From: ronpower@lowerchurchillproject.ca
Sent: Tuesday, March 17, 2015 5:20 PM
To: michaelharris@lowerchurchillproject.ca
Subject: Fw: Astaldi: Revised Monthly Report No. 1 Fw: NE-LCP-TRANSMIT-017207: INFORMATION (WF-006757) Component 1 - CH0007 - Construction of Intake, Powerhouse Spillway and Transition Dams - Astaldi Document for Review PM-A06 (Due 26-Apr-2014) Lead Reviewe...
Attachments: Astaldi Monthly Report to Nalcor - period ending 25-Feb-2014 Rev-A2.pdf

revised version

----- Forwarded by Ron Power/NLHydro on 03/17/2015 04:49 PM -----

From: Ron Power/NLHydro

To: Paul Harrington/NLHydro@NLHydro, Scott O'Brien/NLHydro@NLHYDRO, Ed Over/LCP/NLHydro@NLHYDRO, Lance Clarke/NLHydro@NLHydro, Bruce Hallock/NLHydro@NLHYDRO, Desmond Tranquilla/NLHydro@NLHYDRO, Mike Collins/NLHydro@NLHYDRO,

Date: 04/12/2014 04:01 PM

Subject: Astaldi: Revised Monthly Report No. 1

Fw: NE-LCP-TRANSMIT-017207: INFORMATION (WF-006757) Component 1 - CH0007 - Construction of Intake, Powerhouse Spillway and Transition Dams - Astaldi Document for Review PM-A06 (Due 26-Apr-2014) Lead Reviewer: Mike Collins

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fyi - complete turnaround from the first version for the same period.

Astaldi Monthly Report to Nalcor - period ending 25-Feb-2014 Rev-A2.pdf

----- Forwarded by Ron Power/NLHydro on 04/12/2014 04:28 PM -----

From: "Aconex Notification (LCP Rev Controlled)" <noreply@aconex.com>

To: ronpower@nalcorenergy.com,

Date: 04/11/2014 04:03 PM

Subject: NE-LCP-TRANSMIT-017207: INFORMATION (WF-006757) Component 1 - CH0007 - Construction of Intake, Powerhouse Spillway and Transition Dams - Astaldi Document for Review PM-A06 (Due 26-Apr-2014) Lead Reviewer: Mike Collins

Dear **Ron**,

You have received a new Transmittal: NE-LCP-TRANSMIT-017207

Project:	LCP Rev Controlled
Type:	Transmittal
Mail Number:	NE-LCP-TRANSMIT-017207
Cc:	Stephen Chorny, Nalcor Energy Mr Frank Gillespie, Nalcor Energy Mr David Green, Nalcor Energy Jason Kean, Nalcor Energy Kevin Miller, Nalcor Energy Andre Mosser, Nalcor Energy Mr Scott O'Brien, Nalcor Energy Ms Marion Organ, Nalcor Energy **Ron Power, Nalcor Energy** Greg Snyder, Nalcor Energy
From:	C Knight, Nalcor Energy
Sent:	11/04/2014 4:02:59 PM NDT (GMT -02:30)
Reason:	Issued for Information
Status:	N/A
Subject:	**INFORMATION (WF-006757) Component 1 - CH0007 - Construction of Intake, Powerhouse Spillway and Transition Dams - Review PM-A06 (Due 26-Apr-2014) Lead Reviewer: Mike Collins**

Uploaded Document

Document No.	Revision	Title
MFA-AT-SD-0000-PM-A06-0001-01	A2	Monthly Progress Report - Period Endir

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Regards,
The Aconex Team

Document Front Sheet

nalcor energy
LOWER CHURCHILL PROJECT

NE-LCP Contractor/Supplier

Contract or Purchase Number and Description: CH0007-001 Intake & Powerhouse,Spillway & Trans Dams	Contractor/Supplier Name:
Document Title: Monthly Progress Report – Period Ending 25-Feb-2014	Total Number of Pages Incl. Front Sheet: 33
Contractor Document Number: MFA-AT-SD-0000-PM-A06-0001-01	Revision Number: A2
Supplier Document Number:	Revision Number:
NE-LCP Document Number: MFA-AT-SD-0000-PM-A06-0001-01	NE-LCP Issue Number: A2
Approver's Signature:	Date (dd-mmm-yyyy): 09-Apr-2014 / Review Class:
Comments:	Equipment Tag or Model Number:

NE-LCP

REVIEW DOES NOT CONSTITUTE APPROVAL OF DESIGN DETAILS, CALCULATIONS, TEST METHODS OR MATERIAL DEVELOPED AND/OR SELECTED BY THE CONTRACTOR, NOR DOES IT RELIEVE THE CONTRACTOR FROM FULL COMPLIANCE WITH CONTRACTUAL OR OTHER OBLIGATIONS.

