

Muskrat Falls Corporation

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WITHOUT PREJUDICE

27 May 2016
LTR-CH0007001-1181

Mr. Francesco Rotundi
Astaldi Canada Inc. / Astaldi S.p.A.
00156 Roma
Via G.V. Bona 65

Dear Mr. Rotundi:

**Re: Astaldi Canada Inc. - Justification for Incremental Compensation
Agreement: CH0007 – Construction of Intake and Powerhouse, Spillway
and Transition Dams**

I am responding to the Justification for Incremental Compensation ("JIC") which accompanied Mr. Stenilis' letter to Mr. Ed Martin of March 31, 2016.

As you know, Mr. Stan Marshall was recently appointed to the position of Chief Executive Officer of Muskrat Falls Corporation and affiliated companies. He has been away these past two weeks and will be responding to Mr. Stenilis' letter upon his return.

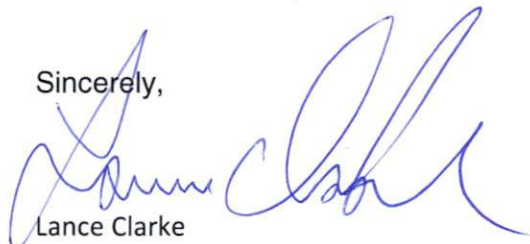
We have reviewed the JIC in detail and feel compelled to provide you with our summary review following our detailed assessment of the various claims set out in the JIC. You will see that we have found little, if any, justification for the \$785,500,000 that Astaldi Canada is seeking. Astaldi Canada's suggestion that the Agreement is void for misrepresentation is not supported by the facts; Agreement CH0007 is valid and binding on the parties. The alternative claims presented in the various annexes in the JIC also suffer from a variety of problems: factual, legal and contractual. However, there is one overriding factor which applies generally to the various claims being advanced, and that is a failure by Astaldi Canada to recognize the serious deficiencies in its performance, particularly in 2013-2014, and the errors in its estimates of the cost to perform the work.

I understand that Astaldi Canada presented the JIC to satisfy our request for such a document as a precondition for further meetings to discuss the potential for a commercial resolution to the cost and schedule issues you have raised. While we do not agree with the positions you have taken in the JIC, we do need to meet to try to come to a solution acceptable to both parties.

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I anticipate being in a position to propose a meeting date after consulting with Mr. Marshall, and I look forward to meeting with you at that time. In parallel, for the purposes of coordination, please connect with me re your availability in the coming weeks.

Sincerely,



Lance Clarke
Business Services Manager

Attachment

cc: Stan Marshall
Filippo Stinellis
Gilbert Bennett

**SUMMARY RESPONSE BY MUSKRAT FALLS CORPORATION
TO ASTALDI CANADA INC.'S
"JUSTIFICATION FOR INCREMENTAL COMPENSATION"**

The following is a summary response to the without prejudice "Justification for Incremental Compensation" ("JIC"), delivered by Astaldi Canada Inc./Astaldi S.p.A. ("Astaldi") to Muskrat Falls Corporation on March 31, 2016. The factual basis for the claims set forth in this document, and the precise grounds for entitlement to much of the relief claimed, are poorly articulated and resist detailed analysis.

Nalcor Energy and Muskrat Falls Corporation (each "Company" at the relevant time) say that there is no basis under Agreement No. CH0007 ("Agreement") or at law to support Astaldi's claim for additional compensation.

This summary response is organized as follows:

- A. ASTALDI CANADA PERFORMANCE DEFICIENCIES
- B. ASTALDI'S PRIMARY POSITION: MISREPRESENTATION
- C. ASTALDI'S SECONDARY POSITION: CLAIMS UNDER THE AGREEMENT

A. ASTALDI CANADA PERFORMANCE DEFICIENCIES

Astaldi has not admitted or accepted any responsibility for any of the incremental costs or delays Astaldi alleges it has or will incur. It is obvious that such a position is not reasonable nor supportable.

The contemporaneous project documentation provides a very different perspective regarding the causes and responsibility for the project delays and cost overruns than suggested in the JIC. The documentation clearly shows that Astaldi bears the responsibility for the preponderance, if not all, of these delays and cost overruns.

Astaldi's deficiencies fall within three major classifications:

- Project Planning
- Project Management
- Execution

Project Management includes, but is not limited to, Project Staff, Quality Control, Safety, Labour Relations, Procurement and Logistics, and Administration. Project Planning is a subset of Project Management however the deficiencies here are such that it warrants separate treatment. Execution consists primarily of construction related activities and addresses both pre-award and post award issues.

Astaldi's report of productivity rates are less a measure of productivity, but rather a measure of waste. As the Ibbs Consulting Report enumerated, Astaldi's performance was the result of, but not limited to, poor planning, lack of discipline, failure to supervise, rework, extended break periods and early departures. The cumulative impact of Astaldi's planning, management, and erection failures resulted in the waste of over three million labour hours and direct and indirect material expenses. If not addressed they will continue.

In addition to the hours and expenses Astaldi has wasted, Company has, and will incur additional costs for accommodation and rotation expenses. These are direct costs to Company due to the inflation of the labour hours and not as a function of Astaldi's delays.

Project Planning

The minimum requirements for project scheduling are specified in Exhibit 3 to the Agreement. Detailed planning using a comprehensive list of activities, logically linked with appropriate durations is an absolute necessity on any large civil works project, the lack of which invariably results in delays and increased costs. Unfortunately, deficiencies in Astaldi's project planning was evident from the outset.

Company's concerns about Astaldi's lack of progress and failure to submit required deliverables was such that Company met in January 2014 with Astaldi senior management in Rome to express those concerns and to encourage more project support from Rome. Nevertheless,

Astaldi's "ready to place concrete" activity in its early works schedule slipped five months over the next three month period.

Astaldi's Senior Planner departed in March 2014, and was not effectively replaced until September 2014. With only the one remaining planner and scheduler Astaldi could not adequately plan work at a critical time. For example, Astaldi's Basis of Planning document indicated the Spillway completion Milestone M4A had a negative 21 days of float and Milestone M26 had a negative 28 days of float. Within a period of 30 days, Astaldi's Spillway schedule had slipped 20 days. Astaldi stated it was preparing a recovery plan to try to complete the work on time.

