

**From:** Triassi Emanuele  
**To:** [Robasto Maurizio](#); [Hoffman Jennifer](#); [Vivian Luigi](#); [Palumbo Mauro](#)  
**Subject:** Fwd: LCP Muskrat Falls - Nalcor Kick-off Meeting 19 Dec 2013 - Astaldi Presentation and Meeting Notes  
**Date:** Saturday, December 21, 2013 9:07:01 AM  
**Attachments:** [2013 12 19 Kickoff Meeting Notes.pdf](#)  
[ATT00001.htm](#)  
[Astaldi Master Presentation - Nalcor Kickoff Meeting - December 19 2013 v4.pdf](#)  
[ATT00002.htm](#)

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Fyi

Sent from my iPad

Begin forwarded message:

**From:** "Tardif, Lorna (CA - Montreal)" <[lornatardif@deloitte.ca](mailto:lornatardif@deloitte.ca)>  
**To:** "Venturini Guido" <[g.venturini@astaldi.com](mailto:g.venturini@astaldi.com)>  
**Cc:** "Chryssolor Ken" <[k.chryssolor@Astaldi.com](mailto:k.chryssolor@Astaldi.com)>, "Triassi Emanuele" <[E.Triassi@astaldi.com](mailto:E.Triassi@astaldi.com)>, "Shelley Paul" <[p.shelley@Astaldi.com](mailto:p.shelley@Astaldi.com)>, "Morse, Drake Alexander (CA - Saint John)" <[dmorse@deloitte.ca](mailto:dmorse@deloitte.ca)>  
**Subject:** LCP Muskrat Falls - Nalcor Kick-off Meeting 19 Dec 2013 - Astaldi Presentation and Meeting Notes

Good morning,

Attached please find a copy of the Powerpoint Presentation made by Astaldi during the Kick-Off Meeting and my notes from this meeting.

My observations:

1. Nalcor stated that they were very pleased with the Astaldi philosophy of safety and quality that came through in all of the Astaldi presentations. Said that they did not always see this from contractors.
2. Nalcor placed a lot of emphasis on the requirement for the Quality Manager to be an Astaldi employee based at site (Muskrat Falls). In Nalcor's words, they will be "relentless" on this.
3. Nalcor appear to be convinced that Astaldi will move quickly with construction once they start (concreting in the spillway in February 2014)
4. Astaldi did an excellent job in presenting its project management systems (safety, environment, quality, cost control, schedule control, etc.) We have created a level of expectation that will be difficult to fulfill.
5. Nalcor are anxious to set up work sessions (break-out sessions) with Astaldi on all of these systems starting in early January.
6. Nalcor spoke at some length of the "front end loading" that they have done

– engineering, planning, etc. work done by Nalcor prior to the start of construction. Nalcor considers that they are very ready to start this project, that they know it cold – far better than Astaldi does given that Astaldi has not had the time yet to study the project to the same extent that Nalcor has.

7. Nalcor commented on the significant investment made by Nalcor in the 3D model and their recommendation that Astaldi make full use of this model during the construction process (can go to 4D – we need to look at this).

Lorna Cuthbertson Tardif, Eng., M.B.A.  
Partner | Financial Advisory/Capital Projects  
Deloitte  
1 Place Ville Marie, Suite 3000, Montreal, QC H3B 4T9  
Direct: 514-393-5088 | Main: 514 393 7115  
Fax: 514-390-4114 | Mobile: 514-261-0138  
[lornatardif@deloitte.ca](mailto:lornatardif@deloitte.ca)<<mailto:lornatardif@deloitte.ca>>  
[www.deloitte.ca](http://www.deloitte.ca)<<http://www.deloitte.ca>>

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LCP – Muskrat Falls CH0007

NALCOR KICK-OFF MEETING – December 19<sup>th</sup>, 2013 – St. John’s, Newfoundland

## MEETING NOTES

Location: Delta Hotel, St. John’s, Newfoundland

Time: 8:30 a.m. to 4:30 p.m.

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### Attached documents

1. Agenda (includes list of attendees)
2. Meeting sign-in sheet
3. NALCOR organization chart (11 x 17 – handout at start of meeting)
4. NALCOR Powerpoint presentation
5. ASTALDI Powerpoint presentation

## 1. Intro

### Paul Harrington

We are on a mission

On the project for 8 years

Can only do it by working together

We are honest sincere people and we are fair

This is the single biggest contract on this project and we have got to make it work

This project is the future of the province – carries a heavy burden

Obstacles:

Federal loan guarantee – got it

Environmental assessment – got it

Agreement with aboriginals – got it

Transmission contract is now awarded. 500 km awarded. Another 1,100 to go. Massive piece of work  
3 or 4 megaprojects all on the go at the same time

Scott, Ron, Desmond carrying the burden

Today – tops of the trees, not deep dive – that will be done by sub-groups

Solution oriented, not problem focused

Start meetings with “Value Moment” – anchor back to one of the values

- Teamwork
- Open Communication
- Honesty and Trust
- Safety
- Respect and Dignity
- Leadership
- Accountability

## 2. LCP Organization and Overview

### Ron Power – General Project Manager

JIT Just in Time

Key strategies for success

- Owner lead delivery team with financial responsibility (Hard to build a team – get the right people)
- Front end loading (unlock opportunities / reduce risk) – do a lot of work before you start construction
- Decision gate process (structured decision points)
- World class engineering consultant – SNC Lavalin
- Engage top tier contractors and suppliers
- Scope into large packages
- Nalcor – lean and efficient – leverage large contractors

Nalcor spending on average \$100 million per month  
\$8 billion budget (incl. Emera work)

“Astaldi is key to Nalcor’s success”

### 3. Scope of Work

#### **Scott O’Brien**

Company expectations – safe, on budget and on time delivery of the work in accordance with Nalcor’s core values.

Emphasis on partnership

Crux of the project is at site. Need team culture and collaborative environment

Project schedule – SEE SLIDE (includes work by other contractors) (Guido took photograph – get copy or see slide)

Agreement (Ron Adamcyk is the “guru”)

- Target price site labour model
- Fixed unit prices / lump sums
  - Equipment
  - Materials
  - Non labour costs
- Flow through trade labour travel cost

#### **Lance Clarke**

Nalcor has ownership – wants to know what is going on – but will let Astaldi to the job “this is yours, no question”. Astaldi owns the bigger risk for execution. But there is some risk sharing so we have to work together. Need good engineering up front, good labour agreements, get people interested, road shows. Just the start of those things. Will need to talk about where productivity sits and where the opportunities are. We will help. If we get it below, project looks better, we save money, Astaldi has better profit. Then we go to Gull Island

#### **Scott O’Brien**

Key interfaces:

- CH-0006 Bulk excavation
- CH-0030 Turbines and generators
- CH-0032 Hydro mechanical equipment
- CH-0031 Balance of Plant
- Design interfaces (overbreak in powerhouse, massive package of dwgs coming early in the New Year.)

Turbines in manufacture in China. Andritz – Mark Peddle moving to China in the New Year. Delivery in 2015 for installation.

Gates – working under LNTP.

Intake gates 180 tons each

Embedments – early deliveries for gates packages

10:00 a.m. – BREAK

## 4. Astaldi Opening Comments

### Guido Venturini

Greetings from President (Mr. Astaldi)

All corporate Astaldi fully committed to project

Unique opportunity – not only because of magnitude, but because this is the core of this Province, at announcement of financial closure – impressed that Premier was emotional. We are the contractor that must partner with Nalcor that must deliver to the people of this province

Commitment is the most important starting point

Commitment means daily interaction between site, St. John's, Rome (not so far – with us everyday)

6 visits from top mgmt. to Nfld since beginning of project

HR

Quality

IT

Fully committed to this project

Working / personal relations –

This is the first project where Guido has the honour to be given flowers when he arrived at airport

Emotional

Trust – important – meeting with Ron everyday more or less – everytime Nalcor says they are doing something, it is done.

Solution oriented.

Rules

3 months working together. Feels like one year. Nalcor is very structured. This is a strength. We are also structured. Sometimes we feel we would like to be better – more structured. Internally, we always look at what is not going well. Will see later how we are structured.

Rules and responsibilities well defined. Project Mgr could not be here because of commitment he has had for one year. Available for conclusion.

Guido – link between site, Nalcor and Rome

Collaboration.

Interfaces – Astaldi is an EPC contractor, used to work in interfacing context. Andritz was our successful contractor on \_\_\_ project and is our sub on \_\_\_\_\_

We have a very performing office in Milan on electro-mechanics. Have to fit with concrete. Will involve this team on this project. Want to avoid risk

High expectations. We know we are a key contractor. Honoured to be. Not concerned but very focused on that. If we are not successful, this will be a big problem for you but Astaldi will disappear from North America. Astaldi is a shareholder company. Public company. Market is extremely sensitive. Increase of 8% because of award of this contract. But can punish us 15% if we do not perform.

Lmax – Target of Labour – Most important thing. Great opportunity.

Only a few people around the table know in detail what is in the Agreement.

Not complicated but quite ...

Sent email to my colleagues – every body has to know – mainly on target cost – how it is structured – labour and non labour component.

Astaldi safety moment – ice – don't put hands in pockets

Presentation of slides (see Powerpoint)

**Lorna Tardif**

Presentation on PMP

Question from Ron Power – re Kiewit's use of 3D model on Hydro-One project in Ontario

**Guido Venturini**

Discussion on Org Chart

Gilbert Bennett arrives (11:40 a.m.)