- ☐ 01 – REVIEWED AND ACCEPTED – NO COMMENTS
- ☐ 02 – REVIEWED – INCORPORATE COMMENTS, REVISE AND RESUBMIT
- ☐ 03 – REVIEWED - NOT ACCEPTED
- ☐ 04 – INFORMATION ONLY
- ☐ 05 – NOT REVIEWED

Lead Reviewer:	Date (dd-mmm-yyyy):	Project Manager:	Date (dd-mmm-yyyy):
NE-LCP Management:	Date (dd-mmm-yyyy):		

General Comments:

ASTALDI CANADA Inc.	Lower Churchill Project | Muskrat Falls CH0007: Civil Works **MONTHLY PROGRESS REPORT** Period Ending 25 February 2014	NO: 001 Page 1 of 32

MONTHLY REPORT NO. 001

Figure 1: Spillway Cover - 21 February 2014

	Name	Date	Signature
Prepared	~~Lorna Tardif~~ Enrico Violato	March 24th, 2014	
Reviewed	Enrico Violato	March 24th, 2014	
Reviewed	Vittorio Robiati	March 24th, 2014	
Reviewed	Roger Hopkins	March 24th, 2014	
Approved	Ken Chryssolor	March 24th, 2014	

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ATTACHMENTS

1. Health and Safety statistics January 2014, February 2014
2. Register of Environmental Incidents
3. Environmental Compliance – List of Permits, Acceptances, and Authorizations
4. Project Schedule – Data Date 14 February 2014
5. Astaldi Drawing Numbering Protocol
6. Concrete Pour Naming Protocol
7. Register of Astaldi Drawings
8. Register of Site Queries
9. Contractor's Laydown Area
10. Monthly Cost Report – Material and Equipment
11. Monthly Cost Report – Labour

1. Executive Summary

The Agreement between Astaldi and Nalcor for the CH0007 Contract was signed on November 29th, 2013.

During the three months of the work following the signature of the Agreement, Astaldi focused on:

- the procurement of the major subcontractors, equipment and material necessary for the execution of the work;
- the recruitment of personnel
- the development of the Health & Safety, Environmental and Quality Plans for the Project;
- mobilization to site;
- the start of the construction of the temporary works, and
- the start of the permanent works in the spillway.

This first Monthly Progress Report sets out the history of the project thus far, identifies the issues that Astaldi has faced and is facing, and presents Astaldi's current planning for the execution of the Work.

This Monthly Progress Report will be further developed in future submissions to cover the full scope of the subjects to be addressed as set out in Exhibit 3 of the Agreement.

2. Worksite Safety

During January and February, Astaldi developed its safety management structure for the project. Astaldi's site specific Health and Safety Management Plan is now approved by Nalcor and in use on the Project.

Astaldi has increased its Health & Safety personnel and now has a significant safety team in place, including:

Safety Manager	1 (Chris Edder)
Assistant Safety Manager	1 (Steve Cullen)
Health & Safety Coordinators	3
Health & Safety Administrators	3
Health & Safety Advisor	5
Health & Safety Consultant	1

In the crusher area, Astaldi's subcontractor, Labrador Ready Mix (LRM) encountered problems with dust and with general maintenance. A dust suppression system was added to the crusher plant, however the system did not fully achieve the desired results. The winter operation of the plant, and the inability to use water to suppress dust, continues to cause problems. LRM is currently looking at the required adjustments to the crusher facilities to resolve this.

Up to February 25, 2014 Astaldi has had a single High Potential Near Miss (HPNM) and 3 Near Miss incidents. The single HPNM involved 2 iron workers and a foreman. The high potential near miss was caused by a disregard for proper operating procedures and safety regulations.

The ironworkers revealed to be not sufficiently qualified and had to be removed and replaced with properly qualified workers.

The incident was properly investigated and communicated in a timely basis with management communicating to all Supervisors and Foreman's that they must educate and enforce the Safety Absolutes while promoting a safety culture.

See **Attachment 1** for the Safety Statistics Summary reports for the months of January and February 2014.

3. Environmental Compliance

Astaldi submitted its Environmental Management Plan in October of 2013 and received Nalcor approval for this plan at the end of November 2013. Astaldi submitted the Contract Specific Environmental Protection Plan in December 2013 and received Nalcor approval for this plan in early January 2014.

Astaldi has increased its Environmental personnel at site and now has a team in place including:

Environmental Manager	1 (Rober Biles)
Environmental Advisor	1 (Shem Evans)
Environmental Monitors	2

There have been 18 environmental incidents to date, all relating to relatively small spills of hydraulic fluid or engine oil.

See **Attachment 2** for the Register of Environmental Incidents.

See **Attachment 3** for a Register of Permits, Acceptances and Authorizations

Astaldi is developing training guides to sensitize and educate all Astaldi, including Astaldi subcontractor, personnel to the project environmental requirements. This will be included in the orientation program for Astaldi personnel, including subcontractor personnel.

