

LOWER CHURCHILL PROJECT	CHANGE ORDER Between Company and Contractor
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Agreement No:	CH0030	CHO No.	024
Agreement Title:	Supply & Install Turbines & Generators	Rev. No:	01
Company:	Muskrat Falls Corporation	CHR No.	CHR-122 Rev. 01
Contractor:	Andritz Hydro Canada Inc.	Date:	27-Oct-2017

Description of Change:

CHR-122 Rev. 01 – Indoor Climate Controlled Storage in Montreal – The following Items are included in the below listed Prices:

- Storage Fees at Montreal Warehouse;
- Material Handling at Montreal Warehouse;
- Double Transportation for China Shipment Components (from Goose Bay Hangar to Montreal Warehouse and from Montreal Warehouse to Site);
- Inventory Control and Material Management;
- Inspection; and
- Security

Note:

(1) Contractor’s quoted Fold-A-Way at Site for Material Reception is not included in this CHO.

(2) Inflation of Deferred Transportation Costs is part of Amending Agreement (June 22, 2017).

CHO No.024 Revision 01 increases the storage duration to accommodate a total schedule realignment of twenty-nine (29) months.

Item 1.0 Indoor Climate Controlled Storage in Montreal from September 2015 to March 2018 – Maximum 22,695 Sq. Ft. per Month (Cumulative 419,834 Sq. Ft.) – Based on a 12-Month Schedule Delay Measured on the Adjustment to the Unit No. 1 Pit Free Schedule Date of 1 May 2016.

CAD\$ 2,719,613.00

Item 2.0 Indoor Climate Controlled Storage in Montreal – Extension of 22,695 Sq. Ft. per Month – Valid for an Additional 12-Month Schedule Delay Based on the Unit No. 1 Pit Free Revised Schedule Date beyond 1 May 2017.

CAD\$ 422,436.00

Monthly Unit Price: CAD\$ 70,406.00

Extended Storage Months: 6 Months

Item 2.1 Indoor Climate Controlled Storage in Montreal for an additional Eleven (11) Months beyond the Unit No. 1 Pit Free Revised 1 May 2017.

CAD\$ 774,466.00

Monthly Unit Price: CAD\$ 70,406.00

Total Lump Sum Price:

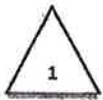


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Payment Schedule - Item 1.0, 2.0, & 2.1

Terms of Payment:

- Upon Signing of Change Order by both Parties: \$ 350,000
- 29 February 2016: \$ 225,000
- 31 May 2016: \$ 325,000
- 31 August 2016: \$ 325,000
- 30 November 2016: \$ 250,000
- 28 February 2017: \$ 200,000
- 31 May 2017: \$ 250,000
- 31 August 2017: \$ 300,000
- 30 November 2017: \$ 300,000
- 28 February 2018: \$ 194,613
- 31 May 2018: \$ 211,218
- 31 August 2018: \$ 211,218
- 30 November 2018: \$ 211,218
- 28 February 2019: \$ 211,218
- 31 May 2019: \$ 211,218
- 31 August 2019: \$ 140,812



Item 3.0 Future Change Requests still to be finalized are included in the Agreement via Change Order that may require Indoor Climate Controlled Storage.

Monthly Unit Price per Square Foot (SF) of Material Stored: CAD\$5.88

Estimated Extended Storage Months: 18 Months

Estimated Square Foot (SF) of Material Stored: 1,000

Estimated Total Price Not to be Exceeded: CAD\$ 105,840.00

Terms of Payment:

Reimbursable based on:

- Actual measured Square Foot (SF) usage (as shown on transportation documents) for each future Contractual Change Request that may require indoor climate controlled storage; and
- Above fixed Monthly Unit Price per Square Foot (SF).

Contractor's billing shall be at the same time as for Terms of Payment of above Item 1.

- HST 13% will be charged extra.

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o Contractor shall advise Company in writing when it has expended seventy-five percent (75%) of the Total Estimated Price of each of the above items.

Supporting information that forms part of this Change Order:

- o CHO No. 024 Rev.01
- o MF T&G Indoor Storage Tracking CHR-111&122

Change Includes: <input checked="" type="checkbox"/> Price <input type="checkbox"/> Schedule Adjustment Type: <input checked="" type="checkbox"/> Lump Sum <input checked="" type="checkbox"/> Unit Rate <input type="checkbox"/> Fixed Amount <input checked="" type="checkbox"/> Estimate <input checked="" type="checkbox"/> Reimbursable	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black;">Original Contract Price</td> <td style="border-bottom: 1px solid black;">CAD 124,517,329.25</td> </tr> <tr> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;">USD 36,635,422.14</td> </tr> <tr> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;">Euro 4,204,787.04</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Previous Change Orders Price (Includes Amending Agreement)</td> <td style="border-bottom: 1px solid black;">CAD 49,733,745.07</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Backcharges (Included in above and below Prices)</td> <td style="border-bottom: 1px solid black;">CAD (71,700.00)</td> </tr> <tr> <td style="border-bottom: 1px solid black;">This Change Order Price</td> <td style="border-bottom: 1px solid black;">CAD 774,466.00</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Total Contract Price to Date</td> <td style="border-bottom: 1px solid black;">CAD 175,025,540.32</td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;">USD 36,635,422.14</td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;">Euro 4,204,787.04</td> </tr> </table>	Original Contract Price	CAD 124,517,329.25		USD 36,635,422.14		Euro 4,204,787.04	Previous Change Orders Price (Includes Amending Agreement)	CAD 49,733,745.07	Backcharges (Included in above and below Prices)	CAD (71,700.00)	This Change Order Price	CAD 774,466.00	Total Contract Price to Date	CAD 175,025,540.32		USD 36,635,422.14		Euro 4,204,787.04
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Total Contract Price to Date	CAD 175,025,540.32																		
	USD 36,635,422.14																		
	Euro 4,204,787.04																		

Impact on Control Schedule: N/A
 Revised Finished Date: N/A

This Change Order shall form and be read and construed as an integral part of the above-noted Agreement. The above adjustment to the Contract Price constitutes full compensation (including all impact costs) to the Contractor for the above Changes.

Issued by Company: Supply Chain Manager or Delegate Name: Michael Harris Mel Melhem Signature: Date: 27-Oct-2017 Company Representative Name: Scott O'Brien Signature: Date: 08 Nov 2017	Acknowledgement of Contractor Receipt: Signature: Name: Marc Gagnon Date: 13 Nov 2017
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Change Request 122**Long Term Indoor Storage**

The delay in installation of the turbines and generators required the development of a long term storage solution. In 2013 Andritz was asked to investigate the options and over the preceding years an overall strategy was developed. The total solution includes increased preservation, establishment of laydown at the Muskrat Falls Site, warehouse space in Goose Bay (non-climate controlled) and a climate controlled warehouse in Montreal.

Large items such as the runner components, draft tube liners, etc that can tolerate outdoor conditions will be stored in the laydown area established at Site. Crates of smaller items that are required to be stored under cover are designated for the warehouse established in Goose Bay. Establishing these storage facilities at or near Site eliminated the cost of double handling and allowed Andritz to execute their original plans of shipping directly from China to Goose Bay.

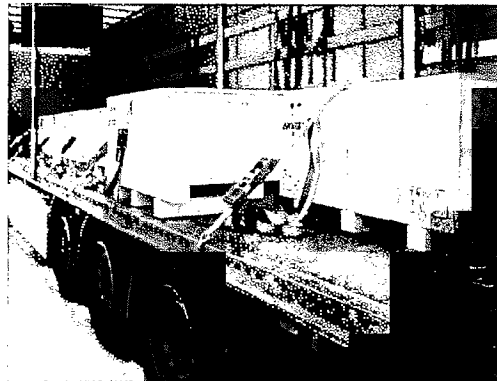
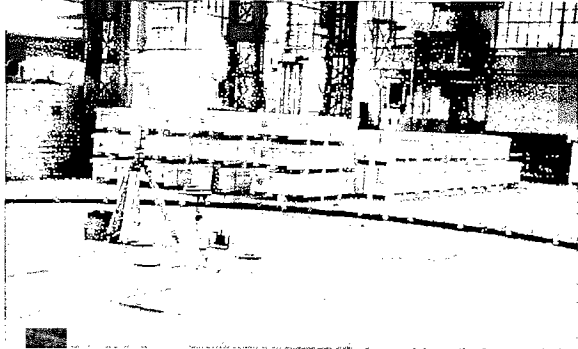
The electrical and some mechanical items, such as bearing pads, require climate controlled storage and the options investigated for this facility included:

- 1) Rental of warehouse space in Goose Bay. Andritz contacted businesses in the Goose Bay area to determine the availability and cost of warehouse space. Their investigation found that there was insufficient space for our needs and the costs were prohibitive.
- 2) Build an inflatable structure at Site. Two 10,000 square foot structures would be required at a cost of approximately \$4,000,000 for erection and dismantling. This was rejected due to the costs and concerns with the reliability of maintaining a climate controlled environment in an inflatable structure.
- 3) Rental of warehouse space in another part of the country. With the electrical equipment either manufactured in the Montreal area or entering the country through the Port of Montreal, the option of establishing a warehouse in Montreal was investigated and eventually chosen as the recommended solution. This is the option recommended in CHR-122

As described in the change request, Andritz obtained proposals from a number of facilities in the Montreal area. The facility selected is in Lachine near the Andritz office and has been used by Andritz previously. Details of an inspection of the warehouse are included in the proposal.

The change request is a lump sum price which includes rental of warehouse space, offloading and reloading the equipment, inventory control, periodic inspections, transportation of some mechanical items arriving from China at Goose Bay to Montreal and security. The price to cover a 12 month schedule delay is approximately \$2,700,000 with a cost of \$70,000 per month for extending the storage time. The schedule delay accommodates the original T&G/Civil contract milestone realignment and the subsequent civil delays. For budget purposes this has been estimated at 18 months. This would make the total CR value \$3,250,000.

The lump sum price is based on a calculation of the storage requirements made by Andritz. To verify the number a check was made of 7 of the 14 items listed in the table in Attachment #2 of the Change Request representing 60% of the estimated square footage requirements. The LCP calculation was based on drawings of the components, and typical packaging and storage arrangements seen in the manufacturing facilities. The calculated value was 14% higher than the Andritz number. The differences may be the result of the assumptions regarding stacking of the crates. Based on this, the storage estimate provided by Andritz seems reasonable.



Examples of Packaging: cw from Top, rim plates, bearing pads, stator punchings, rotor poles

Discussions with Andritz regarding the rate of \$2.30 per square foot used to calculate the lump sum storage costs identified that a contingency of between 10 and 15% has been included to accommodate the uncertainty in the square footage requirements. This seems appropriate based on the variation between the LCP and Andritz calculations. In addition, consideration was given to making the warehouse rental reimbursable rather than lump sum. This would require more management by LCP as well as assuming the risk associated with uncertainty in space requirements. It is recommended that the lump sum price be accepted.

Two line items requested by Andritz were removed from the change request for further discussion. These were the fold-a-way building recommended for site and the escalation on the trucking costs from

Montreal. In order to allow Andritz to proceed with the warehouse contract these will be dealt with separately.

