

Brown, Angie

Subject: FW: SNC- MFI FW: GT Interview - Follow-up questions

From: Sheilagh Murphy [<mailto:smurphy@yourlegalteam.ca>]

Sent: Friday, June 15, 2018 9:26 AM

To: Shaffer, Scott <Scott.Shaffer@us.gt.com>

Cc: Malamed, David <David.Malamed@ca.gt.com>; Howe, David <DavidHowe@muskratfallsinquiry.ca>; O'Brien, Kate <KateOBrien@MuskratFallsInquiry.ca>

Subject: SNC- MFI FW: GT Interview - Follow-up questions

Good morning, Scott.

I received the following response from my client, on behalf of Paul Lemay, in response to your questions. His responses are in red type.

Sincerely,
Sheilagh

From: Proulx, Melanie (Affaires Juridiques) <Melanie.Proulx@snclavalin.com>

Sent: Thursday, June 14, 2018 1:39 PM

To: Sheilagh Murphy <smurphy@yourlegalteam.ca>

Subject: TR: GT Interview - Follow-up questions

Sheilagh,

Please find below Paul Lemay's answers to the follow-up questions.

Best regards,

Mélanie Proulx, B.A., LL.B.
Conseillère juridique/Legal counsel
Énergie propre/Clean Power
Énergie/Power

Tél./Tel. : 514-393-8000 x 52084

SNC-Lavalin



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De : Lemay, Paul
Envoyé : 14 juin 2018 11:46
À : Proulx, Melanie (Affaires Juridiques)
Objet : RE: GT Interview - Follow-up questions

Hi Mélanie,

Please find herewith my answers for Grand Thorton's request.

Regards,

Paul.

Paul Lemay, *Ing./P.Eng.*

Chef Estimateur - Projet Muskrat Falls /Lead Estimator, Muskrat Falls Project.

Estimation/Estimation

Énergie/Power

Tél./Tel. : 514-393-8000 x 55707

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De : Proulx, Melanie (Affaires Juridiques)
Envoyé : 14 juin 2018 10:50
À : Lemay, Paul
Objet : GT Interview - Follow-up questions

Paul,

You will find below follow-up questions received from Scott Schaffer at Grant Thornton. Please note that we have requested the engineering team to provide the answers to question 2a and I will provide this information to external legal counsel under separate cover.

1. Table 1.8 is attached;
2. There were other open items to the interview that we will still need Paul LeMay to answer assuming he can. Here is what we show on our end:

- a. What percent was engineering complete for each individual component (C1, C3, C4) at the following dates:
- i. Date of estimate which I assume was December 2011
 - ii. Date of DG 3 which occurred in December 2012
 - iii. Date of financial close which occurred November 2013
- b. Astaldi's bid contained 1M more direct labor hours than the estimate for CH0007. What was the underlying cause for that?

The main reason is because Astaldi has a higher ratio between Staff person and Site Workers than we use to see here in Canada, for similar type of contract. On this CH-0007 bid, one of the bidder (AECON), had the same number of hours (978,000 hrs) than my estimate (930,000 hrs), compared to 1,982,044 hours for Astaldi, which is almost 1 million hours difference. Also, for the direct labor the main reason why I have less man-hours, is because Astaldi has used a productivity average of 7 man-hour/ m3, compared to 5 man-hour/ m3 for my estimate. Let say that I was a little bit more optimistic on my productivity.

- c. The base estimate for work package CH0007 was \$688M at December 2011, correct? The attached table 1.8 shows \$761M.
- i. When was table 1.8 prepared?

I. Table 1.8 showing the \$ 761 M, was prepared on 26th September, 2013

ii. What caused the change from \$688M to \$761M? Did the \$688M include \$12M in travel?
 II. The \$ 688 M was finally identified only at the Sanction Date in December 2012, since no contract package has been completely identified prior to 15th December 2011. The \$ 73 M more for a total of \$761 M, was due to the 14 addendas that were issue during the bidding period between March 2013 and August 2013 and also, to some quantity adjustment created by the fine tuning of the engineering scope and drawings. The \$ 12 M for travel is on the top of the \$ 761 M.

- d. Additionally, can Paul answer the following questions:
- i. How was the lack of labor availability and competition for labor factored into the base estimate? Was the base estimate adjusted for these issues?

According to my "Ground Rule Estimate Notice" given to all estimator, I asked them to do not factor any production activity, as we would address this issue separately. We have then included in the base estimate a 20% majoration of the labour force to address a possible lack of labor availability and potential unproductivity.

- ii. How was location of the project and winter conditions factored into the estimate? How as labor productivity adjusted in the base estimate?

The factor of the location of the project was address in the Air Travel estimate allowing sufficient time to get to the far Site, back and forth, and has nothing to do with the productivity labor itself. For the winter conditions, the installation of a "complete covered structure" over two Group Units, was included in the estimate, in order to have the workers to work comfortably inside the structure for the winter months.

- iii. How was the estimate for the Industrial Benefits Agreement factored into the base estimate (which provided for the following in relation to order of priority of hiring: Labrador Innu, Labrador Residents, Newfoundland Residents, and Canadians)?

This issue of "order of priority of hiring" was not included in the base estimate of December 2011, but perhaps Nalcor has included something with their owners cost to cover this issue, I really cannot tell.!

iv. Were the above issues (labor availability, weather, location, rates) factor into the base estimate as it relates to the production schedule? If so, how?

As I mentioned in 2.d.i, an amount of 20% of the total direct labor hour corresponding to 2,520,000 hours over a grand total of 12,600,000 direct hours, was included into the base estimate under a lump sum amount of approximately \$ 200 million. (2,520,000 hours x \$ 80 / hr = \$ 201,600,000).

v. What are the main differences between the bid amount and the DG3 estimate on package CT0327 (and CT0346 which was later rolled into CT0327)? Labor hours? Material costs? Can you provide a summary which shows the differences?

I. I have not been involved in the merging package of contract CT0327 and CT0346. This was done by Nalcor procurement people.

3. Did the base estimate that he performed factor in the harsh weather conditions in labor productivity? For example, if the productivity factor ("PF") equal 1 under normal conditions, what was the PF used for the estimate? As an example, for CH0007, if it was expected under normal conditions that 100 cubic meters of concrete should take 50 man hours (I am not sure of the actual, this is just an example), then is that what Paul used or did he assume a PF of 2, meaning he would have used 100 hours in the estimate?

See my answer in 2d.II. The "harsh weather conditions" you are referring to is taken into consideration by the installation of a "complete covered structure".

4. There was shortage of labor in 2011 - 2012 in Canada for these types of projects. Did Paul adjust the labor rates to account for this shortage? If yes, how? As example, if under normal circumstances, a person would be paid \$35 per hour, did Paul use \$35 per hour or added a 20% premium, hence \$42 per hour?

See my answer in 2d.I and IV. The 20% majoration was put in place to allow for, lack of labor availability and potential unproductivity. So in the contract CH0007 for instance, we had some 3,7 millions working hours foreseen, that means that this contract has a "provision of 740,000 hours" to address this issue, or 103 man, full time, for a period of two years! (740,000 hrs/300hrs/month/24 mo =102.7 man.)

Best regards,

Mélanie Proulx, B.A., LL.B.
Conseillère juridique/Legal counsel
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