Message

From: Prendergast, Thomas F. [Thomas.Prendergast@stvinc.com]

on behalf of Prendergast, Thomas F. <Thomas.Prendergast@stvinc.com> [Thomas.Prendergast@stvinc.com]

Sent: 9/5/2018 1:29:17 PM

To: Begin, Jocelyne [Jocelyne.Begin@ottawa.ca]; Morgan, Michael (Transit) [michaelj.morgan@ottawa.ca]; Cripps, Steve

[steve.cripps@ottawa.ca]; Holder, Richard [Richard.Holder@ottawa.ca]

CC: Manconi, John [John.Manconi@ottawa.ca]; Prendergast, Thomas F. [Thomas.Prendergast@stvinc.com]

Subject: Comments Re: RTG Proposal on RSA

Attachments: RTG Nov 2nd RSA Proposal - Krieger-Barstow Comments.ppt; RTG Nov 2nd RSA Proposal - Sagar Comments.ppt;

Critical Ottawa Vehicle Issues 5-Sep-2018.docx; FW: RTG proposal on the RSA date change - Sept. 4 2018

Jocelyne (et al) -

Attached are marked up copies of the document you sent to the Independent Assessment Team (IAT) for review and comment. In the comments document provided by Krieger and Barstow they have inserted recommended language that the IAT believes should be inserted into the slides as noted. In the comments document provided by Sagar, he has listed under the PowerPoint comments application (aka need to "click on " comments view) points that the IAT believes need to be made to those assessing the risks associated with accepting the RTG proposal with PA exceptions. Whether they are formally included in the text wording or provided in verbal form when presented is immaterial as long as they are made.

The IAT believes that the rating for SAT's and SIT'S as listed on Slide #5 should be "RED" because without full SCADA in place and functioning RTG will NOT be able to complete a full System Integration Test that will prove that the RCC is fully functioning. Such a test is an ABSOLUTE requirement prior to achieving RSA and certainly prior to the start-up of revenue service operations.

The IAT recommends that the comments on Slide #5 needs to be revised to include the following sentence...."Watch item is the substantial number of tests that need to be completed at a rate not even closely demonstrated by RTG to-date, and on equipment installations that have not been completed as of yet, and are therefore not available for testing. In the context of only 58 days left until a November 2nd RSA date the likelihood of completing those tests is diminishing extremely rapidly."

Lastly, attached are two documents summarizing the outstanding critical vehicle issues related to the Alstom fleet along with examples of standard vehicle acceptance criteria/practices used by agencies to ensure the vehicles are ready to be used in revenue service. The first of these documents clearly illustrates that there are a number of outstanding vehicle issues that need resolution, some of which need to be completed prior to cars being placed in service. The second document, while not necessarily being part of the PA, and therefore not enforceable per se, helps to illustrate the risks associated with vehicles having poor or unacceptable reliability issues, and why the need for a sufficient fleet size (minimum service requirement plus unscheduled/scheduled maintenance spares) cannot be compromised without assuming unacceptable risks in delivering service.

The above comments represent the primary concerns the IAT has with the latest proposal the City of Ottawa has received from RTG regarding their proposal to achieve a November 2nd RSA. However, they do NOT represent all of the concerns the IAT has because, for whatever reason, the perception of some of the "third parties" involved is that the issue of vehicles and the number of them that will be available for revenue service at RSA, and in the days after it, is the ONLY significant difference between RTG's view of their likelihood of achieving a November 2nd RSA and the City's/IAT assessment of same is solely related to the vehicle issue. That is NOT the case and the sensitivity analysis performed in the last Monte Carlo simulation conducted by the City/IAT illustrated that. In addition, nothing that we have learned since that analysis was done in the way of work being completed has changed the result of that sensitivity analysis. In summary, there is a pattern being played out over time by RTG that is consistent. That pattern is their continued inability to meet critical milestones in terms of dates of completion and their accounting for it by reducing the time allocated for Pre-Trial Running, Trial Running and System Assurance requirements. That is especially the case with respect to being able to effectively test the vehicles in ways that closely approximate the service delivery environment they will actually operate in (acceleration, braking, station stopping, etc.) as well as the CBTC system being able to meet the service requirements for end-to-end running of trains under normal and exacerbated conditions. The City/IAT expressed their concerns regarding this schedule compression and the "knock on" effect it would have on being able to open a "safe and reliable" service on after RSA over 15 months ago when it conducted its first "deep dive" assessment. We now find ourselves some 15 months later and within 60 days of a proposed RSA in the undesirable position of having

been proved right.	And because the effect is across a broader spectrum of issues than just the vehicles we believe it
important to reiter	ate that fact so that it is not lost in the most recent discussions where some may believe it is solely
about the vehicle is	ssue.

Tom	Pre	nde	rga	st

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