A number of change requests have been issued to cover the storage and preservation requirements as the anticipated storage duration changed as the project has progressed. A summary is provided below;


- 1) CHR 104 - Outdoor Storage of Circular Passage Liners: Liners were stored in Goose Bay until site laydown area became available. \$79,995.32
- 2) CHR 111 - Indoor Storage of T&G Components (Goose Bay). 40,000 square feet, \$3,109,403 for 18 months.
- 3) CHR 118 - Storage of Primary Embedments in Goose Bay. \$262,953.00
- 4) CHR 284 - Rim Plate Special Preservation \$18,539
- 5) CHR 290 - PDA Coupler Additional Packaging \$1,936
- 6) CHR 287 - Servomotor Additional Preservation \$45,513
- 7) CHR 288 - CT Additional Packaging \$8,058
- 8) CHR 123 - Site Outdoor Storage – includes periodic inspection, maintenance of packaging, snow clearing, etc. CR pricing to be submitted
- 9) CHR 122 - Montreal Indoor Storage. 20,000 square feet. \$3,247,889
- 10) Various change requests for offloading prior to site mobilization. Total value to be determined.
- 11) Recalibration of instruments required due to extended storage. CR to be submitted.
- 12) Costs associated with delayed purchase of short shelf life materials and consumables. CR to be submitted.

Total for which costs have been submitted = \$6,606,131

Order of Magnitude for remaining items = \$2,500,000

It should be noted that in all cases Andritz remains fully responsible for the materials, conducting periodic inspections and maintaining the preservation. *

*The cost of re-preservation of indoor-stored components is not covered in this CHO.


13-Nov-2017

Muskrat Falls T&G - GTI Indoor Storage Extension - CHR-122 (CHO No. 24) - Payment Schedule

Pit Free Dates

Units	Baseline	Revised
U1	1-May-16	TBD
U2	17-Jul-16	TBD
U3	21-Aug-16	TBD
U4	25-Sep-16	TBD

Original Payment Schedule:

Date	Amount	CHO No. 24	Status
2/15/2016	\$ 350,000	Item 1.0	Invoiced and Paid
2/29/2016	\$ 225,000	Item 1.0	Invoiced and Paid
5/31/2016	\$ 325,000	Item 1.0	Invoiced and Paid
8/30/2016	\$ 325,000	Item 1.0	Invoiced and Paid
11/30/2016	\$ 250,000	Item 1.0	Invoiced and Paid
2/28/2017	\$ 200,000	Item 1.0	
5/31/2017	\$ 250,000	Item 1.0	
8/31/2017	\$ 300,000	Item 1.0	
11/30/2017	\$ 300,000	Item 1.0	
3/31/2018	\$ 194,613	Item 1.0	
Total	\$ 2,719,613		

Proposed Revised Payment Schedule - based on 24-month schedule delay:

Date	Amount	CHO No. 24	Status
2/15/2016	\$ 350,000	Item 1.0	Invoiced and Paid
2/29/2016	\$ 225,000	Item 1.0	Invoiced and Paid
5/31/2016	\$ 325,000	Item 1.0	Invoiced and Paid
8/30/2016	\$ 325,000	Item 1.0	Invoiced and Paid
11/30/2016	\$ 250,000	Item 1.0	Invoiced and Paid
2/28/2017	\$ 200,000	Item 1.0	
5/31/2017	\$ 211,218	Item 2.0	CHO No. 24 (Item #2) - To be inserted in the PMT schedule. \$70,406/month (\$211,218 per quarter)
8/31/2017	\$ 211,218	Item 2.0	
11/30/2017	\$ 211,218	Item 2.0	CHO No. 24 to be revised by LCP - payment inserted. \$70,406/month (\$211,218 per quarter)
2/28/2018	\$ 211,218	Item 2.0	
5/31/2018	\$ 250,000	Item 1.0	
8/31/2018	\$ 300,000	Item 1.0	
11/30/2018	\$ 300,000	Item 1.0	
2/28/2019	\$ 194,613	Item 1.0	
Total	\$ 3,564,485		

Proposed Revised Payment Schedule - based on 30-month schedule delay:

Date	Amount	CHO No. 24	Status
2/15/2016	\$ 350,000	Item 1.0	Invoiced and Paid
2/29/2016	\$ 225,000	Item 1.0	Invoiced and Paid
5/31/2016	\$ 325,000	Item 1.0	Invoiced and Paid
8/30/2016	\$ 325,000	Item 1.0	Invoiced and Paid
11/30/2016	\$ 250,000	Item 1.0	Invoiced and Paid
2/28/2017	\$ 200,000	Item 1.0	
5/31/2017	\$ 211,218	Item 2.0	CHO No. 24 (Item #2) - To be inserted in the PMT schedule. \$70,406/month (\$211,218 per quarter)
8/31/2017	\$ 211,218	Item 2.0	
11/30/2017	\$ 211,218	Item 2.0	CHO No. 24 to be revised by LCP - payment inserted. \$70,406/month (\$211,218 per quarter)
2/28/2018	\$ 211,218	Item 2.0	
5/31/2018	\$ 211,218	Item 2.0	
8/31/2018	\$ 211,218	Item 2.0	
11/30/2018	\$ 250,000	Item 1.0	
2/28/2019	\$ 300,000	Item 1.0	
5/31/2019	\$ 300,000	Item 1.0	
8/31/2019	\$ 194,613	Item 1.0	
Total	\$ 3,986,921		

LOWER CHURCHILL PROJECT	CHANGE ORDER Between Muskrat Falls Corporation and Andritz Hydro Canada Inc.
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Agreement No:	CH0030	CHO No.	024
Agreement Title:	Supply & Install Turbines & Generators	Rev. No:	00
Company:	Muskrat Falls Corporation	CHR No.	CHR-122 Rev. 01
Contractor/Supplier:	Andritz Hydro Canada Inc.	Date:	29-Jan-2016
Change Title:	Indoor Climate Controlled Storage in Montreal		

Description of Change:

CHR-122 Rev. 01 – Indoor Climate Controlled Storage in Montreal – The following Items are included in the below listed Prices:

- Storage Fees at Montreal Warehouse;
- Material Handling at Montreal Warehouse;
- Double Transportation for China Shipment Components (from Goose Bay Hangar to Montreal Warehouse and from Montreal Warehouse to Site);
- Inventory Control and Material Management;
- Inspection; and
- Security

Note that the Contractor’s quoted Fold-A-Way at Site for Material Reception and Inflation of Deferred Transportation Costs will be discussed at a later time with Contractor and are not included in the subject CHR-122 Rev. 01.

- Item 1: Indoor Climate Controlled Storage in Montreal from September 2015 to March 2018 – Maximum 22,695 Sq. Ft. per Month (Cumulative 419,834 Sq. Ft.) – Based on a 12-Month Schedule Delay Measured on the Adjustment to the Unit No. 1 Pit Free Schedule Date of 1 May 2016

Total Lump Sum Price: CAD\$ 2,719,613.00

Terms of Payment:

- Upon Signing of Change Order by both Parties: \$ 350,000
- 29 February 2016: \$ 225,000
- 31 May 2016: \$ 325,000
- 31 August 2016: \$ 325,000
- 30 November 2016: \$ 250,000
- 28 February 2017: \$ 200,000
- 31 May 2017: \$ 250,000
- 31 August 2017: \$ 300,000
- 30 November 2017: \$ 300,000
- 31 March 2018: \$ 194,613

LOWER CHURCHILL PROJECT	CHANGE ORDER Between Muskrat Falls Corporation and Andritz Hydro Canada Inc.
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Note that these above Terms of Payment are based on a 12-month schedule delay measured on the adjustment to the Unit No. 1 Pit Free schedule date of 1 May 2016. If additional schedule extension beyond 1 May 2017 is required, the above listed payment terms of 31 May 2017 to 31 March 2018 will be deferred by the same additional extension duration.

- Item 2: Indoor Climate Controlled Storage in Montreal – Extension of 22,695 Sq. Ft. per Month – Valid for an Additional 12-Month Schedule Delay Based on the Unit No. 1 Pit Free Revised Schedule Date beyond 1 May 2017

Monthly Unit Price: CAD\$ 70,406.00

Estimated Extended Storage Months: 6 Months

Estimated Total Price Not to be Exceeded: CAD\$ 422,436.00

Terms of Payment:

Reimbursable based on:

- Above fixed Monthly Unit Price; and
- Actual number of additional months of schedule delay beyond 1 May 2017.

Contractor's Billing shall be Bi-Monthly.

- Item 3: Future Change Requests still to be finalized and included in the Agreement via Change Order that may require Indoor Climate Controlled Storage

Monthly Unit Price per Square Foot (SF) of Material Stored: CAD\$ 5.88

Estimated Extended Storage Months: 18 Months

Estimated Square Foot (SF) of Material Stored: 1,000

Estimated Total Price Not to be Exceeded: CAD\$ 105,840.00

Terms of Payment:

Reimbursable based on:

- Actual measured Square Foot (SF) usage (as shown on transportation documents) for each future Contractual Change Request that may require indoor climate controlled storage; and
- Above fixed Monthly Unit Price Per Square Foot (SF).

Contractor's billing shall be at the same time as for Terms of Payment of above Item 1.

LOWER CHURCHILL PROJECT	CHANGE ORDER Between Muskrat Falls Corporation and Andritz Hydro Canada Inc.
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- o HST 13% will be charged extra.
- o Contractor shall advise Company in writing when it has expended seventy-five percent (75%) of the Total Estimated Price of each of the above items 2 and 3.

Supporting information that forms part of this Change Order:

- o Change Request CHR-122 Rev. 01 dated 27 January 2016

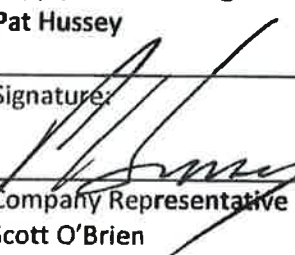
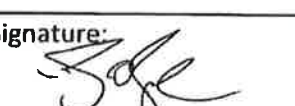

Change Includes: <input checked="" type="checkbox"/> Price <input type="checkbox"/> Schedule		Original Contract Prices	CAD 124,517,329.25 USD 36,635,422.14 Euro 4,204,787.04
Adjustment Type: <input checked="" type="checkbox"/> Lump Sum <input checked="" type="checkbox"/> Unit Rate		Previous Change Orders Price	CAD 8,350,699.07
<input type="checkbox"/> Fixed Amount <input checked="" type="checkbox"/> Estimate		Backcharges (Included in above and below Prices)	CAD (71,700.00)
<input checked="" type="checkbox"/> Reimbursable		This Change Order Price (Estimated Total Price Not To Be Exceeded)	CAD 3,247,889.00
		Total Contract Prices to Date (Including Estimated Total Price Not To Be Exceeded)	CAD 136,115,917.32 USD 36,635,422.14 Euro 4,204,787.04

Impact on Control Schedule: None

Revised Finished Date: N/A

This Change Order shall form and be read and construed as an integral part of the above-noted Agreement. The above adjustment to the Contract Price constitutes full compensation (including all impacts costs) to the Contractor for the above Change.