## 5. Execution Plan

**Vittorio Robatio**

Presentation of Execution Plan

Spillway – looked at cover. Timing important – get area covered early in winter – opportunity to do some work. Saving money by not putting sand. Ask for contribution to cover system – advantage to Nalcor. 85 m long 23 m wide. Do middle slabs – biggest ones. Do concrete for first 3 slabs – go up with piers. Pour concrete (ideal) end of February.

Cover will be here 06 Jan 2014

Foundations – prefabricated blocks. Came in yesterday – 7 trailers

Cover erected end of January

Go inside and start rock cleaning, foundation treatment.

Start with pour of overbreak concrete

18 cm thickness – about 1,000 m<sup>3</sup> – should be able to do quickly

Use plant at site

Maintain plant as it was originally

Should start crushing very soon

Labour – 100 people in January

Office will be operational

Spillway cleared of ice

Excavators in

Placing insulated material

Place foundations in early January

Adjusted road to go down

Did survey

Taking over pumping system

Team to look after during winter holidays

Document submitted to defreeze

Remove 4 inch cover of carpets

Place serpentine with glycol piping

Reflective layer

Defrosting

Drill holes to monitor

Should go fast

Then wash rock

In February, working floor, steel and formwork in place, start foundations

Issue with drilling of anchors

Has to be done earlier

Lunch Break

## 6. 3D Presentation

### Venturini with comments from Vittorio

Vittorio advised that peak in labour requirements is a big problem. Due to timing of electro mechanical work. Want to talk to Nalcor to optimize schedule.

## 7. Schedule Presentation

### Pierre Cianni

Pierre - How many of you don't believe in planning?

Vittorio – History of Israel – many wars with Arabs since 1948. Why did the Israeli's always win? One reason, they were flexible, no rigid programs. Modify and adjust.

Section 7.3 of Exhibit 3

I agree with 75 to 80% of what is demanded

Detailed planning, pour by pour

Weekly review of progress

Walk around on site and see what is happening.

75% of effort is monitoring and updating

We will do whatever it takes to meet the milestones

Progress curves derived from planning will be updated on weekly basis

One per area and sub-area

Re-baselining – not often - only if there is a major change

Only with client approval

Over progressing – take that out – we will not overprogress

Did not go into detailed discussion of subsequent slides

## 8. Health and Safety

12:50 p.m.

### Nalcor Intro – D. Riffe

Approaching health and safety as a team.

### Enzo Raho

See slides

### Nalcor comments

Challenge that Astaldi and Nalcor will face – tapping into a mobile work force. What has been Astaldi's experience working globally in getting worker engagement to safety. What tools do you use.



Answer (Enzo). Culture of communication of this message. Vertical org chart is simple. Use for non-complex activities. Horizontal roles dedicated to communication, improvement, philosophy of safety, can communicate ...

Guido – asks Enzo to share his experience in south of Italy where he was resp. for safety.

Enzo – worked on project in Italy – last 5 yrs with Astaldi in south of Italy – where there is no real philosophy for health and safety. Our practice was to speak at every level and ensure performance ...

Bennett- Nalcor – safety is the most important thing we are going to talk about – not enough to talk about production, cost, schedule, quality...H&S here to support but it is the construction teams that have to make it happen

Rick (Astaldi safety manager). Have people who have worked all over Canada – have seen international levels of safety. Need to learn from them what they can bring to the table wrt safety. Pass it on. Everytime our supervisors meet with a worker – has to be **safety driven**.

Jason Kean (Nalcor Deputy Proj Mgr)

3 things

1. Caring – about each other, about the worker,
2. Coaching
3. Communication

Positive recognition – safe work areas, leader, reinforce the positive

Vittorio

Evolution of how you use your hardhats at site

Graphics is effective way to teach people

Force into the minds

Guido

Experience of Chilian project

Dealing with communication consultants. Hard to care and coach if you cannot communicate.

Thinking to use more modern tools on the market. Supported by communication consultants.

Graphics.

Vittorio

Motorway in Italy – visual images of consequences of accidents.

Nalcor wrap-up – D. Riffe

Enzo's presentation good – thanks. See in room passion for safety. Look forward to meetings in January.

Desmond Tranquilla – pleased to see commitment to safety. Don't always get this level of commitment.

Very encouraging.

## 9. Environmental

1:30 p.m.

**Nalcor Intro – Marian Organ**

**R. Biles**

See slides

**Ron Power**

Environmental just works on this project because of team that Marion has lead. Just outstanding. Any other transmission line project in the world, permitting is a big problem. Here it is under control.

#### Bennett

Environmental Assessment Hearings. This project is not without its share of controversy. Safety and environmental performance will contribute to how we are seen. We do what needs to be done. We do what is right.

Environmental is right up there with Safety.

Need to work together.

Plans. Processes. Need to follow through. We will collectively feel pain if we don't.

#### Guido

Astaldi awarded best project in South America re environmental. Would like to be awarded again for north America.

## 10. Quality

### Nalcor Intro – M. Peddle

Pleased to hear many references in morning presentations on quality.

Draft quality plan – great document.

Fruitful sessions – thanks to Enzo and his team

Wants to hi-lite 3 or 4 areas, expectations from Nalcor's side

1. QA vs QC – quote from hi level mgmt. strategy the strategies provide focus on the owners team as quality assurance as a lean quality assurance with QC squarely with contractor (inspection)
2. Astaldi Quality Manager – realizes that Astaldi putting its team in place. Expectation that it be a permanent Astaldi employee. Why? Important that Astaldi quality culture is brought to the project. Key individuals have to have that culture. Will be relentless on that.
3. Have looked at last 12 months – what has worked and what has not worked. One of the items – expectation on Nalcor's behalf – expect the Quality Manager to reside not in St. John's, not in Mtl, not Goose Bay but 100 m from the powerhouse. Needs to be... (Vittorio – agreed). Needs to be in the action – we will be relentless on that.
4. Prior to any work, need ITP's
5. Concluding remark – got a bit of work to do on Quality Plan – we are at 80% - 90%. Real prize is proper implementation.

### Vittorio

Introduces Marco Brollo – Panama 9,000 m3 per day. Followed procedures to the letter. Will do the same here.

### Enzo Raho / W. Ball

See slides

### Nalcor comments (David Green)

Q Slide 78 – 15 Quality Control Inspectors – average or peak?

A Astaldi answer: not a set number

Q Didn't see the word audit in the presentation

- A Quality plan includes audits – definitely part of the process. Was mentioned in one slide
- Q How do you plan to get Best Practices used – culture embodied. How do you make sure it remains entrenched.
- A Through communications

Vittorio Like health and safety, we will have courses. Book to study. Examinations.

Ron Power

Astaldi inspectors will inspect the work.

Concrete job. They say the pour is not ready and the construction mgr says it is, what happens.

Vittorio – this happens regularly. We do our own checks. Survey, cleaning, patches in place... then call for inspection. If disputes, look at together. Eventually, QC has the last word. But has to be common sense.

Ron Power – in the Agreement, because I put it in, Nalcor will sign before concrete is poured.

Guido – Mark you said that you wanted the quality manager to be an Astaldi employee. Astaldi has guaranteed that quality approach will benefit from our quality culture. One of the main goals that Astaldi has on this project is to generate a true Astaldi Canada employee culture. Astaldi Canada is a Canadian company. Want all Canadian employees. Work with expats but want to be fully integrated into Canadian culture, Canadian market. Not just quality, everything.

Vittorio – last 6 or 6 years, different clients in different countries. Sometimes clients put conditions that are impossible to achieve. Sometimes we have to be practical and realistic.

Mark – Closing comments. Appreciate comments and concerns. Will assess candidates. But will be relentless to make sure we have the proper individual. Has to be an Astaldi employee – may be pie in the sky. But whoever Astaldi brings to the table on Quality Mgmt – we have mature quality team and will be able to assess. Looking for someone with big picture – with knowledge of Astaldi quality systems. All that good quality systems embedded in your organization – want to see some of that.

Guido – Astaldi wants to bring quality – it is one of our assets – fully committed to bring knowledge and culture and to improve.

Nalcor – We acknowledge that Astaldi still have gap to fill – big gap.

Guido – acknowledges this – will work with Rome on this.

Vittorio – wants to bring someone – from Panama Canal – but doesn't like the cold.

Nalcor – we are not moving the project.

COFFEE BREAK – 2:30 P.M

## 11. Lance Clarke – Report from CEO of Nalcor and CEO of Astaldi

Just had conversation

Commitment is there from the very top.

Mr. Astaldi will be here in January

2 CEO's want joint presentation of where we are and how we are going to move forward

Will be at site.

Evening at Lodge in Labrador

## 12. Contract Administration

### Nalcor Intro – R. Adamcyk

Commercial aspects of contract. Major items of concern

1. Change Mgmt
2. Payment procedures
3. Communication
4. Coordination Procedures

### Guido Venturini

Share the history of the Agreement. Started as fixed price. Then Nalcor provided opportunity to submit offer based on fixed price or Lmax (target price)

14 addendum

Last one July 2013

Revisions up to 9, 10, etc.

Worked a lot together. Whenever we received a revision, there was an improvement. Lot of work done by Nalcor and Astaldi to generate something... Key of project is summarized ... (cant read slide). Labour component.

3 months. First part under LNTP. Long discussion with subcontractors. Who also need to be compliant with this approach. Astaldi dealing with subs on back to back approach. Only way to get full commitment to philosophy of approach (target).