The problems continued with the Baseline Schedule, which was informally issued, revised because of defects, and with further revisions due to further defects. It was clear that Astaldi's lack of a qualified planner prevented Astaldi from making the necessary corrections to the Baseline Schedule to produce a workable document Company could accept, and Astaldi could use to manage the work. This continued through September 2014, and similar issues arose with its updated Baseline Schedule, the first version of which was issued in mid May 2015.

Due to its lack of planning, between March 2014 and September 2014 Astaldi's work force grew to 1,620 direct hire craft and 474 subcontract craft. This was close to Astaldi's planned peak work force for the Work and yet Astaldi did not have sufficient planned work activities available for half this work force. Contrary to Astaldi's contention that its problems were due to a shortage of skilled labour, it was quite the opposite. Astaldi had requested more labour than it had work to perform, and did not have the management and supervision to utilize the labour productively.

At the end of 2014 Astaldi was forecasting a delay of nine months to the delivery of the Spillway and over twelve months to the powerhouse and intake structure.

In another example, on February 10, 2015, Astaldi provided a draft 120-day construction schedule. This schedule was the outcome of a commitment made at an alignment meeting held in Happy Valley-Goose Bay on January 27, 2015. The following day a revision to this draft 120-day schedule was submitted. In an email dated February 16, 2015 Astaldi informed Company that work had been suspended in the powerhouse until the overhead cranes in the ICS are commissioned. Astaldi stated it planned to reassign the workers from the powerhouse to the spillway and the south dam. Thus the 120-day schedule, which had just been produced, was being abandoned.

The planning problems continue. In the last four months alone, many of the milestone completion dates have slipped from two days to eight weeks.

Project Management

From the issuance of the Limited Notice to Proceed through 2014, Astaldi failed to adequately staff the project with qualified personnel or to furnish or retain the key project personnel pursuant to Section 3.1 of Exhibit 3. During 2014 Astaldi experienced five changes in Project Manager. While it is difficult to attribute a cost or actual delay to these changes, there is little doubt that Astaldi was unable to establish and maintain a consistent effort or to address the

many problems being encountered during the project start-up. Only with the arrival of Mr. Giacomo Orsatti in October 2014, did Astaldi begin to seriously address many of its execution problems. However, by this time the 2014 construction season had been lost, and significant labour and non-labour costs had been wasted.

In addition, Astaldi did not furnish the construction superintendents committed to in the Agreement, nor did it provide adequate safety, quality, procurement, logistics and equipment management supervision. Due to the lack of management supervision there were serious deficiencies in each of these areas resulting in waste and lost labour efficiencies.

In 2014 on repeated occasions, Company expressed its concerns regarding the lack of personnel for the key positions of Health and Safety Manager and Quality Manager. The candidates Astaldi were proposing did not possess the depth of experience or requisite skill set required for the scope of these critical positions. Throughout the majority of 2014, these positions remained unfilled.

Following the resignation of Astaldi's Engineering Manager in August 2014, Company inquired how Astaldi planned to ensure that temporary, permanent or other engineering related work at site would be carried out in compliance within all provincial/federal regulations and guidelines without a registered professional engineer in Newfoundland and Labrador on staff.

Safety

Since the start of the Project Astaldi has had 67 high potential near misses and 98 near misses. There have been four lost time incidents resulting in 290 lost time days, and other safety incidents have resulted in 2,569 modified workdays. In addition to the incident themselves and the requisite corrective action, each of the 165 near misses required investigations all of which resulted in non-working time for the personnel involved. The modified workdays alone resulted in at least 25,690 hours of non-productive time. All of this was time wasted.

In June 2014, Company identified significant design and safety concerns with the temporary ICS retaining wall downstream of ICS line D. These concerns included Astaldi's proceeding with the work without Company acceptance; the structural design was insufficient; and site visits revealed that foundation preparation had been inadequate. Following a thorough design review, Company provided a plan to Astaldi that would permit use of the retaining wall structure with limits on crane operations.

Company's August 2014 safety audit of Labrador Ready Mix ("LRM") found that LRM was failing with respect to all eighteen areas addressed in the audit. LRM's safety record on the project had been unacceptable. As a result of the audit, Astaldi shut down LRM's batch plant and crushing operations. Following the safety shutdown and implementation of revised operating procedures and training, Company permitted the batch plant and crusher to resume operations on September 6, 2014 under Astaldi direction.

The LRM situation was not unique and on September 2, 2014 a dropped load resulted in a second safety shutdown and action to address safety concerns with all of Astaldi's subcontractors.

Subsequent safety audits have not been positive. Astaldi is reactive when more emphasis is required on proactive health and safety measures. The focus should be on incident and injury prevention, both of which negatively impact productivity, and not case and claims management.

Quality

As of April 30, 2016 Astaldi was reporting 349 External Non-Conformance Reports (“NCR”), 385 Internal NCRs and 94 Company issued NCRs. This record and the corresponding Correction Action Reports and Notices of Inspection reveal Astaldi’s poor quality performance. This poor performance has resulted in additional costs for other contractors and significant expenditure of Astaldi labour hours to correct defective work. These costs are clearly wasted costs and not a reflection of craft productivity.

From the start of the work through April 2015, the average delay from the notice to complete a pre-pour inspection to the pour was four shifts. From May 2015 on the average delay has declined to under two shifts. The delays in completing the pre-pour inspection and starting the pour were due to deficiencies that Astaldi supervision and quality inspectors had not cleared prior to calling for the pour inspection. In 2014 and 2015, this resulted in over 115,000 wasted hours for rework.

In December 2015 (CAR No.: CH0007001-0014) Astaldi recognized that with only one civil and one rebar inspection for each shift it was lacking sufficient resources to perform the basic quality control tasks. This was clearly evident with over 480 Concession Requests and 280 Non-Conformance Reports. Additional resources would reduce these numbers and improve work quality, improve schedule performance, and reduce the cost of rework.

Construction defects in the Spillway have resulted in additional costs for Andritz and the rectification of these deficiencies has delayed their work.

Execution

Astaldi execution deficiencies fall within two categories: pre-award deficiencies which are considered to be bid errors resulting in increased cost of performance, and post award executions deficiencies which had resulted in delays and costs for labour waste.