APPROVAL

Issued by Company: Supply Chain Manager: Pat Hussey Signature:  Date: 3 Feb 2016 Company Representative Name: Scott O'Brien Signature:  Date: 03 Feb 2016	Acknowledgement of Contractor Receipt: Contractor Representative Name: Jeanne Li Signature:  05-Feb-2016 Date:
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LOWER CHURCHILL PROJECT	CHANGE REQUEST
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Change Request Title:	Indoor Climate Controlled Storage in Montreal	CHR No. (Reference):	CHR-122
Agreement No:	CH0030-001	Rev. No:	01
Agreement Title:	Turbines and Generators	CHO No.:	
Company:	Muskrat Falls Corporation	Date:	27-Jan-2016
Contractor/Supplier:	Andritz Hydro Canada Inc.	Aconex No.:	CHR-CH0030001-0083
		DAN No.:	
		PCN No.:	0546

Description of Change Request and Reason (attach all supporting information):

CHR-122 Rev. 00 dated 7 July 2015 is deleted in its entirety and replaced by the subject CHR-122 Rev. 01 – Indoor Climate Controlled Storage in Montreal.

CHR-122 Rev. 01 – Indoor Climate Controlled Storage in Montreal – The following Items are included in the below listed Prices:

- Storage Fees at Montreal Warehouse;
- Material Handling at Montreal Warehouse;
- Double Transportation for China Shipment Components (from Goose Bay Hangar to Montreal Warehouse and from Montreal Warehouse to Site);
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Total Lump Sum Price: CAD\$ 2,719,613.00

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- 30 November 2016: \$ 250,000
- 28 February 2017: \$ 200,000

**LOWER CHURCHILL
PROJECT**

CHANGE REQUEST

○ 31 May 2017:	\$ 250,000
○ 31 August 2017:	\$ 300,000
○ 30 November 2017:	\$ 300,000
○ 31 March 2018:	\$ 194,613

Note that these above Terms of Payment are based on a 12-month schedule delay measured on the adjustment to the Unit No. 1 Pit Free schedule date of 1 May 2016. If additional schedule extension beyond 1 May 2017 is required, the above listed payment terms of 31 May 2017 to 31 March 2018 will be deferred by the same additional extension duration.

- Item 2: Indoor Climate Controlled Storage in Montreal – Extension of 22,695 Sq. Ft. per Month – Valid for an Additional 12-Month Schedule Delay Based on the Unit No. 1 Pit Free Revised Schedule Date beyond 1 May 2017

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Estimated Total Price Not to be Exceeded: CAD\$ 422,436.00

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Contractor's Billing shall be Bi-Monthly.

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Estimated Extended Storage Months: 18 Months

Estimated Square Foot (SF) of Material Stored: 1,000

Estimated Total Price Not to be Exceeded: CAD\$ 105,840.00

LOWER CHURCHILL PROJECT	CHANGE REQUEST
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Terms of Payment:

Reimbursable based on:

- o Actual measured Square Foot (SF) usage (as shown on transportation documents) for each future Contractual Change Request that may require indoor climate controlled storage; and
- o Above fixed Monthly Unit Price Per Square Foot (SF).

Contractor's billing shall be at the same time as for Terms of Payment of above Item 1.

Supporting information that forms part of this Change Request:

- o Andritz Correspondence No. Andritz-Email-002693 dated 11 November 2015 – Andritz Change Request Commercial Impact Analysis – CHR-122 Rev. 01 duly revised (highlighted in red) by Company

Description of impact on Control Schedule: N/A

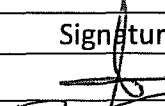
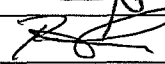
Revised Finish Date: N/A

Lump Sum Price, Unit Price and Total Price Not To Be Exceeded and adjustment to the Contract Price:

Item	Description	UOM	Estimated Quantity	Fixed Unit Price CAD\$	Estimated Total Price (CAD\$)
1	Indoor Climate Controlled Storage in Montreal from September 2015 to March 2018 – Maximum 22,695 Sq. Ft. per Month (Cumulative 419,834 Sq. Ft.) – Based on a 12-Month Schedule Delay Measured on the Adjustment to the Unit No. 1 Pit Free Schedule Date of 1 May 2016	LS			\$2,719,613.00
2	Indoor Climate Controlled Storage in Montreal – Extension of 22,695 Sq. Ft. per Month – Valid for an Additional 12-Month Schedule Delay Based on the Unit No. 1 Pit Free Revised Schedule Date beyond 1 May 2017	Monthly	6	\$70,406.00	\$422,436.00
3	Future Change Requests still to be finalized and included in the Agreement via Change Order that may require Indoor Climate Controlled Storage	Monthly per Square Foot	18 Months – 1,000 SF	\$5.88	\$105,840.00
Estimated Total Price of this Change Request (Not to be exceeded):					\$3,247,889.00

LOWER CHURCHILL PROJECT	CHANGE REQUEST
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- HST 13% will be charged extra.
- Contractor shall advise Company in writing when it has expended seventy-five percent (75%) of the Estimated Total Price of each of the above items 2 and 3.

ORIGINATOR <input checked="" type="checkbox"/> COMPANY <input type="checkbox"/> CONTRACTOR/SUPPLIER			
Title	Name	Signature	Date
Contract Administrator	Line Tremblay		27-Jan-2016
Package Lead	Richard Severs		29-Jan-2016
RECEIVED BY:			
Title	Name	Signature	Date



Change Request Commercial Impact Analysis

Agreement No:	CH0030	CHR No. (Reference):	CHR-122
Agreement Title:	Lower Churchill Project – Turbines & Generators	ECN No.	n/a
Company:	Muskrat Falls Corporation	Rev. No:	01
Contractor/Supplier:	Andritz Hydro Canada Inc.	Date:	10-Nov-2015

Please modify CHR-122 (Rev00) with the following:

Description of Change Request and Reason (attach all supporting information):

Long-term heated warehouse in Montreal:

Further to receipt of the CHR-122 from LCP, this is to provide a Lump Sum Price for the long-term heated indoor warehouse (approximately 22,695 sq. ft. at peak time) for the storage of the components detailed in Attachment #4:

AH assessed the following five (5) warehouse facilities as potential candidates for the indoor heated storage:

- GTI Group (Lachine, Quebec)
- Traffic Tech Inc. (Anjou, Quebec)
- Awen (Boucherville, Quebec)
- Transport Jules Savard (Jonquiere, Quebec)
- Churchill Construction Ltd. (Goose Bay, Newfoundland and Labrador) – max. capacity 14,403 sq. ft.

Based on cost effectiveness, capacity, location, safety, infrastructure and accessibility, both GTI Group and Traffic Tech Inc. qualified to be audited as final candidates for the indoor heated storage of the Muskrat Falls T&G components.

Upon completion of the audit for both warehouse facilities, AH has concluded that GTI Group is the recommended facility for the following reasons:

- Most competitive pricing;
- Has the capacity required by AH (with additional space if needed) for the overall duration specified;
- Facility is well secured - it is only accessible during the day by appointment and fully gated at night;
- Health and Safety management is well implemented;
- Convenient location in Lachine (Montreal) close to AH's offices in Pointe-Claire, which minimizes costs and travel for inspection and material management support;
- Direct access to provincial Highway 20 for ease of transport;
- Wide door access for material handling;
- Infrastructure to handle heavy components (e.g. Rim Plates), including an overhead crane that can handle up to 47,000 lbs and a forklift with a 10,000 lb capacity;
- Well proven facility with past experience with AH (i.e. is familiar with Hydro products and has qualified crane operators and riggers to perform necessary lifting operations);
- Is structurally sound, secure, weather tight and heated as per the AH Standard Packaging Specification (P HCA SP 013/1e), and as identified in the Muskrat Falls Quality Plan AH-MUS-QA-0002 Rev 6.

The AH audit report is included in Attachment #6 for LCP's reference.

The AH Lump Sum Price includes costing for the following items:

- Storage fees at (Montreal) warehouse;
- Material handling at (Montreal) warehouse (approx. 186 truckloads in and out separately);
- Double transportation for China shipment components (from Goose Bay Hangar to Montreal Warehouse and from Montreal Warehouse to site – total eight (8) trucks);



- Inventory control and material management;
- Inspection;
- Security;

- ~~Fold-A-Way at site for material reception of the heated indoor storage components;~~ Excluded
- ~~Inflation of deferred transportation costs (shipment from MTL warehouse to site);~~ Excluded

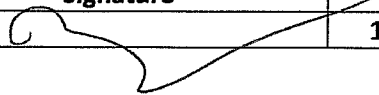
Please review and approve this Change Quest Form by Tuesday, November 24th, 2015. This proposal expires on Wednesday, November 25th, 2015.

- Attachment #1: Detailed Pricing Sheet (Item #1) and Proposed Payment Schedule (Item #1)
- Attachment #2: Detailed Pricing Sheet (Item #2)
- Attachment #3: Detailed Pricing Sheet (Item #3)
- Attachment #4: List of Components with storage requirements
- Attachment #5: CHR-122
- Attachment #6: Audit Reports
- Attachment #7: AH's presentation (12-Jun-2015)
- Attachment #8: Example of indoor storage tracking for open CHRs and future changes

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
1	Indoor climate controlled storage in Montreal (with LCP schedule delay of 12 month) - from September 2015 to March 2018 - max. 22,695 sq. ft. per month (cumulative 419,834 sq.ft.) (Based on a 12-Month Schedule Delay measured on the adjustment to the Unit No. 1 Pit Free Schedule Date of 1 May 2016) Detailed Pricing Sheet is included in Attachment #1. Notes: 1) The storage of the non-approved change requests is not included in this item and will be charged separately; 2) An adjustment of 13,189 sq. ft. has been incorporated for the Mfg schedule change of the Stator Bars and P&C Systems.	Lot	1	\$3,401,413 2,719,613	\$3,401,413 2,719,613
	Proposed Payment Milestones (Item #1): Refer to the agreed Terms of Payment on CH0 no. 24 - See Attachment #1 for the detailed payment schedule of Item #1 above - Note: ^{31 May} March 2017 to ³¹ March 2018 payment milestones will be ^{DIFFERED} pushed out by the same period of time if LCP schedule is further delayed beyond 12 months (see item #2 below) ^{1 May 2017}				
2	Extension of 22,695 sq. ft. indoor climate controlled storage in Montreal (valid for ^{additional} further 12 months) ^{Schedule Delay based on the Unit 1 Pit Free Revised Schedule Date beyond 1 May 2017} Detailed Pricing Sheet for monthly rate is included in Attachment #2.	Monthly	1	\$70,406	^{Reimbursable} \$70,406
	Proposed Payment Milestones (Item #2): - Starting to pay in ^{May} June 2017 if LCP schedule is further delayed beyond 12 months ^{1 May 2017}				
3	AH will maintain a separate tracking file for the indoor storage in associated with the open change requests. A price adjustment will be required based on the actual storage required for these change requests. The template of the tracking file is included	sq. ft./ Month	1	\$5.88	T&M Reimbursable



in Attachment #8 for LCP's reference.			
Proposed Payment Milestones (Item #3):		→ Refer to the agreed Terms of Payment	
- TBA (based on the actual storage duration)		on CHO no. 24	
13% HST will be charged extra.			
Title	Name	Signature	Date
AH Project Manager	Joanne Raddatz		10-Nov-2015



