ALSTOM Power & Transport Canada Inc.

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June 24, 2013

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Alex Turner
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Letter No.:

ALS-OLRT-00027

In reply to:

OLR-ALS-0011

Action:

OLRT

Reference:

Article 8.3, Appendix D

Letter Ref.:

ALS-OLRT-00004, OLR-ALS-0004, ALS-OLRT-0012

Subject: Subcontract No. 507528-P001: OLRT Vehicle Delivery Schedule, Version 1

Dear Mr. Turner:

Please find attached the revised schedule, OLRT Vehicle Delivery Schedule, Version 1 for your review and approval. The changes to the schedule and responses to the comments under OLR-ALS-0011 are as follows:

OLRTC Comment(s):

Activity 9 (and related activities 111 through 129) in your Rev 0 indicates the milestone
related to issuance of major Purchase Orders has been moved to August 30th 2013. This is
much later than the baseline. As we have discussed previously, I accept that your subsuppliers can be demonstrated to be under contract prior to that date by other contract means.
Please revise these dates to be in accordance with our agreement.

Alstom Response:

As we have concluded last week the documentation needed to demonstrate that the sub-suppliers are under order, we have modified the date of Activity 9 and the various subordinate activities 111 through 129.

Activity 117 – Manufacturing of Train 1 in Hornell (and related activity 218 for Train 2). In
the original baseline schedule, manufacturing of the first 2 trains was committed to be in
France. While OLRTC does not specifically oppose the movement of this manufacturing to
North America, we will require a written explanation as to the reasoning and benefits for this
move. It represents a significant departure from the base contract, and therefore must be
reviewed and discussed with all affected parties before it can be approved as a variation.

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Alstom Response:

We believe that your reference to Activity 117 was in error and should have read 175. With regard to the reasoning for the move to Hornell, these are mainly schedule risk reductions related and include:

- a. Reduced risk to schedule for material. As the material will be mostly North American sourced, to ship all of that material to Europe to assemble the first cars was considered to be an unnecessary risk to schedule, both in terms of shipping time but also for any replacements resulting from shipping damage or other non-conformances.
- b. Reduced transportation time for finished LRV's. The shipping time for the transfer from France to North America is around 1 month so eliminating this shipping time provides for almost 4 weeks of additional "value added" activity duration.
- c. Proximity of Hornell to Ottawa site for training. The assembly of the first 2 LRV's protects schedule in 2 ways. Firstly, the assembly staff/supervision from Ottawa can receive more extensive training in Hornell over a sustained period than it would be practical to achieve if the first 2 LRV's were assembled in France. Then, when assembly moves to Ottawa, a larger pool of trained staff will exist in Hornell and can be quickly made available in the even that support in Ottawa is needed at any time.
- d. Proximity of suppliers to the assembly process. As most material will be of North American origin, it is far more practical to have the suppliers at a closer proximity for the first assembly, so that any problems encountered can be more rapidly dealt with

Our assessment of the effect of the change of location is that it substantially strengthens the overall planning and reduces risk to the first LRV production by providing an increased amount of time for completing all activities associated with the first 2 LRV manufacturing and testing.

 Activities 228 – 243 (testing). It is assumed that as the vehicle will not be manufactured in France, nor will it be tested there. OLRTC requires a detailed explanation for this change, the location of the planned testing, and your new strategy prior to being able to accept this proposed change. There are again many parties affected by this.

Alstom Response:

You are correct that the testing of the first LRV's will not be conducted in France but instead will be conducted in North America. The details of the specific locations of each test will be finalized nearer the time however we can advise you that all qualification testing will principally be conducted for static qualification testing at the Alstom site in Hornell NY which has extensive testing facilities, for dynamic testing, in Colorado at the test track in Pueblo and, for climatic testing, at the environmental test facility in Ottawa.

The explanation for the change is simply that the logistics of shipping the LRV back to France once assembled is not consistent with the schedule risk reduction achieved by assembly in Hornell. The conduct of the test program will be unaffected by the change in location as all facilities used will be fully capable of executing the tests relevant to those locations. In addition, with respect to OLRTC and City of Ottawa staff witnessing tests, we hope that it will facilitate much greater access and participation in the tests by avoiding the cost and advance planning associated with international travel to Europe.

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• Activity 305 and subsequent (Serial Manufacturing). During a number of meetings, Alstom has mentioned the desire to put a "gap" in the manufacturing schedule between the 1st two train manufacture and commencement of Serial Manufacturing. Alstom have advised verbally their reasoning for this change, and how it relates to a successful execution of the contract on-time and with reduced MODS. However, the change was placed in your proposed schedule without a supporting narrative to request approval. Please provide a written reasoning for this proposed amendment.

Alstom Response:

As previously explained, it is typically Alstom's preference to introduce a gap between the completion of the first vehicle(s) and the remainder of the production, in order for the maximum number of issues arising from assembly and test to be fully resolved. It is not always possible to do this however as it is normally dependent on Customer schedules.

In the case of the Ottawa LRV project, the move of production from Hornell to Ottawa introduces a natural break in production. What we have done is to maximize the gap, consistent still with meeting the overall manufacturing schedule for the full fleet, in order to provide as much time as possible to complete an extensive amount of the LRV 1 & 2 testing, before assembly resumes. We believe that this will provide for a smoother start in the assembly in Ottawa and avoid unnecessary modification work which can be expected where a break in production does not exist, or is too short.

We look forward to receiving your approval of the attached schedule. Please feel free to contact the undersigned with any further questions.

Sincerely,

Derek R. Hurst Alstom Project Director

DRH/ad

Attachments:

1) OLRT Vehicle Delivery Schedule V1 Detail 240613.xer

2) OLRT Vehicle Delivery Schedule V1 Detail 240613.pdf