Aurizon Network Flood 2015 Response Submission

11 November 2016

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Introduction

On 20 February 2015 category 5 Cyclone Marcia crossed the Queensland coast and tracked south over Aurizon Network's Moura coal system causing significant damage to rail infrastructure. Work to reinstate the Moura System was completed 16 September 2015 and Aurizon Network submitted a Review Event claim to the QCA 30 November 2015.

From February to June 2016 Aurizon Network's claim was reviewed by Jacobs on behalf of the QCA. Jacobs split the works into two separate packages. The first package covered the largest part of the claim, a washout at Bells Creek (MSL61). The second package comprises three sites sampled from the remaining works and which represent the remaining sites in a way that prudency test results could be confidently extrapolated. The sites sampled are:

- MSL1 signal cabinet reinstatement Mt Rainbow
- MSL66 ballast scour and washout Earlsfield to Dakenba
- MSL69 track wash out Earlsfield to Dakenba

Jacobs' assessment found MSL1 and MSL66 to not be prudent on cost. As a result, in October 2016, the QCA released a draft decision not to approve Aurizon's flood claim $4.24M and invited responses from stakeholders be submitted by 11 November 2016 to make a final decision on the flood claim. The QCA's draft decision also raised concerns around coverage of costs by insurance in addition to the timing of cost recovery in the event of approval of the claim.

This report aims to provide the additional information to the QCA addressing the areas of concern highlighted in the draft decision report. The information in this report should be sufficient to support QCA approval of the full amount of the claim for the FY2015 Moura flood review event as well as provide clarity around the timings of cost recovery. However, if further information is required, Aurizon Network is happy to provide that information upon request.

Transparency of flood costs

MSL 1 Signalling Cabinet Mt Rainbow

Background

The report, completed by Jacobs on behalf of the Queensland Competition Authority (QCA), suggests the costs incurred by Aurizon Network in reinstating the signalling cabinet at Mount Rainbow are not prudent. Jacobs' report estimates, for Asset Types, Track labour and plant (installation and transport), includes 32 hours of labour at $250/hour for a signal engineer. Aurizon Network attributed a total of 840 hours in the claim to reinstate the signalling cabinet. It was required to use a number of various human resources, across multiple engineering and trade disciplines to complete this task. In addition there was a number of additional and significant tasks required to be performed to repair the damaged site at Mt Rainbow to a safe and reliable state for the running of trains.

At a summary level the task was to recover two separate damaged signalling cabinets, integral components to Aurizon Network's signalling and electronic points systems. The damage occurred as a direct result of flooding triggered by Category 5 Cyclone Marcia which crossed the coast on 20 February 2015. A Client Requirement Brief (CRB) was prepared by Aurizon upon inspection of the damage to the signalling cabinet and the formation on which the cabinets were located. The CRB has been provided to Jacobs previously and is included in the Jacobs Review.

Rationale

The site itself was severely damaged and required significant earth works and reconstruction of concrete slabs which support the signalling cabinets. The signalling cabinets were submerged half way under flood waters and sustained substantial damage (Appendix A). A decision was made by senior engineering staff to transport the cabinets to an offsite workshop in Rockhampton to be repaired. This was done for a number of reasons. The first being that there was considerable damage to the foundations and the signal cabinets needed to be moved to reinstate the foundations. Second, the signal cabinets were significantly damaged to the point it would be more efficient to transport to a location with workshop facilities where tools and other necessary equipment was readily available.

Due to the severe damage to the concrete slabs, on which the signalling cabinets sit, as well as the underlying formation, it was necessary to reconstruct the site in its entirety. To maximise cost savings whilst optimising operational efficiency, it was agreed to consolidate the two signalling cabinets into one, subsequently only requiring one new cabinet foundation to be constructed.

Prior to reconstruction of the site, a number of activities needed to occur. This included the disconnection and megger testing of the cables for breaks and insulation integrity (25 in total). In addition to the formation and signalling damage, other trackside systems equipment was also destroyed by water inundation. They too required disconnection, removal from the site and eventually replaced by new equipment. The trackside systems equipment removed, included axle counter heads and trackside units, electro-hydraulic pump units and a number of detector boxes related to the turnout switching equipment (Appendix B,C,D,E,F,G).