Attachment #1

BUDGETARY PRICING SHEET

CUSTOMER: Muskat Falls Corporation DATE: 10-Nov-2015
 SITE: Lower Churchill Project CH0030 CURRENCY: CAD\$
 CHANGE REQUEST (CR) NUMBER: CHR-122 UNIT: 1, 2, 3, 4 & Spares
 CVR NUMBER (ANDRITZ): N/A
 DESCRIPTION: Long-term heated warehouse in Montreal (based on 12-month LCP schedule delay)

	Description	QTY	Rate	Total
Warehouse storage fee in Montreal (incl. infrastructure and security)	419,834 sq. ft. cumulative from Sep'15 to Mar'18 Note: An adjustment of 13,189 sq. ft. has been incorporated for the Mig schedule change of the Stator Bars and P&C Systems	419,834	\$2.30	\$965,618
Material handling (receiving, space optimization and shipping) at MTL warehouse	Equipment, operators, labour, AH supervision - approx. 186 trucks in and 186 trucks out			\$1,231,320
Inventory control and material management (tracking materials in & out and movement (LMS))	Material tracking over the course of 31 months (Sept 2015 to March 2018)			\$241,760
Inspection (AH Inspector to verify integrity of parts)	2 days per month x 31 months (Sept 2015 to March 2018)			\$76,880
Fold-A-Way on-site for material consolidation	Infrastructure, installation and dismantling	1	\$575,000.00	\$575,000
Transportation of China components from Goose Bay to MTL	8 Trucks	8	\$9,200.00	\$73,600
Transportation of China components from MTL to Site	8 Trucks	8	\$9,660.00	\$77,280
Triage of China components at Goose Bay Hangar (incl. material handling at GBH)	Triage of materials on a total of 8 trucks (2 days per truck) - Incl. Equipment, operators, labour, AH supervision			\$53,155
Inflation for deferred transportation costs - shipment from MFL warehouse to site (estimated 1.5 years)	5% inflation per year for 1.5 years (178 trucks x \$8,000/truck x 1.5 year + 15% markup per contract) * Note: 8 trucks for China components are charged separately above			\$100,880
	TOTAL			\$3,401,413

Notes:

1. A small fold-a-way is required at site for optimization of shipments per the original Shipping Plan since the Service Bay Area may not be able to handle the receipt of the all materials in a truck at once. This eliminates the cost of additional trucks & material handling at site and minimizes Service Bay space constraints.
2. Packing / protection issues discovered during bi-weekly inspections are not included in the above price.

GRAND TOTAL 3,401,413

Note: Taxes extra

2,719,613

Changed Dates for Stator Bars from PTBO

Unit #	Original Dates - (DD-MM-YY)	Revised RTS Dates (DD-MM-YY)	Storage Requirement (SQ. FT.)	Delay of Storage (Months)	Total adjustment (SQ. FT.)
U1 Stator Bar	11-Mar-16	2-Jun-16	543	3	1,628
U2 Stator Bar	27-May-16	18-Aug-16	543	3	1,628
U3 Stator Bar	1-Jul-16	22-Sep-16	543	3	1,628
U4 Stator Bar	23-Jul-16	14-Oct-16	543	3	1,628
					6,510

Changed Dates for P&C from HEMI

Unit #	Original Dates - (DD-MM-YY)	Revised RTS Dates (DD-MM-YY)	Storage Requirement (SQ. FT.)	Delay of Storage (Months)	Total adjustment (SQ. FT.)
U1 P&C	11-Mar-16	2-Nov-16	304	8	2,429
U2 P&C	27-May-16	2-Nov-16	304	6	1,822
U3 P&C	1-Jul-16	2-Nov-16	304	4	1,214
U4 P&C	23-Jul-16	2-Nov-16	304	4	1,214
					6,679

Total Adjustment (SQ. FT.)					13,189
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Attachment #2

BUDGETARY PRICING SHEET		
CUSTOMER:	Muskat Falls Corporation	DATE: 10-Nov-2015
SITE:	Lower Churchill Project CH0030	CURRENCY: CAD\$
CHANGE REQUEST (CR) NUMBER:	CHR-122	UNIT: 1, 2, 3, 4 & Spares
CVR NUMBER (ANDRITZ):	N/A	

DESCRIPTION: Long-term heated warehouse in Montreal - Monthly Fee for additional 12 month extension of time beyond ~~March-2018~~ ^{1 May} 2017

Description	QTY	Rate	Total
Warehouse storage fee in Montreal (incl. infrastructure and security)	22,695 sq. ft. (peak time) x \$2.30/sq.ft per month	22,695	\$52,199
Inspection (AH Inspector to verify integrity of parts)	2 days per month		\$3,100
Inventory control and material management			\$12,400
Inflation 4%	For above 3 items		\$2,708
TOTAL			\$70,406

GRAND TOTAL	70,406
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Note: Taxes extra



Attachment #3

BUDGETARY PRICING SHEET

CUSTOMER:	Muskat Falls Corporation	DATE:	10-Nov-2015
SITE:	Lower Churchill Project CH0030	CURRENCY:	CAD\$
CHANGE REQUEST (CR) NUMBER:	CHR-122	UNIT:	1, 2, 3, 4 & Spares
CVR NUMBER (ANDRITZ):	N/A		

DESCRIPTION: **Price for Storage of Components of future Change Requests (Item #3)**

Description	Total
Warehouse storage fee in Montreal (incl. infrastructure and security)	\$2.30
Inventory control and material management (tracking materials in & out and movement (LMS))	\$0.56
Inspection (AH Inspector to verify integrity of parts)	\$0.18
Material handling (receiving, space optimization and shipping)	\$2.84

Grand Total	\$5.88
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Note: Taxes extra



Attachment #4

Muskkrat Falls T&G - List of Components with Storage Requirements

Origin	Description	# of Crates	Total SQ FT	Stacked SQ FT - actual Foot Print allowed for material handling and accessibility
China	China Shipment #3 & 4 Rotating Ring, Thrust Ring, Runner Gland Ring & Blade Seals	18	1,842	1,918
China	Bearings	30	1,219	1,270
India	Wound Poles	340	8,593	1,887
Poland	Rim Plates	776	17,431	4,586
Austria	Punchings	316	2,517	1,410
Canada	Turbine Components	61	896	760
Canada	Rotor Connections (PB 6323)	20	1,670	991
Canada	Stator Bars (PB 6635)	48	4,166	2,170
Canada	Circuit ring Tap (PB 6646)	4	426	444
Canada	Remaining Generator Components	175	3,061	3,091
Canada	BOP	16	232	241
Canada	Excitation	12	1,393	1,451
Canada	HPU	4	1,210	1,261
Canada	Protection & Control	48	1,166	1,214
		1,868	45,823	22,695

- Turbine and Generator Bearings
- Poles
- Stator Punchings
- Stator Bars and Pole Jumpers
- Rotor Connections
- Rotating Rings
- Thrust Rings
- Collector Rings
- Circuit Rings
- Rotor Rim Plates
- Excitation Systems
- HPU Equipment
- Protection and Control Systems
- Air Gap Monitoring Systems
- Current Transformers
- Other (HPOIS, Instrumentation, Brush Riggings Runner Gland Rings, Blade Seals, Main Lead, Neutral Lead, etc.)



Attachment #5

LOWER CHURCHILL PROJECT	CHANGE REQUEST
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Agreement No:	<u>CH00300001</u>	CHR No. (Reference):	<u>CHR-122</u>
Agreement Title:	<u>Turbines & Generators</u>	Rev. No:	<u>0</u>
Company:	<u>Muskat Falls Corporation</u>	CHO No:	
Contractor/Supplier:	<u>Andritz Hydro Canada Inc.</u>	Date:	<u>07/Jul/2015</u>
		Aconex No.:	<u>CHR-CH0030001-0083</u>
		Dan No.:	
		PCN no.:	

Description of Change Request and Reason (attach all supporting information):

Andritz Hydro shall quote a Lump Sum Price for the provision of approximately 20,000 square feet of long term heated warehousing in the Montreal area. The warehouse shall be used to store turbine and generator components requiring climate controlled conditions such as poles, punchings, rim plates, control cabinets, bars, rotating rings, thrust rings, etc.

Selection of facility shall be subject to approval by Company.

Quote shall be based on a minimum of a 12 month adjustment in the original Contract milestones with an option for extending up to an additional 12 months.

Quote shall include all costs associated with the warehousing of the components.

Supporting information that forms part of this Change Request:

Andritz to provide details of proposed facility and price breakdown.

Description of impact on Control Schedule:

Change Request is being raised in anticipation of a revision to the Contract milestones.

Revised Finish Date:

Lump sum price (or estimated Cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Fixed Price	Extended Price
1	20,000 square feet, indoor climate control storage in Montreal area.	LS	1.00		0.00
2	Extension of storage duration	FT ² per Month			0.00
Value of this Change Request:					\$ -

ORIGINATOR			
<input checked="" type="checkbox"/> COMPANY		<input type="checkbox"/> CONTRACTOR/SUPPLIER	
Title	Name	Signature	Date
Contract Administrator	L. Tremblay		7-Jul-2015
Package Lead	R. Severs		7-Jul-2015
Received by:			
Title	Name	Signature	Date
AH Project Manager	Joanne Ruddick		03-Sept-2015



Attachment #6

Traffic Tech Inc.

Address: 10301 Colbert, Anjou, PQ

Contact: Marc Dubois, 514-730-9446

Date of visit: August 12th, 2015

Description of facility:

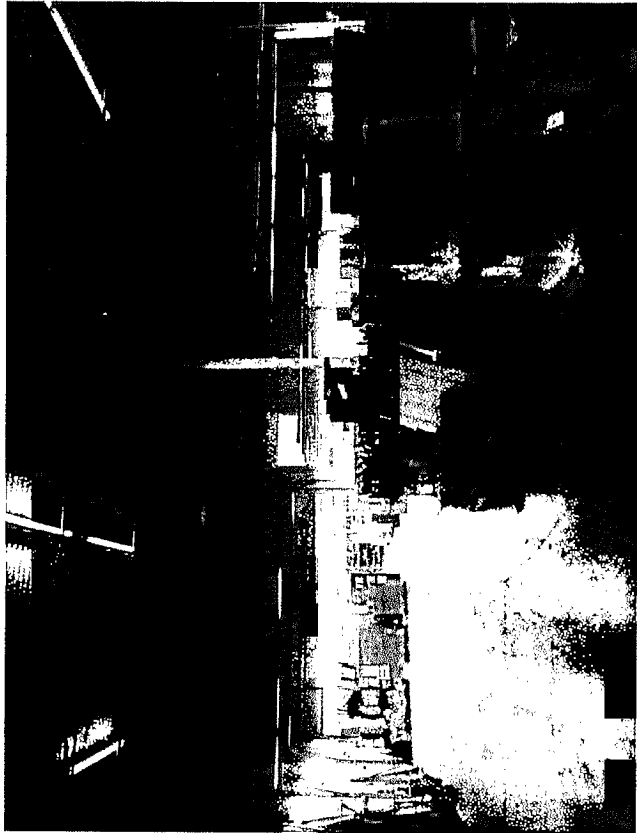
This warehouse, located in Anjou with immediate access to provincial highway 25, has a capacity of 58 000 square feet inside and 77 000 square feet outdoor. It is heated and/or conditioned with a temperature range of 18 degrees Celsius to 28 degrees Celsius. The doors of the loading dock are 106 inches wide by 108 inches tall but there is also another warehouse in the immediate vicinity that has doors with dimension of 240 inches wide by 192 inches tall.

