



**Muskrat Falls Corporation
350 Torbay Road, Suite 2
St. John's, NL Canada
A1A 4E1**

30. August.2014

ACI / MFC-0126

LTR-CH0007001-0255

Attention: Mr. Desmond Tranquilla
Deputy Company Representative and Site Manager

Subject: **LCP Muskrat Falls Contract No. CH0007
Construction Of Intake And Powerhouse, Spillway And Transition Dams
Batching Plant Production & Site Concrete Activities**

Dear Mr. Tranquilla,

Following the safety audit and review of the operations of the pouring of concrete at 3A in the Spillway, Astaldi have held several internal meetings, as well as meetings with Nalcor personnel to review the overall situation. Following these meetings, several corrective actions have already been implemented to improve the situation as follows:

Technical Corrective Actions

We had several technical meetings with Nalcor personnel, where we explained in detail all of the corrective actions which are being implemented in respect of the items of concern, all of which are being documented in writing. The same points regarding preparation for the pouring of concrete have already been put in place and are now ongoing. The operational items related to the actual pouring of concrete will be implemented as and when they actually take place, based on what has been explained and submitted to you. All of these items are listed in the attached document.

Health & Safety Issues

Prior to the Audit, Astaldi had already planned some actions related to the safety organization, including placement at the Plant of Astald's safety personnel to cover both shifts. At the same time, following the site inspection at the Batching Plant by Management, on Saturday 23.August.2014, we immediately placed Richard [Rick] Lewis in charge of the plant operations and he has been busy since then identifying the problems which had occurred earlier, and he immediately started to instigate the corrective actions. This has been demonstrated to Nalcor personnel during the meeting held in the Astaldi site offices on 28.August.2014. Some of these corrective actions have already been executed whilst others are still ongoing.



The plant Organisation Chart is being reviewed and will be submitted to you as soon as is practicable. Concurrently, the the Project Manager from Labrador Ready Mix has been removed from site, and a new Project Manager, Gus Lewis, will arrive at site tomorrow, Sunday 31.August.2014, and we are confident that he will operate the Batching Plant to everybody's satisfaction, as he is already well known to some of our staff. Please find attached herewith the CV for Gus Lewis. Irrespective of the arrival of Gus Lewis, it is our intention that Richard [Rick] Lewis will still be the person in charge of the Batching Plant.

Following the Health & Safety Audit, we held many internal meetings and implementation of the following actions has commenced. Please see attached document in this respect.

Quality

With regard to Nalcor's concern in respect of Quality, we demonstrated to Nalcor in the meeting held on 28.August.2014, the various actions which are already being put in place. It is our intention to locate our Geologist & Laboratory Specialist Nicola Ramacciato at the Batching Plant on a full time basis, and he will be responsible for monitoring the plant activities which are related to quality as well as placing of concrete and testing operations, both at the Batching Plant and on the site. He will co-ordinate his activities with our quality personnel.

Management, Staff & Operatives

As already referred to above, the new Batching Plant Manager will be on site as from Monday 01.September.2014 onwards, under the leadership of Richard [Rick] Lewis. In addition we are presently reviewing the organization and we will possibly make some changes, by replacing the personnel who are not totally fluent in English, and also issuing a directive in this regard. In addition we will replace any staff who we consider are insufficiently qualified, as well as introducing additional staff & operatives who are required for comprehensive operation of the Batching Plant. Mark-ups are presently being prepared.

Immediate Operational Actions & Priority Actions To Be Taken Now

Following the prioritization of the required corrective actions, we are working to complete those shown on the attachment, before work recommences. We have restructured our own Safety Team resulting in Carol Ann Griffin taking the lead from 08.September.2014, and Amanda Murphy will be available from 04.September.2014. Boyd Penny is already part of the team and a new Safety person is presently being sourced. Jerry Bouchard from LRM is already at the plant.

A site Query is being submitted to Nalcor requesting authorization for us to eventually procure concrete locally in order that we can pour over-break concrete in the Intake at Units 3 & 4 in addition to rock reconstruction concrete along line A.