Labour cost is one of the elements where we have to work together in next weeks in order to define detailed procedures. Introductory period and standard period. You pay all the staff mgmt. labour based on labour cost either on site – few in Goose Bay and 4 in St. John's. But right now not on site. Problem. Can be managed. Have to work on it. One of the most important points to achieve together in the next months. Internal milestones. Measure, certify. How to measure worked hours. Need to do exercise to identify where the problem can be found and how to solve.

30 or 40 versions of the Agreement. Important point is changing the work. As mentioned by Ron. Addressed to my team. I asked all my management team to study the Agreement and Exhibit and know them in detail. We have to be aware – any change in the work – clear procedures – times are quite tough – 10 days. Have to follow the rules – in my opinion is clear- if we have doubts – interpretation – make exercise to understand if there are any doubts. Article 14...

Everyone should know Exhibit 3. Ask my team – if we see some inconsistencies, some doubts, better to sit down together and see how we apply this and try to solve asap. And not leave to middle of production when we are all stressed – more problems. For instance, example, measurement of payment, Exhibit 2 – Attachment A – go in the indirect costs – written lump sum price based on 42 months... Can be understood if you look at all the document... quite sure we will have to share together in order to have clear ...

Change Request - ...

Communications - Roxanne is here with us. We are improving communications. Aconex is working better. Want to receive from Nalcor – concerns about communication in the short period – do not leave to Feb or Mar. Final communication plan of Astaldi will be submitted end of January. Fully integrated into PMP now under development.

Astaldi requests that Nalcor confirm receipt of key documents submitted to Nalcor (for example, payment certificates).

Payment: Proposal finalized – trying to show objective data. Want discussion with smaller group to have clear procedures for how to measure the different activities for certificates. Problem is mainly addressed to indirect costs. Direct costs easier to measure and define and exert control by Nalcor. Key until now was information. Plan discussion for beginning of January.

### **Lance Clark**

It's about communication. Our goal is success on safety front, get it built but also so that neither party is saying I just lost my shirt. Don't want to get to a claims situation – really detracts from the job. Disagreements – separate from execution of job and deal with them. Collaborate collaborate collaborate. Will be watching closely. Massive scrutiny. Public scrutiny the most on cost. If we stray on that, will have big problem.

### **Guido**

Fully agree – communication is main part. Agree we don't want claims. Question is, how to manage a change order. 2 opportunities – we submit, if you do not accept, we still have the opportunity to go to Dispute Review Board. We have to work in very good faith. First month important to do exercise, to understand each other, if we overuse, or if we underuse, this instrument.

Have seen a lot of jobs where the Owner did not recognize changes – became claims.

Astaldi looking hard to find local contract manager – experiencing problems – now looking on international market. Must have construction experience.

### **Ron Adamcyk**

Change requests through change request procedures. Need to resolve in timely manner so that it doesn't go beyond that.

### **David Green**

Communication – extends all over the place. If you are receiving instructions to do something untowards the agreement – put your hands up and take it to another level. Make us aware. Need to be wary of.

### **Guido**

Change Orders can only be submitted by contract representative.

Ghost change orders. Cup of coffee. 2 people working in good faith. Nobody knows about the agreement. Then discover after 15 days that 2 guys took a decision thinking that ... nobody on top of them knew that the agreement was done.

Be sure that the decision chain is always aware of what is done on the front fact – site.

**Ron Adamcyk**

We agree with that. Only the company representative can issue a change order. Our people need to know that they cannot give instruction for a change. There is a process in the contract that must be followed.

**Mel Melhem (site contract administrator)**

Coordination meetings – identify extras – put an action item. Don't want to wait until something festers.

Conformity with the contract – there are letters that go to personnel – should be directed to representative – can put cc on the bottom. Document control will make sure it goes to the right person. Would appreciate this.

**Guido**

Wants some theoretical exercise – have to train ourselves.

**Adamcyk**

We do have a lot to work on to make sure we have complete understanding of these issues.

## 13. Project Controls

**Nalcor Intro – E. Bush**

Projects Control Manager for overall LCP. Only here for a few months. Wear 2 hats – as overall controls manager resp for Muskrat Falls and transmission link. Also serving as functional ...

In this contract – have site team under leadership of Pierre Sasseville.

Key areas – not only cost and schedule also have resp. for risk mgmt., mgmt. of change, interface mgmt. and overall comprehensive project reporting.

Expectations – journey along the course of the project – how to get where we are going, where we are, forecast down the road. And provide reports on where we are at any point.

Have coordination procedures – apply to all contracts. This is a huge contract 1/6th of the entire project. Have to integrate others as well.

**Enrico Violato**

Astaldi has long history on project controls. Director of project controls in Rome. Project leader. Motto that Astaldi take and considers important

1992 – sent open letter to all managers – Project Controls is the ears and eyes of project manager and the key to the success of the group

Time and cost integration

**Ron Power**

Wants to know if Enrico will be on site

**Pierre Sasseville**

Happy to see reference to WBS

**E. Bush**

Lots of work to do if we are going to be able to forecast accurately. Wants a work session week of January 13<sup>th</sup>.

**Vittorio**

Detailed daily time sheets

**E. Bush**

How real time is data collection.

Do you use tablets.

Do you get that uploaded nightly

**Guido**

We are implementing a system – using it on daily basis. Would like to work on JIT system

Share through dashboard, weekly report or other needed instrument

**Vittorio**

2 tendances – best thing to do is to use scanned card. But lot of cheating. People prefer paperwork.

Need to look at.

## 14. Labour Relations / Provincial Benefits and Reporting

**Nalcor Intro – D. Clarke / M. Moran**

3 agreements:

1. Impact benefits agreement (with Innu)
2. Benefits Strategy (with province of Nfld and Labrador)
3. Gender equity and diversity program

**George Kean**

Made a presentation on labour relations that is not covered in the Powerpoint presentation

**NEED TO GET A COPY OF HIS NOTES**

- Greatest asset is people working on this project
- Management doesn't have all the answers
- Need to engage the participation of the work force
- Open dialogue – so employees feel part of this project, will be more productive
- Important to go into the work place, talk to employees, find out what the issues are, find a compromise
- We do have a grievance procedure
- New Year, back on 06 Jan - mid Jan will have 50 to 100 employees on site. Day before orientation. Meal facilities prior to orientation – next day.
- Meet with Innu partners in January – address absenteeism
- Markup finalized on early works. Procedures completed

**Don Power**

Do you anticipate any labour shortages?

**George**

Concerned that by mid-March 3,000 employees required for Bull Arm. But still think that we will meet our goals. But wouldn't want to commit to that.

**Kathy Goudie**

Provincial Benefits lead manager for Astaldi

Astaldi has seen the Provincial Benefits program as an opportunity to invest in the community.

4:30 p.m. BREAK

## 15. Finance

**Nalcor Intro – J. Skinner**

Payment – need to address it. Need alignment on that issue. Helps building a good relationship. Keys to success – clear and open discussions re invoicing requirements, understanding systems, process controls of contractors. Opportunities for alliance on controls.

Looking forward to good workshops in January. Breakout sessions – makeup of each of our F&A teams.

Wants to learn about Astaldi invoice preparation plans. Supporting documentation.

**Fabrizio Tonucci**

Enrico has described Baan – program used by Astaldi – project distribution, finance and control. Positive cash flow on this project. Hope we don't have problem. Important to us to have timely monthly certificates. Important to have cash to use for the project.

## 16. Closing Remarks

**Scott O'Brien**

Thankyou to all participants. Worthwhile session. Thanks to Guido and Astaldi and demonstrating level of commitment and level of rigor with broader aspects of work plan. Had grand plans to map out work sessions but this is not the time.

Suggest that we work together over the next few days to map out these in early January. Want a schedule and who will be a participant.

Had great success with David and George on labour. Use that as a model.

**Guido**

Thanks to Nalcor for opportunity. Successful kickoff meeting.

Impressed by my team because I know what we are doing these days – cannot stop – still working on daily targets but all of you guys were really committed to successfully achieve goal of this meeting. Thank my team. Good point to do that.

Just a starting point. Meetings in January extremely important. Would like to hi-lite importance of learning curve – trying – making exercise in order to be prepared. This is nothing compared to what we will have to do in March, April, May...



**Don Powell**

Pleased with meeting. Met my expectations. Was at Rolling Stones concert – was I feeling good? I am feeling good.

**Vittorio**

Good thing between us and you and other contractors. Distribute 120 turkeys for families that couldn't afford it in GooseBay. On the radio. Received message from Paulo Astaldi – This is what we have to do socially – provide help where it is needed.

