

Astaldi Notes P Harrington

Overall Timelines and key meetings (Note – there were regular, continued management meetings, face to face and phone calls throughout this period)

- **London 14th Sept 2013** – Notification of LNTP attended by
 - Nalcor – E Martin, P Harrington, G Bennett, R Power, L Clarke, R Adamcyk
 - Astaldi – S Cerri, G Venturini, J Hoffman, M Lanciani, M Triassi
- **Contract Awarded** XXXXXXXXXXXXXXXXXXXX
- **Rome 15/16th/ Feb 2014** – Meeting in Astaldi's offices Rome – Nalcor concerned on slow mobilization, PM situation, Poor Performance, Readiness concerns, First pour delay, attended by:
 - Nalcor – P Harrington, L Clarke, R Power
 - Astaldi – S Cerri (PT) M Lanciani, J Hoffman, M Triassi plus Robasto (PT)
- **Rome 13th June 2014** – Marriott Hotel – Nalcor concerns and Astaldi's plan to address poor performance, mobilization issues, PM and CM gaps, Readiness, First pour delays, attended by:
 - Nalcor- E Martin, P Harrington, L Clarke, R Power
 - Astaldi – S Cerri, M Lanciani, J Hoffman,
- **Rome 8th Oct 2014** – Nalcor continuing concerns on current situation with Astaldi unable to meet recently issued rebaseline plan by 25 to 30% of concrete placement, ICS , Spillway progress concerns and Astaldi's plan to get back on track- Nalcor offer of support with working groups initiative
 - Nalcor – P Harrington, L Clarke, R Power
 - Astaldi – M Lanciani, J Hoffman plus part time attendances, S Cerri, M Massimiliano
- **London 4th Nov 2014** Oxford and Cambridge Club – Follow up on progress of working group initiative, Nalcor's continued concerns regarding performance of Astaldi and production/concrete placement. Astaldi assured fully committed and will improve significantly, attended by
 - Nalcor –E Martin, P Harrington, G Bennett, L Clarke
 - Astaldi – S Cerri, M Lanciani, J Hoffman, M Triassi
- **London 25th November 2014** – Sofitel at LHR – Nalcor very concerned about further schedule delays, unacceptable rate of production and placement of concrete, ICS delay and impact on powerhouse plus the breakdown in Construction management and inability to direct the work, (Astaldi requested Nalcor to release Bill Knox and Roy Collier to Astaldi to lead the CM team and bring on other experienced people in CM) attended by:
 - Nalcor – P Harrington, L Clarke, R Power
 - Astaldi – J Hoffman, M Lanciani, M Triassi (?)
- **New York City 15th Dec 2014**- Princeton Club NYC – Nalcor concerned about delays and organizational challenges , lack of readiness, functional gaps and performance in 2014 and wanted to know what Astaldi were going to do to tackle these problems and get back on track.
 - Nalcor – E Martin, P Harrington, L Clarke, R Power

- Astaldi – S Cerri, M Lanciani, J Hoffman, G Orsatti, M Triassi
- **Muskrat Falls Site 24th March 2015** – Nalcor Conference Room Administration building – Nalcor stated that they could offer no more and it was up to Astaldi to perform now and that 2015 was a critical year and that they must ramp up labour and take advantage of the spring and summer to ramp up production get powerhouse concrete placed and advance the spillway to enable Andritz to complete their work. Astaldi committed to do so and showed concrete pours increasing to 120 in June/July 2015 with concrete placed increasing to 26,600 m³ in June with labour at 1350 in June. Attended by:
 - Nalcor – E Martin, P Harrington, L Clarke, R Power
 - Astaldi – S Cerri, M Lanciani, J Hoffman, G Orsatti, M Triassi plus representatives from Astaldi Board and other global areas (PT)

Precis of Meetings/Phone calls

13th Nov 2013 Phone call with M Triassi and M Lanciani to explain the reason for the Limited Notice To Proceed extension to end of January 2014. Rational – Project Financing not completed, EA for Lil not through yet, Contract is still not complete. Nalcor explained they are fully committed to ensure all Astaldi costs are covered so Astaldi are to proceed on all fronts to mobilize and ramp up start of work.

31st Jan 2014 Phone call meeting with by P Harrington, L Clarke, R Power with M Triassi, M Lanciani, J Hoffman. Key themes – Astaldi are moving too slow to mobilize, the Safety issues are significant and OHS will shut Astaldi down if no progress is made to improve, Astaldi are not meeting the contract deliverables. They have serious gaps in Project Management functions . The relationships with unions, aboriginals, locals is not where it needs to be. N Spur price too high and based on the current performance we cannot recommend to our CEO that extra work be given to Astaldi.