If we are unable to continue with some of the concrete operations immediately, with effect from Monday 01.September.2014, it will be necessary to lay-off 250 operatives, which we are loath to do at this time of the year, taking into consideration that winter is not too far away and we really



want to take advantage of the remaining good weather months to complete as much of the concreting work as possible. We are presently ready to pour 5000 cubic metres of concrete.

Conclusion

We wish to reiterate that as soon as these items were identified, we acted immediately to get the problems resolved. Some of these have been done, some are still ongoing, and shall be completed shortly, particularly the top priority items, however others will require more time. Outstanding items will be addressed as soon as concrete pouring recommences. We wish to confirm the importance of these actions which need to be performed, and our personnel will be in place to implement all items.

We respectfully request that Nalcor will give permission to Astaldi to restart concreting activities on Monday 01.September.2014.

We are available for any clarifications which may be required in respect of this subject and we wish to thank you in anticipation of ongoing co-operation regarding same.

Yours sincerely,

Astaldi Canada Inc.

A handwritten signature in blue ink that reads "Vittorio Robiati".

✶ Mr. Jose Alves
Project Manager
Lower Churchill Project – Muskrat Falls

Cc: Mr. Edy Lucchini; Mr. Roger Hopkins; Mr. Vittorio Robiati; Mr.Giosue Pani;
Mr. Erasmo Bassano

Nalcor : Mr. Alphonsus Kelly; Mr. Mel Melhem; Mr. Hisham Geres;

RJH – 30.August.2014

CAR-CH0007001-008 Concrete Readiness

28-Aug-2014

Response to Contractor Recommended Disposition

In order for Company to sign-off on next concrete pour Contractor shall demonstrate continuous batching operation by placing a minimum of 120m³ of concrete in non-permanent or temporary structures.

In addition items labelled (A) below need to be resolved with Company prior to next pour. Items labelled (B) need to be resolved with Company by 19-Sept-2014.

Item 1: Issues with Plant Operation

- Company request to see revised Org Chart and roles and responsibilities for Key plant positions and the qualifications of QC and batch personal. (A)
- Company request to see copy of plant maintenance and repair logs, specifically with respect to the recent plant breakdowns during productions (B)
- Contractor shall ensure full readiness and redundancy of plant equipment and concrete delivery equipment prior to start of any concrete pour. Company shall be notified on the Concrete Placement Authorization Checklist of the status of this equipment. (A)
- Company comments with respect to Rev C2 of Batch Plant Procedure MFA-AT-SD-1513-CS-K24-0002-01 have not yet been considered by Contractor. Contractor shall address. (B)
- Verify that plant QC and batching personal are trained and knowledgeable with respect to the content of the Batch Plant Procedure. Company request a training log and to sit in on the training session. (A)

Item 2: Ice Plant

- Contractor shall supply a written description of how the ice plants work, including descriptions for normal and contingency operations. (A)
- Plant #2 does not automatically record ice weight from ice plant #1. Review/Modify batch plant communication process for recording ice weight between plants and up-date procedure. (B)
- Batch Plant Procedure MFA-AT-SD-1513-CS-K24-00002-001 shall be up-dated with operational procedures described above. (B)

Item 3: Slump Variation and Addition of Water

- There needs to be more consistency in production at the plant to reduce need for adjustment at delivery. Contractor shall explain how the water content is measured in the mix and identify any corrective actions required. (A)
- Contractor shall add (Addition of Water) procedure to the Batch Plant Procedure MFA-AT-SD-1513-CS-K24-0002-01 as per SQY-074 response and specification and add protocol on the LRM ITP. (B)

CH0007-AST-CAN-NCR-012-00

In response to Company comments on the am NCR, we would like to respond/clarify as follows:

1. In the SWB 3C a movement was noted in the block-out form work and the attached embedments beyond the specified tolerances of +/- 6mm (Around 15mm). Adjustment took place during the pour, and the pour continued. As a preventive action for the next pour, Cross Bracing were added to the Block-out form work for the SWB 3C.
2. Despite the cross Bracings installed in the SWB 3A, again movement was noted in the Block-out form work, as well as the rebar cage, that time movement were around 25 mm, again adjustment took place to the original position.

