

**From:** [Richard Noble](#)  
**To:** [Tim Calver](#)  
**Cc:** [David Steele](#); [Michael Kennedy](#)  
**Subject:** RE: P80  
**Date:** Wednesday, March 2, 2016 10:18:24 AM  
**Attachments:** [Rational for explicit recommendations on QRA.docx](#)

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Dear Tim,

Thanks for your thoughts on this and appreciated the brief conversation yesterday given the immediate pressures out east at present. Your points too are well made. However, I would recommend we are explicit on this Pnumber. Suggested wording:

***The Project Contingency should make appropriate allowances for all risks including strategic, at a confidence level reflecting stakeholders required cost certainty. Our experience is that a reasonable conservative value (typically P80\*) should be used for probability on cost and schedule and further that this would be based on a thorough Quantitative Risk Assessment;***

\*then adding an explanatory footnote or definition in a glossary.

As, I noted yesterday, a key technical quality lens has to remain:

**“ Are the findings and recommendations sufficiently comprehensive and detailed so that were OC & Nalcor to implement them, they’d arrive at a reasonable number”**

This applies to both this specific QRA matter as well as the other findings and recommendations.

The Pnumber will be, as you know, a critical determinant in robustness of the revised estimate. We know OC is inexperienced in this area. Nalcor also have not arrived at the right way to do things in the past. Knowing this, we shouldn’t leave ourselves open in April (should we find them having not done it right again) to either OC or Nalcor saying:

**“Well, we did what you told us... you weren’t clear enough in your report”**

This means we cannot leave terms like **“reflecting stakeholders required cost certainty”** open to interpretation and must make a clear recommendation while using appropriate language mitigating our risk of ownership of the \$ cost number that results.

The fuller discussion of this is in the attached document.

I know it’s tough to get the balance in this very sensitive report and the communication... but am sticking with my original Technical QA advice to the team on this item.

Best regards,

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**From:** Tim Calver

**Sent:** Tuesday, March 01, 2016 6:08 PM

**To:** Richard Noble

**Cc:** David Steele; Michael Kennedy

**Subject:** P80

Hi Richard,

Just wanted to come back to you on the P80 question.

We discussed and concluded that we didn't want to make a specific recommendation on P80. However, we did update the recommendation to read as follows:

*The Project Contingency should make appropriate allowances for all risks including strategic, at a confidence level reflecting stakeholders required cost certainty;*

I think we are all of the view that the appropriate confidence level in the circumstances (and we can evidence this from our various experience) would be P80. Through the wording above we would have this conversation and advise the Client, but not expose ourselves to just a black and white P80 recommendation.

Hope this addresses your concern – what are your thoughts?

Tim

**Rational for explicit recommendations on QRA****2 March 2016**

Again... certainly appreciated the brief conversation yesterday given the immediate pressures out east at present.

Your points are well made and I think I get the thought process including a) the overall thrust of the risk section including key omissions of strategic risks in the calcs, b) The historicity of the past QRA work c) the context of the current QRA they are doing (and its likely schedule to complete the exercise) as well as the caution at putting in black and white "P80", including any inherited ownership of the number as a result.

However, I would recommend we are explicit on this number.

***The Project Contingency should make appropriate allowances for all risks including strategic, at a confidence level reflecting stakeholders required cost certainty. Our experience is that a reasonable conservative value (typically P80\*) should be used for probability on cost and schedule and further that this would be based on a thorough Quantitative Risk Assessment;***

We have the US DOE recommendations that we can reference. I think the team would agree it is also consistent with our understanding of the risk appetite of the government and prudent practice given the current position of the Muskrat Falls program.

This is an important point as the Pnumber will be a critical determinant in robustness of the revised estimate. As a critical determinant of our own service quality (both perceived and actual), it is worth being clear on the reasoning, which is as follows.

As, I noted yesterday, a key technical quality lens has to remain:

***" Are the findings and recommendations sufficiently comprehensive and detailed so that were OC & Nalcor to implement them, they'd arrive at a reasonable number"***

This applies to all of the findings and recommendations we are making. (Indeed, must be borne in mind for the rest of the report completion hence prior note on recommendations)

Obviously this is subject to the constraints of the scope/limitations of the assignment. However, the objective on setting this lens is not only the conventional "ensuring an appropriate standard of care". We also have to avoid leaving ourselves open to delivery risk. Specifically, if when we do our follow up review work we might still find them deficient. In this case, we don't then to leave ourselves open to anyone (OC or Nalcor) saying:

**“Well, we did what you told us... you weren’t clear enough in your report”**

This means we cannot leave terms like “**reflecting stakeholders required cost certainty**” open to interpretation. while also needing to be sure we are using appropriate wording mitigating our risk of ownership of the cost number.

Now, I suspect Nalcor will indeed act in good faith and should be intent on exercising reasonable professional judgement in implementing any recommendations. However, so far they have failed to “get it right” specifically on things like QRA as well as other areas.

Sometimes this may have been muddied by attempts at accommodating the “optics” of the escrow arrangement etc. Sometime it was not deliberate and genuinely because they didn’t know the right way to do it. Other times, they will have claimed to have done what they believed to be acting in line with what they interpreted as the stakeholders requirements. The OC is not an expert in this regard and in the past has been swayed by Nalcor’s position.

The clarity, completeness and detail of the report is therefore still pivotal to our advising OC and Nalcor and to their effectively implementing the corrective action.

Ultimately, the completeness of the QRA process and the choice of appropriate Pnumber will be a key determinant in the robustness of the \$numbers received by Government/OC... my recommendation to the team as the QA exec on this is therefore has to remain that we need to be explicit on this point.