Pre-Award Bid Errors:

Astaldi’s performance and review of Astaldi’s costs have revealed several potential bid errors, which were not readily apparent during the bid review; these include, but are not limited to:

1. Astaldi’s estimated hours for installation of concrete embeds is at least 150,000 hours too low. Astaldi’s decision to field fabricate water stop joints has exacerbated this bid error.
2. Foundation preparation costs bid at \$11.09/m² should have been closer to over \$100.00/m².
3. Scaffolding appears to have been omitted from Astaldi’s bid.

4. Winter protection of \$23.3 million was not sufficient to cover Astaldi's cost for the Norseman Structure and the ICS, including Astaldi's cost to build foundations, retaining walls and backfill. In addition, Astaldi included no costs for traditional heating and hoarding.
5. Astaldi's costs for road maintenance were too low.

Post Award Execution Deficiencies:

Following is a list of Astaldi's more egregious erection deficiencies. The daily reports, forepersons daily logs, safety reports and NCRs provides an extensive narrative of defects, errors and omissions which cumulatively have lead to the project delays and labour cost waste:

- Dewatering failure in January 2014 flooded the powerhouse excavation, removal of ice took several weeks to remove, with the resulting waste of labour resources.
- OH&S shut down Astaldi's crusher operations for several weeks in March 2014 due to a lack of a dust suppression system. The lack of aggregate contributed to the delay in approving Astaldi's concrete mix designs.
- Delay in erection of the Norseman structure over the spillway slab in February and April 2014 led to its removal in May 2014 prior to achieving any benefit.
- Astaldi reported foundation preparation for the Spillway Base Slabs was done at least five times. Photographs and videos document this operation and the use of improper equipment, resulting in a waste of at least \$2.4 million.
- Delays in awarding the subcontract to Labrador Ready Mix delayed the erection of the new batch plant.
- Astaldi's delays in erecting the new batch plant and provision of aggregate contributed to the delays in finalizing the concrete mix design. It was only due to Company's approval of Concession Request CON-CH0007001-032 that Astaldi was permitted to use A2 (335 kg cement) mix design for the first four spillway base slab lifts on the condition the test results showed that the concrete met all specified requirements. But for this concession, Astaldi would have been further delayed in completing the first structural pour.
- Safety shutdown of the batch plant in August 2014 was due to unsafe operations and to failure to erect the batch plan in compliance with the building codes. The code violations were not corrected in 2014, and were a contributing fact to the OH&S stop work order in April 2015.
- In April 2015 Astaldi, Company and Iskueteu were issued stop work orders due the failure of Astaldi's electrical installations on site complying with electrical codes. This included the batch plant and grounding for generators. Emergency actions were undertaken to correct conditions and allow OH&S to lift the stop work orders. Commitments were made to OH&S, to bring the batch plant into code compliance. This work was not completed until the end of June 2015. This resulted in a further waste of labour and costs.
- The powerhouse flooded in April 2015 due to a lack of power and the inability to correct the fault due to the OH&S stop work order. This resulted in wasted cost to repair/replace the pumps, and dewater the powerhouse.
- ICS cranes rails were improperly installed resulting in repair work during commissioning. The commissioning of the cranes stopped work in Units 1 and 2 and the time required to repair the crane rails extended this period of up to two months.
- Failure to provide shop inspection of its subcontractor Supermetal caused a shut down of fabrication work, resulting in delay in the erection of the E-Building structural deck and wasted costs.

- Failure to manage subcontractors, LRM, AGF, Constructions Proco, and Iskueteu has resulted in unnecessary wasted cost and delays.
- Procurement and installation of a second batch plant and ice plant that were not needed and not used, resulted in wasted cost, and is currently for sale.
- Installation of a second crusher that has yet to produce a cubic meter of aggregate resulted in wasted cost.
- Failure to connect to site power, thus relying on generator power with the resulting waste in fuel and equipment rental expenses. This was compounded by the time and expense for equipment maintenance and the connection and grounding of the generators.
- Failure to direct the appropriate assembly and use of the Doka forms resulting in waste of labour hours to erect dismantle and re-erect the forms. This was improved in 2015, and in 2016, Doka personnel are being mixed with the formwork erection crews to improve productivity.
- Slow pay and no payment to subcontractors and vendors has led to multiple liens and affected Astaldi's ability to obtain local credit and the supply of materials.
- Failure to provide a survey, and design deficiencies with the ICS, delayed material fabrication, delivery and erection. The ICS was a failure of monumental proportions and made no material contribution to the project.

B. ASTALDI'S PRIMARY POSITION: MISREPRESENTATION

Astaldi's primary position is that Agreement is void or voidable on the basis of misrepresentations for which both are responsible, and by which the Company is alleged to have procured the Agreement. Astaldi asserts entitlement to compensation on a *quantum meruit* basis for the "reasonable value of the work" performed.

No Misrepresentation by the Company

Astaldi alleges that Nalcor "led Astaldi to believe that its labour productivity assumptions were reasonable", that "Nalcor and Muskrat Falls were at all times aware that Astaldi's labour assumptions were unachievable and that Astaldi would not be able to complete the project within LMAX", and that Nalcor engaged in "persistent, strategic non-disclosure".

Astaldi's allegations of misrepresentation, however characterized, assume and require that Nalcor and/or the Company knew that Astaldi's labour assumptions were incorrect. No basis for the allegation of knowledge on the part of either Nalcor or Muskrat Falls has been advanced by Astaldi. Only the existence of the University of Calgary study concerning achievable labour productivity and the statement that Nalcor had identified labour productivity as the project risk are presented by Astaldi as bases for an allegation of knowledge of a true state of affairs, which is then used as the basis for a misrepresentation; something must be represented to succeed on a claim of misrepresentation. Astaldi cannot identify a misrepresentation where it cannot point to that which is misrepresented. A representation by silence cannot be constructed from the mere discovery by a party that its own assumptions prior to contracting proved to be incorrect.

There is no University of Calgary report, as alleged. There is a JVR Consultants report on "Improving Best Work Practices" dated November, 2008, but that report contains no productivity data. That report focuses on management practices that impact productivity, practices which are the responsibility of the contractor and not the owner.