Rome 15/16th/ Feb 2014 – Meeting in Astaldi's offices Rome – Nalcor concerned on slow mobilization, PM situation, Poor Performance, Readiness concerns, First pour delay, attended by:

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Schedule provide in Contract not being met – 4 weeks behind already,, Crusher still not operable(also OHS issues) Spillway cover behind schedule (2 to 3 weeks) and will be of no use(too little too late) First spillway pour scheduled for March now May 2014.

Performance not improving, PM lacking key people and functions, Relationships with IN, Unions, Locals still not harmonious, Astaldi need to focus on safety, readiness, planning and production. Nalcor will support but Astaldi must rake the action.

21 March 2014 Brainstorming within LCP Team

Our objective is to improve the visibility of the worksopes to get Astaldi moving.

Our focus is currently directed towards:

- Weekly meeting each Monday and twoce weekly coordination meetings
- Increased communications
- Coaching Astaldi to get crushing plant and batch plants fully operational
- Responding quickly to letters and queries from astaldi

Day to day activities

- Real basic support to get H&S plans developed

- Helping at all levels, Planning, procurement, Quality, H&S , CM
- Lost of hand holding to understand the rules in Canada
- Time sheets and invoicing support to enable payments
- Astaldi do not have alignment internally
- H&S is not used to First world requirements

Project Management and Construction Management

- Missing at least 6 key positions
- No real plans, method statements and a lack of urgency to get these in place
- Lorne Tardiff seems to be trying to produce procedures but not in the Astaldi way
- Quality
 - Manager now on board so can start to build up the systems
 - ITP's do not tie into the construction procedures
 - Need help from Astaldi Corporate
- Bill Knox is frustrated , knows what to do and Astaldi don't get it
- Astaldi Indirect to directs are way out of control

Project Controls

- No leadership
- NO PEP
- Fundamentals are missing
- No monthly report
- No
- No acceptable schedule
- Resources not matching workfronts

Engineering

- ICS design is behind nothing submitted yet to Nalcor
- NO SDRL yet
- Disconnect between Astaldi and Beton

Key Action

- GET ASTALDI CORPORATE TO UNDERSTAND THEY ARE STRUGGLING AT SITE AND NEED HELP AT MANY LEVELS---TALK TO MARIO LANCIANI ASAP

- **Rome 13th June 2014** – Marriott Hotel – Nalcor concerns and Astaldi's plan to address poor performance, mobilization issues, PM and CM gaps, Readiness, First pour delays, attended by:
 - Nalcor- E Martin, P Harrington, L Clarke, R Power
 - Astaldi – S Cerri, M Lanciani, J Hoffman

This was a focus meeting to emphasize the need for Astaldi to improve performance and to identify key measures to be able to track Astaldi's efforts in this regard. Astaldi presented what they saw as areas for improvement – the low productivity of the workforce was brought up – Nalcor response was that labour productivity could be improved if Astaldi planned the work better, had Construction management who understood the labour force and Canadian ways better, also if the ICS and Spillway covers were going to be installed to provide cover in winter.

- **Rome 8th Oct 2014** – Nalcor continuing concerns on current situation with Astaldi unable to meet recently issued rebaseline plan by 25 to 30% of concrete placement, ICS , Spillway progress concerns and Astaldi's plan to get back on track- Nalcor offer of support with working groups initiative
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Safety – A safety summit was announced because of increasing number of high potential near misses, reporting of safety incidents was also identified as needing improvement. The Astaldi Corporate QHSE Manager will lead a site audit and develop an improvement action plan. Nalcor fully supported this initiative and will participate.

Astaldi stated that production was improving slightly but support functions were not keeping up and needs work. Bain have been engaged to prepare a full assessment and identify improvement action plans. J Alves is the new PM from S America, he has his style and is taking time to adjust. Rome and Site communication is strained and site internally alignment is missing between top and middle management

Lab ready mix issues is an obstacle and needs fixing. ICS is becoming an obstacle because of delays in construction ..are we building the ICs or the powerhouse? We need to get the priority right!

Nalcor are not sure about Alves he is not 100% Astaldi and the S American way where labour is cheap will not work in N America where labour is expensive – he is a closed door manager, old school and that is a problem

Nalcor stated that Astaldi have the responsibility to address the issues they face , of their own creation in many cases however nalcor will help by driving the establishment of working groups to focus on specific areas such as spillway, ICS, Powerhouse, CM, PM etc. Nalcor want to help Astaldi be successful.