As a preventive measure to avoid recurrence the following will take place:

- Removal of rebar chairs between rebar cage and blockout formwork
- Increase the number of cross-bracing support rebar between the vertical non-structural top mat support bars.
- Additional lateral bracing in blockout formwork from blockouts to Doka panels using coil rods.
- Additional diagonal bracing from blockout formwork to bottom matt rebar using coil rods.
- Installation of Come-Alongs from upper rebar cage to the Doka panels.
- Pours will be poured North-South instead of East-West, in line with blockout formwork.
- Taught wire in formwork to indicate/monitor movement.

Priority 1

Completed before Start-Up

Audit Item	Includes
Safe Work Practices / Safe Work Procedures	<ul style="list-style-type: none"> • Development of Safe work practices & procedures for all identified critical operational tasks • PPE
Training and Communications	<ul style="list-style-type: none"> • Competency Assessment • Leadership Training • Orientation • Respiratory Protection • WHMIS • Lock-Out –Tag-Out • Confined Space Entry
Hazard Assessment and Control	<ul style="list-style-type: none"> • FLRA • JSA • Unsafe behaviors and conditions
Inspections	<ul style="list-style-type: none"> • Workplace • Tools & Equipment
Preventative Maintenance	<ul style="list-style-type: none"> • Scheduling Program for all identified operational areas

August 30th 2014

H&S NOTES

Following several recent issues with operations at the LRM Crusher and Batch Plant facilities, full-time Astaldi Safety presence has been added to the LRM site Safety Department since Saturday August 23rd 2014.

Upon reception of the draft version of the Joint Internal Audit performed on Thursday August 28th, a meeting was held between Astaldi and LRM site Safety Departments on Friday September 29th to fix immediate actions that will enable Crusher and Batch Plant operations to resume in the coming days, as well as deadlines for completion of corrective measures to overall elements observed during the audit.

1) Immediate Action Plan (corresponds to Nalcor "Priority 1 to be completed before start-up")

Over the weekend, the following elements will be revised jointly by LRM and Astaldi Safety representatives in order to properly document the Risk Evaluation and Control process for activities necessary to the operation of the Crusher and Batch Plant: Sections 2 (Hazard Assessment and Control), Section 3 (Safe Work Practices) and Section 4 (Safe Job Procedures).

In addition to addressing the observed quality issues with current daily field assessments (JSA and FLRA practices), a general Hazard Assessment will be created for LRM site activities. This assessment will address overall risks and the range of controls to be put in place to permit operations to resume in this sector. These include the 5 documented high-risk activities associated with operations (Fall Protection, Confined Space, Lockout/Tag-out, Respiratory Protection, Hearing Conservation). Critical issues concerning PPE selection and maintenance (Section 6) and Training records/Competency evaluations (Section 8) will be included in this exercise: deadline ASAP.

Parallel to this evaluation, over the weekend the Astaldi Plant Manager will review LRM's Preventive Maintenance Program (Section 7) and identify improvements necessary to resume activities in this sector: deadline ASAP.

Diffusion of the revised documents will occur to all crews in the form of a specific Safety Stand Down before resumption of Crusher and Batch Plant activities.

2) Short-term Action Plan

The Labrador Ready Mix Corporate Safety Manager will receive a copy of the results of the Joint Internal Audit upon Astaldi reception of the finalized official version from Nalcor.

The LRM Safety Department will be required to subsequently provide immediate documentation of their site Management Plan concerning their Disability Management and Return to work Program (Section 18) and their Subcontractor Management Program (Section 17) : deadline Wednesday, September 3rd 2014. Depending on the existence and nature of the documents submitted, Astaldi may impose our criteria on these activities until further LRM documentation can be provided.

The LRM Corporate Safety Department will be required to submit a revised version of the the site Safety Program submitted to Astaldi on June 17th, which addresses the gaps in on-site documentation observed during the audit : Health and Safety Policy (Section 1), Company rules (Section 5), overall Training Program Management Plan, including site-specific orientation (Section 8), inspections and investigation

activities (Sections 9 and 10), Emergency Preparedness Plan (Section 11), and WHMIS/TDG (Sections 15,16): deadline Monday September 8th.

Diffusion of revised documents will occur to all crews in the form of a specialized Safety Stand down. Henceforth, all new hires will receive information via the future LRM site-specific orientation presentation.