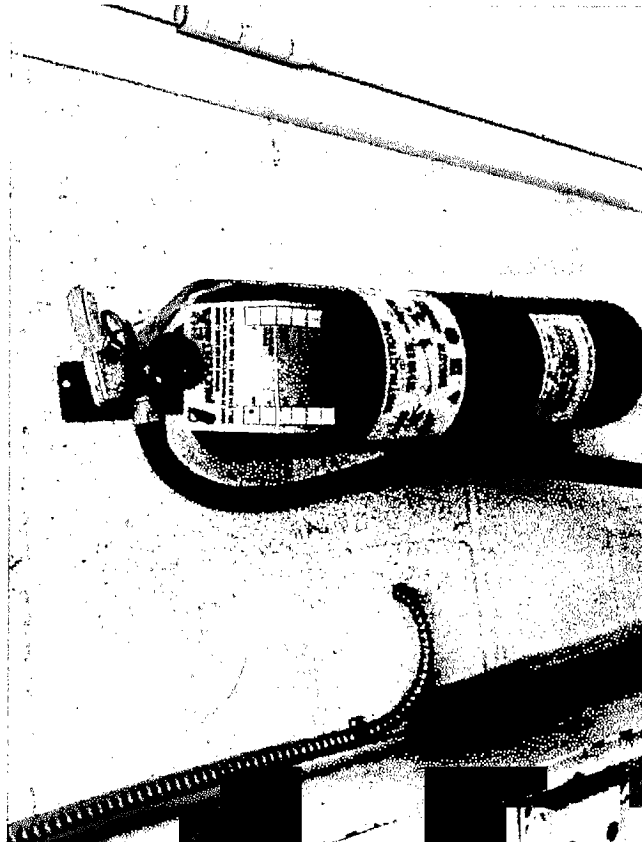
There is a possibility of using a 13 000 lbs forklift but there is no overhead crane. Therefore, the loading/offloading capacity is limited to 13 000 lbs for now. There is also a possibility of keeping racking in place (already present) this racking has a capacity of 5600 lbs per shelf.

With regards to Health and Safety, a quick check was done to ensure that fire protection system is up to code. Fire extinguishers, sprinklers and emergency exits were checked and everything seems to be adequate. As to site security, an alarm system with sensors is in place (no security guard) with online access to cameras available for Andritz Hydro.

The attached pictures were taken at the time of the visit:









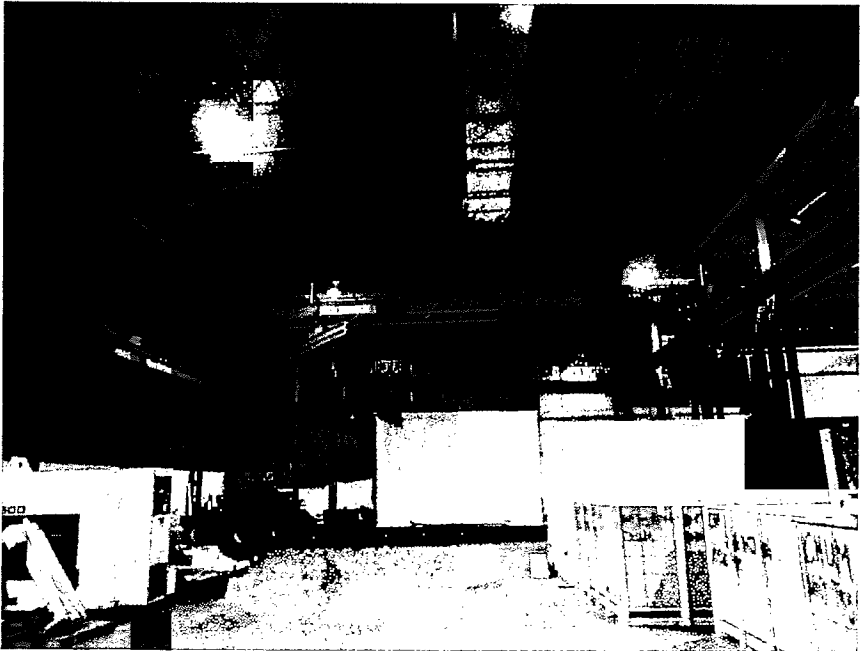
GTI Group**Address: 5205 Fairway, Lachine, PQ****Contact: Serge Girard, 514-349-3530****Date of visit: August 18th, 2015****Description of facility:**

This complex located in Lachine on Fairway St has a total capacity of more than 200 000 square feet and has direct access to provincial highway 20. It is heated and conditioned and can be equipped with racking if needed. An interesting point is that it is already used by Andritz Hydro compact group as well as several high profile customers like CAE, Rolls Royce and Voith Hydro. Therefore, the site security is really well managed with presence 24/7. Access doors for loading/offloading are of a dimension of approximately 180 inches wide and 180 inches tall.

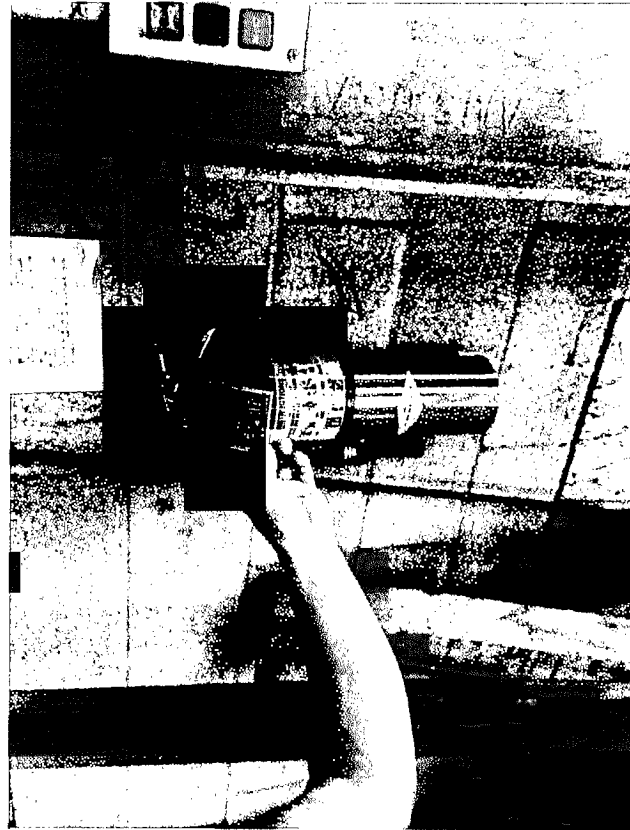
A forklift with 10 000 lbs capacity is present as well as an overhead crane of 47 000 lbs of capacity, which could be interesting depending on the need we have. With regards to overhead crane, it is inspected every 3 months and the slings are changed every 3 months as well. All crane operators and riggers are certified and the manager of the warehouse is qualified to perform lifting operations certifications of the workers.

Health and Safety management system at the complex is really well implemented with regular inspections of the workplace and fire protection systems up to code, which include a sprinkler system and firefighting equipment (extinguishers and hoses) that is regularly inspected by a third party. For site security, the complex is accessible during the day but gated during night. Access is possible during night when coordinated with the responsible of the warehouse. During night, site surveillance consists of periodical rounds made by a security company combined with an alarm system in case of intrusion. As for the access during normal business hours, a process is set where access is granted only when the responsible (Mr. Girard) is notified of an eventual visit by Andritz Hydro's representative(s) and the visit is logged into a visitor's log.

The attached pictures were taken at the time of the visit:












Attachment #7



Muskrat Falls T&G – Logistics Update

12-June-2015

Agenda

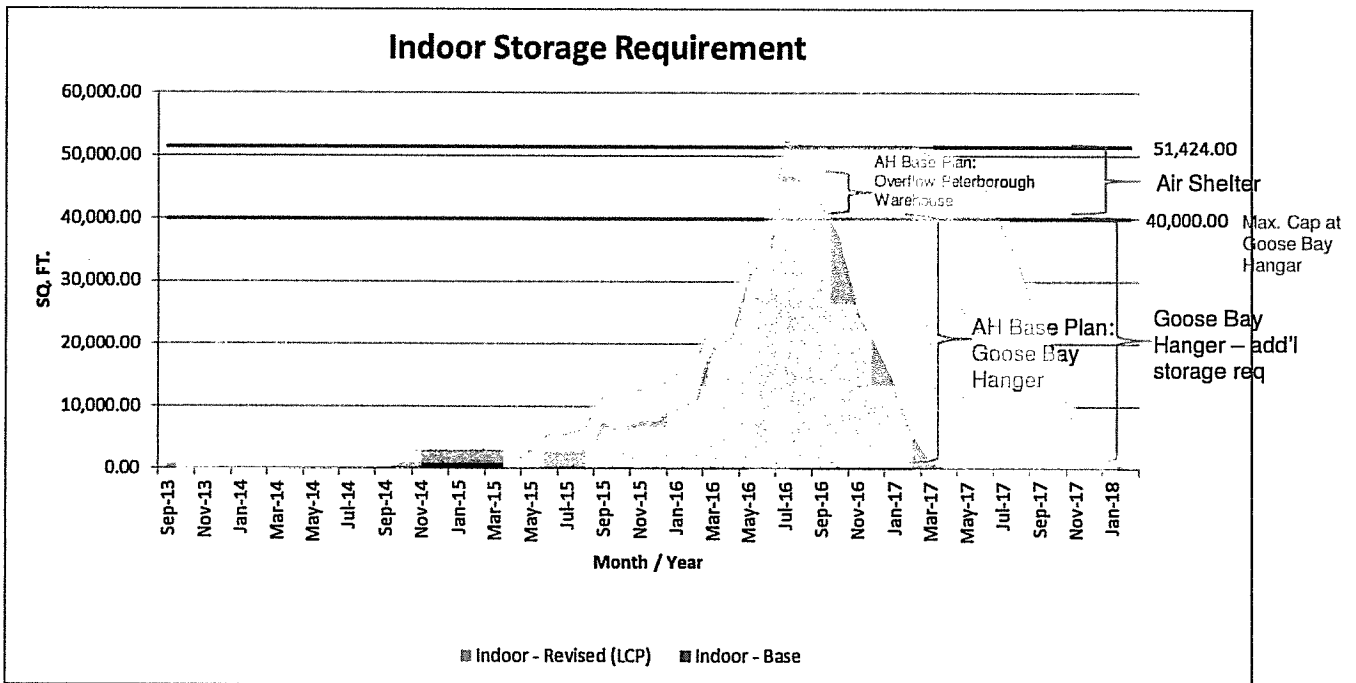
- Safety Moment
- Indoor storage update
- Outdoor storage update
- Delivery of U3 Pit Liner & upcoming delivery of U4 Pit Liner
- Upcoming shipment deliveries in 2015
- Review of 1st China shipment Lessons Learned
- Review of preliminary Transportation Plan of 2nd China Shipment
- Review of MoM