Once these activities were completed, the damaged concrete slabs could be removed, the site cleared of debris, spoil and reconstruction of the formation and new concrete slab could be undertaken.

Jacobs' assessment of the task undertaken by Aurizon to estimate a total of 32 labour hours for one signal engineer to complete the task of reinstating the signal cabinet. The activities required on site alone, required multiple staff from varying engineering and trade disciplines to recover the site in preparation for the reinstatement of the signal cabinet which significantly exceeded 32 hours assessed by Jacobs.

The hours were allocated by Aurizon's Engineering and Projects Supervisor to the line items in the CRB (Appendix J) using actual experience and knowledge of the work performed as part of MSL 1. A total of approximately 66 labour hours was consumed on site to facilitate the abovementioned removal of the damaged signalling cabinets and other trackside systems equipment. This roughly equates to six staff working over two days for up to eight hours on site including travel to and from depots or the closest available accommodation of roughly one and a half hours in each direction.

133 hours was attributed to the rebuild and consolidation of the signal cabinet in Rockhampton depot which required extensive refurbishment of a significant amount of components. This equates to eight staff working 8 hours per day for two days performing task from refurbishment, product sourcing, design input and other electrical equipment related tasks.

Rectification works on site, including formation, concrete slab repairs and rebuild, cabling testing and other works as well as installation of all other previously mentioned trackside systems equipment amount to 561.4 hours. This roughly equates to 12 staff working eight hours per day on site plus travel, for up to five days. A further 69.5 hours has been allocated to post commissioning clean up works which roughly equates to nine staff on site for one day cleaning the site. Travel time of roughly one and a half hours also applied to this task.

It is also important to note that access to the Mt Rainbow site is very difficult as it is in a high cutting. Further, the access road adjacent to the Mt Rainbow site was the only access available for work crews working on recovery at other sites along the Moura corridor. As a result, the equipment at Mt Rainbow had to be continually repositioned to allow safe passage of vehicles and plant through the site to other locations throughout the recovery works.

Conclusion

It seems the consultant's report includes a cost estimate for labour hours for the installation of the signal equipment by one signal engineer. The consultants have failed to consider the significant damage at Mt Rainbow which required extensive reparation works at the site. In addition, the substantial amount of work required to replace other trackside systems equipment requiring a number of different staff from multiple engineering and trade disciplines has not been considered.

Further, it appears that Jacobs has not taken into account the significant amount of damage caused to the signalling cabinets and the considerable amount of time required to repair and consolidate the signalling cabinets off site. The evidence provided along with this response demonstrates the 840 hours assigned by Aurizon was a realistic amount of time to reinstate the Mt Rainbow site, trackside systems equipment and signalling cabinets to a standard necessary to facilitate the safe and reliable operation of train services on the Central Queensland Coal Region (CQCR). Therefore Aurizon Network's cost allocation is deemed to be prudent.

MSL 66 Ballast Scour and Track Washout Earlsfield to Dakenba

Background

The report, completed by Jacobs on behalf of the Queensland Competition Authority (QCA), suggests the costs incurred by Aurizon Network in conducting formation repair works at the Earlsfield to Dakenba sections are not prudent. Jacobs' report estimates for Asset Types, Track labour (installation and transport), applies a rate of $712/m for 34 m totalling $71,200.

The main task on the Earlsfield to Dakenba section was to rectify 34m of formation damage sustained during the flooding. Aurizon Civil Engineering Standards dictate that associated works including top and line alignment by resurfacing and rail restressing be performed extending the site to 200m. Other tasks at the site included removal of debris and spot ballast drops.

Rationale

Jacobs have undertaken an assessment of the work and assumed Aurizon has applied a unit rate to 200m. Jacobs asserted that the majority of the works undertaken would have revolved around the 34m of formation repair and applied the unit rate to that length of work.