**Adjourned – 5:00 p.m.**

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Notes prepared by Lorna Tardif

December 20<sup>th</sup>, 2013

**ASTALDI**

**LCP - Muskrat Falls – Contract CH0007**  
*Construction of Intake and Powerhouse,  
 Spillway and Transition Dam*

Contract Kick-Off Meeting – December 19th, 2013

**Astaldi Presentation**

**ASTALDI**    **nalcor**    **ASTALDI**  
energy    energy    CANADA INC.

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**ASTALDI**    **Opening Comments**

- Astaldi's progress to date:
  - Set-up of the offices in St. John's, Goose Bay, and at site
  - 53 management and staff personnel on site
  - 11 persons supporting the site from Montreal (logistics, procurement, administration)
  - 7 departments from the corporate (Rome) directly supporting the project
  - 7 Consulting companies (Allnorth, DPHV, KGS, Deloitte, Rehirig, SEA Consulting, Heenan Blaike)

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**Safety Moment**

ICE COVERED BY SNOW

WRONG WALKING POSITION

**nalcor**    **ASTALDI**  
energy    CANADA

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**ASTALDI**    **Opening Comments (cont.)**

- Astaldi's progress to date (cont'd)
  - Over 57 project meetings on different items
  - Safety, Quality and Environmental Management Plan submitted
  - Labour kickoff meeting successfully done
  - Labour hiring process started
  - Innu hiring process started
  - Provincial Benefit process fully operative
  - Hiring and labour relationships learning curves already developed
  - 12 persons hired in the last 8 days

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**OPENING COMMENTS**  
**Guido Venturini, Project Director**

**ASTALDI**

HONESTY AND TRUST    SAFETY    TEAMWORK    OPEN COMMUNICATION    LEADERSHIP    INTEGRITY AND DIGNITY

**ASTALDI**    **Opening Comments (cont.)**

- Astaldi is fully committed to maintaining its efforts to achieve the main goals of the project on safety and quality conditions, on time and on budget.
- All the experienced skilled professional profiles foreseen during the negotiation are actually working on the project.
- Astaldi Canada is also fully committed to all Nalcor Values

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### Presentation Agenda

- 00 – [Project Management Plan](#)
- 01 – [Execution Plan Update](#)
- 02 – [Health and Safety Requirements](#)
- 03 – [Environmental and Regulatory Compliance](#)
- 04 – [Quality](#)
- 05 – [Contract Administration](#)
- 06 – [Project Controls](#)
- 07 – [Labour Relations / Provincial Benefits and Reporting](#)
- 08 – [Finance](#)
- 09 – [Other Business / Closing Remarks](#)

7

### Project Management Plan(PMP) How we will build the PMP

- In full collaboration with the Astaldi project team (need “buy-in”) and Astaldi Corporate (compliance with ISO 9000 requirements)
- With full consideration for Nalcor requirements
- Based on integration of the project management systems and optimization of the project management processes
- As a “living Plan” that can easily be maintained current and relevant.
- As a useful tool, that the project team will be motivated to use on a daily basis.

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### Lower Churchill Project Muskrat Falls – CH007 – Civil Project Management Plan

Think Safe, Work Safe, Be Safe



19/12/2013

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### Exhibit 4 SDRL (partial)

Index	SDRL Code	Document Title	Reference	Pg	Deadline to submit
1	A01	Supplier Document Register	Exh 4	Pg 3	7 weeks After Receipt of Order
2	A07	Execution Plan	Exh 3 Sec 2.4	3	14 days of Effective Date
3		Organization Chart	Exh 3 Sec 3.2.1	4	14 days of Effective Date
4		Correspondence Plan	Exh 3 Sec 3.2.2	6	
5	A39	Survey Report	SDRL		
6		IS / IT Plan	Exh 3 Sec 3.2.4	10	30 days of Effective Date
7		Logistics and Transportation Plan	Exh 3 Sec 5	13	
8		Cost Management Plan	Exh 3 Sec 6	14	30 days of Effective Date
9		Sample Cost Report	Exh 3 Sec 6	14	30 days of Effective Date
10		Control Schedule Baseline Document	Exh 3 Sec 7.16, 7.4	15, 18	
11		Schedule Development and Control Plan (SDCP)	Exh 3 Sec 7.16, 7.2, 7.3	15 - 18	
12		Control Schedule	Exh 3 Sec 7.5, 7.6	18, 19	
13	Q03	Quality Plan		18, 19	4 weeks After Receipt of Order
14	Q07	Internal / External Audit Schedule			4 weeks before Works
15		Environmental Management Plan			
16	A35	Contract Specific Environmental Protection Plan			4 weeks
17	A28	Health and Safety Plan			6 weeks After Receipt of Order
18	A04	Risk Management Plan	Exh 3 - 9.1 c	25	6 weeks After Receipt of Order
19		Risk Register	Exh 3 - 9.1 c	25	
20		Weekly Reports	Exh 3 - 3.2.3, 7.7	7, 20-21	
21		Monthly Progress Reports	Exh 3 - 3.2.3, 7.7	8, 20-21	

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### Project Management Plan (PMP) Extract's from Astaldi's Proposal

- Development and implementation of project management systems (including extensive training of personnel) that **optimize the efficiency of project staff** (thereby both reducing the overall number of personnel required and ensuring consistency and continuity of service during off site rest-periods of key personnel)
- To achieve Project success, Astaldi must: ... successfully implement Astaldi's **integrated project management systems** to ensure proper management of quality, safety, and the environmental as well as project controls

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### Project Management Plan(PMP) Mapping of Nalcor SDR list to Astaldi Plan

ASTALDI Project Management Plan		NALCOR SDR List (partial)
1	Scope	
2	Reference Documents (incl. Contract)	
3	Definitions and Abbreviations	
4	Project Description	
5	Responsibilities	
6	Management and Training of Human Resources	
7	Contract Management	
8	Planning of Production Process	Schedule Development and Control Plan
9	Design Management	Control Schedule
10	Management of Procurement, Subcontracts and Transportation	Logistics and Transportation Plan
11	Management of the Product Supplied by the Client	
12	Execution of the Works	Execution Plan
13	Audit on Quality, Safety and the Environment	
14	Corrective and Preventive Actions	
15	Process Indicators and Statistics Techniques	Cost Management Plan
16	Project's Monthly Report	Monthly Report
17	Management of Document and Data	Correspondence Plan
18	Revision of Project Management Plan	
19	Annexes to the PGP	
1. Project's Organization Chart		Organization Chart
2. Job Description Handbook		Key Personnel - roles & responsibilities
3. Matrix of Responsibilities		
4. General Contract Programme		
5. Procurement Plan (PPC)		
6. Design Plan (PDP) - if applicable		
7. Project Budget		
8. Project's Safety Management Plan (PSM)		Health & Safety Plan
9. Project's Environmental Management Plan (PEM)		Environmental Management Plan
10. Project's Risk Management Plan (PRM)		Risk Management Plan
		Risk Register

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### Project Management Plan(PMP) Focus of Cost and Schedule Control

	No of Price Items	Manhours	Price
DIRECT - ALL	401	3,099,062	484,689,066
DIRECT - CONCRETE, RESTEEL, ANCHORS Items > \$ 1 million	23	2,640,981	369,365,159
% OF DIRECT - ALL	<b>6%</b>	<b>85%</b>	<b>76%</b>

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### ASTALDI

#### WBS Category: TASKS

### Project Management Plan(PMP) Building Blocks – Concrete / Resteel / Anchors

- Approximately 1,200 concrete pours
- The building blocks of the project
- Most of the direct labour; most of the direct cost

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### ASTALDI

#### WBS Category: TASKS

Index	Task - Level 2 - Concrete Work	Index	Task - Level 3 - Concrete Work - Formwork
4.01	Formwork	4.01.01	Drainform - Liner
4.02	Waterstop	4.01.02	Wooden hand made
4.03	Bituminous Coating		
4.04	Sealing of Joints		
4.05	Grout		
4.06	Concrete Supply		
4.07	Concrete Transport to Site		
4.08	Concrete Placing (Pouring)		
4.09	Concrete Curing		
4.1	Concrete Green Cutting		
4.11	Placing Prefabricated Concrete		
4.12	Concrete Finishing		

Index	Task - Level 3 - Concrete Work - Supply
4.06.01	Class A-2 - 35 MPa GU-at plant
4.06.02	Class A-2 - 35 MPa LH-M at plant
4.06.03	Class A-2-A - 35 MPa GU at plant
4.06.04	Class B-2 - 30 MPa LH-M, at plant
4.06.05	Class B-2 -30 MPa-GU-at plant
4.06.06	Class B-3-A - Fc=350 Kg/m3-GU-at plant
4.06.07	Class BC-2 - 25 MPa-LHM- at plant

### Project Management Plan(PMP) Astaldi WBS – Level 1 (incomplete)

Index	Physical Area (Level 1)	Index	Task (Level 1)	Index	Cost Types	Index	Entities	Index	Departments
1	General	1	Indirect Costs	1	Labour	1	Owner	1	Contract Admin
2	Hyale	2	General	2	Construction Material	2	Contractor	2	Environment
3	Powerhouse	3	Concrete Work	3	Management Material	3	Government Agencies	3	Public Relations
4	Spillway	4	Work Enclosed For Company'S Other Contractor	4	Equipment	4	Subcontractors	4	St. John's Office
5	Transition Dams	5	Reinforcement, Anchors And Dowels	5	Subcontracts	5	Vendors	5	Project Controls
6	Hydro generator & auxiliaries	6	Civil Work	6	Consultants	6	Consultants	6	Risk Management
7		7	Structural Steel And Miscellaneous Metal	7	Labour Unions	7	Labour Unions	7	Health & Safety
8		8	Miscellaneous Steel	8		8		8	Quality
9		9	Electrical Work	9		9		9	Procurement
10		10	Turbine Generator And Auxiliaries	10		10		10	Production
11		11	Structural Steel	11		11		11	Admin & Finance
12		12	Anchors And Embedded Parts Provided By Others	12		12		12	Plant
13		13	Installation Of Anchors And Embedded Parts Prov						
14		14	Supply And Installation Of Structural Steel						
15		15	Architecture Works						