In its bid Astaldi did not provide any details regarding its labour assumptions, and compared with other bidders and Company's cost estimate, there was no basis for Company to know that Astaldi's labour assumptions were incorrect. Therefore, there was no misrepresentation, express or by silence, and Astaldi's claim that the Agreement is voidable fails on the facts.

Astaldi Representations About Labour Risks

Prior to November 29, 2013, Astaldi confirmed in writing that it understood and accepted that it would be fully responsible under the terms and conditions of the Agreement for the risks associated with the labour necessary to perform the Work in accordance with the Milestone Dates. Further, in response to the question what process was followed when formulating its assessment of labour risks, Astaldi stated that it relied on the experience and know-how of its consultants and subcontractors.

Astaldi also represented that it was an experienced and commercially sophisticated contractor, a contractor who had engaged consultants and subcontractors familiar with working conditions in Newfoundland and Labrador. Astaldi was therefore in a better position than an owner to

determine and assess the productivity rates likely to be achieved by its own workforce. Under the circumstances, no reasonable contractor would have placed any reliance upon the representation alleged to have been made by the Company.

The Company relied on Astaldi's representations as to its knowledge and acceptance of labour risks and would not have contracted with Astaldi if the Company bore those risks.

Silence or Inaction as Operative Misrepresentation

Even if the Company had information about errors in Astaldi's labour assumptions, any such knowledge was not capable of forming the basis of an operative misrepresentation: mere non-disclosure of facts, outside of a fiduciary context, will not be enough to constitute a misrepresentation: see, e.g., B. MacDougall, *Misrepresentation, supra*, at p. 185; J. Cartwright, *Unequal Bargaining*, 1990, p. 90; *Chitty on Contracts*, 2015, 32nd ed., p. 654. In the course of contractual negotiation, a party is under no general duty to supply factual information to another, even if that party has information it knows would be considered vital to the other. If one party wants information, then it must ask for it, in which case the answers might constitute misrepresentations.

Astaldi relies upon a recent decision of the Ontario Court of Appeal in *Meridian Credit Union Limited v. Baig*, 2016 ONCA 150 for the proposition that, in certain circumstances, silence and half-truths may amount to a misrepresentation. The Ontario court in *Meridian* also referred to the decision of the Manitoba Court of Appeal in *Alevizos v. Nirula*, 2003 MBCA 148, to which Astaldi also refers in support of the contention that a representation may be made in light of what it implies. Astaldi omits reference to the court's discussion of the circumstances in which silence may constitute a representation:

When silence constitutes falsity. There are two main classes of case in which reticence may contribute to establish a misrepresentation: (1) where known material qualifications of an absolute statement are omitted; and (2) where the circumstances raise a duty on the representor to state certain matters, if they exist, and where, therefore the representee is entitled as against the representor to infer their non-existence from the representor's silence as to them.

The court's elaboration of the circumstances in which silence may constitute a misrepresentation is significant.

First, neither of the conditions for the making of a material misrepresentation by silence appear to be present in the JIC's allegations: no absolute statement for which a material qualification was omitted appears to have been made, and no circumstances existed in the negotiation of the Agreement in which any positive statement was required.

Second, there are no circumstances which impose a duty on the Company to make a positive statement. Astaldi suggests that the LNTP "engaged common law duties of good-faith and honest performance", and purports to apply these principles to "[a]ll obligations under the LNTP, including negotiation of the contract", notwithstanding the "good faith" reference only applied to the items set forth in Schedule 3. The issue of labour productivity itself is not an item to be resolved under the LNTP, and therefore not a matter for negotiation in good faith.

In *Bhasin*, the Supreme Court of Canada made clear that a duty of honest performance does not extend to one of loyalty or of disclosure.

Agreement Provisions Allocating Responsibility

Even if the Company had made a statement to Astaldi about labour productivity or was silent about errors in Astaldi's assumptions, the Agreement makes Astaldi solely responsible for the supply of the necessary labour to perform the Work, and the risk of the inability to do so.

Article 5.1 of the Agreement states that:

Contractor shall be solely responsible to furnish and procure the numbers and classifications of Contractor's Personnel required to perform the Work; for greater certainty, subject to this Article 5.1, Contractor has the complete responsibility for this obligation, without any dependence or reliance on Company or on information obtained from Company. Contractor shall comply with the provisions of article 7 of the Project Labour Agreement for procuring trades labour... (emphasis added)

That Article places on Astaldi the responsibility to "furnish and procure" the Personnel "required to perform the Work". The "Work" is defined to mean "all labour, supervision, engineering, design services and obligations to be performed and materials, equipment and products to be supplied by Contractor under the terms of this Agreement..." (emphasis added).

Among the obligations to be performed under the terms of the Agreement is the completion of Work in accordance with the Milestone Dates. Article 3.1 provides that:

Contractor shall carry out all of its obligations under this Agreement and shall perform the Work, including:

[...]

- (i) completing the Work, and portions thereof, in accordance with the relevant Milestone Dates. (emphasis added)

Article 3.21 provides that:

Subject to a Change to the relevant Milestone Date made pursuant to Article 14, Contractor agrees to:

- (a) complete the Work for each Milestone by the relevant Milestone Date; and
- (b) take all measures and act diligently in order that Contractor Group may timely comply with the duties and obligations imposed on Contractor under this Agreement.

In addition, the above provisions must be read together with the entire agreement clause in Article 34.5, which provides that:

This Agreement embodies the entire agreement between Contractor and Company with respect to the Work and comprises all matters relating to the

planning, procurement, construction, testing, inspection, commissioning and completion of the Work. Unless otherwise expressly stated, this Agreement supersedes all prior agreements, understandings or writings among the Parties, whether written or oral and whether legally enforceable or not. Subject to Applicable Laws, no Party shall be bound by or be liable for any statement, representation, promise, warranty, inducement, obligation or understanding of any kind or nature not set forth in this Agreement.

By this clause the parties agreed that the Agreement comprehended all matters relating to the Work, including the planning and procurement of the Work, and that the Agreement supersedes prior agreements, understandings and writings. This clause excludes from the Agreement all representations that are not set out in the Agreement, which would have included any representations by the Company concerning labour.