ANDRITZ **Hydro**

Indoor Storage

Indoor Storage

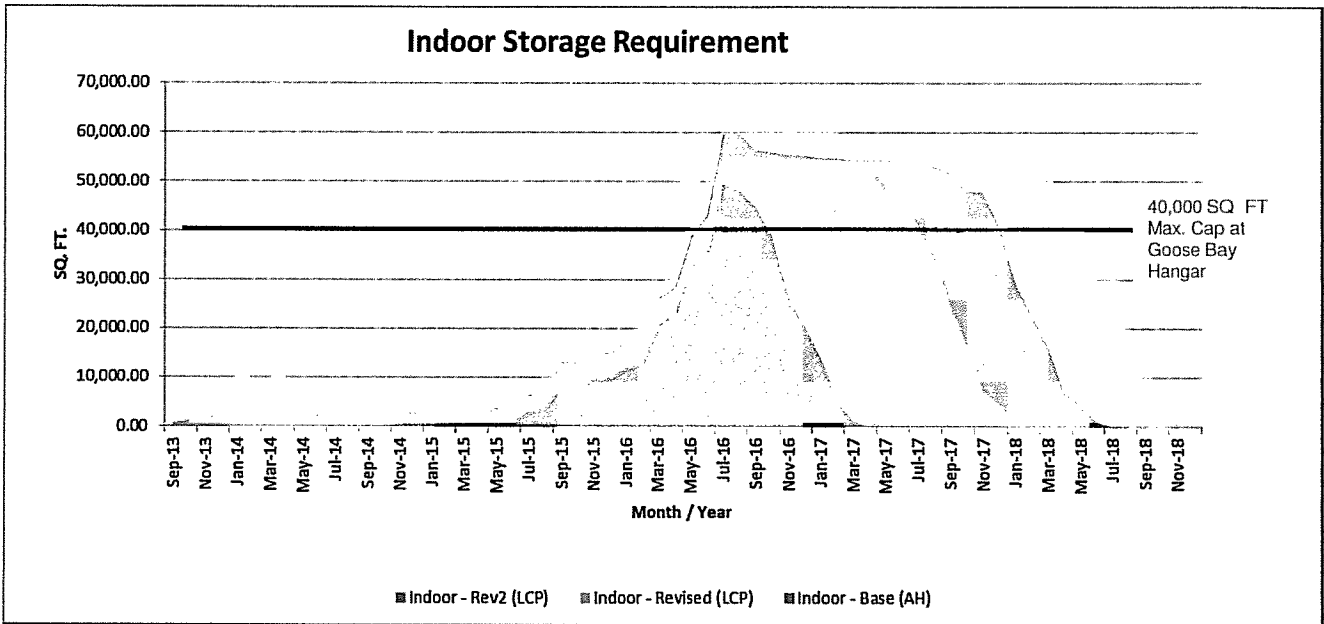
Andritz Hydro Base Plan vs. Revised Schedule (LCP) – October 2014



Revised schedule based on delayed start dates (approx. 9.5 months/unit)



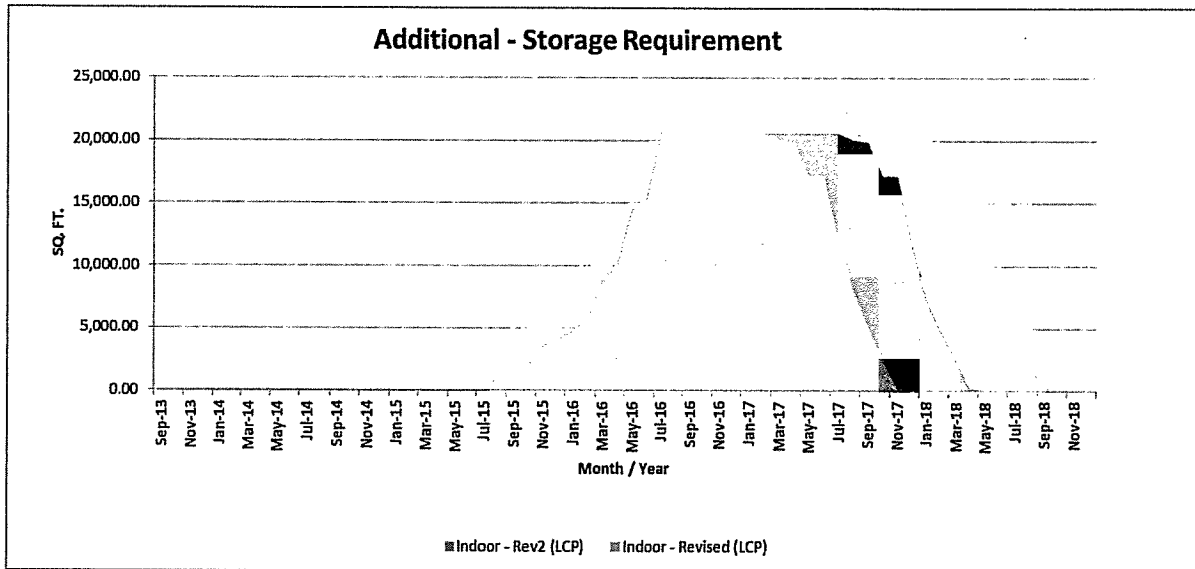
Indoor Storage
Andritz Hydro Base Plan vs. Revised Schedule (LCP) – June 2015



Revised schedule based on Additional Delay



Indoor Storage – Overflow beyond 40,000 sq. ft. allowed at Goose Bay Hangar



Indoor Storage - Overflow

Indoor – AH Base Plan - Overflow

Start Date	Location	Timeline	SQ FT Requirement
July 2016	Andritz Hydro Peterborough Warehouse	3 Months (July 2016 – September 2016)	Avg. Required: 7,400 SQ FT

Indoor – LCP Revised (13 Months) – Overflow & Heated Warehouse

Start Date	Components	Timeline	SQ FT Requirement
August 2015	All Electrical Components	34 Months (August 2015 – May 2018)	402,050 Cumulative SQ. FT. Max: 20,600 SQ FT



Indoor Storage Cost Comparisons - Budgetary

	10-Month Delay			13-Month Delay	
	Option #1 - Original Pricing (CHR-111-00) GBH + Air Shelter (Qty 1)	Option #1 - Revised Pricing GBH + Air Shelter (Qty 1)	Option #2 GBH + MTL Warehouse	Option #1 GBH + Air Shelter (Qty 2)	Option #2 GBH + MTL Warehouse
Goose Bay Hangar (max. capacity 40,000 sq. ft.)	\$1,765,403	\$1,765,403	\$1,765,403	\$2,269,403	\$2,269,403
Air Shelter (max. capacity 11,424 sq. ft for each shelter)	\$1,255,840	\$2,058,584	n/a	\$4,117,168	n/a
Montreal Warehouse Facility – Heated Storage (Poles, BOP, Punchings, Bars, Rotor connections, Rotating Rings, Thrust Rings, Circuit Rings, Rim Plates) - max. 20,600 sq. ft.	n/a	n/a	\$3,092,873	n/a	\$3,654,635
Total	\$3,021,243	\$3,823,987	\$4,858,276	\$6,386,571	\$5,924,038

Notes:

- Two (2) Air Shelters will be required under Option #2 if the schedule is further delayed beyond 10 months. Extra space will be required.
- Primary Embedment Parts are not included above and will be charged to LCP via CHR-118.

Monthly charge to LCP for further delay beyond 13 months:

- Goose Bay Hangar: \$168,000/month (40,000 sq. ft.)
- MTL Warehouse (Heated Storage): \$187,254/month (20,600 sq. ft.)
- Air Shelter (Qty 1): \$20,000/month (11,424 sq. ft.)

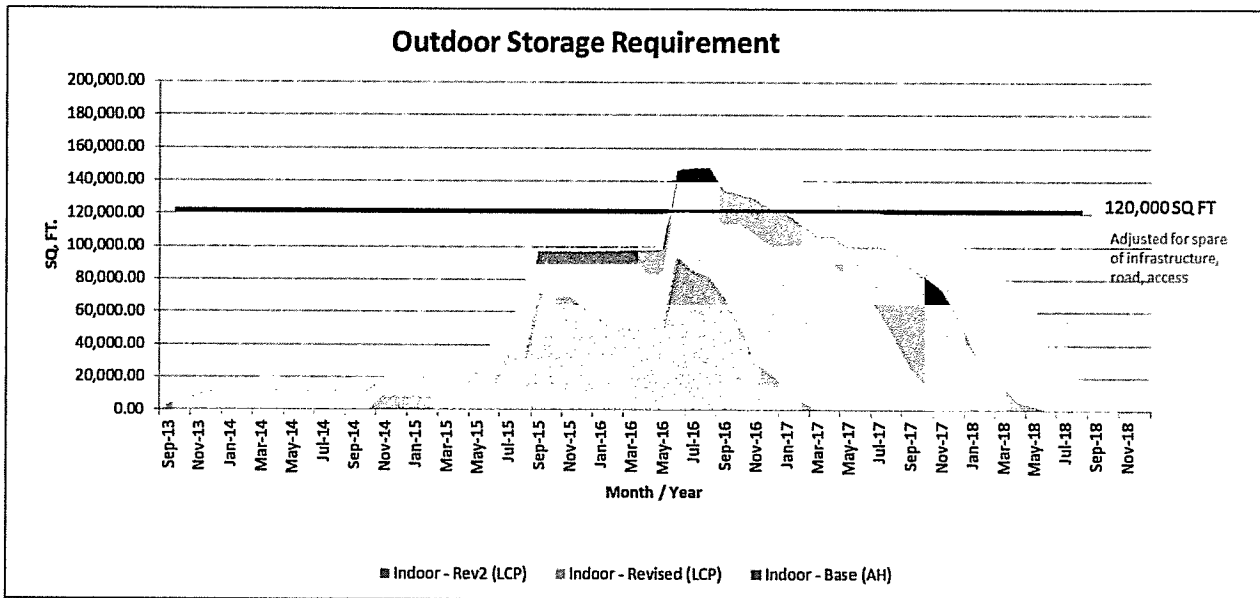
Note: The above price is only valid for 12 months beyond the 10-month initial delay.