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### ASTALDI

#### WBS Category: AREAS

**WBS Category: AREAS**

Index	Area - Level 2 - POWERHOUSE	Index	Area - Level 3 - POWERHOUSE - North Service Bay
3.01	North Service Bay	3.01.01	Slab-walls (from 9.55 to 15.50)
3.02	South Service Bay	3.01.02	up 15.50
3.03	Unit 1		
3.04	Unit 2		
3.05	Unit 3		
3.06	Unit 4		

Index	Area - Level 3 - POWERHOUSE - South Service Bay
3.02.01	Draft Tube
3.02.02	from -31 to -21.50
3.02.03	from -21.50 to 6.50
3.02.04	from 6.50 to 15.50
3.02.05	up 15.50
3.02.06	Mezzanines

Index	Area - Level 3 - POWERHOUSE - UNITS
3.0x.01	circular passage
3.0x.02	draft tube
3.0x.03	Draft Tube fire walls structure
3.0x.04	Draft Tube Cone
3.0x.05	Draft Tube Cone Steel Liner

Lower Churchill Project  
Muskrat Falls – CH007 – Civil  
**Project Management Plan**

## Questions?

[Return to Agenda](#)

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Integrated Data System



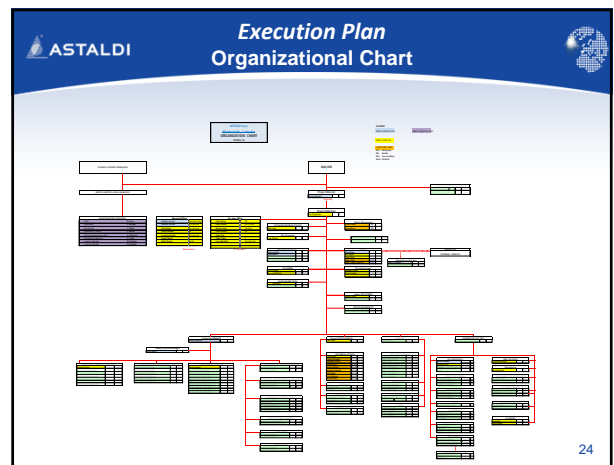
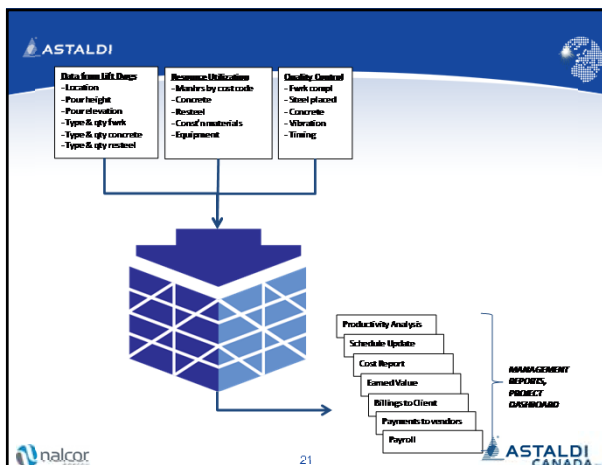
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Lower Churchill Project  
Muskrat Falls – CH007 – Civil  
**Execution Plan**

Think Safe, Work Safe, Be Safe



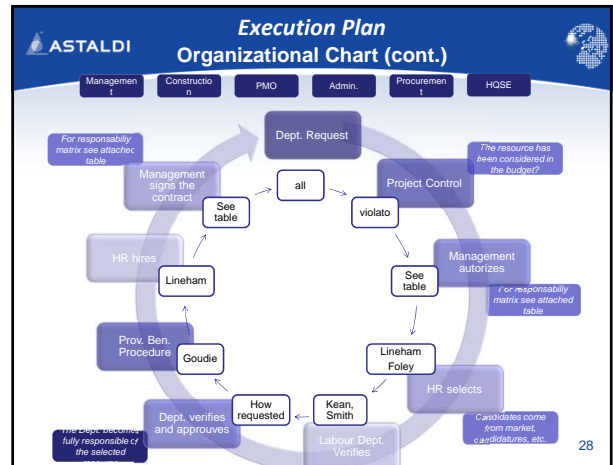
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**ASTALDI Execution Plan Organizational Chart (cont.)**

- Project Director: G. Venturini
- Project Manager: K. Chrissyolor
- Assistant Project Manager: R. Lewis
- Deputy Project Manger: J. Zhou
- Construction Manager: V. Robiati
- Deputy Construction Manager: M. Brollo
- Superintendent: M. Bennet
- Superintendent: R. Strang

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**ASTALDI Execution Plan Organizational Chart (cont.)**

- Chief Administration Officer: F. Tonucci
- Chief Accountant: F. Barreto
- Project Control: E. Violato
- HQSE Manager: E. Raho
- HQSE staff: 4 persons
- PMO (consultant): L. Tardif
- Technical offices: 9 persons
- Planner: P. Cianni
- HR Coordinator: M Linham

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**ASTALDI Execution Plan Scheduling (as of Nov 30, 2013)**

- Early Works Schedule - Baseline issued on October 30th, 2013
- Early Works Schedule - Update as of November 30th, 2013
  - Issued on December 11th, 2013
  - Includes permanent work activities (Spillway, Powerhouse and Transition Dams) until July/August 2014.

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**ASTALDI Execution Plan Organizational Chart (cont.)**

- HR Assistant: G. Foley
- Labour Coordinator: G. Kean
- Union Manager: K. Smith
- Provincial Benefits: K. Gadie
- Public Relations: P. Shelley
- Procurement Manger: F. Accorsi
- Procurement Office: 9 person
- Executive Assistant (GB): J. Pilgrim
- Executive Assistant (SJ): L. Woodfine

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**ASTALDI Execution Plan Health & Safety, Environment and Quality**

- Health & Safety Management Plan (Early Works) - Returned with comments and resubmitted
- Project Environmental Plan – Accepted with comments
- Environmental Protection (Contract Specific) - Submitted
- Quality Plan - Approved with comments and resubmitted
- JSA Early Works - Submitted
- Gap Analysis to be submitted early January 2014

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**ASTALDI** *Execution Plan*  
Construction Engineering

- ICS
  - Intermediate design drawings already submitted to Nalcor
  - Final design to be submitted to Nalcor in mid-January 2014
  - Fabricator selected and coordination meeting held between ICS designer (EDHV) and ICS fabricator (Proco)
  - Overhead crane vendor is now selected (Konecranes Canada Inc.)
  - Foundation drawings are available and the orders for rock dowels and reinforcement are ongoing

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**ASTALDI** *Execution Plan*  
Construction Engineering (cont.)

- Temporary Electrical
  - Design brief for detailed design of lighting system for ICS and adjacent areas in progress
  - Final verification of preliminary calculations and drawings for lighting underway
  - Site power design – ICS/powerhouse area
  - Ratings of water pumps for cement batching and estimates
  - Electrical room specification

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**ASTALDI** *Execution Plan*  
Construction Engineering (cont.)

- Spillway Temporary Cover
  - Vendor is now selected (Norseman)
  - Drawings ready for Nalcor review, if required
  - Foundation dwgs completed and in use for the preparation of precast blocks and beams.
- Lift Drawings
  - Lift dwgs for 3 slabs in centre of spillway (scheduled for concreting in March 2014) in progress. To be submitted to Nalcor in mid-January 2014.

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**ASTALDI** *Execution Plan*  
Construction Engineering (cont.)

- Survey
  - Survey of spillway and powerhouse excavated rock surfaces
  - Survey of areas for temporary site installations

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**ASTALDI** *Execution Plan*  
Construction Engineering (cont.)

- Temporary bridge d/s of Spillway
  - Layout information to be submitted to Nalcor in mid-January 2014. Design calculations and working dwgs to follow.

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**ASTALDI** *Execution Plan*  
Procurement

- Concrete and aggregate supply – verbal agreement October 11, 2013, LOI issued on December 2013
- ICS – Vendor selected
- Reinforcing Steel – Subcontractor selected and subcontract in preparation
- Formwork – Draft tubes – in final negotiations
- Formwork – Standard – quotes received [re-quotes December 2013]
- Embedments – take off for initial lifts in progress

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**Execution Plan Procurement (cont.)**

- Main contractor office – contract awarded November 2013
- Material handling equipment
  - 18 overhead cranes (Konecranes)
- Concrete handling equipment
  - Concrete pump truck (Pompaction)
- Other equipment
  - Compressors
  - Loader / Excavator / Grader
  - Boom trucks / Forklift / Articulating boom lifts

**EXECUTION PLAN**

1. INTRODUCTION

- SPILLWAY / LEARNING CURVE
  - FOUNDATION TREATMENT
  - OVERBREAK CONCRETE
  - DRILLING AND GROUTING/ANCHORS/INSTRUM.
  - WORK PROCEDURES+ H&S + QUALITY + ENVIR.