Rescission as Remedy for Misrepresentation

Astaldi's JIC seeks "incremental compensation" through *quantum meruit* on the basis of an entitlement to rescind the Agreement.

Rescission for misrepresentation requires an unequivocal act of election by the misrepresentee which demonstrates clearly that it elects to rescind the contract and to no longer be bound by it. Even if the actions alleged in the JIC were established, Astaldi has clearly chosen not to rescind the Agreement. Affirmation of the contract has occurred by taking substantial step towards its performance after discovery of the "misrepresentation": see *Keating on Building Contracts*, 2012, 9th ed., p. 179. Such affirmation is final.

Further, where any construction works have been carried out materially affecting the owner's land, rescission may be refused even where the work was carried out without knowledge of the misrepresentation.

Even if Astaldi did not positively affirm the Agreement, the remedy of rescission is barred by the lapse of time.

Quantum Meruit

Quantum meruit only provides a remedy where goods or services were provided without a contract, or under a contract which did not specify the amount of payment. There has been no misrepresentation by the Company and the Agreement is not void, so *quantum meruit* has no application.

If it did have application, the burden of proof with respect to the value of work lies with a contractor seeking compensation. Astaldi has not quantified an amount alleged to be appropriate compensation pursuant to the doctrine of *quantum meruit*. It has claimed "additional compensation" in the amount of \$785,500,000 which is inconsistent with a *quantum meruit* approach. Any such amount cannot include profit; see *Sopov v. Kane Constructions Pty Ltd. (No. 2)*, [2009] VSCA 141.

C. ASTALDI'S SECONDARY POSITION: CLAIMS UNDER THE AGREEMENT

Astaldi advances a secondary and alternative position that, even under the present contract, it is entitled to compensation and an extension of time.

Annex A Time at Large **Claim: 7.5% of Contract Price (approximately \$82 million)**

1. *Astaldi's Claim*

Astaldi has failed to meet contractual Milestone Dates, but claims that it is no longer bound by the contractual schedule for performance of the work and that time is "at large", which it says means that it is only obligated to complete in a reasonable time. It says this relieves it of liability for liquidated damages.

This is essentially a defence against Company's potential claim for the liquidated damages set out in the Agreement for Astaldi's failure to achieve Milestones by specified dates.

2. *Relevant Contract Provisions*

Article 26 of the contract provides that:

- Liquidated damage amounts accrue daily following the failure of Astaldi to meet Milestone Dates at defined stages of construction.
- Liquidated damages are capped at 7.5% of the Contract Price, as adjusted by approved Change Orders.
- Subject to the Company's right of termination, payment of liquidated damages is Company's only remedy for Astaldi's failure to meet Milestone Dates.

Article 14.8 allows Astaldi to claim a Milestone Date extension by submitting a request for a Change Order. If a Dispute arises concerning the request, then Astaldi can submit a notice of Dispute and engage the Article 31 dispute resolution process.

3. *If Time is at Large Then Actual Damages Are Recoverable*

If the liquidated damages provisions were declared to be unenforceable, Astaldi would be exposed to a claim for Company's actual damages for late completion. Company's actual damages will be significantly greater than liquidated damages amounts.

4. *Company Did Not Delay or Contribute to Astaldi's Failure to Meet Milestone Dates*

(a) *Contract Execution*

Astaldi alleges that Company delayed the start of the work "well into the fall of 2013". This presumably refers to the timing of the contract award following the LNTP period.

In response:

- In the September 24, 2013 Pre-Award Record of Site Inspection and Status of Site Conditions Astaldi confirmed that entering into the LNTP would not impact Milestone Dates and that any adjustments to the execution plan and Construction Schedule were included in the Contract Price.
- Astaldi had opportunity to reconsider the risk of failure to meet Milestone Dates before executing the contract on November 29, 2013, but did not do so.
- The release executed by Astaldi contemporaneously with the Agreement and expressly releases Company from any claim related to delay in execution of the contract, which is a complete answer to this allegation.

(b) Powerhouse Excavation and ICS

Astaldi claims that excessive over break in the powerhouse excavation made redesign of the ICS foundation necessary, it was delayed while waiting on complete excavation drawings from Company and on approval of its revised ICS design. It claims that the delay in starting the ICS made the ICS unavailable and caused Astaldi to rearrange its work execution plan.

Addressing over break is an Astaldi responsibility under the terms of the Agreement. The Scope of Work Specifications requires Astaldi to supply and install over break concrete and surveying. Astaldi had technical problems designing the ICS which impacted the timing of the Company's approvals. Astaldi also had problems with the performance of its subcontractor.

In short, the ICS was an issue which was and remains solely an Astaldi responsibility. (Astaldi's responsibility for the ICS is dealt with in more detail in the response to Annex C below.)

(c) Changes Due to Site Instructions and at the Separation Wall

Astaldi states that in August 2014 it submitted two notices of occurrence that it said constituted Changes, with evaluation of the schedule impact to follow. It also says it submitted a Change Request concerning over-excavation at the separation wall. It says that neither were resolved.

Astaldi does not explain how Company responses were inadequate and does not explain any impact on Milestone Dates. Astaldi has not provided any schedule analysis to justify any impact on the Milestone Dates.

(d) Approval of 2016 Re-Baselining

Astaldi alleges that Company delayed approval of Astaldi's January 11, 2016 re-baselining submission, while requiring Astaldi to perform in accordance with that baseline. No detail is given in Annex A. In particular, Astaldi has not explained how failure to approve the re-baselined schedule delayed it in performance of any work necessary to meet Milestone Dates that trigger liquidated damages.

(e) *No Failure to Adhere to Contractual Processes*

Astaldi alleges that Company invoked an “extra-contractual” process to address its requests for schedule and Milestone Date extension. Astaldi requested extension to at least the M4A, M4B and M18 Milestone Dates.

Astaldi and Company engaged in varying degrees of discussion about Change Orders and other requests, all of which is normal construction administration. If Astaldi is dissatisfied with the response or lack of response from Company, it can refer a request to Dispute resolution, provided it is within time to do so.

There was no agreement to use a different procedure for resolving requests for schedule extensions than that specified in the Agreement, or any attempt by Company to impose a different procedure on Astaldi.