4. Quality

Astaldi's Site Specific Quality Plan was approved for work (Code 2 approval) by Nalcor in mid February 2014. Astaldi has increased its Quality personnel on site and now its team in place includes:

Quality Assurance Manager	1 (Essam Michael)
Quality Control Manager	1 (Wayne Ball)
Quality Administrator	1
Quality Control Coordinators	2

Quality Control Inspectors 2

For the period of November 1, 2014 to Feb 25, 2014 there have been two instances of non-conformity, both relating to the crushing operations.

NCR No.	Date Raised	Initiated By	Approved By	Description	Disposition Date	Disposition By
CH0007001-0001	8-Feb-2014	Tayseer Hassanein	Bill Knox	Fine Aggregate Gradation Outside of Specification	21-Feb-2014	Wayne Ball
CH0007001-0002	16-Feb-2014	Tayseer Hassanein	Paul Oblander	Lack of Aggregate Sampling due to Lack of Communication	21-Feb-2014	Wayne Ball

5. Planning

In October 2013, the detailed planning of the early works as specified in the LNTP was developed and issued for comment to Nalcor on October 30, 2013. Astaldi considers this as the Baseline Schedule for Early Works.

In early November 2013, Astaldi's activities were transferred from the St. John's office to the Goose Bay office. At this time, updates of the Early Works schedule started. Details and additional activities were input into the schedule as well as actual status of the Early Works compared to the baseline schedule of 30 October 2013.

Astaldi issued the schedule for the construction of the Spillway to Nalcor on 17 February 2014.

As of 25 February, Astaldi continued the weekly schedule update of early works and all preparatory works for starting the Spillway concrete placement of the center section of the base slab defined as "First Concrete") and the installation of the ICS steel structure.

The Spillway detailed schedule was completed and issued to Nalcor for comments with unapproved lifts numbering on 17 February 2014. As soon as the overall lifts numbering structure was approved, planning undertook the changes of P6 activity coding to reflect the new lift codes as well as the revision of the activity ID and activity descriptions.

On 22 February 2014, planning group started to develop the Intake and Powerhouse detailed schedule while making the weekly updates.

Astaldi notified Nalcor that the Intake and Powerhouse schedules will be issued for comments on 15 March 2014. Astaldi management wishes to implement in such schedule the recovery measures taken in order to mitigate the impact of the foundations overbreak.

A key issue is to reduce the time between concrete pours from 10 or 12 days to a delay determined by the concrete strength, hydration and temperature test results, particularly for the smaller concrete pours. This will be pursued with Nalcor.

Continuation of Intake and Powerhouse schedule development will resume in early March 2014.

Once the overall schedule and the basis of planning are approved by Nalcor, the schedule will be used as the contract baseline and will be the basis for the production of the baseline progress curves. Astaldi expects Nalcor to accept the contract overall schedule about the first week of April 2014.

Astaldi will load resources on the overall contract schedule and will be able to produce the required progress curves thereafter.

See **Attachment 4** for Astaldi's Schedule – Data Date February 22nd, 2014

6. Engineering

6.1. Temporary Facilities

The Spillway cover was designed by the fabricator, Norseman. Astaldi designed the foundations. Both sets of documents, including the associated work method statements and JSA's, were submitted to Nalcor.

The status of the design of other temporary facilities, as at the end of February 2014, is as follows:

- Power house – upstream and downstream crane pads and access roads – in preliminary design phase
- Laydown area – foundations for heated warehouse – in preliminary design phase
- Waterline to C1 Area.

6.2. ICS

DPHV submitted preliminary drawings for the ICS in January and these were submitted to Nalcor for review. Nalcor advised Astaldi through revision mark-ups on DPHV drawings that the rock profile in the powerhouse was different than shown on the IFC drawings.

A meeting was held in Montreal in late January with participation from DPHV, Proco, Astaldi, SNC and Nalcor where a number of technical issues were reviewed and resolved. SNC requested changes to the ICS in order to reduce the interface between ICS and the permanent structure. Astaldi's designers were asked to reduce the number of columns. Astaldi made additional changes to improve vehicle access to the unloading bays of the ICS.

In addition, a number of action items were identified. Astaldi has generated a number of Site Queries relating to bracing locations, embedded parts, missing rock profile information, and requesting geotechnical data on rock. Responses to the site queries have been provided.

DPHV is currently redesigning the ICS to accommodate the significant rock over break situation in the powerhouse. In fact, rock is lower than anticipated under some of the ICS columns.

6.3. Lift Drawings

Astaldi completed and submitted the lift drawings for the spillway base slab, using traditional 2D technology.

Astaldi, through its consultant, SWS, is developing lift drawings using 3D technology. Astaldi will develop a sample set of lift drawings, review with its construction team, adjust as required, and then submit to Nalcor. Once accepted by both Astaldi's construction team and by Nalcor, this will form the template for all future lift drawings. It is anticipated that a sample set of lift drawings will be submitted shortly.

