

Best Regards,
Brian

Brian Forbes

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GPO Box 668 Brisbane QLD 4001 | 145 Ann Street Brisbane QLD 4000 Australia |

From: ToddSmith@lowerchurchillproject.ca [mailto:ToddSmith@lowerchurchillproject.ca]

Sent: Friday, 27 May 2016 11:04 PM

To: Brian Forbes

Cc: GregSnyder@lowerchurchillproject.ca; DarrenProtulipac@lowerchurchillproject.ca

Subject: Muskrat Falls - Horizontal Slipforming

Brian,

We realize you have been busy lately and hope your trip has gone well .

We were wondering, when you get a chance, if you could provide some comments on the Contractor's proposal (see email below from May-22) to use horizontal slip forming to form the upstream and downstream faces of the dam . Have you used it successfully in the past, or have you encountered any difficulties? Any cautionary notes you may have? Any experience with air entrainment and freeze-thaw durability? Concerns or experience around surface finish and tolerances?

Also, do you have example specifications for the concrete mix to be used for the slip-forming operation - since this operation is not part of the initial spec we will have to develop some guidelines for the product .

FYI, the shape of the downstream form presented in the execution plan has been discussed with the contractor and they have been informed that the slight batter on the exposed side of the form cannot be used, it must be either vertical or battered to match the slope of the dam . Vertical steps seems to be preferred at the moment .

Thanks,

Todd Smith

Senior Civil / Structural Engineer

PROJECT DELIVERY TEAM

Lower Churchill Project

t. 709-733-4452 c. 709-687-2832

e. ToddSmith@lowerchurchillproject.ca

w. muskratfalls.nalcoreenergy.com

From: Darren Protulipac/NLHydro

To: Greg Snyder/LCP/NLHydro@nlhydro, Todd Smith/LCP/NLHydro@nlhydro, "Dr Malcolm Dunstan MD and A" <rccdams@rccdams.co.uk>, "Brian Forbes" <Brian.Forbes@ghd.com>

Cc: Scott O'Brien/NLHydro@nlhydro, Jason O'Brien/NLHydro@nlhydro, Vincent Payne/NLHydro@nlhydro

Date: 05/22/2016 01:01 AM

Subject: Fw: ACTION: 26 May 2016 RCC Constructability Session

Guys. Barnard has updated their execution plans. See attached.

Let me know your thoughts. Our constructive criticism will be provided to them on Thursday 26-May.

Brian - look forward to hearing from you this week. We plan to call you. Aiming for the end of the week.

Malcolm - a hard copy of the plan will be held at the Sheraton in your name (on Monday). Vince so kindly will look after this matter for you.

Look forward to more discussions - commencing Tuesday in St John's.

Enjoy the long weekend.

Darren..

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Darren Protulipac <DarrenProtulipac@lowerchurchillproject.ca>

Sent: Saturday, May 21, 2016 11:13 PM

To: Aaron Rietveld

Cc: Scott O'Brien; Peter Tsekouras; Jeff Reid; Jason O'Brien; Vincent Payne; Koehler Anderson; Tyler Warren; Dustin Burke; RJ Roos; Kevin Hunt; Mike Pauletto; Tom Reynoldson; jason.finlay@pennecon.com; Dean German; Patrick Geiger; Oleg Narodetsky; Derek Tisdell; Brad Cole; david.mitchell@pennecon.com; Jeff Higgins; Collin Frerck; Rob Hewitt; Dennis Hewitt

Subject: Re: ACTION: 26 May 2016 RCC Constructability Session

Thank you Aaron. Look forward to learning how you intend to build the north dam in 2017.

I'll gather comments and discuss your execution plan internally. If there are any fatal flaws I'll advise - otherwise we'll provide formal comments and queries after we discuss in detail on 26 May.

Rgds

Darren..

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Aaron Rietveld

Sent: Saturday, May 21, 2016 2:24 PM

To: DarrenProtulipac@lowerchurchillproject.ca

Cc: ScottOBrien@lowerchurchillproject.ca; PeterTsekouras@lowerchurchillproject.ca; JeffReid@lowerchurchillproject.ca; JasonO'Brien@lowerchurchillproject.ca; VincentPayne@lowerchurchillproject.ca; Koehler Anderson; Tyler Warren; Dustin Burke; RJ Roos; Kevin Hunt; Mike Pauletto; Tom Reynoldson; jason.finlay@pennecon.com; Dean German; Patrick Geiger; Oleg Narodetsky; Derek Tisdell; Brad Cole; david.mitchell@pennecon.com; Jeff Higgins; Collin Frerck; Rob Hewitt; Dennis Hewitt

Subject: RE: ACTION: 26 May 2016 RCC Constructability Session

Darren,

Attached is the updated execution plan for review on the 26th. Sorry I wasn't able to get this out yesterday. Let me know if you have any questions or comments.

Thanks,

Aaron

From: DarrenProtulipac@lowerchurchillproject.ca [<mailto:DarrenProtulipac@lowerchurchillproject.ca>]

Sent: Monday, May 16, 2016 4:48 PM

To: Aaron Rietveld (aaron.rietveld@barnard-inc.com) <aaron.rietveld@barnard-inc.com>

Cc: ScottOBrien@lowerchurchillproject.ca; PeterTsekouras@lowerchurchillproject.ca; JeffReid@lowerchurchillproject.ca; JasonO'Brien@lowerchurchillproject.ca; VincentPayne@lowerchurchillproject.ca

Subject: ACTION: 26 May 2016 RCC Constructability Session

Aaron - in addition to receiving your attendee list very soon - we also look forward to receiving your RCC Execution Plan no later than 18th of May.

Thanks

Darren..

Darren Protulipac

Area Manager - Dams

PROJECT DELIVERY TEAM

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e. DarrenProtulipac@lowerchurchillproject.ca

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You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

From: Darren Protulipac/NLHydro
To: "Aaron Rietveld (aaron.rietveld@barnard-inc.com)" <aaron.rietveld@barnard-inc.com>
Cc: Scott O'Brien/NLHydro@NLHYDRO, Peter Tsekouras/NLHydro@NLHYDRO, Jeff Reid/NLHydro@NLHYDRO, Jason O'Brien/NLHydro@NLHYDRO, Vincent Payne/NLHydro@NLHYDRO
Date: 05/13/2016 05:54 PM
Subject: REQUEST: 26 May 2016 RCC Constructability Session

Aaron - LCP will post the 26 May Meeting Request this coming Monday, with an Agenda to follow.

Please re-confirm the names of those attending.

Also note the meeting is to be held St. John's - in Company's Project office.

If the location changes I'll advise accordingly.

Rgds.
Darren..

Darren Protulipac
Area Manager - Dams
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You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

[attachment "North Dam and RCC Trial Demonstration Execution Plan.pdf" deleted by Todd Smith/LCP/NLHydro]

This e-mail has been scanned for viruses

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NVictoria downstream stepped face.jpgNVictoria slipform and CVC truck.jpg



NVictoria upstream face seal detail.jpgNVictoria upstream face TJ seal.jpgNVictoria upstream face.jpg



Porce slipform downstream stepped kerb.jpgPorce upstram kerb and cracking.jpgPorce upstream face.jpg



Porce upstream TJ seal.jpg