In any event, if there were a failure by Company to follow contractual procedures applicable to schedule adjustments Astaldi has not shown that the failure impeded its ability to plan and execute the Work.

On the facts and in accordance with the Agreement, Astaldi cannot avoid payment of liquidated damages for missed Milestones.

Annex B Labour Market Conditions
Claim : \$206,290,000

1. Astaldi Claim

This claim is for an increase to the LMAX and Labour Profit for extra cost of concrete placement, excluding powerhouse and winter work concrete which is claimed separately.

It is based on the difference between the labour productivity rate of 6.12 mhr/m³ used by Astaldi in its bid and a rate of 11.75 mhr/m³, which Astaldi describes as the best possible rate for concrete placement under labour market conditions in Labrador, relying on the Ibbs report. The lower than anticipated productivity is blamed on Astaldi’s inability to use the ICS as well as lack of qualified workers.

2. Relevant Contract Terms

Article 5.1 specifically addresses Astaldi’s responsibility to procure the necessary numbers and classifications of personnel:

5.1 Contractor shall be solely responsible to furnish and procure the numbers and classifications of Contractor’s Personnel required to perform the Work; for greater certainty, subject to this Article 5.1, Contractor has the complete responsibility for this obligation, without any dependence or reliance on Company or on information obtained from Company. Contractor shall comply with the provisions of article 7 of the Project Labour Agreement for procuring trades labour.... (emphasis added)

In Article 2.8(a) Astaldi represented that it has the personnel necessary to perform the Work:

2.8 Contractor represents and warrants that during the Term:

- (a) it has the required skills, experience, facilities, equipment, Personnel and capacity to perform the Work in a timely manner and in accordance with the terms of this Agreement, Applicable Laws, the Standard of a Prudent Contractor and sound industry accepted practices;

Article 34.5 states that the Agreement is the entire agreement and displaces any prior representations.

3. Analysis

As noted elsewhere, Astaldi was itself responsible for its inability to use the ICS. As for any lack of qualified workers, in 2014 Astaldi made errors in its approach to recruiting craft labour but has subsequently shown through improved recruiting methods that sufficient qualified workers are available.

Any other issue with productivity is due to Astaldi failing to carry out proper analysis of labour prior to bidding. In response to Company's bid clarification question whether Astaldi had conducted a labour availability survey Astaldi responded they had "...prepared a brief Labour Availability analysis regarding most trades in Canada and more specifically in Newfoundland and Labrador. This analysis is based upon the experience and advice of Consultants and Subcontractors who have worked with us on this topic." Astaldi stated it had "...confirmed its opinion while participating at specific meetings organized by the Client and by gathering information available on the internet and mass media." Astaldi's efforts were clearly insufficient or in error.

Astaldi has also failed to properly manage and supervise the work. The Ibbs reports detail various management improvements that Astaldi can apply to improve productivity, but Astaldi has failed to incorporate many of those improvements.

As noted above, Company made no representations to Astaldi, by silence or otherwise, concerning labour productivity. Company had no information that contradicted Astaldi's expectations regarding labour productivity.

Astaldi has not advanced the contractual basis for entitlement for "incremental" compensation for labour. There is no basis in the Agreement for this claim and there is no factual basis on which to base this claim.

Annex C Over-break in Excavations & ICS Delayed Redesign Approval Claim \$334,000,000

1. Astaldi Claim

Astaldi claims that over break in excavation of powerhouse foundations made it necessary to redesign the Integrated Cover System (ICS) that was intended to provide temporary shelter for winter work on the powerhouse. It says that Company delayed delivery of as-built excavation profile information that Astaldi needed to revise the ICS foundation design, and that Company delayed approval of the ICS redesign. It says that inefficiencies resulted from its inability to use

the ICS to protect the powerhouse construction from winter weather, which as a result prolonged the time to complete the powerhouse and increased its costs.

The contractual or legal basis for the claim is not explained.

2. Analysis

The ICS was a method by which Astaldi proposed to perform the Work, and it did not form any part of the final structure for the powerhouse. Article 3.11 states that Astaldi has sole responsibility for construction and installation means, methods, techniques, sequences and procedures ...”.

The possibility of over break was contemplated by the Agreement which included provision for payment for extra concrete necessary to offset excavation over break. Astaldi was responsible to carry out its own survey. The Scope of Work Specification provides that:

3.4.1 The Contractor shall be responsible for:

3.4.1.1 Surveying required for setting-out the structures and for as-built profile of the excavation and structures;

Astaldi was therefore responsible to address over break.

Astaldi had retained a survey subcontractor who provided services to Astaldi in December, 2013; this was the same surveyor who had provided surveys to the excavation contractor. Astaldi either did not carry out its own survey as soon as access was given or failed to use survey information from its survey subcontractor.

Notwithstanding that it had its own surveyor who was familiar with the excavation; Astaldi issued a Request for Information on January 17, 2014 asking Company for powerhouse excavation survey data. Company provided preliminary data the same day and a “final version” on January 28, 2014, both with statements that it was for information only, that Astaldi’s reliance on this data for design purposes was at its sole risk and that it did not relieve Astaldi of its obligations under section 3.4.1.1.

Astaldi proposed a method of adapting the ICS foundation design to the over break using two concrete pours rather than one, which required iterations and revisions before it could be approved, lengthening the design approval process. Various iterations and revisions were also needed before Astaldi satisfied Building Code requirements.

Astaldi bears responsibility for delay in initiating and delivering the ICS design and subcontracting which was to have been done within the LNTP period, for not efficiently dealing with the ICS foundation re-design, and for mismanaging its ICS subcontractor (Proco).

Proco started construction in July 2014 and had Proco performed according to its schedule, the ICS should have been in place for winter work in 2014/2015. Astaldi terminated Proco’s subcontract on December 20, 2014 on grounds that Proco failed to deliver on time, had excessive labour hours, and provided poor management and supervision.

The ICS was incomplete and deficient, was abandoned and eventually removed.

Astaldi is responsible for all costs incurred arising from its failure to complete and use the ICS.

**Annex D 2014-2015 Winter Work
Claim - \$106,300,000**

Astaldi claims for costs associated with working on unprotected areas, principally the spillway, under winter conditions from November 1, 2014 to April 30, 2015.