Nalcor will place more key people on site to assist in the establishment of the working groups to kick start things , but Astaldi have to provide resources not in the day to day work . Astaldi agreed and will send resources to site

- **London 4th Nov 2014** Oxford and Cambridge Club – Follow up on progress of working group initiative, Nalcor’s continued concerns regarding performance of Astaldi and production/concrete placement. Astaldi assured fully committed and will improve significantly, attended by
 - Nalcor –E Martin, P Harrington, G Bennett, L Clarke
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Safety Action Plan was discussed with short, medium and long term objectives and plans in place

Astaldi stated that they would take over the Lab Mix and self execute, also roads maintenance. Overall greater focus on self performing. Working groups making a difference things improving but Nalcor question if it is sustainable. The functional supports to Construction and Construction management are still not performing.

Nalcor stated , keep working it, work together, we can support Astaldi but Astaldi need to perform, Nalcor not convinced all that needs to be done has been done.

Bain report is available but being worked internal to Astaldi – no real surprises in it , the same themes that Nalcor have noted are included . Good to have independent view that supports the approach.

Astaldi asked for two months to turn things around, Nalcor stated that CM is the key to get concrete moving , Astaldi will consider Nalcor offered to help as much as possible with resources.

Nalcor noted however that Astaldi are behind schedule, Astaldi responded that first year is always difficult and that they will meet the schedule, this is not considered a difficult project by Astaldi , contract is complex but work is not.

- **London 25th November 2014** – Sofitel at LHR – Nalcor very concerned about further schedule delays, unacceptable rate of production and placement of concrete, ICS delay and impact on powerhouse plus the breakdown in Construction management and inability to direct the work, (Astaldi requested Nalcor to release Bill Knox and Roy Collier to Astaldi to lead the CM team and bring on other experienced people in CM) attended by:
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This was a watershed meeting – Nalcor laid out all issues to Astaldi , pin pointing the lack of alignment between workers, Supervision, Management and that this has led to gross inefficiencies and confusion and is not sustainable. Astaldi asked if Nalcor could release two key Construction managers to Astaldi to lead the CM reorganization. Nalcor agreed.

It was also confirmed by Astaldi (Mario) that the Contract is not changing as a result of the efforts made by Nalcor to support and assist Astaldi – he was very clear that the lump sum type nature on labour is not compromised at all .

Nalcor stated that the working groups should continue but the CM reorganization needs to be planned by Astaldi and the Xmas break would be a good time to refocus, restart and get organized- Astaldi also saw this as an opportunity and will plan the Xmas shutdown and restart with the new CM team in place and fully integrated with Astaldi Site team.

- **New York City 15th Dec 2014-** Princeton Club NYC – Nalcor concerned about delays and organizational challenges , lack of readiness, functional gaps and performance in 2014 and wanted to know what Astaldi were going to do to tackle these problems and get back on track.
 - Nalcor – E Martin, P Harrington, L Clarke, R Power
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Astaldi stated that they were winter ready, Nalcor support was appreciated. Spillway moving ahead and hoarding/heating works well to achieve progress through winter

ICS over unit 1 and 2 will be enclosed with roofing and tarpaulins but Unit 3 and 4 are still under review. The CM organization was seen as a success and starting to make a difference. The two CM's will also bring on other Canadian experienced superintendents, supervisors and foremen.

All talk was about the January restart and getting organized to take off in 2015.

Astaldi mused about a second batch plant – some hint of commercial gambit but Nalcor would not make a decision for Astaldi – if a second batch plant made sense to Astaldi to improve production then it must be an Astaldi decision. Nalcor has no desire to approve or not. Same goes for ICS – this has to be an Astaldi decision alone. Nalcor will handle media fallout and with Government so Astaldi should not feel constrained to keep the ICS , they should decide based on the basis of a good business decision.

Astaldi share price is being impacted by Astaldi's performance at MF, Nalcor recognizes that situation and will avoid exacerbating by inflammatory statements in media.

Some good teamwork to improve the situation but lots still to do and Astaldi need to drive this effort.

