Daily Diary Report by Bid Item

Contract No.: **04-0120F4**

Diary #: **1232** **Const Calendar Day:** 805 **Date:** **18-Aug-2014** **Monday**
Inspector Name: **Brignano, Bob** **Title:** **Transportation Engineer**
Inspection Type:
Shift Hours: **Break:** **Over Time:**
Federal ID:
Location:
Reviewer: **Schmitt, Alex** **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** **12 PM** **4PM**
Precipitation **Condition** overcast am and pm

Working Day ☑ If no, explain:

Diary: Dispute ☐

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

The status of the 2 test rigs in this current phase of the Townsend Test (Test IV) is as follows:
Rod 18 (Dry 2008 Rod, ID S1-A7, Bottom): Tensioned to 0.30 Fu Today
Rod 19 (Dry 2008 Rod, ID S2-H6, Bottom): Tensioned to 0.30 Fu Today

ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field for the first jacking step of TR's 18 & 19. A week ago on 8/11/2014, the TR's were exercised and then left at a snug tight tension for the week. Crews at the Pier 7 warehouse are working an 8-hour shift 0600 through 1430. Working on the CCO operation today are Ironworker Jared Garrett (~0920~1020 for ~1hr) and Mechanic Joe Hernandez (~0950~1020 for ~1/2 hr). The non-CCO 314 operations elsewhere at the Pier 7 warehouse area at other times in the day are not covered by this diary.

VGO is on site today for the first jacking step at TR's 18 & 19. From VGO, Dave Van Dyke and Mattea start work on site at ~0730, after traveling to the Bay Area from Oregon yesterday. They start by checking the data from the TR's, which have been at a snug tight tension for the last week to check for instrumentation drift. VGO reports that the instrumentation is ok and the first jacking step can happen today. VGO is present for live data display during the first jacking step at both test rigs. Then, VGO works on the data reports from the first jacking step at both test rigs. VGO leaves the site ~1030. VGO continues offsite work on data and report issues. At the end of the day, VGO produces and sends the pm data reports.

For the jacking step at the 2 test rigs, present from the DJV are Bardan Gurung and Luis Funes. Present from CT-METS for AE is Elijah Turner (communicate with Mistras personnel offsite). One ABF ironworker is present to operate the hydraulic pump and tighten the nut, with VGO present to monitor the loads being used to guide the operations.

Test Rig #18 (Dry 2008 Rod, ID S1-A7, Bottom) Jacking Step:
This is the 1st jacking step and the rod is being jacked to 0.30 Fu. The post-seating of the nut target is 250.740 +10/-0 kips. The expected hydraulic pressure at this locked off force is 1,800 psi. Based on the previous jacking step (first attempt 0.30 Fu on 8/5/2014), the expected seating loss is 21 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~270~280 kips. The tension on the rod at the start of the operation is 66 kips (the snug tight load left on the rod 8/11/2014 was 72 kips for a delta of -6 kips, with this tension difference possibly due to thermal differences between 8/11/2014 and

today). Jacking is started at 0927. At 1,800 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 235 kips. The hydraulic pressure is increased to 2,100 psi and the primary strain gauges give a force of 283 kips. The AE is checked with the ok given at 0930. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 281 kips (bleed loss = 2 kips). After bleeding off the jacks, the primary strain gauges give a force of 259.7 kips (seating loss = 21 kips). The force is within the specified tolerance – it is within 1k of the top end of the tolerance.

Test Rig #19 (Dry 2008 Rod, ID S2-H6, Bottom) Jacking Step:
This is the 1st jacking step and the rod is being jacked to 0.30 Fu. The post-seating of the nut target is 250.740 +10/-0 kips. The expected hydraulic pressure at this locked off force is 1,800 psi. Based on the previous jacking step (first attempt 0.30 Fu on 8/5/2014), the expected seating loss is 22 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~270~280 kips. The tension on the rod at the start of the operation is 60 kips (the snug tight load left on the rod 8/11/2014 was 66 kips for a delta of -6 kips, with this tension difference possibly due to thermal differences between 8/11/2014 and today). Jacking is started at 0933. At 1,800 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 228 kips. The hydraulic pressure is increased to 2,100 psi and the primary strain gauges give a force of 265 kips. The hydraulic pressure is increased to 2,200 psi and the primary strain gauges give a force of 280 kips. The AE is checked with the ok given at 0937. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 279 kips (bleed loss = 1 kip). After bleeding off the jacks, the primary strain gauges give a force of 256 kips (seating loss = 23 kips). The force is within the specified tolerance.

During the jacking operation at TR 19, there were some problems with the power to the pump cutting out. The generator appeared to be running fine and the power on the pump came back on after it cut out each time. This power issue happened sometimes during previous jacking operations. After the jacking operations this morning, the ironworker works with the mechanic to examine the generator and the hydraulic pump. There are a few minor repairs made by the mechanic, including addressing a loose wire in the end of the power cord from the hydraulic pump.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is on idle/standby at the test rig work area. A 40kW generator – MQ Power 40 – ABF ID 002051 is used briefly for the jacking operations and for some maintenance and is on idle/standby at the test rig work area the remainder of the day. A Hydraulic Pump for running the jacks is used briefly for the jacking operations and for some maintenance and is on idle/standby at the test rig work area the remainder of the day. A Kubota Cart is used by the ironworker and another Kubota Cart is used by the mechanic at the test rig work area.

Note that there is k-rail at this work area. All the remaining k-rail at the CCO 314 test rig site is State owned. There are 20 pieces of 10' bought k-rail. Of the 20 pieces, 16 are installed in test rigs and 4 are spare/extra k-rail that are set aside.

To elevate k-rail and sandbags, crane mats (built from 12x12's) and timber blocking (12x12's) are used. The crane mat and 12x12's quantities are as follows:
1 each 4'x20' crane mat (1 x 80 LF)
1 each 5'x19' crane mat (1 x 95 LF)
2 each 5'x20' crane mats (2 x 100 LF)
2 each 5'x16' crane mat (2 x 80 LF)
~64 LF additional 12x12's
Total 12x12's quantity = 599 LF ~ 600 LF

The agreed extra work with ABF is as follows:
Ironworker Jared Garrett - 1 hr
Mechanic Joe Hernandez - 0.5 hr
Engineer Kelvin Chen - 0.5 hr
40 kW Generator - 0.5 hr
12x12 timber - 600 LF
See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:

Office 2 hours: ABF is working a shift at the Pier 7 warehouse area between 0600 and 1430. I am in the field for a portion of the ABF shift when the TR's are jacked, as well as some miscellaneous issues before and after the jacking operations. Then, late in the day, I am in the office for various work related to A354 Grade BD bolts and rods, including issues related to today's jacking operation & the start of the test with these 2 TR's and also addressing EWB's due soon for this month's estimate. My shift is 0600 to 1630 and my OT is 1430 to 1630.