**Execution Plan Procurement (cont.)**

- Preparation of tender documents
  - Drilling, pressure grouting
  - Grounding, conduits and lighting
  - Embedded piping
  - Structural steel
  - Water stops and membrane

**EXECUTION PLAN**

2. FOUNDATION TREATMENT

- SELF PERFORM
- WORK PROCEDURE
- HEAD SECTOR
- EQUIPMENT

```

    graph LR
      A[ROCK CLEANING BY HIGH PREASSURE] --> B[WATER CONTROL]
      B --> C[WATER DRIED BY SUCKER]
    
```

- WORK PERFORMED UNDER COVER
- NO SAND COVER
- TIMING APPROX. 2 MONTHS

**Execution Plan Construction**

- Installation of Temporary Site Office
- Start GD11 Clearing and access roads
- Start Preparatory work for the Spillway Cover Installation planned for early January 14 (By Astaldi)

**EXECUTION PLAN**

3. ROCK PROTECTION

- Access road adjustment
- Survey
- Preparation
- Take over the pumping system
- Removing of the ice
- Placement of insul. Carpets
- Proc. & instal. of the cover
- Removal of the ins. Blankets
- Backfill concrete
- Forming the central foundation
- Drilling from the top of the structure



### EXECUTION PLAN

#### 3. ROCK PROTECTION

PLAN SHOWING THE POSITION OF THE SPILLWAY AND OF THE COVER

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### EXECUTION PLAN

#### 6. OTHERS

- Program of the work
- Inspections
- Health & Safety
- Environment
- Road maintenance
- Accessibility of areas

- Site UTILITIES
  - All ordered
  - Semi circular 24x9 mt structures
  - Trailers
  - ICS
- WASTE MANAGEMENT
- WITH THE UNIONS
- SURVEY TEAM

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### EXECUTION PLAN

#### 4. OVERBREAK CONCRETE

##### Spillway

Work procedures  
H&S/Env./Quality  
Mix design approved

Done under heated cover  
Modify the Lab. batching plant with new mixer  
Sand pit for sand  
Aggregate tests/ accelerated non-accelerated

TIMING: First slabs end of January/early February  
Survey  
Estim. Q.ty : 20cm thick/ 1200m3

Batching plant and crushing plant position (2 Batching plant of 240 cubic yard each)  
Sand PIT/TREE CUTTING: Springdale Forest Resources/100k sqm

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### PLANNING FOR JANUARY 2014

### EXECUTION PLAN

#### 6. DRILLING & GROUTING

- Area ready & Procedures/method stat.
- Anchors to be incorporated in the found. pours/some after over break concrete
- Mostly after the foundation/PVC sleeves
- 500 anchors/6m depth

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### Planning for early 2014

- Spillway base slab (Center Portion) to start about mid-March 14 followed by piers 3 & 4
- South Service Bay Wall (el -21.5 to el 15.5) to start in Early June 14
- Intake Unit 1 and PH Unit 1 planned to start in July 14
- Transition Dams foundation preparation to Start in May 14

**SCHEDULE DEVELOPMENT AND CONTROL PLAN**  
(AS PER EXHIBIT 3, SECTION 7.3)

**SCHEDULE DEVELOPMENT & CONTROL PLAN (Cont'd)**

- 4 – Interfaces Outside of Astaldi's Control (Cont'd)**
  - Update of these Interface Milestones by Nalcor and data supplied to Astaldi
- 5 – Schedule Update**
  - Schedule will be updated at least monthly and more if needed
- 6 – Critical Path and Total Float Analysis**
  - Check Dates of the Interface / Milestone
  - Filter activities with TF less than 15 working days
  - Analyze the Filtered TF
  - Make all necessary corrections
- 7 – Re-Baselining the Control Schedule**
  - Events not in Astaldi's control delaying the end date
  - Addition of major scope of work
  - Re-baselining must be approved by Nalcor

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**SCHEDULE DEVELOPMENT & CONTROL PLAN**

The following items as per section 7.3 of exhibit 3 are in preparation:

- 1 - Schedule Development and Monitoring
- 2 - Methodology for Analyzing & Forecasting the Schedule Progress
- 3 - Management of Interfaces (exhibit 9)
- 4 - Interfaces outside of Astaldi's control
- 5 - Schedule Update
- 6 - Critical Path & Total Float Analysis
- 7 - Re-Baselining the Control Schedule
- 8 - Schedule Activity Coding
- 9 - Physical Progress Measurement Methodology
- 10 - Progress Measurement Review Procedure
- 11 - Over Progressing Activities
- 12 - Impact of Rework on Progressed Activities
- 13 - Change Management and Impact on Progress
- 14 - Weighting Methodology
- 15 - Material Receipt at Work Site

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**SCHEDULE DEVELOPMENT & CONTROL PLAN (Cont'd)**

- 8 – Activity Coding**
  - Include all codes Astaldi needs to organize activities
  - Include 5 codes for Nalcor's use (CH0007-LCP1, 2, 3, 4 & LCP5)
- 9 – Physical Progress Measurement and Review Procedure**
  - Development of Progress Curves
    - Engineering
    - Procurement
    - Construction (Intake, Powerhouse, Spillway, Transition Dams + Sub-areas)
  - Physical Progress Reporting
    - Progress Measurement (Rules of Credit templates)
    - Reporting Progress
    - Spent hours
    - KPI (Contractor Performance Index & Schedule Performance Index)
- 10 – Progress Measurement Review Procedure**
  - Reporting results
  - Corrective Actions

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**SCHEDULE DEVELOPMENT & CONTROL PLAN (Cont'd)**

- 1 - Schedule Development and Monitoring**
  - Pre-Planning activities
  - Schedule Development
  - Planning / Schedule Review
  - Planning / Schedule Update
- 2 - Methodology for Analyzing & Forecasting the Schedule Progress**
  - Compare Milestone & Interface key dates to Baseline schedule
  - Check activities with different dates from Baseline schedule
  - Analyze problems & ensure that problems are real ones
  - Suggest and Monitor Corrective actions
  - Issue planning Report to Management team
- 3 - Management of Interfaces**
  - Preparation of table including:
    - Contractual Dates
    - Actual Dates
    - Forecast dates
    - Remarks
- 4 – Interfaces Outside of Astaldi's Control**
  - Interface Milestones with other Company Contractors

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**SCHEDULE DEVELOPMENT & CONTROL PLAN (Cont'd)**

- 11 – Over Progressing Activities**
  - Correction of Progress (Earned % / curve will change)
  - Re-Analyzing Results
  - Issue report
- 12 – Impact of Rework on Progressed Activities**
  - No change to progress but report spent hours
  - Change the earned % to reflect the real progress
- 13 – Change Management and Impact on Progress**
  - Define a minimum % when changes will be added to the progress curves
  - Changes will be planned and Progressed
  - Baseline curve will be chaged (approval By Nalcor) as the earned curve
- 14 – Weighting Methodology**
  - Estimated Hours for each Construction Activity

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**ASTALDI**

### SCHEDULE DEVELOPMENT & CONTROL PLAN (Cont'd)

**15 – Material Receipt at Work Site**

- The warehouse will notify planning group of all material received and dates

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**Lower Churchill Project  
Muskrat Falls – CH007 – Civil**

### Health and Safety Requirements

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19/12/2013

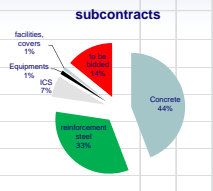
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**ASTALDI**

### Subcontractors

Activity	Description	Status/Targets
Concrete	Production & Delivery	Subcontractor: Beton Provincial - Labrador Ready Mix (25 December 2013) Start: January 2014
Reinforcement Steel	Supply	Subcontractor: ABB (21 December 2013) Contract: January 2014
Draf Tubes Formworks	Supply	Supplier: CEI - contractors Engineering Purchase Order issued.
Formworks & Scaffolding	Supply	Supplier Selection: ongoing Contract: January 2014
I.C.S. - Integrated Cover System	Supply	Supplier: Constructions PROCO Inc. (25 December 2013) Contract: January 2014
Spillway Hoarding	Supply	Supplier: Norveman Structures Delivery: January 2014
Equipment	Supply	Some Purchase Orders issued Ongoing
Light Vehicles	Supply	Some Purchase Orders issued First units received Ongoing
Camp Solutions	Supply	Some Purchase Orders issued First units received Ongoing
Structural Steel	Supply Installation	Bidding Process: starting January 2014
Mechanical Works	Supply Installation	Bidding Process: starting January 2014
Electrical Works	Supply Installation	Bidding Process: starting January 2014



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**Health and Safety Requirements  
Introduction and Team**

### Introduction

**Astaldi Canada's Health and Safety Department:**

- Enzo Raho – Corporate QHS&E Manager;
- Rick Crane – Health and Safety Manager (interim);
- Allnorth – Health and Safety Consultant(s)
- TBD – Health and Safety Advisors
- TBD – Health and Safety Coordinator
- TBD – Health and Safety Communication Specialist

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**Lower Churchill Project  
Muskrat Falls – CH007 – Civil**

### Execution Plan

## Questions?

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**Health and Safety Requirements  
Perspectives**

**ASTALDI CANADA - Management Contractor**

**Client, Regulators**

Monthly Report, Weekly Report, Statistics Performance

**ASTALDI CANADA - Management Subcontractors**

**Subcontractors**

Daily Inspections, Permit to Work (Coordination), Non Conformity Activities, Orientation, Incident reporting and analysis

