

From: pharrington@lowerchurchillproject.ca
To: gbennett@nalcorenergy.com
Subject: Fw: Andritz
Date: Wednesday, January 21, 2015 12:34:53 PM
Attachments: [.png](#)
[Linz Sinuhydro Discussions 12 Jan 2015.pptx](#)
Importance: High

FYI - read and weep!

Paul Harrington

Project Director

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----- Forwarded by Paul Harrington/NLHydro on 01/21/2015 12:34 PM -----

From: Frank Gillespie/NLHydro

To: Paul Harrington/NLHydro@NLHYDRO,

Cc: Lance Clarke/NLHydro@NLHYDRO, Ron Power/NLHydro@NLHYDRO, Scott O'Brien/NLHydro@NLHYDRO

Date: 01/21/2015 12:01 PM

Subject: Re: Andritz

Gentlemen

Attached is the slide deck summarizing the discussions last week in Linz.



Linz Sinuhydro Discussions 12 Jan 2015.pptx

Frank

Frank Gillespie P. Eng

Area Manager Electrical & Mechanical Component 1

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Scott O'Brien---01/21/2015 11:46:07 AM---From: Scott O'Brien/NLHydro To: Paul Harrington/NLHydro@nlhydro,

From: Scott O'Brien/NLHydro

To: Paul Harrington/NLHydro@nlhydro,

Cc: Frank Gillespie/NLHydro@nlhydro, Lance Clarke/NLHydro@nlhydro, Ron Power/NLHydro@nlhydro

Date: 01/21/2015 11:46 AM

Subject: Re: Andritz

Paul

Delay in presenting findings is entirely my fault. There's a deck prepared and ready for review summarizing the discussion but unfortunately I've been home with the flu. Frank will share that presentation today.

We will issue an agenda today based on the one used in Linz.

Re lunch, I think a lunch out is a good idea. The meetings last week on both packages were demonstrative of them recognizing the error in the adversarial approach they'd taken before Christmas and of a willingness to come back to the table. We'll organize.

My apologies

Scott

Scott O'Brien
Project Manager - Muskrat Falls Generation
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On Jan 21, 2015, at 8:58 AM, Paul Harrington <PHarrington@lowerchurchillproject.ca> wrote:

Scott/Frank

we have the meeting on Friday but do not have an agenda also a debrief of

your trip was promised and has not occurred. I am at MF tomorrow and tied up with Valard/Quanta this morning which leaves this afternoon as the only time to have that debrief and I would appreciate some background and names/titles of the Andritz players and locations involved.

Can you also put an agenda together of things Andritz should be presenting and get that to Rob/Daniel -

also will we need to have lunch brought in or should we go out to Lunch ? can you pls have someone arrange all this - I have asked for the Think Tank so Ron can video in

Paul

Paul Harrington

Project Director

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CH0032 – Gates Fabrication Discussions

Linz, Austria

20-Jan-2015

Boundless Energy



Take a
MOMENT
for Safety

Attendees

LCP

- Scott O'Brien (Project Manager – Muskrat Falls Generation)
- Frank Gillespie (Area Manager - Electrical & Mechanical – Component 1)
- Bruce Drover (Package Lead – Hydro Mechanical Equipment)

AH Canada

- Rob Murray (General Manager - Large Hydro)
- Bill Mavromatis (Project Manager coach- Hydro Mechanical Equipment)

AH Linz

- Andreas Starzer (Vice President Project Mgt.)
- Gerhard Auberger (Head of Quality Department)
- Wolfgang Stanger (Head of Engineering Department Penstocks and Gates) part time
- Alois Zeuner (Head of Technical Project Management Penstocks and Gates)
- Johann Hary (Deputy Project Manager)
- Erich Stallinger (System Engineer)
- Gerald Abel (Deputy System Engineer)
- Bettina Neugschwandtner (Design Calculation)
- Robert Hoglinger (Quality Manager)

Fabrication Issues

Bruce delivered the following overview:

Fabrication of spillway gates continues at the Sinohydro facility **without** the following minimum Quality Control Requirements:

- Approved for Construction C1 Drawings
- Approved Welding Procedures
- Approved ITPs
- Substandard Material Test Plan
- Material changed from A529 specified to A572 with no concession request
- Weld inspection only documented on major welds, not 100% as specified
- None of the QC process and documentation issues noted by LCP have been documented by Andritz NCRs
- Project kick off meeting was held with the Chinese Fabricator without participation of LCP and AH project managers in attendance. The Linz office representatives organized and ran the kick off meeting

Issues

- Linz project team appear to operate in isolation of the Montreal based project team and all fabrication outside of North America is under the Linz office control. The Andritz Hydro PM is not in control of the project as LCP expected
- AH requested to immediately install Bill Mavromatis as PM
- No transfer of Lessons Learned or QC processes from CH0030 QC team (Montreal Office) to the CH0032 Quality team (Linz Office). The need for this has been raised repeatedly by LCP in weekly meetings
- Linz has not issued any QC Inspection reports to date. LCP issues daily Quality Surveillance Report, copy to Andritz Hydro
- LCP questioned ability of current Andritz QC personnel in China to implement the QC requirements for fabrication
- LCP reminded Andritz that although Andritz are assuming RISK for continued fabrication without the proper Quality Controls in place , LCP will be impacted should fabricated items have to be scrapped 11 weeks into a projected 44 week fabrication schedule.

- LCP has raised 9 separate NCRs for the quality concerns. These are followed up daily by LCP on site by Franklin Zhang with status updates
- Andritz (Linz office) will mobilize senior management personnel (Johann Hary) to China 18 January for 2-3 months to address QC issues and ensure AH QC team and procedures in place. LCP team to visit China 4+ weeks prior to Johann leaving to complete assessment.
- It was agreed by ALL that future project kick off meetings will not be held without the PMs from both LCP and AH in attendance. These scopes include
 - MUHR (Trash rack Cleaning Machine)
 - CEC (Intake Hoists)
 - Sinohydro (Intake Gates)
 - HEMI Controls (Spillway and Intake Electrical/Instrumentation/Controls)
- LCP offered to facilitate a workshop on QC and QA requirements . Andritz were receptive. LCP to organize and schedule.
- LCP offered early review and closure on outstanding design issues to minimize late start of fabrication
- Lessons learned workshops from CH0030 fabrication to be held in Montreal (Short Term) and Tianbao (Long Term) to transfer best practices
- ***AH agreed to STOP fabrication on the Spillway gates until the full QC system is in place and all documentation is up to date.***

Follow Up

- LCP to organize and schedule Quality Workshop prior to end February
- AH to schedule and hold Lessons Learned workshop in Montreal for transfer of best practices from CH0030 to CH0032 teams prior to end Q1 2015. Follow up meeting in China to be scheduled prior to end Q1 2015.
- Ah to follow up on actions with Steering Team scheduled for 23-January
Agenda for Steering Team Update
 - Action Plan and Resolution Timelines resulting from Linz discussions
 - Project Management Issues Resolution (AH Montreal vs Linz)
 - QC Procedural Deficiencies and NCR Resolution
 - AH China QC team Resources
 - Fabrication Stoppage to address Issues
 - Joint Team (CH0030 and CH0032) Lessons Learned Workshops

Update

- ***Appears fabrication has started on the TRCM no formal kick off meeting held with the AH/LCP PMs. Drawings and weld procedures not approved***

Sharing our ideas in an open and supportive manner to achieve excellence.

Teamwork

Open Communication

Fostering an environment where information moves freely in a timely manner.

Honesty and Trust

Being sincere in everything we say and do.

Relentless commitment to protecting ourselves, our colleagues, and our community.

Safety

Respect and Dignity

Appreciating the individuality of others by our words and actions.

Leadership

Empowering individuals to help, guide and inspire others.

Holding ourselves responsible for our actions and performance.

Accountability