Upon investigation it became apparent that there were three other sites in the Earslfield to Dakenba section that were performed by Aurizon Operations Rail Services Deliver (RSD) in addition to MSL66. RSD billed Aurizon Network for all four sites as one task totalling $290,941.31 (Table 1). Aurizon Network had been recording the sites as four separate tasks. As a result, there was a need to allocate the total cost of reparation works of the four tasks to each individual MSL. This was done by pro-rating the costs proportionally based on site length. Reducing the length of MSL66 to 34m would result in an increase cost apportionment ratio being applied the other sites and therefore increasing the distribution of the total allocated costs to the other MSLs. Further, Jacobs' assessment sampled MSL69 and found Aurizon's cost were approximately $70,000 less than the Jacobs' estimate.

Table 1: Cost Allocation

PRIORITY 1 - INTERNAL								
MSL Refere	**Area**	**Work Group**	**Km From**	**Km To**	**Distance in Mtrs**	**Cost Apportionment**	**Cost Allocation**	
MSL-66	Earlsfield - Dakenba	TCC	8.7	8.9	200	56%	$	161,634.06
MSL-67	Earlsfield - Dakenba	TCC	12.01	12.02	10	3%	$	8,081.70
MSL-68	Earlsfield - Dakenba	TCC	14.1	14.15	50	14%	$	40,408.52
MSL-69	Earlsfield - Dakenba	TCC	15.05	15.15	100	28%	$	80,817.03
TOTAL	Earlfield - Dakenba				360	100%	$	290,941.31

Conclusion

When assessed in isolation it could be determined that Aurizon Network has overestimated the site length resulting in an imprudent cost allocation. When the sites are assessed in total becomes evident that the site length was simply used to pro-rate the allocation of the total costs across the five MSLs. However, considered as a whole (i.e. across all 4 jobs) it is clear that the costs incurred are prudent. It is therefore considered Aurizon Network's costs are prudent.

Capitalisation of Costs

The approach adopted in preparing the cost pass-through application is that only incremental maintenance costs associated with Aurizon Network's response to the Flood Event will be claimed. Each rectification job has been analysed to ascertain if it is capital in nature or incremental maintenance. The jobs identified as capital required creation of new assets. Jobs identified as incremental maintenance involved refurbishment or repair of existing assets. The works at MSL1 and MSL66 were purely incremental in nature as the activities undertaken were refurbishment works.

The only works that resulted from this Flood Event which have been classified as capital in nature, have been included in the Aurizon Network's FY2016 'ex post' capital expenditure claim which is currently under QCA consideration. For information purposes, we have attached to this submission a copy of the internal Aurizon Network business case describing the nature and detail of this work to demonstrate that there is no duplication between these capital works and those included in this FY15 Flood Claim.

Double Counting of Maintenance Costs

The works undertaken included in this claim were purely incremental in nature. Specifically:

- the work would not have been performed were it not for the damage caused by the floods.
- no allowance has been built into UT4 maintenance cost allowance for flood recovery over $1M as it is assumed such events will be dealt with through the Review Event mechanism
- only internal overtime hours and hours booked by external labour is included in the claim

Immediately following the flood, Aurizon Network track inspection supervisor's inspected the track, identified damaged sites and identified the works required to fix the damage and return the track to operation. Separate work orders were established for each flood remediation task and time was booked to these tasks and are provided with this submission.

Insurance for weather events

Stakeholder submissions in response to Aurizon Network's 2015 flood claim, expressed concerns on the extent to which flood costs are covered Aurizon Network's insurance or self insurance arrangements. This section demonstrates that the February 2015 flood related incremental maintenance cost could only be recovered via a Review Event submission and are not covered by any of Aurizon's insurance allowances.

Insurance arrangements

Aurizon Network's risk management is based on a combination of external insurance, self insurance and cost pass-through via a Review Event submission to the QCA.