Analysis

Article 22.7 states that Astaldi is solely responsible and assumes all risks associated with weather conditions at the Site. This provision applies to each of the items below.

(a) *Concrete in the Winter*

Astaldi claims that it planned to perform most concrete activities either in the summer or under protection. It makes the bare allegation that it incurred productivity losses because it was "forced" to perform concreting in areas exposed to severe winter conditions, but it does not explain how it was compelled to perform that work or whether any contractual provisions were breached thereby.

The start of the spillway concrete work was delayed from March to August 2014 because of Astaldi's failure to apply proper planning and schedule development to the project. This resulted in its prolonged delay installing the new concrete batch plant, aggregate crushing, the development and approval of the concrete mix design, and its late award of necessary sub-contracts.

(b) *Protection of Winter Work*

Astaldi states that it submitted a method statement for hoarding, heating and concrete temperature monitoring when placing concrete during the winter that was not approved by Company, citing failure to comply with contract specifications and CSA requirements. Astaldi disagreed but carried out the work as instructed and submitted a request for a Change Order for additional costs and impact on schedule, arguing that Company's requirements were in excess of contractual obligations.

The Agreement requires Astaldi to comply with CSA requirements.

(c) *Impact on Productivity of Harsh Winter Weather*

Astaldi relies on anecdotal reports of higher than average snowfall and colder than average temperatures in the winter of 2014/2015 to claim increased weather related costs. Astaldi ignores the clear wording of Article 22.7. The reported weather conditions were reasonably to be expected at the work location.

(d) *ICS*

Astaldi claims that the abandonment of the ICS caused it to shift resources to perform work in areas that had not been intended to be performed in the winter, principally the spillway,

adversely affecting labour productivity. It was Astaldi's decision to abandon the ICS and terminate the subcontract with Constructions Proco. Astaldi elected to work in the Spillway through the winter in an effort to mitigate its own schedule delays.

Company bears no liability for the failure of Astaldi's work methodology.

2. Damages

(a) *Direct Labour Costs - \$23,500,000*

Astaldi claims incremental direct labour costs by comparing the actual labour productivity rates from 1 November 2014 to 30 April 2015 to the estimated productivity rates used in the bid. Astaldi's management and labour supervision during this time frame was extraordinarily poor, with frequent project manager and other key personnel changes. All labour costs during this time frame can be attributed to Astaldi's poor management.

(b) *Heating and Hoarding - \$10,200,000*

Astaldi claims the cost of direct labour for hoarding. This claim will only be successful if Astaldi's original method statement for hoarding, heating and concrete temperature monitoring when placing concrete during the winter is determined to have been compliant with the contract specifications and CSA. Astaldi has not provided any basis to support the hours and the hourly rates claimed.

(c) *Indirect Costs - \$67,700,000*

Astaldi claims for indirect staff labour and non-labour costs based on a rate of \$47.50 per direct labour hour. Astaldi provides no basis for this amount and provides no other explanation justifying this claim.

(d) *Diesel Costs - \$4,900,000*

Astaldi claims for the incremental cost of diesel fuel from November 2014 to April 2015. This is based on the difference between the average monthly diesel costs in the summer months compared to that period, ignoring the fact that fuel consumption will always be higher in the winter due to factors such as colder temperatures and less daylight. The method of measurement of this claim is not logically connected to the basis on which the claim is advanced.

Each of the claims in this Annex D assumes that Astaldi bears no responsibility for winter work, for complying with the Specifications or for the failure of its ICS methodology. That position is not consistent with the facts and contrary to the terms and conditions of the Agreement.

ANNEX E Labour Wage Escalation Claim: \$20,530,000

Astaldi's claims for the escalation of labour rates as a result of the projected delay to the completion of the Work.

Analysis

Astaldi is responsible for the delay to the completion of the Work caused by its slow start and poor management and supervision as well as bid errors, and therefore is responsible for the increase in labour rates as a result.

Astaldi is responsible for the labour escalation costs due to lower productivity achieved and lack of proper planning and management of the work.

ANNEX F Compensation for Incremental Cost of Construction Managers**Claim: \$6,175,000**

Astaldi claims the costs of construction superintendents recommended by Company and who were hired by Astaldi. Astaldi claims that there was a verbal agreement that Company would reimburse the rate differences between the contract rate Astaldi billed to Company for two production managers and five construction superintendents and the actual costs paid by Astaldi.

Analysis

Company acknowledges that it agreed to pay the differential for the two production managers. Company denies that there was any agreement to pay the cost differential for the five superintendents. Astaldi required these personnel to rectify its construction management problems.

As per email from Lance Clarke dated 15 June 2015, Company agreed to pay the rate difference for the two production managers but not for the five superintendents. In addition, the amount claimed is speculative, and contains contingencies, profit and mark up which are inconsistent with the agreement to pay the cost differential agreement for the production managers.

Astaldi issued Change Request No. 2032 on November 4, 2015 to address this matter. The negotiation and resolution of this Change Request is ongoing.

ANNEX G Gap Between Work Shifts**Claim: \$60,530,000**

Astaldi's claims costs arising from the "imposition" of a gap between shifts of its work crews.

Analysis

Article 20 in the Collective Agreement, states that the Contractor has sole discretion to determine the shift schedule and may adjust the schedule to deal with job conditions. The only stipulation in the Collective Agreement is that the second shift must start between the hours of 4:00 pm and 9:00 pm. Astaldi is therefore solely responsible for any lost productivity costs associated with a gap between shifts.

In his March 7, 2015, report, Dr. Ibbs highlighted a number of reasons why he believed the gap between shifts should be changed. Among these reasons include: reducing the number of bus trips per day, providing a better hand-off between shifts, and reducing the amount of overtime incurred. Dr. Ibbs estimated that the shift change would save Astaldi at least \$8 million in direct costs and save at least 10 calendar days in the schedule.

Company has requested Astaldi on a number of occasions to amend the shift gap, as per Dr. Ibbs's report, and on each occasion this was rejected by Astaldi.

ANNEX H Sanitary Services
Claim: \$21,593,000

Astaldi has become responsible by Change Order to provide wash cars for the CH0007 construction sites (in addition to the ones provided to them by Company), and takes responsibility for the cleaning, provision of supplies, plumbing and electrical maintenance of these wash cars. Astaldi claims for the cost of all wash cars and supply of generated power.