- **Phone call 22nd Jan 2015**- Nalcor Snr team and Astaldi Snr Team. Bain report available and key issues discussed, same points as Nalcor has noted before, Safety, CM, functional support issues, resource gaps, processes and procedures missing . No surprises with Bain. Also Prof Ibbs telling the same story about what needs to be done to achieve sustainable progress. Agreed on a CEO meeting in march 2015

- **Muskat Falls Site 24th March 2015** – Nalcor Conference Room Administration building – Nalcor stated that they could offer no more and it was up to Astaldi to perform now and that 2015 was a critical year and that they must ramp up labour and take advantage of the spring and summer to ramp up production get powerhouse concrete placed and advance the spillway to enable Andritz to complete their work. Attended by:
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Meeting objectives and key points emphasized by Nalcor

1 Astaldi need to recognize the serious of their situation

2 Astaldi need to take the opportunity to rampup labour and increase concrete placement in Spring, summer., fall of 2015 – this is one last chance to get back on track

3 Nalcor can do no more but continue support –it is up to Astaldi now to produce and perform

4 Astaldi need to fill the gaps in their organization

5 Astaldi need to rampup and step up labour and concrete placement

6 This is now Astaldi's to succeed we have worked hard to get to this point but Nalcor are not the constructor, Astaldi are.

These points were made and Astaldi presented 120 days targets and committed to making it happen.

Key targets are:

Astaldi committed to concrete pours increasing to 120 in June/July 2015 with concrete placed increasing to 26,600 m3 in June with labour increasing month over month to 1350 in June.

MEETING IN ROME 8th OCTOBER 2014

Nalcor P Harrington, R Power, L Clarke

Astaldi M Lanciana, J Hoffman

Current Situation

Astaldi have only achieved 25% to 30% of planned work

Production rate is well below where it needs to be to meet schedule

Astaldi need to recognize the problem and make improvements

Nalcor will support all Astaldi efforts but it needs Rome intervention to overcome Astaldi site issues and get moving on track

Mario Lanciani stated:

- Astaldi will improve production in coming months
- Astaldi are fully committed to making this project a success
- There are a number of key actions underway by Astaldi

- Safety Summit Max massimiliano Corporate H&S director will take action to resolve H&S issues at site – too many Hi pot near misses not enough reporting. Will increase training and reporting. Audit of safety team at site – need training and education of workers and site team . Nalcor will participate
- Since July daily communication with Site and Rome
- Some improvements noted in production and benefit of joint work teams to address ICs, Spillway, Crushing , Batch plant
- Mr Alves on site but has medical issue with eye
- Much organizational improvement needed – Albafarti/ Alves relationship not the best
- Leadership issues – more work needed
- Breakdown in communication between middle management/top management and Rome
- Planning and execution needs improvement
- Spillway cover was too little too late and had to be removed for slab pours
- ICS is a problem with sub contractor and design
- Will not be able to use ICS for winter pours
- Batch plant – Lab Ready mix relationship is poor based on a bad contract and needs to change- renegotiation underway, get a second plant?
- Payment – Astaldi need help to get invoice up to acceptable level and payments made nalcor will assist as much as possible
- Skills of people is lower than planned and productivity is low eg carpenters
- Labour call off processes need to be improved
- Alves assessment
 - Not 100% Astaldi
 - In at the deep end
 - Needs a lot of help esp processes
 - He is loyal and committed
 - Fire fighting issues
 - He has missed some key things
 - Needs to communicate with Nalcor (Desmond)
 - Has eye problems
 - Will decide on him before end of October 2014

P Harrington Stated:

- Some positives we need to build on them
- Desmond and Alves need to talk more
- Alves needs to recognize Rome support and direction more
- Alves is proud but is in a difficult situation and needs help
- Robasto needs to work with Alves – if he doesn't work out Astaldi need to act – (that was agreed)
- Group discussion and alignment on the following:
 - Work Groups are making a difference

- The work groups need leadership not involved in day to day activities
- Good cooperation but we need results
- Relationship is good

Payments

- Lance committed to work through issues and get payments however Astaldi need to do a better job on invoicing and support documentation we have standards that we cannot ignore but we will try hard to help Astaldi

Work groups

- Discussion and agreement on who participates and who leads all the groups, Planning/Labour/Training ICS/Spillway/Powerhouse/ Productivity

KEY ACTIONS

- ASTALDI NEED TO IMPROVE PRODUCTION/PM and CM
NALCOR IS SUPPORTING _NOT DIRECTING THIS IS ASTALDI'S INITIATIVE
- WORK GROUPS ARE HELPING BUT MORE NEEDED
- ALVES IS UNDER REVIEW

NOVEMBER 4th 2014 STEERING COMMITTEE and CEO Meeting LONDON