Astaldi developed a protocol for the numbering of all Astaldi and Astaldi subcontractor drawings. See **Attachment 5** for a copy of this.

Astaldi also developed a structure for the naming of all concrete pours and for all drawings. See **Attachment 6** for a copy of this.

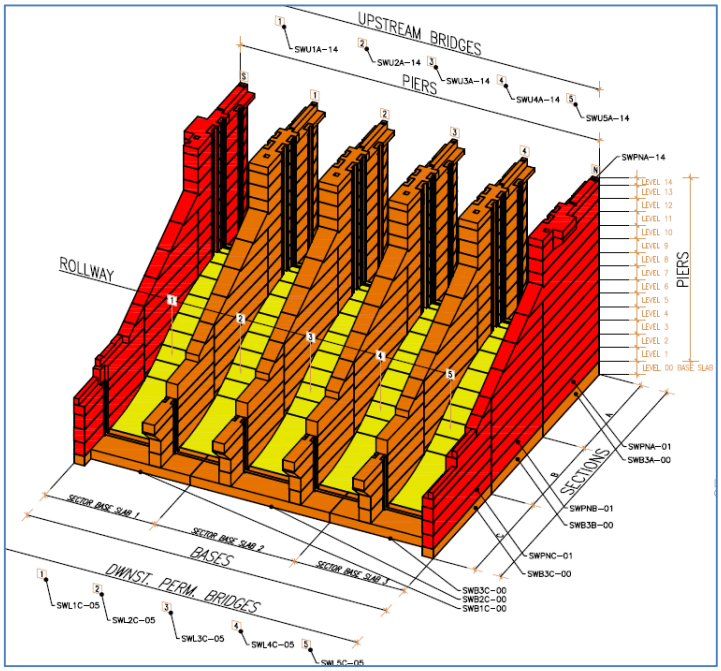

Figure 2: Pour numbering - Spillway

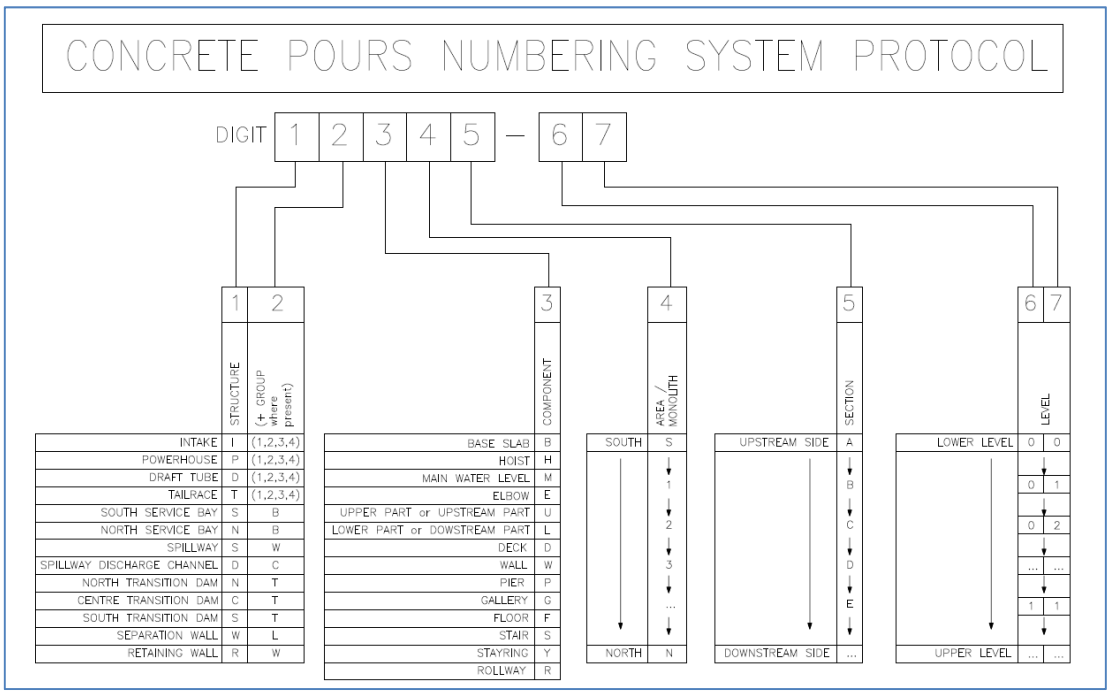

Figure 3: Pour numbering protocol

6.4. Shop Drawings – Reinforcing Steel (AGF)

Astaldi's reinforcing steel subcontractor, AGF, is currently preparing the reinforcing steel drawings using specialty software. Drawings for the spillway reinforcing steel are well advanced. Astaldi expects to start the submission process of these drawings to Nalcor once the drawing numbering system is approved.