Analysis

Company only transferred to Astaldi the supply and maintenance of the site wash cars. Astaldi must provide at its cost any additional wash cars outside of construction sites. It is also responsible for the hook-up to Site temporary power and not to use the more expensive generated power.

Company and Astaldi reached an agreement on the costs (similar to Change Order #16) then Astaldi backed out of this agreement. Company has issued CO #16, acknowledged by Astaldi, at \$8,000,000 to cover the wash car services until the end of the Project.

Astaldi's claim includes unsupported estimated maintenance hours and use of generated power instead of the available Company supplied Site power.

CO#16 is the appropriate compensation for this work.

Annex I High Angle Rescue Service
Claim: \$8,413,000

Astaldi claims that Company is responsible for Astaldi's cost to provide full time high angle rescue services.

Analysis

Both the Agreement and Occupational Health and Safety regulations mandate that Astaldi, as the contractor, provide the appropriate plans and procedures to ensure the safety of its workers. The Agreement contains numerous references to Astaldi obligations in this regard, in Article 15, and Exhibits 5 and 11.

At no time has Company insisted that Astaldi have a full time rescue team on Site. The decision to do this was Astaldi's alone, and therefore this service is supplied at its cost. Company has only required that Astaldi have an approved rescue plan that incorporates high angle rescue procedures.

In 2015 Astaldi offered to contribute \$40,000 to a high angle training program that would cover all contractors on Site and thereby admitting, at least in part, its contractual and statutory obligations.

ANNEX J Lack of Available Accommodations to Support Personnel

Claim: \$2,001,250

Astaldi claims the cost of off Site accommodations between September 2013 and March 2014.

Analysis

The Camp Accommodations Complex was not open until March 2014, so Astaldi provided room, board and transportation for their personnel from September 2013 to March 2014 until it was ready. The Agreement did not guarantee the availability of Site accommodation during the early work phase of the Project.

At during that time, most Astaldi personnel were working in offices located in Goose Bay and therefore it made sense for them to stay in town until the Accommodations Complex and their Site office space became available.

Astaldi has failed to provide notice pursuant to Article 14.8 and therefore has waived its right to make this claim.

ANNEX K Poor Quality of Owner Provided Stockpile

Claim: \$8,150,000

Astaldi claims that the stockpile rock made available to Astaldi was poor quality and required Astaldi to carry out additional work to make it usable.

Analysis

Exhibit 12 – Site Conditions, Section 1.3.2.1 states that the crusher feed stockpile will be from 0 – 1000 mm (LTRs #0169, 0178, 0205 & 0481). In short, fines and coarse material was to be expected.

NCR CH0007001-AST-CAN-001-00 referenced by Astaldi (Exhibit K2) clearly states in the Root Cause Section that Astaldi (its subcontractor LRM) should institute a proper preventative maintenance/repair program. That would have reduced downtime and increased productivity with a corresponding reduction of costs.

The Pennecon report indicates that better planning of crushing operations such as adding screening capacity would reduce waste and increase productivity. Therefore, Astaldi (by its subcontractor LRM) is responsible for any waste and low productivity, and therefore for the increased cost.

Company acknowledged receipt of Astaldi's report on the potential shortage of aggregate on September 21, 2015. On October 5, 2015 Company issued Change Request No. 1065 to compensate Astaldi for hauling 50,000 cubic meters of crusher feed rock from the stockpile at location A to the crusher site at location C2. Astaldi has submitted its cost for this work and a Change Order is currently being processed.

ANNEX L Site Blockade
Claim: 8,908,000

Astaldi claims \$8,908,000 for costs and 15 days schedule impact, including six days for Force Majeure and nine days for ramping up to full capacity, resulting from the Force Majeure, as per Article 29.4, 29.6 and 29.7. Astaldi provided no schedule analysis to support its request for a time extension of 15 days

Analysis

Force Majeure occurred at the Site between August 13-18, 2015. Astaldi restored production levels back to at or near full capacity on August 21, 2015.

The Force Majeure event was caused by Astaldi due to its mismanagement of incidents between two workers under its control or direction.

Pursuant to Company's letters LTR-CH0007001-0855 and 0859, Company granted an extension of 7 days. Pursuant to Articles 29.4 and 29.7, Astaldi is not entitled to any change to the Contract Price or to the Target cost of Labour.

ANNEX M Compensation of Subcontractor's Staff
Claim: \$2,629,756

Astaldi seeks to vary the Agreement by adding seven subcontractors to Table 1.3 of Appendix F of Exhibit 2 as it was "forced" to use those subcontractors as a result of a late start under the LNTP, and who were not intended to be used at the time of bidding for this contract.

Analysis

Compensation of subcontractor's staff are included in the Non Labour Component of the Contract Price, as per Section 2.2, Appendix F, Exhibit 2, except for two subcontractors for spillway preparation and concrete production that are reimbursable under Section 2.3, Appendix F, Exhibit 2.

Astaldi's allegation that it did not intend to use five of the seven subcontractors is not correct. As per Exhibit 8 – Subcontractors, Manufacturers and Material Suppliers in the Contract

(Astaldi's Appendix A16 Proposed subcontractors, manufacturers and Material Sources submitted with their tender), the following subcontractors and services were included under Solution 2 Concrete Production, Forming and Concreting Subcontracted:

- AGF Steel for reinforcement steel
- LCC Ltd and Arhursivret EF File for cast in place concreting and forming, dam & separation wall. However, DoKa was selected by Astaldi in lieu of Arhursivret to provide the forming services.
- GJ Cahill & Company Ltd for Electrical works and Black & McDonald Ltd for Mechanical works. However, Iskueteu (which operates with GJ Cahill) was selected as service provider for both mechanical and Electrical services.
- Supermetal for structure steel
- Bigland for road maintenance and snow removal

Only two of the seven were not included in the list of subcontractors. Further, Astaldi had the opportunity to change Table 1.3 or prior to signing the LNTP or to make provisions for a subsequent change prior to signing the Agreement.

Astaldi is not entitled to compensation for subcontractors' staff with the potential exception of Labrador Ready Mix and the spillway preparation subcontractor. However, the spillway preparation subcontractor has not been identified.