

From: Deborah L.J. Hutchings <dhutchings@bensonbuffett.com>
Sent: Tuesday, April 30, 2019 3:59 PM
To: Collins, Michael <MichaelCollins@muskratfallsinquiry.ca>
Cc: Muzychka, Irene <IreneMuzychka@MuskratFallsInquiry.ca>; Ding, Adrienne <AdrienneDing@muskratfallsinquiry.ca>; Nagarajah, Gobhina <GobhinaNagarajah@muskratfallsinquiry.ca>
Subject: [Potential Junk/Spam] RE: Jason Kean Questions

Michael,

Please find attached responses from Jason Kean to your questions below.

Trusting that you will find the attached to be in order.

Regards
Debbie



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From: Collins, Michael <MichaelCollins@muskratfallsinquiry.ca>
Sent: Saturday, April 27, 2019 11:02 AM
To: Deborah L.J. Hutchings <dhutchings@bensonbuffett.com>
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Subject: Jason Kean Questions

Debbie,

I've been thinking over the conversation with Mr. Kean. I have a few additional questions for him:

- 1) Why does P-130, pp 310–319 (Attachment B.15), contain AACE recommendations for contingency determination using parametric estimating?

The tactical-risk exposure inputs (pp 238–249, Attachment B.10) seem to be based on range estimating, as described in P-903. So do the strategic risks (P-130, pp 282–309).

- 2) Was the contingency calculated according to the AACE guidance in P-903, in Attachment B.15? Are there any notable differences, or is there some other AACE source I should be looking at, or some other source? If so can I get a copy?

I am seeing a small deviation, in that P-903 seems to focus on ranging by risk, where P-130 Attachment B.10 seems to range by package. If that's what's happening, that Nalcor used the AACE approach except that it ranged by package instead of by risk, perhaps Mr. Kean could give a brief explanation of why?

- 3) Has Mr. Kean had a chance to review P-1162? It suggests (p2) that the May workshop "did not attempt to finalize ranges, but to capture the viewpoints of all parties and develop a basis for Nalcor to finalize the tactical cost, schedule and strategic risk ranges."

Thanks,
Michael

Michael Collins
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J. Kean responses to M. Collins questions of 27-Apr-2019**Question 1**

Why does P-130, pp 310–319 (Attachment B.15), contain AACE recommendations for contingency determination using parametric estimating?

The tactical-risk exposure inputs (pp 238–249, Attachment B.10) seem to be based on range estimating, as described in P-903. So do the strategic risks (P-130, pp 282–309).

Response

As a guideline, AACE RP 42R-08 has been included a background reference on the process of risk estimating using parametric models. Westney relies upon several methods, including the use of parametric models, in its strategic risk modelling practices, wherein relevant historical industry information would be leveraged to support the assessment of the impact of various risk events (e.g. shortage of labour and its impact on production) on the Muskrat Falls Project.

For the Muskrat Falls Project, Nalcor utilizes Westney's risk assessment expertise, and knowledge of acceptable risk modelling techniques, for all quantitative risk modelling used for evaluation of the impact of both tactical and strategic risks. As understood from Westney, its assessment approach is perhaps best characterized as the Hybrid Method, as defined within AACE RP40R-08 (Contingency Estimating: General Principles). The Hybrid Method leverages a mix of different contingency assessment techniques, including range estimating, expected value, parametric modelling, and expert judgement.

Question 2

Was the contingency calculated according to the AACE guidance in P-903, in Attachment B.15? Are there any notable differences, or is there some other AACE source I should be looking at, or some other source? If so can I get a copy?

I am seeing a small deviation, in that P-903 seems to focus on ranging by risk, where P-130 Attachment B.10 seems to range by package. If that's what's happening, that Nalcor used the AACE approach except that it ranged by package instead of by risk, perhaps Mr. Kean could give a brief explanation of why?

Response

Per the response to Question 1, Westney's method is best characterized as the Hybrid Method. Westney modelling approach considers the impact of identified uncertainty and risk events on both the project cost and time estimates.

As indicated in Exhibit P-00956 (pages 23 & 24) decisions regarding the approach to model identified risks, including the modelling technique, model format, level of detail, the application of both cost- and time-models (reference Attachment B.8 and B.9 of Exhibit P-130), were made by Westney, as Nalcor's risk advisor. The methods used remained consistent from 2008 through to the last QRA completed in spring 2017.

Question 3

Has Mr. Kean had a chance to review P-1162? It suggests (p2) that the May workshop "did not attempt to finalize ranges, but to capture the viewpoints of all parties and develop a basis for Nalcor to finalize the tactical cost, schedule and strategic risk ranges."

J. Kean responses to M. Collins questions of 27-Apr-2019**Response**

Exhibit P-130, Section 9.0 – Basis of Assessment describes the process used for assessment of the exposure created by the identified risks. The late May workshop built upon several risk workshops and meetings held over the preceding year, providing a forum to discuss the potential cost and schedule impact of the identified risks on the Project, which in-turn provided the basis for finalizing of inputs for Westney's risk modelling.