Aurizon Network's Operating costs allowances in the 2016AU contains;

- A premium for relevant specifically insured risks under the Industrial and Special Risks policy and general liability insurance, directors and officers insurance, travel etc. Of the below-rail assets, only selected bridges, tunnels and feeder stations are covered under the Industrial and Special Risks policy and there is no cover for rail track infrastructure

- Self Insurance for the costs of insuring key below-rail risks such as derailments, dewirements, weather events and below-deductible liability losses.

Table 2 sets out the UT4, QCA approved risk and insurance allowances for the FY2014 to FY2017 regulatory period.

Table 2: Aurizon Network's Risk and Insurance allowances UT4

$m Nominal	2013/14	2014/15	2015/16	2016/17
Insurance premium costs	3.3	3.8	4.0	4.1
Self- insurance	5.0	5.6	6.1	6.7
Total risk and insurance	**8.3**	**9.4**	**10.1**	**10.8**

External insurance

As noted in Aurizon Network's November 2015 flood submission, no damage was sustained to any asset covered under Industrial and Special Risks policy due to the February 2015 floods. Thereby no costs were recoverable under the insurance policy. As a result, Aurizon Network has no avenue to recover the incremental maintenance costs associated with the February 2015 floods, other than through a cost pass-through mechanism in the form of a Review Event.

Self Insurance

In determining the proposed amounts for insurance and self insurance for the UT4, Aurizon Network engaged Finity Consulting Pty Ltd (Finity) to provide self insurance estimates for the stand-alone insurance policy premiums.

The Finity analysis concluded that the pass-through option (i.e. including a provision, such as clause 5 of Schedule F in the UT4, which permits Aurizon Network to recover through a QCA approved variation to reference tariffs the incremental costs of specified Force Majeure events) is an efficient way of dealing with extreme events which occur infrequently, are extremely difficult to model and are beyond the normal control of the business. Finity approach was approved by the QCA and forms the basis of the 2016AU self insurance allowances.

The Finity analysis assumed that that major weather events where below-rail losses to the network exceed $1 million will continue to be subject to pass through via the Undertaking.

By applying Finity's approach, the UT4 allowance for Self-Insurance in Real terms is summarised in Table 3 into various risk categories. For clarity Table 2 is the final approved allowances for Self Insurance under 2016AU converted to nominal terms

Table 3: UT4 Allowance

Year	Derailments			Weather	Dewirements	Liability	Total
	Track (ex Large)	Yard/siding (ex Large)	Large				
2014	1.16	0.55	1.82	0.82	0.17	0.46	**4.97**
2015	1.30	0.61	2.04	0.84	0.17	0.47	**5.44**
2016	1.40	0.66	2.19	0.86	0.19	0.49	**5.80**
2017	1.49	0.70	2.34	0.89	0.19	0.51	**6.14**

Including the flood claim of $4.2M in FY16 dollars as part of a Review Event submission is in line the assumptions underpinning Aurizon Network's self insurance allowance where, major weather events which cause below-rail losses to the network exceed $1m should be captured via cost pass through and are not covered by the self insurance allowance.

Escalation and Timing of revenue recovery

The QCA in its assessment of the escalation methodology of Aurizon Network's November 2015 claim, considered it required adjustment for consistency with the mid-year approach as adopted in UT4. The mid-year conversion to revenue was first suggested by the QCA in its Consolidated Draft Decision in December 2015, as such Aurizon Network's flood submission was not updated to reflect mid-year revenues. Aurizon Network agrees with the mid- year approach and have escalated the FY2017 costs to mid-year instead of end of year dollars.

Aurizon Network notes the QCA's draft decision to enable recovery of costs over the second half FY2017. If this decision were confirmed, the recovery would occur as per Table 4. Aurizon Network is currently in discussions with Stakeholders and will advise the QCA if agreement is reached with Stakeholders on an alternative recovery period.

Table 4: Recovery Option - Flood cost recovery over 6 months from 1 Jan 2017 to 30 June 2017

Cost Recovery	2016/17
Timing of Recovery $ (mid-year)	4,481,473
Tonnes ('000) – 6 months	6,256
$ per NT	0.72
Tariff increase	
AT3	2.25
AT4	0.36

Appendix

Appendix A

Appendix B,C,D,E,F,G