Astaldi, in collaboration with AGF, has submitted a number of Site Queries relating to reinforcing steel and has received responses from Nalcor.

6.5. Shop Drawings – Formwork – Standard Panels (Doka)

Doka is currently working on the design of the formwork for the spillway and the powerhouse. The non-availability of the "dwg" files (drawing files in native file format – CADD) caused some challenges to this work. Doka has submitted drawings for the first pours (base slab pours) in the spillway. These are under review by Astaldi for compatibility with the spillway cover system and will be submitted to Nalcor as soon as any interferences are resolved.

6.6. Shop Drawings – Formwork – Draft Tubes (CEI)

CEI have submitted preliminary schematic drawings of the draft tube formwork. Design and drafting efforts are in progress, as per the following table.

Item	Description	Weight	% Complete
A	Design	4%	59.9%
B	CAD Modeling	9%	68.1%
C	Shop Drawings	16%	33.8%
D	Steel Fabrication	7%	0.0%
E	Wood Fabrication	64%	5.1%
	TOTAL		17.2%

Figure 4: Progress of Draft Tube formwork – as at 14 March 2014

6.7. Document Registers

See **Attachment 7** for a register of Astaldi drawings.

See **Attachment 8** for a register of Site Queries

7. Procurement

Since the signature of the Agreement on November 29th, 2013, Astaldi has made the following procurement commitments:

- Concrete and aggregate supply – Labrador Ready Mix (LRM)
- ICS
- Reinforcing steel – supply and install – AGF
- Formwork – standard panels – DOKA
- Formwork – draft tubes – CEI
- Main office trailers and other site trailers as well as containers
- Material handling equipment – Konecranes
- Concrete handling equipment – Pompaction
- Other heavy equipment (compressors, loaders, excavators, graders, boom trucks, forklifts, articulating boom lifts, etc.)
- Small equipment of all types.

The requirement to transfer to subcontractors some of Astaldi's commitments under the CWA is causing some issues in finalizing key subcontracts. Work is progressing based on Letters of Intent and Astaldi has mobilized a legal and technical team in order to help finalizing the subcontracts as quickly as possible.

8. Construction

8.1. Site Mobilization

Astaldi mobilized to site in November 2013. During the months of December, January and February, Astaldi advanced its temporary installations.

The focus of Astaldi's efforts in the first months of the project was in finalizing the selection of the key subcontractors and suppliers including:

- Reinforcing steel (AGF)
- Crushing and concrete batching (Labrador Readymix)
- Design, Fabrication and Erection of ICS (DPHV / Proco
- Spillway cover (Norseman)
- Standard Formwork (Doka)
- Formwork for draft tubes (CEI)

Astaldi ordered all of the major equipment required for material handling and concrete distribution.

Mobilization to site started in November, 2013. The Goose Bay office was expanded twice to accommodate the project staff (engineering, procurement, subcontractor management, planning, cost control, H/R, and administration as well as office space for subcontractors). Some issues have been addressed in terms of availability of rooms in the camp and communication systems (internet).

Site offices are now operational. Astaldi recruited staff and direct labour.

A shipment of equipment was held up due to lack of access to the Goose Bay harbor. Some equipment was stored temporarily in Goose Bay.

Astaldi found out that the dewatering system installed by the previous contractor and handed over to Astaldi was not suitable for use in winter conditions. The issue was addressed and solved with the replacement of most of the components of said pumping systems.

Excavation in the powerhouse and spillway was completed in November 2013. Unlimited access to the spillway was provided to Astaldi in December 2013.

Astaldi mobilized the equipment for crushing and batching and proceeded with the set-up of this equipment. The concrete tests have not been completed yet, due to some problems with dust at the crushing plant. Astaldi is planning the action required in order to mitigate this delay.

Additional mobilization efforts include:

- Set up of living accommodations in Goose Bay (in part required due to non-availability of rooms in camp).
- Set up of site transportation system (busses and vehicles)
- Installation of site radio system

Project communications remain hampered by inadequate internet access.

8.2. Temporary Works

Astaldi constructed the access roads into both the spillway and the powerhouse and started road maintenance in early February 2014. This work is proceeding well.

In the powerhouse, Astaldi proceeded with dewatering and ice removal, after having made some modifications to the dewatering system in order to make it functional in winter conditions.

The bridge at the Mackenzie River became unusable due to high water levels. Nalcor required Astaldi allocate earthworks resources to the construction of a by-pass road.

Work proceeded with the installation of the office trailers in the various work areas and in the Astaldi laydown area. The schematic below shows the office trailer location and designation in the Astaldi laydown area.