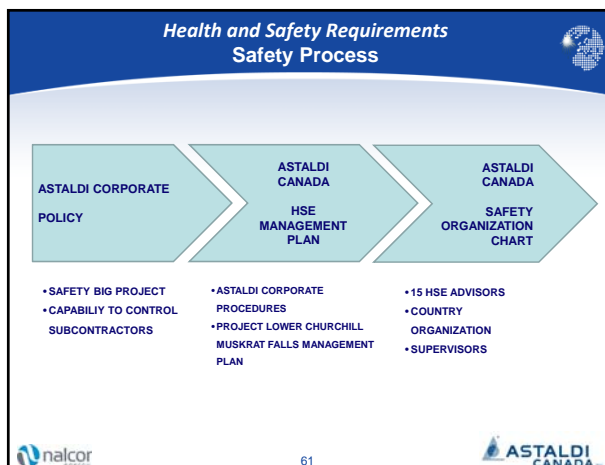
**ASTALDI CANADA - Execution Works**

**Astaldi Canada Workers**

Tool Box Meeting, FLRA, Training, Orientation, Incident Reporting and Analysis

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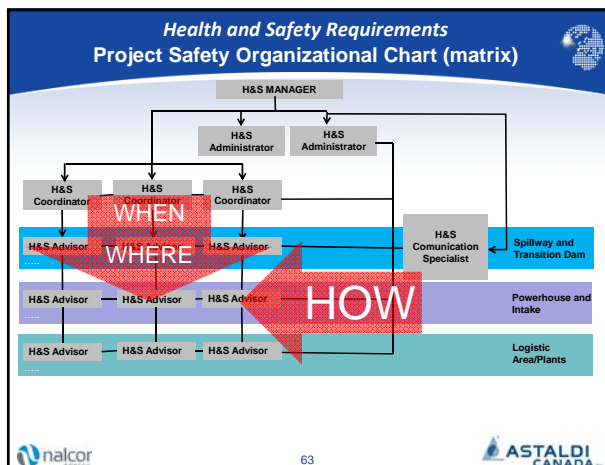
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- ### Health and Safety Requirements Health & Safety Communication Specialist
- Senior Professional that speaks with every level of the company (Managers, Supervisors, Workers)
  - Follows every Astaldi Canada's toolbox meeting activity
  - Follows every subcontractor's toolbox meeting activity
  - Provides team communication supervision and correct flow of Health and Safety information
  - Continuous improvement of Health and Safety communication
  - Coaching, mentoring, and ensuring best communication practices
  - Effectively communicating Astaldi Canada's vision, goals and motto
  - Maintaining Health and Safety communication boards
  - Open communications channel and positive safety culture support injury prevention

- ### Health and Safety Requirements Work to Date
- Developed and submitted a Health and Safety Plan to Nalcor
  - Hired Health and Safety Advisor - Gerard Brenton
  - Interim Safety Manager Hired – All Tech Services – Rick Crane
  - Actively completing and submitting Job Safety Analysis forms for the work site

- ### Health and Safety Requirements Site Safety Job Descriptions
- Supervisors (production line) :
- Daily Inspections
  - Toolbox Meetings
  - Subcontractor's Permit to Work
- Workers:
- Field Level Risk Assessment procedures
  - Participate Tool Box Meeting
  - Participate Orientation
- Advisors:
- Daily Inspections
  - Review Field Level Risk Assessment's
  - Conduct Incident Investigations
  - Attend Subcontractors safety meetings
  - Review Subcontractors Safety Programs
  - Conduct Orientation activities, if needed



- ### Health and Safety Requirements Subcontractors Control
- Procedures for control of subcontractors:
1. Selection
  2. Orientation – Coordination – Permit to work
  3. Daily inspections – Non conformity activities

**Health and Safety Requirements Goals**

- ZERO Incidents and ZERO Injuries
- Worker satisfaction
- Client satisfaction
- Maintain Astaldi corporate OSHAS 18000 certification

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**Lower Churchill Project  
Muskrat Falls – CH007 – Civil  
Health and Safety Requirements**

**Questions?**

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**Health and Safety Requirements  
Medium Term Objectives**

- Create a Health and Safety culture that will permeate throughout the project organization
- Capability to quickly resolve subcontractors Health and Safety problems
- Create a team with strong Health and Safety capabilities and skills for future projects

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**Lower Churchill Project  
Muskrat Falls – CH007 – Civil  
Environmental and Regulatory Compliance**

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**Health and Safety Requirements  
MOTTO**



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**Environmental and Regulatory Compliance  
Introduction and Team**

**Introduction**

**Astaldi Canada's Environmental Department:**

1. Enzo Raho – Corporate QHS&E Manager;
2. Roger Biles – Environmental Manager;
3. Allnorth – Environmental Consultant(s)
4. KGS – Environmental Consultant(s)
5. TBD – Environmental Permit Specialist
6. TBD - Environmental Advisor
7. TBD - Environmental Monitors

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### Environmental and Regulatory Compliance Work to Date

- Developed a Project Environmental Management Plan (EMP), submitted to and accepted with comments by Nalcor
- Obtained building accessibility Permits for “temporary trailers”
- Completed Environmental Orientation Program
- Received all copies of existing “Blanket” Environmental Permits from Nalcor
- Drafted and submitted to Nalcor a Contract Specific Environmental Protection Plan (C-SEPP) for “Early Works”

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### Lower Churchill Project Muskrat Falls Quality

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### Environmental and Regulatory Compliance Current and Upcoming Activities

- Actively recruiting Environmental personnel
- Develop and implement Environmental Baseline sampling Program
- Designing Settling Pond and Wash Basin for the Concrete Batch Plant in area C1
- Designing the water intake for the Concrete Batch Plant
- Environmental control of the contract specific roads
- Preparing all applications under the GAP Regulation for Fuel Storage on site
- Implementation of the (C-SEPP) Environmental Monitoring Program
- Develop C-SEPP for the remainder of the Project activities [February 2014]
- Complete permit applications for the office trailers, and facilities for the remainder of Construction activities
- Astaldi is committed to continual Improvements to our Environmental Program.

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### Quality Quality Perspectives

**ASTALDI CANADA - Management Contractor**

Client, Regulators  
Monthly Report, Weekly Report

**ASTALDI CANADA – Subcontractors Management**

Subcontractors  
Daily Inspections, Non Conformity Activities

**ASTALDI CANADA – Execution Works**

Internal Quality System  
ITP, Procedures

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### Lower Churchill Project Muskrat Falls – CH007 – Civil Environmental and Regulatory Compliance

## Questions?

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### Quality Quality Process



<p>• Achieve quality on large complex Projects</p> <p>• Capability to manage quality of Subcontractor work</p>	<p>• ASTALDI CORPORATE PROCEDURES (ISO 9001)</p> <p>• EXHIBIT 7 OF AGREEMENT</p>	<p>• Country Organization</p> <p>• Quality Manager</p> <p>• Quality Control Manager</p> <p>• 15 Quality Control Inspectors</p>
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### Quality Quality Work to Date

- Developed the Project Quality Plan – Re-submitted to Nalcor early December 2013
- Developed Inspection Testing Plan for «Early Works» - in progress
- Hired the Quality Control Manager – Wayne Ball
- Actively recruiting Quality Control Inspectors, Quality Coordinators, and Quality Specialists

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### Quality Project Quality Organizational Chart (matrix)

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### ASTALDI QUALITY DEPARTMENT

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### Quality QA/QC SPECIALISTS

- Ensure technical support to coordinators and inspectors
- Verify the application of Quality Project Plan Procedures
- Transfers Astaldi Quality requirements to suppliers / subcontractors
- Collaborate with Quality Control Manager and with Construction Manager to draw up the inspection and testing plan
- Provides Quality Control Manager and Construction Manager with the assistance in proposing solutions to non conformities
- Facilitate collaboration among the Nalcor and Astaldi Quality assurance and Quality control teams

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### Quality Country Quality Department

- Provides PM with support in drawing up and/or updating the Project Quality Plans and the relevant operative procedures;
- Develop plan for collaboration with Nalcor Quality Assurance Team
- Schedules, carries out and makes official AUDIT activities aimed at establishing Project units' compliance with the ASTALDI CORPORATE procedures, the Project Quality Plan, the ITP, operative procedures, technical specifications and contract drawings and reports
- Collaborates with PM in connection with the transfer of quality requirements to Suppliers /Subcontractors;

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### Quality Subcontractors Control

- Selection: Subcontractor's Quality Plan
- Line up Astaldi Canada Quality Plan to Subcontractor's Quality Plan
- Daily Inspections – Non conformity activities

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### Contract Administration Overview

CONTRACTOR'S NAME: ASTALDI CANADA INC.											
LABOUR COMPONENT						NON LABOUR COMPONENT					
UNIT OF MEASURE	ESTIMATED QUANTITY OF UNITS	MAN HOURS (BY UNIT)	UNIT PRICE (\$/HR)	LABOUR COST (\$/UNIT)	TOTAL LABOUR COST (\$/UNIT)	MATERIALS COST (\$/UNIT)	EQUIPMENT COST (\$/UNIT)	PROFIT AND OVERHEAD (\$/UNIT)	UNIT PRICE (\$/UNIT)	TOTAL PRICE (\$/UNIT)	TOTAL PRICE (\$/UNIT)

### Lower Churchill Project Muskrat Falls – CH007 – Civil Contract Administration

## Questions?

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### Contract Administration Overview

#### ARTICLE 14 CHANGES IN THE WORK

- 14.1 Company has the right to make a Change at any time and from time to time during the performance of the Work by issuing a Change Order. Contractor shall implement all Changes required by Company. Compensation for a Change shall be determined in accordance with Exhibit 2 – Compensation and Exhibit 3 – Coordination Procedures.
- 14.2 Contractor shall not perform and shall not be entitled to any compensation for a Change without a Change Order issued by the Company to the Contractor for the Change.
- 14.3 Contractor shall commence with and shall execute all Changes with all due diligence immediately upon receipt of a Change Order issued by Company.
- 14.4 Contractor shall comply with the requirements of Exhibit 3 – Coordination Procedures in the development of the pricing, impacts on resources and schedule as it relates to a Change and present a comprehensive proposal covering the Change to Company for Approval.
- 14.5 Except to the extent expressly provided in a Change Order, no Changes shall violate or invalidate or be deemed to amend or be deemed to constitute a waiver of any provision of this Agreement. All Changes shall be governed by all the provisions of this Agreement. Changes will not result in any limitation of Contractor's Warranty under Article 17.