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Outdoor Storage

Outdoor Storage Andritz Hydro Base Plan vs. Revised Schedule (LCP)



Outdoor Storage

Andritz Hydro Base Plan vs. Revised Schedule (LCP) – Cont'd

Outdoor Storage Requirement (no Shelter) – Base Plan:

Net Capacity:	174,000 SQ FT
Net Capacity adjusted after access:	120,000 SQ FT
AH Base Plan Requirement:	95,000 SQ FT
Revised Schedule (LCP) Requirement:	168,800 SQ FT
Revised Schedule (LCP) Additional delay Requirement:	48,800 SQ FT

Outdoor Storage Requirement w/ 1 Shelter – Option 1:

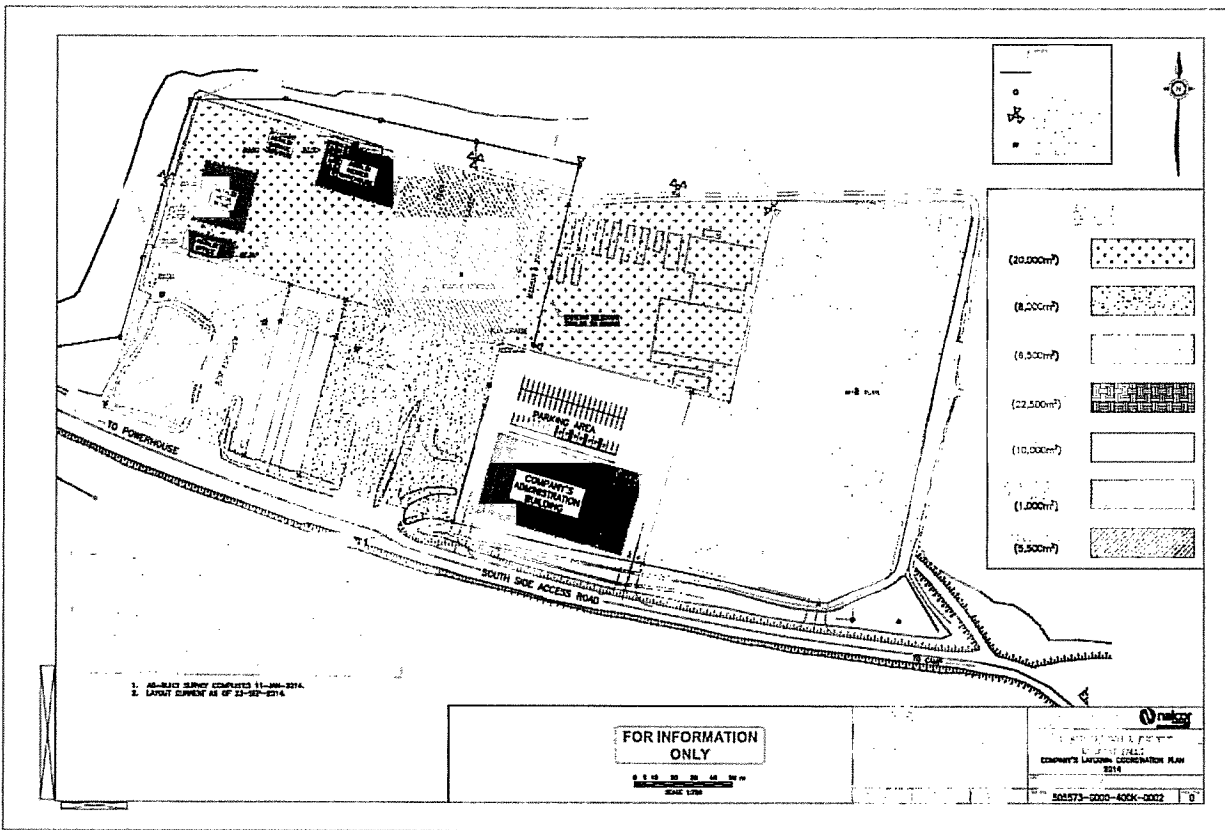
Net Capacity:	174,000 SQ FT
Net Capacity adjusted after access:	120,000 SQ FT
AH Base Plan Requirement:	95,000 SQ FT
Revised Schedule (LCP) Requirement:	185,000 SQ FT
Revised Schedule (LCP) Additional delay Requirement:	65,000 SQ FT

Outdoor Storage Requirement w/ 2 Shelters – Option 2:

Net Capacity:	174,000 SQ FT
Net Capacity adjusted after access:	120,000 SQ FT
AH Base Plan Requirement:	95,000 SQ FT
Revised Schedule (LCP) Requirement:	201,200 SQ FT
Revised Schedule (LCP) Additional delay Requirement:	81,200 SQ FT



Laydown Storage Plan – Revised (Option 1 w/ one Air Shelter only)



Outdoor Storage – Actions

- LCP to issue an CHR by end June 2015.

- AH to provide a proposal in response to the LCP's CHR including but not limited to the following:
 1. Additional 6,000 sq. m. (or 65,000 sq. ft.) required within 5km radius from current AH site laydown area for the 4th Shipment from China (U3 and U4 T&G Components).
 2. Additional 16,200 sq. ft. required for a second Air Shelter (TBA) – if Option 2 is selected. Both Air Shelters (2) must be installed at the same location.
 3. Erection of the Air Shelter(s) must be in the summer (July) of 2015.
 4. Additional preservation of outdoor storage components (long-term protection).
 5. Removal of long-term preservation before installation.
 6. Fencing, jersey barriers, security and inspections.
 7. Snow removal (amount of seasons depends on schedule delay).
 8. Double handling of the parts if required (dependent on laydown area condition).
 9. Tarp replacement and other consumables for potential damage of the packaging during the additional outdoor storage.

- LCP to confirm the availability of the additional outdoor storage area at site (see Items 1 and 2 above).

Items to Remedy in Laydown Area Prior to 2nd China Shipment Delivery

- Laydown Area investigation to determine over-all ground stability, impact of spring thaw conditions and identify areas of concern (AH will conduct an informal investigation and will provide recommendations for LCP's consideration)
- LCP to remove of all non-AH equipment from the AH Laydown Area:
 - Trailers
 - Containers
 - Culverts
 - Hydro Pole
 - Other ?
- AH will establish a secure perimeter for protection of AH components from Non-AH traffic circulation:
 - Fencing
 - Jersey Barriers
 - Other ?
- AH will establish limited accessibility through entrances to AH Laydown Area for non-essential traffic circulation

Note: Commercial implications will be evaluated separately.

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Deliveries of U3 & U4 Pit Liners (June 2015)

U3 & U4 Pit Liner Deliveries to Site

- AH T&G Site Team has not mobilized to Site.
- AH proposed Step #2 via letter AH-MUS-PM-0444 on May 14th, 2015; LCP's response is overdue as of today (deadline: May 27th, 2015).
- Delivery dates:
 - U3: June 4th, 2015 (Actual date)
 - U4: June 11th, 2015 (current plan)

Plan:

- AH will send a Supervisor to site to manage the reception/offloading of Units #3 and #4 Pit Liners.
- Subcontractor (Astaldi) will be used to offload the components at site. The associated costs of labour and equipment (crane, etc.) will be back-charged to LCP.

Impacts of Schedule Delay on AH
Extension of Project Time – Costs for AH Staff and Equipment

Cost / Benefit Comparison

Activity	Cost Share?	LCP cost
Reception of China Shipment #2	Cost Share?	LCP cost
Reception of Cdn\Eupn Components	Cost Share?	LCP cost
Reception of China Shipment #3	Cost Share?	LCP cost
Erection of LCP Air Shelter	LCP Cost	LCP cost
90 Day Readiness	Yes	No

**Cost sharing ratios TBD*

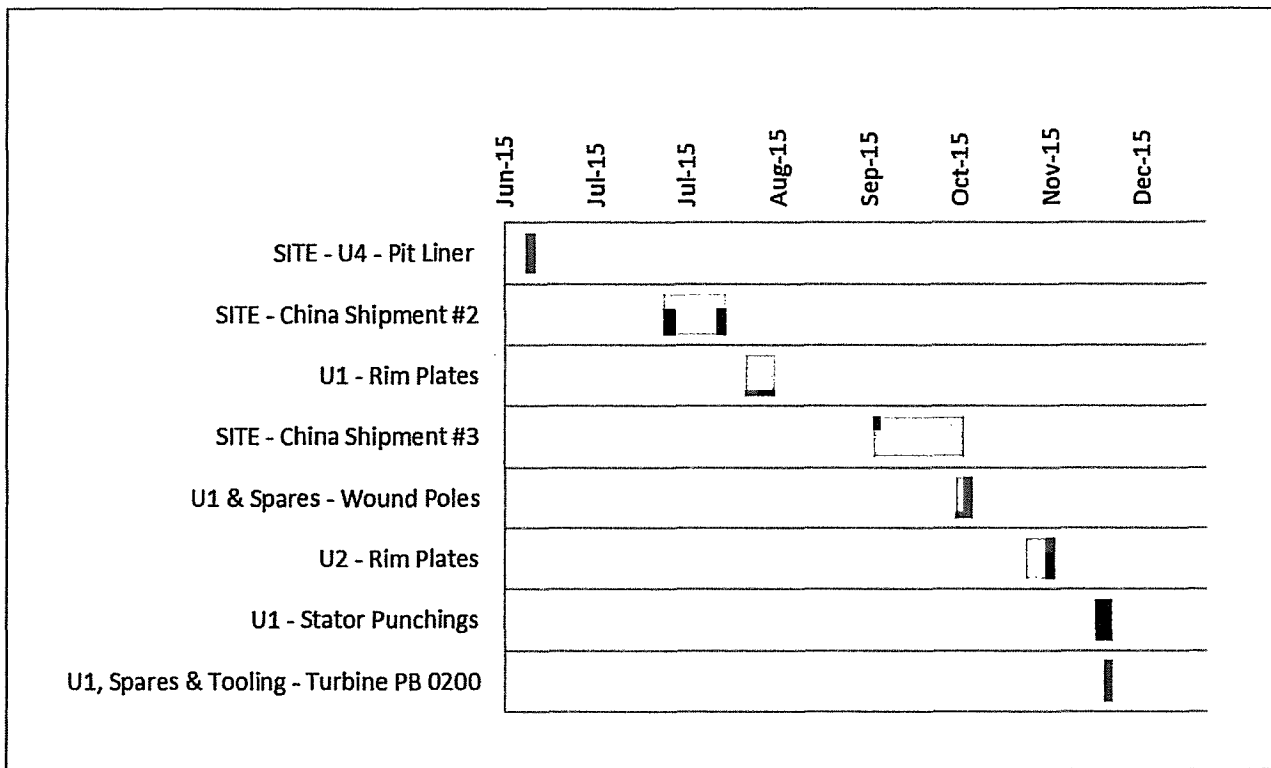
This slide is from the AH's presentation made to LCP on 16-Apr-2015 (Ref. AH-MUS-PM-0218)





Upcoming Shipment Deliveries in 2015

Main Upcoming Shipment Deliveries in 2015





Review of 1st China Shipment Lessons Learned

Lessons Learned – Muskrat Falls – June 2015

Shipments (Focus Canada/China)

Disrupted Normal Flow of Material Has Adverse Impact

Site Access – Delivery Delays

Black Rock Bridge	Traffic Closure (MOT)	Working with Local MOT Authority - Transport Permit Conditions
Gate Clearance/Registration	Time Consuming – All Personnel	Nominated Carrier Awen / Robert will Complete Full Site Orientation
Site Escort	Required at all times, including when equipment empty	Greatly Reduced by Carrier Completing Site Orientation
Shift Change (2x)	<ul style="list-style-type: none"> - 05:00 to 07:00 and 17:00 to 19:00 - Blackout approximately 1h before and 1h after - Finite delivery times: 8:00 to 15:00 = very small window 	
Traffic Control	<ul style="list-style-type: none"> - Strictly maintained - Site road conditions - Other contactor deliveries can impede 	Road Conditions Inspection 3, 2, 1 Week in Advance
Road Restrictions	Larger components require full road closure (ex. Stay Ring)	Add Bulkhead - See Delivery Plan