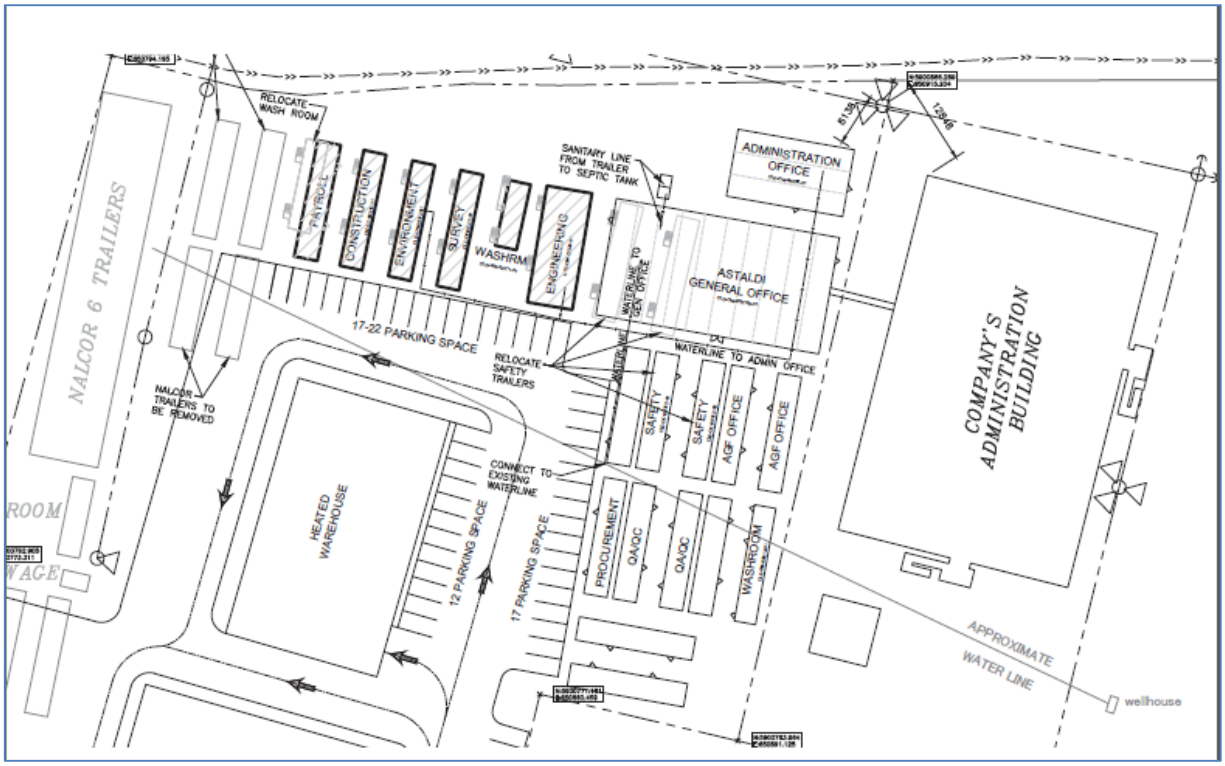

Figure 5: Astaldi's Laydown Area

The actual drawing is included as **Attachment 9** to the report.

8.3. Sand / Aggregates / Concrete Production

Astaldi opened the sandpit in Area GD11 in December 2013, constructed the access road, cleared trees and removed overburden. The screen was installed in February and sand production started in late February.

Astaldi winterized the temporary batch plant including closing in the facilities and installing steam lines for sand and aggregates.

Astaldi carried out extensive gradation and other tests on sand and aggregates. The gradation of the sand is within the acceptable envelope however the gradation of the coarse aggregates is not always as anticipated. This may require an adaptation of the mix design. Astaldi's technical team will work with Nalcor to achieve the required quality of concrete.

Following Nalcor's request thereof, Astaldi directed its subcontractor to install dust suppression equipment before starting crushing operations.

An issue has arisen in respect to the amount of fines in the rock stockpile. This issue requires Astaldi to select the rock with an excavator prior to crushing and use only large boulders for crushing, setting aside the smaller rocks contaminated with fines and organic material.

8.4. Road Maintenance

Astaldi took over the road maintenance from the previous contractor on February 1st, 2014. This work is proceeding well.

8.5. Powerhouse

During a site meeting Astaldi informed Nalcor that the as-built rock profile in the powerhouse appeared to be significantly different from that shown on the drawings. Nalcor informed Astaldi that it would make changes to the IFC drawings for the powerhouse to adapt to this over break condition.

This unforeseen over break caused changes to the ICS structure and foundations. Astaldi's designer, DPHV, is currently incorporating the necessary changes into the design of this structure.

Astaldi has studied, and continues to study, its planned construction sequence, particularly in the powerhouse, in order to assess opportunities to mitigate the impact of the over break.

Work continues on the design of the ramp for the platform for the cranes on both the upstream and downstream sides of the powerhouse. Astaldi has placed temporary covers over the areas where the foundations of the ICS will be constructed. The rock in these areas is being cleaned.