### Lower Churchill Project Muskrat Falls – CH007 – Civil Project Controls

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### Contract Administration Overview

#### CHANGE REQUEST (CR)

Agreement No. \_\_\_\_\_ Revision No. \_\_\_\_\_

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

Supporting information that forms part of the Change Request:

Description of impact on Control Schedule:

Revised Finish Date: \_\_\_\_\_

Impact on resources for labour, plant and equipment to be completed by: \_\_\_\_\_

Contractor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed and Approved: \_\_\_\_\_ Date: \_\_\_\_\_

#### CHANGE ORDER (CO)

Agreement No. \_\_\_\_\_ Revision No. \_\_\_\_\_

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

Supporting information that forms part of the Change Order:

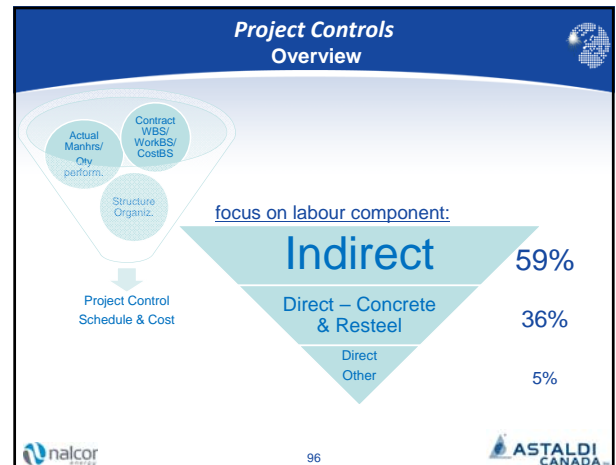
Change Details: \_\_\_\_\_

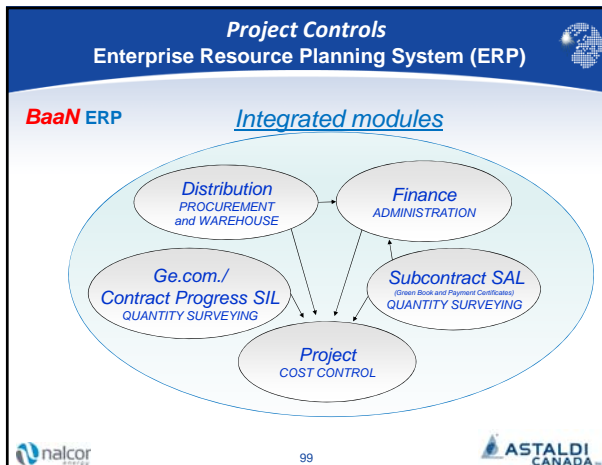
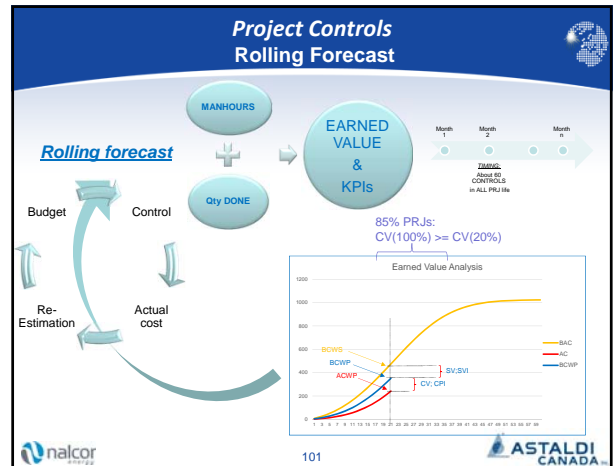
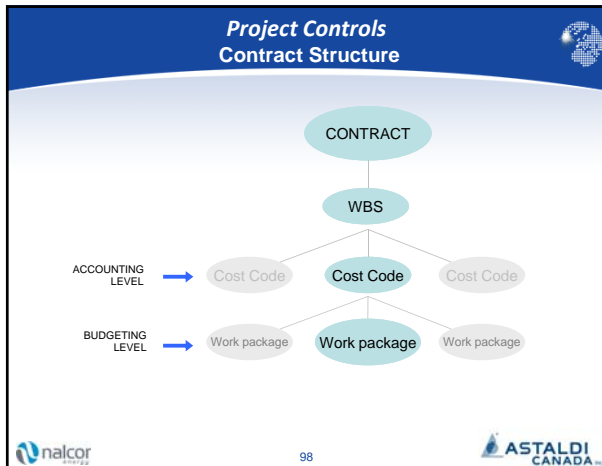
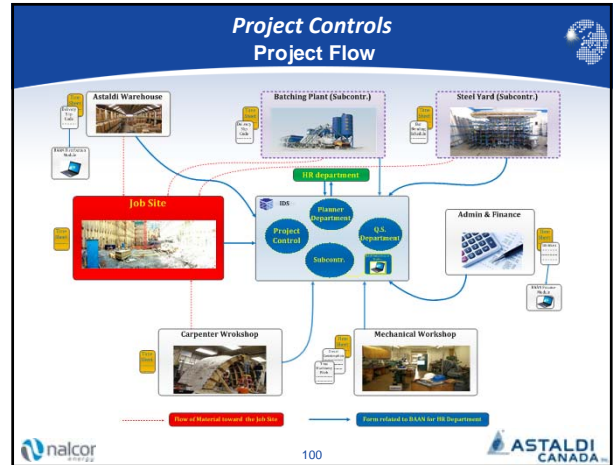
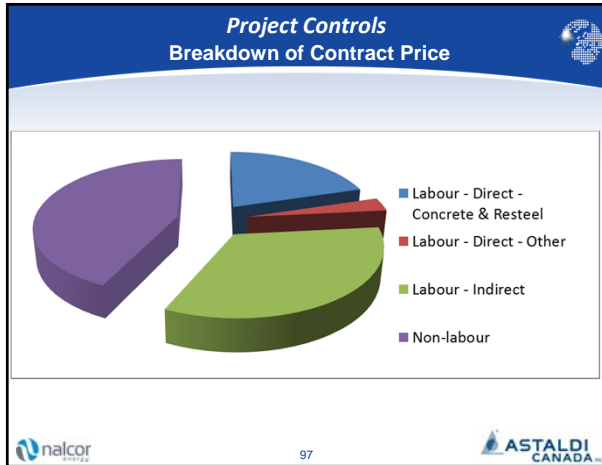
Project Control Schedule: \_\_\_\_\_

This Change Order shall form and be read and construed as an integral part of the above-named Agreement. The above-named Agreement shall prevail in the event of any conflict between the two documents.

Contractor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed and Approved: \_\_\_\_\_ Date: \_\_\_\_\_






*Lower Churchill Project  
Muskrat Falls – CH007 – Civil  
Project Controls*

## Questions?

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*Labour Relations / Provincial Benefits and Reporting  
Work to Date*

**Provincial Benefits**

- Opened staff offices in St John's and Happy Valley-Goose Bay
- Developed Organizational Chart
- Actively investing in the Community in Labrador and Newfoundland
- Established Health and Safety Committee
- Developed internal Human Resource Policies
- Developed Women and Diversity Program
- Developed the Provincial Benefits Program and trained all core staff
- Completed In-House Cultural training for Innu, Newfoundland and Labrador and Italian cultures.
- Actively collaborating and meeting with Nalcor provincial benefits program team
- Met with Town Council Goose bay and representatives from Sheshatshiu.



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Labour Relations / Provincial Benefits & Reporting*

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*Labour Relations / Provincial Benefits and Reporting  
Work to Date (cont.)*

**Labour Relations**

- Developed Grievance Management Plan
- Established Liaison Committee
- Developed Labour Management Plan
- Attended Labour Relations liaison and Kick off meetings December 4, 2013



*Labour Relations / Provincial Benefits and Reporting  
Team*

**Provincial Benefits**

- Program Manager - Kathy Goudie
- Program Assistant - Lisa O'Brien

**Labour Relations**

- Manager - George Kean
- Assistant Manager and Union Coordinator St John's - Krista Smith
- Assistant Manager Goose Bay - Marcus Linehan
- Onboarding Coordinator - Kayla Dawe
- Labour Relations Support - Bill Alcock


**Human Resources**

Training Coordinators - Gayle Foley & Markus Linehan



*Labour Relations / Provincial Benefits and Reporting  
What's Next*


- Work with Nalcor Provincial Benefits and Labour Relations team for Breakout session
- Presentation to Innu nation January and discussions on labour relations
- Paul Shelley to present to Goose bay Chamber of Commerce and others throughout Labrador and Newfoundland.
- Dialogue planned with Innu councils




Lower Churchill Project  
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*Labour Relations / Provincial Benefits and Reporting*

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*Other Business / Closing Remarks*

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**Finance**

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*Other Business / Closing Remarks*

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**Finance**

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