- Exceptionally difficult to establish normal delivery flow
- Greatly extends delivery timetable necessary





**Review of Preliminary Transportation Plan (2nd China
Shipment)**

Preliminary Schedule – Base Plan – Revision 2

Vessel Arrival July 23, 2015 (Estimate)

Day 1 – 16 (July 20th – August 4th)

Road Closure Required

Schedule	Planned Date	Amount of Trucks	Component	Action	Equipment	Location
Day 1-3	July 20-22 (Monday-Wednesday)	-	-	Mobilization of Transport Equipment Preparation and Organization at the Goose Bay Port i.e. Equipment, Materials Dunnage, Safety Meeting		Goose Bay Port
Day 4-7	July 23-26 (Thursday-Sunday)	-	-	Setup Crane	130 Ton Crane	Muskrat Falls Site
		-	-	Vessel Arrival Vessel Discharge and Port Laydown*See Appendix 2 Vessel Departure		Goose Bay Port
Day 8	July 27 (Monday)	4	Miscellaneous Indoor Storage Crates	Load at Goose Bay Port Laydown	Flat Bed Trailers	Goose Bay Port Laydown to Goose Bay Hanger
		4	Stay Ring U4	Load at Goose Bay Port Laydown	RGN Trailers and Escorts	Goose Bay Port Laydown to Muskrat Falls Site
Day 9	July 28 (Tuesday)	2	Miscellaneous Indoor Storage Crates	Load at Goose Bay Port Laydown	Flat Bed Trailers	Goose Bay Port Laydown to Goose Bay Hanger
		4	Stay Ring U3	Load at Goose Bay Port Laydown	RGN Trailers and Escorts	Goose Bay Port Laydown to Muskrat Falls Site
Day 10	July 29 (Wednesday)	4	Stay Ring U2	Load at Goose Bay Port Laydown	RGN Trailers and Escorts	Goose Bay Port Laydown to Muskrat Falls Site

Preliminary Schedule – Base Plan

Vessel Arrival July 23, 2015 (Estimate)

Day 1 – 16 (July 20th – August 4th)

Road Closure Required

Schedule	Planned Date	Amount of Trucks	Component	Action	Equipment	Location
Day 11	July 30 (Thursday)	2	Upper DTL with Bulkhead U4 (2 Halves)	Load at Goose Bay Port Laydown	RGN Trailers and Escorts	Goose Bay Port Laydown to Muskrat Falls Site
		2	Lower DTL U4 (2 Quarters)	Load at Goose Bay Port Laydown	Double Drop Trailers	Goose Bay Port Laydown to Muskrat Falls Site
Day 12	July 31 (Friday)	2	Lower DTL U4 (2 Quarters)	Load at Goose Bay Port Laydown	Double Drop Trailers	Goose Bay Port Laydown to Muskrat Falls Site
		2	Upper DTL with Bulkhead U3 (2 Halves)	Load at Goose Bay Port Laydown	RGN Trailers and Escorts	Goose Bay Port Laydown to Muskrat Falls Site
Day 13	August 1 (Saturday)	4	Lower DTL U3 (4 Quarters)	Load at Goose Bay Port Laydown	Double Drop Trailers	Goose Bay Port Laydown to Muskrat Falls Site
Day 14	August 2 (Sunday)	1	Draft Tube Liner Extension U2-U4	Load at Goose Bay Port Laydown	Flat Bed Trailer	Goose Bay Port Laydown to Muskrat Falls Site
Day 15	August 3 (Monday)	4	Upper DTL U2 (4 Quarters)	Load at Goose Bay Port Laydown	Double Drop Trailers	Goose Bay Port Laydown to Muskrat Falls Site
Day 16	August 4 (Tuesday)	4	Lower DTL U2 (4 Quarters)	Load at Goose Bay Port Laydown	Double Drop Trailers	Goose Bay Port Laydown to Muskrat Falls Site
		-	-	Dismantle Crane	130 Ton Crane	Muskrat Falls Site



Attachment #8

LCP Cost Estimate

COST ESTIMATE - Capital Cost				Project No.: 505573		Date: 19/Jan/2016											
Description: CHR-122 Long term Storage Warehouse				Change #: CHR-122		Prepared By: P. Lemay											
				Rev. No.: R-00													
Item no.	Quantity	un.	UNIT COST				TOTAL COST										
			Job Hours		Material	Eqmt.	Total Unit Cost	Labour	Material	Eqmt.	TOTAL						
Description (1)		Description (2)		Total Hrs	Hrs												
1	Warehouse Storage fee In Montreal	433,024 sq.ft. Month from Sept 15 th i March 2018 (Quotation from LITOM Inc, Villa d'Arjou)	419,834	sf	-	-	\$ 1.90	\$ -	\$ 1.90	\$ -	\$ 797,685	\$ -	\$ 797,685	917,337 \$	965,618 \$		
	Material Handling at Mtl Warehouse	186 local trucks loads (IN) at \$ 2,000 / each 178 local trucks loads (OUT) at \$ 2,000 / each 2 operators x 2 hrs x 364 times = 2 labors x 2 hrs x 364 times 1 Supervision & Logistic x 4 hrs x 250 times	186 178 1,456 1,456 1,000	un un hrs hrs hrs	- - 1,000 1,000 1,000	- - 1,456 1,456 1,000	\$ - \$ - 70 \$ 70 \$ 125 \$	\$ - \$ - \$ - \$ - \$ -	\$ 2,000 \$ 2,000 \$ 70 \$ 70 \$ 125	\$ - \$ - \$ 101,920 \$ 101,920 \$ 125,000	\$ - \$ - \$ - \$ - \$ -	\$ 372,000 \$ 356,000 \$ 101,920 \$ 101,920 \$ 125,000	\$ 1,215,366	\$ 1,231,320	2.52 \$		
	Inventory Control & Material Management	One clerk for 31 months @ 40 hrs / month = One Supervisor for 31 months @ 20 hrs / month =	1,240 620	hrs hrs	1,000 1,000	1,240 620	80 \$ 125 \$	\$ - \$ -	\$ 80 \$ 125	\$ 99,200 \$ 77,500	\$ - \$ -	\$ 99,200 \$ 77,500	\$ 176,700	\$ 203,205	\$ 241,760	0.42 \$	
	Inspection	Two days per months @ 8 hrs / day x 31 months =	496	hrs	1,000	496	125 \$	\$ -	\$ 125	\$ 62,000	\$ -	\$ 62,000	\$ 71,300	\$ 76,880	0.16 \$		
	Double transportation from China components	8 truck loads from HVGB to Mtl back and forth	16	ea	-	-	\$ 9,500	\$ -	\$ 9,500	\$ -	\$ 152,000	\$ -	\$ 152,000	\$ 174,800	\$ 150,880		
	Trilage for the China Components, twice as long than local truck handling up above..l	2 operators x 8 hrs x 8 times = 2 labors x 8 hrs x 8 times 1 Supervision & Logistic x 4 hrs x 8 times	128 128 128	hrs hrs hrs	1,000 1,000 1,000	128 128 128	70 \$ 70 \$ 125 \$	\$ - \$ - \$ -	\$ 70 \$ 70 \$ 125	\$ 8,960 \$ 8,960 \$ 16,000	\$ - \$ - \$ -	\$ 8,960 \$ 8,960 \$ 16,000	\$ 33,920	\$ 39,008	\$ 53,155		
	SUB - TOTAL															2,279,145 \$	2,621,016 \$
	Administration & Profit 15%															341,872 \$	
	GRAND TOTAL															2,621,016 \$	

LCP Payment Schedule versus Andritz Cash Flow
 CIMFP Exhibit P-02979

		Predicted Expenditures						
		Sq Ft	Rental	Trucking	Inspection	GB/China	Total	Cum Expend
2015	Sep	1147	2638.1	41044	10278.7		53960.8	53960.8
	Oct	1147	2638.1	41044	10278.7		53960.8	107921.6
	Nov	4525	10407.5	41044	10278.7		61730.2	169651.8
	Dec	4877	11217.1	41044	10278.7		62539.8	232191.6
2016	Jan	5756	13238.8	41044	10278.7	102017.5	166579	398770.6
	Feb	7023	16152.9	41044	10278.7		67475.6	466246.2
	Mar	9127	20992.1	41044	10278.7		72314.8	538561
	Apr	10551	24267.3	41044	10278.7		75590	614151
	May	14100	32430	41044	10278.7		83752.7	697903.7
	Jun	16101	37032.3	41044	10278.7		88355	786258.7
	Jul	19784	45503.2	41044	10278.7	102017.5	198843.4	985102.1
	Aug	20396	46910.8	41044	10278.7		98233.5	1083335.6
	Sep	20396	46910.8	41044	10278.7		98233.5	1181569.1
	Oct	21481	49406.3	41044	10278.7		100729	1282298.1
	Nov	22695	52198.5	41044	10278.7		103521.2	1385819.3
	Dec	22695	52198.5		10278.7		62477.2	1448296.5
2017	Jan	22695	52198.5		10278.7		62477.2	1510773.7
	Feb	22695	52198.5		10278.7		62477.2	1573250.9
	Mar	22695	52198.5		10278.7		62477.2	1635728.1
	Apr	22695	52198.5		10278.7		62477.2	1698205.3
	May	22695	52198.5		10278.7		62477.2	1760682.5
	Jun	21937	50455.1	61566	10278.7		122299.8	1882982.3
	Jul	19862	45682.6	61566	10278.7		117527.3	2000509.6
	Aug	19150	44045	61566	10278.7		115889.7	2116399.3
	Sep	16700	38410	61566	10278.7		110254.7	2226654
	Oct	13751	31627.3	61566	10278.7		103472	2330126
	Nov	6920	15916	61566	10278.7		87760.7	2417886.7
	Dec	3900	8970	61566	10278.7		80814.7	2498701.4
2018	Jan	1566	3601.8	61566	10278.7		75446.5	2574147.9
	Feb	538	1237.4	61566	10278.7		73082.1	2647230
	Mar	233	535.9	61566	10278.7		72380.6	2719610.6
		419833	965615.9	1231320	318639.7	204035	2719611	

LCP Payments	Cummulative	AH Cash Flow Pay-Expend
	0	(53961)
	0	(107922)
	0	(169652)
	0	(232192)
350000	350000	(48771)
225000	575000	108754
	575000	36439
	575000	(39151)
325000	900000	202096
	900000	113741
	900000	(85102)
325000	1225000	141664
	1225000	43431
	1225000	(57298)
250000	1475000	89181
	1475000	26704
	1475000	(35774)
200000	1675000	101749
	1675000	39272
	1675000	(23205)
250000	1925000	164318
	1925000	42018
	1925000	(75510)
300000	2225000	108601
	2225000	(1654)
	2225000	(105126)
300000	2525000	107113
	2525000	26299
	2525000	(49148)
	2525000	(122230)
194611	2719611	0