8.6. Subcontractors at site

The current contractors on site / working in Goose Bay office are as follows:

- Labrador Ready Mix (LRM) (Crusher, Batching Plant at C1 Area, Sandpit at GD11).
- Cahill (Electric Service).
- Big Land Construction (Road Maintenance).
- Pencal (Bus Transportation from Accommodation Complex to Construction Site, Sewage Truck, Water-Truck, Gas supply).
- Norseman Structures (Spillway Temporary Structure).
- AGF (Reinforcing steel).
- Pennecon (Astaldi rented equipment from Pennecon to mitigate the impact of non-availability of equipment that was on the shipment delayed due to ice conditions in the Goose Bay harbor).

9. Photographs

9.1. Powerhouse

Figure 6: Intake and Powerhouse, downstream view – November 2013

Figure 7: Intake and Powerhouse, downstream view – February 2014

Figure 8: Powerhouse floor – December 2013

Figure 9: Powerhouse floor – February 2014 – dewatering in progress

Figure 10: Powerhouse D-Line - rock cleaning – January 2014

Figure 11: Powerhouse D-Line – rock cleaning – January 2014

Figure 12: Powerhouse D-Line, downstream view – February 2014

Figure 13: Rock cleaning at Powerhouse D Line for ICS foundation

9.2. Spillway

Figure 14: Spillway – December 2013

Figure 15: Spillway – January 2014

Figure 16: Spillway – February 201

9.3. Area C1

Figure 17: Batching Plant Foundations – January 2014

Figure 18: Batching Plant Foundations – February 2014

Figure 19: Batching Plant Foundations – February 2014

Figure 20: Batching Plant Foundations – February 2014

Figure 21: Crusher – February 2014

Figure 22: Crusher – February 2014

Figure 23: Crusher, dust suppression system – February 2014

Figure 24: Crusher, dust suppression system – February 2014

Figure 25: Crusher, production – February 2014

9.4. Area GD11

Figure 26: Sand Pit - Screener, extraction – February 2014

9.5. Area B

Figure 27: Temporary Batching plant – February 2014

9.6. Area E

Figure 28: Powerhouse Office Complex – February 2014

9.7. McKenzie Brook

Figure 29: Works at Mackenzie Brook – February 2014

Figure 30: Works at Mackenzie Brook - February 2014

9.8. Astaldi Laydown Area

Figure 31: Laydown Area – January 2014

Figure 32: Laydown Area – Main Office Complex - February 2014

10. Contract Administration

As of February 25, 2014 there were a total of 9 Change Requests in process, as per the following table:

Change Register #	Nalcor Request Date	Nalcor Change Order Originator	Change Description	Astaldi Response Date
0001	2013-12-13	Adam Kavanaugh	Concrete, 2nd Stage	2014-02-07
0002	2014-01-16	Jacqueline Drover	Supply of Aggregate	
0003	2014-01-26	Mel Melhem	Take over bussing	2014-02-07
0004	2014-01-31	Mel Melhem	Provision of wash cars	2014-02-07
0005	2014-02-05	Mel Melhem	Revised Quantities, Mech, Steel, Etc	
0006	2014-02-10	Mark Turpin	Supply of Aggregate	
0007	2014-02-14	Kris Roders	Construction Power Requirement	2014-02-25

As of February 25, 2014 there were a total of 2 Engineering Change Notices in process, as per the following table:

Change Register #	Nalcor Document Date	Nalcor Author of Document	Change Description	Astaldi Response Date
0001	2014-01-17	Andre Mosser	Update to Architectural and Building Envelope	
0002	2014-01-24	Andre Mosser	Isometrics and revised lighting drawings	

11. Financial Status

11.1. Invoices Submitted / Estimated

Astaldi submitted an invoice under the terms of the LNTP which billing was approved. Astaldi also submitted documentation in support of its invoices for December 2013 and January and February, 2014. The table below summarizes the invoices submitted and the estimated values of the invoices to be submitted for the periods up to the end of February 2014. The invoices for these periods will be formally submitted upon approval of the supporting documentation.

Of note, considerable effort was required to develop and implement the time sheet system required by Nalcor. The forms for this were changed on a number of occasions further to Nalcor requests.

