve materials including the attendees.

Thanks,

Monica.

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: April 29, 2021 4:56 PM
To: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>; Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>
Subject: For Approval ~~s.12;~~
s.13 Materials for May 6 TB

Hello,

s.12; s.13

s.12; s.13

:

|

|

|

|

|

For your approval please to send to Minister's Office.

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: April 30, 2021 8:57 AM
To: Flint, Amy EMLI:EX
Subject: FW: s.12; TB 6-5-21 ADM
Attachments: s.12; s.13 TB 6-5-21 ADM.docx

From: MacLaren, Les EMLI:EX <Les.MacLaren@gov.bc.ca>
Sent: April 30, 2021 8:03 AM
To: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Cc: Schmidt, Cathy A EMLI:EX <Cathy.Schmidt@gov.bc.ca>
Subject: s.12; TB 6-5-21 ADM

Hi Rhonda:

Attached are ADM-approved speaking points for the s.12 item at Treasury Board May 6. We have a call with FIN and BCH this morning where I hope to finalize attendees.

Les

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
To: Flint, Amy EMLI:EX
Subject: FW: For Approval - s.12; s.13 - Materials for May 6 TB
Attachments: s.12; s.13

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: April 30, 2021 11:43 AM
To: Cuddy, Andrew EMLI:EX <Andrew.Cuddy@gov.bc.ca>; Tseng, Eugene EMLI:EX <Eugene.Tseng@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: For Approval -s.12; Materials for May 6 TB

Hello,

s.12; s.13

s.12; s.13

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Page 206 of 307 to/à Page 237 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 238 of 307

Withheld pursuant to/removed as

s.12

Page 239 of 307 to/à Page 240 of 307

Withheld pursuant to/removed as

s.13 ; s.14

Page 241 of 307

Withheld pursuant to/removed as

s.14

Page 242 of 307 to/à Page 244 of 307

Withheld pursuant to/removed as

s.13

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: May 3, 2021 12:29 PM
To: Flint, Amy EMLI:EX
Subject: FW: DM APPROVED w Edits- ^{s.12;} ^{s.13} TB May 6
Attachments: TB Sub 36 20 21 ^{s.12;} Progress Update SN 6-5-21 DM Approved_Edits.docx

From: Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>
Sent: May 3, 2021 12:08 PM
To: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: DM APPROVED w Edits- SN - TB May 6

Hi Rhonda,

DM approved but with some edits. I've tracked changes which you can accept to a clean version.

Thanks,

Monica.

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: May 3, 2021 9:28 AM
To: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>; Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>
Subject: For Approval Please - SN - TB May 6

Hello,

Attached are the speaking notes for the ^{s.12; s.13} item at Treasury Board May 6.

Speaking notes have been approved by Les MacLaren.

For approval please.

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office

Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: May 3, 2021 2:00 PM
To: Flint, Amy EMLI:EX s.12; s.13
Subject: Minister Approved - FW: For Approval Materials for May 6 TB
Attachments: s.12; s.13

From: Cuddy, Andrew EMLI:EX <Andrew.Cuddy@gov.bc.ca>
Sent: May 3, 2021 1:54 PM
To: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: RE: For Approval -s.12; Materials for May 6 TB

Attached. I marked them as "MBR approved"

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: April 30, 2021 11:43 AM
To: Cuddy, Andrew EMLI:EX <Andrew.Cuddy@gov.bc.ca>; Tseng, Eugene EMLI:EX <Eugene.Tseng@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: For Approval s.12; Materials for May 6 TB

Hello,

s.12; s.13

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
Sent: May 3, 2021 4:47 PM
To: Flint, Amy EMLI:EX
Subject: FW:s.12; s.13 - Materials for May 6 TB
Attachments: s.12; s.13

Follow Up Flag: Follow up
Flag Status: Flagged

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: May 3, 2021 2:40 PM
To: Gonzalez, Selina FIN:EX <Selina.Gonzalez@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: s.12; Materials for May 6 TB

Hello,

s.12; s.13

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
To: Subject: Flint, Amy EMLI:EX
Attachments: FW: Materials s.12, s.13 Materials for May 6 TB
s.12; s.13

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: May 3, 2021 5:46 PM
To: Cuddy, Andrew EMLI:EX <Andrew.Cuddy@gov.bc.ca>; Tseng, Eugene EMLI:EX <Eugene.Tseng@gov.bc.ca>; Robb, Amanda EMLI:EX <Amanda.Robb@gov.bc.ca>
Cc: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: Materials s.12; Materials for May 6 TB

Hello,

s.12; s.13

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations
Deputy Minister's Office
Ministry of Energy, Mines and

Low Carbon Innovation
(778) 698-7188

Flint, Amy EMLI:EX

From: De Champlain, Rhonda EMLI:EX
To: Flint, Amy EMLI:EX
Subject: FW: Final Materials -Treasury Board May 6
Attachments: [s.12](#); [s.13](#)

From: De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Sent: May 3, 2021 5:48 PM
To: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>; MacLaren, Les EMLI:EX <Les.MacLaren@gov.bc.ca>
Cc: Hunt, Melanie EMLI:EX <Melanie.Hunt@gov.bc.ca>; Jang, Monica EMLI:EX <Monica.Jang@gov.bc.ca>; Schmidt, Cathy A EMLI:EX <Cathy.Schmidt@gov.bc.ca>; De Champlain, Rhonda EMLI:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: Final Materials -Treasury Board May 6

Hello,

[s.12](#); [s.13](#)

Thank you.

Rhonda De Champlain
Director
Cabinet and Legislative Initiatives
and Business Operations

Deputy Minister's Office
Ministry of Energy, Mines and
Low Carbon Innovation
(778) 698-7188

Page 253 of 307 to/à Page 281 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 282 of 307

Withheld pursuant to/removed as

s.12

Page 283 of 307 to/à Page 289 of 307

Withheld pursuant to/removed as

s.12 ; s.13

Page 290 of 307 to/à Page 292 of 307

Withheld pursuant to/removed as

s.15 ; s.19

Page 293 of 307 to/à Page 297 of 307

Withheld pursuant to/removed as

s.13

Page 298 of 307 to/à Page 307 of 307

Withheld pursuant to/removed as

s.12 ; s.13