3) Interim LRM Site Safety Management Plan

Until further notice, any gaps in LRM Safety Program will be considered to be covered by Astaldi's Safety Program. During the coming week, both Astaldi and LRM Safety Departments will be mandated to ensure that the gaps observed during the audit are addressed in a timely manner.

Due to the increased number of LRM workforce (estimated at about 65), full-time presence of 2 Safety Advisors on the LRM site will be assured by Boyd Penney (Astaldi Subcontractor Safety Coordinator), Amanda Murphy (Astaldi Subcontractor Safety Advisor) and Jerry Bouchard (Labrador Ready Mix Safety Advisor).

Astaldi Health and Safety Manger Allan Layte arrives on site on Friday, September 5th. A new Astaldi Deputy H&S Manager will arrive on 15th September, Quentin Cox. **Astaldi Deputy Safety Manger Carol Ann Griffin will be mandated as on-site Acting Safety Manager for LRM starting Monday September 8th.** At that time we plan to meet the LRM Corporate and site Safety representatives at Muskrat Falls to review the submitted improvements and determine the next course of action.

RESUME

GUS LEWIS

36 Carson Drive, Wabush, NL
Tel: (709)282-3687 Cell: (709)280-6397
E-mail: gus.lewis@hotmail.com

PROFESSIONAL SUMMARY:

Prior to joining Amec in 2008, Gus retired from the NL Department of Transportation and Works Services with 32 years of service in highway construction, Surveying and Project Management where he started as a Surveyor and retired as an Engineering Technician III and Senior Project Manager. He brings a lot of assets to Labrador projects having worked in Labrador for many years.

Gus worked on the Lower Churchill Project back in 1975 as a lead surveyor after having served as a Corporal Field Engineer in the Armed Forces for five years.

Gus detains a Class I heavy equipment license with commercial 40 passenger bus endorsement and is COR certified.

WORK EXPERIENCE:

January 2008- Present- **Amec Earth and Environment Inc., Project Manager, Resident Supervisor**

Gus acted in the role of Resident Supervisor on projects ranging from \$1 to \$25 million dollars in construction costs. He has demonstrated the ability in dealing with various contractors and all site personnel under isolated and challenging conditions. Gus fully understands the policies and procedures that governs construction projects and represents the client who is the Department of works Services and Transportation.

Gus manages the material engineering part of the project as well and has extensive knowledge regarding the best practices for highway construction. He has over 40 years of experience in the field and has an in depth understanding of the behavior of construction materials. He knows and applies the applications needed to meet the client's needs. The specifications for granular and paving materials are specific and he ensures they are meet and exceeded.

Gus is managing the road widening, upgrades and paving of the TLH and has completed more than 300 kilometers of road to date. He has 20-25 direct reports and oversees approximately 100 people on a daily basis. He approves and verifies progress claims, he assists with the budget for the project, he reports to the client's representatives and ensure the work schedules are met and the project is delivered on time and on budget.

EMPLOYMENT HISTORY:

Resident Engineer, Amec earth and Environment- 2008 to present

Engineering Technician and Project Manager, DWST, 1976-2008

Operations and Services Manager, DWST (winter operations)

Surveyor, Party Chief, Shawmont Engineering, 1975-

Field Engineer, Department of National Defense 1970-1975

Surveying Apprentice, Ontario Department of Highways, 1968-69

CERTIFICATIONS:

Certificate in front Line Leadership-

Knox Paving and Equipment Methods-

Armtec Assembly Instructions for Multi Plate Structure-

Military Engineering Training (levels 1-5)-

Bay St George College- Class I with 02,03,04,05,06,07,08 and 09 endorsement-

Basic Emergency Management Course-

CSA, Concrete Material Testing and Methods of Concrete Construction-

NLCA- COR training-

NLCA- Project Management-

Portland Cement, Design and Control of Concrete Mixture-

Decision Making Process- From Inception to Implementation-

Hazard Assessment-

Incident Investigation-

Transportation of Dangerous Goods-

Fire Extinguisher and Awareness-

First Aid Emergency and Standard Levels-

WHIMIS-

OH&S Safety Committee and Supervisory Training-

REFERENCES: To be provided upon request