Description	Labour Reim-burseable			Non-Labour			TOTAL
	Union	Non-Union	Total Labour	Materials / Equipment / Other	Union Travel	Escalation	
Contract Value							
Original Contract Value			585,930,225	452,104,434	29,057,891		1,067,092,550
Changes			-	-	-		-
Adjusted Contract Value			585,930,225	452,104,434	29,057,891		**1,067,092,550**
Invoiced - LNTP							
Invoiced - LNTP	34,445	792,978	827,423	4,769,541	-	-	5,596,964
Estimated Value of Invoice - Post Contract Signature							
Period ending 28 Dec 2014	- 10,160	589,235	579,075	4,463,764	-	-	5,042,839
Period ending 25 Jan 2014	397,254	554,052	951,306	5,665,386	21,529	27,164	6,665,385
Period ending 25 Feb 2014	547,254	704,052	1,251,306	5,665,386	23,000	32,000	6,971,692
Estimated Value of Invoice - Total to Date							
TOTAL	968,793	2,640,317	**3,609,110**	**20,564,077**	44,529	59,164	**24,276,880**

Figure 33: Summary of invoices to the end of February 2014 (submitted and estimated)

11.2. Cost Reports Submitted to Nalcor

Astaldi has submitted Cost Reports to Nalcor as required under the terms of the Agreement. The Cost Report for Labour is included as **Attachment 9** and for Material and Equipment is included as **Attachment 10.**

The following table provides a summary of these two cost reports as well as the corresponding amounts invoiced (or estimate of the amounts to be invoiced).

Item	Description	Labour	Material / Equipment / Travel	Total
A	Original Contract Amount	585,930,225	481,162,325	1,067,092,550
B	Revised Contract Amount	585,930,225	481,162,325	1,067,092,550
C	Incurred to Date	3,894,496	9,297,701	**13,192,197**
D	Invoiced to Date (Approved)	827,423	4,769,542	5,596,965
E	Estimated Value of Invoices (Cumulative)	3,609,110	20,667,770	**24,276,880**

Figure 34: Summary of Cost Reports - as Submitted to Nalcor

11.3. Payments Received

See **Attachment 3** for the monthly cost reports indicating the total Commitments as at Feb 25, 2014. The commitments are separated into Labor and Materials and Equipment.

Item	Date of Payment	Particulars	Amount (excl. taxes)	Amount (incl. taxes)	Cumulative (incl. taxes)
1	2-Oct-13	Initial Advance Payment (under LNTP)	15,000,000	16,950,000	16,950,000
2	13-Jan-14	Advance Payment (under Agreement)	87,429,255	98,795,058	115,745,058
3	13-Jan-14	LNTP Progress Payment	5,596,965	6,324,570	122,069,629

Figure 35: Summary of Payments Received from Nalcor

12. Human Resources

The project has added 34 project management related personnel since early February 2014. There are currently a total of 86 managers, technicians, and administrative staff in the Goose Bay and St. John's Offices. In addition, the project continues to receive support from personnel located in the Montreal and Rome offices of Astaldi. Both offices send personnel to Goose Bay frequently.

The project currently has 175 craft labour at site.

Astaldi recently hired an experience HR Manager. Astaldi's HR team continues to focus its efforts on identifying, screening, and selecting skilled candidates in accordance with the Provincial Benefits provision of the Nalcor Contract. In addition, HR is currently establishing a consistent approach to on-boarding, and the development of project specific HR processes and procedures.

To support these efforts, Astaldi has established a website for the development of its workforce. http://muskratfalls.astaldi.ca

The following table outlines the break-out of Craft Labour and Project Management staff currently on site:

Category	Craft Labor	Project Management
Innu	57	2
Labrador	62	20
Newfoundland	76	41
Outside Province	0	23
TOTAL:	175	86
Women	17	23

Figure 36: Labour at site as of February 25th, 2014

Astaldi has an established e-mail address, through which it is receiving many job applications, and will continue to utilize this address for the development of its workforce. muskratefalls@astaldi.com

13. Provincial Benefits

As described in the HR section Astaldi has a hiring process and procedures in place and are in compliance to the Provincial Benefits requirements. Nalcor's provincial benefits team and the Innu nation are pleased with this process and we will continue to be diligent in this process.

Contractors, service providers, consultants, and suppliers within Newfoundland and Labrador will be provided with full and fair opportunity to participate, on a competitive basis, in the supply of goods and services.

Astaldi currently allocates a percentage of professional services to minorities on our day-to-day projects based on contract requirements and local regulations. Astaldi has an established supplier diversity program and staff who assist in establishment and engagement of SWMBEs in a sound mentor-protégé relationship.

It is Astaldi's intention to hire as part of our team an independent consultant with experience in management of provincial benefits in Newfoundland and Labrador to ensure that establishment, management, monitoring and reporting on those benefits is recorded and improved where possible.

Astaldi has had meetings with CONA and LATP to partner for training including hiring training coordinator. Management has stated training manager to be hired.

The development of training programs on a modular basis in specialized areas including:

- Quality control
- Cost control
- Scheduling
- Project document control
- Change management
- Cold weather concreting techniques

Astaldi has identified opportunities for training programs for these areas and has been working with LATP and Innu Nation to implement a targeted wage subsidy on the job training program for some areas and training programs under LNTP for other programs.

To date Astaldi has contributed over 15 thousand dollars to communities, predominantly within Labrador.

14. Risk

Astaldi's Project Risk Register is under development and will be provided when available.