

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016637**Date Inspected:** 03-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 230**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). PP13 Shear Plate Insert ABF-SUB-001503R00 – (SMAW)
- 2). OBG Field Splice 1W/2W Weld ID: A LS3 and A LS4 - (SMAW)
- 3). OBG Field Splice 4W/5W Weld ID: B1, Face B - (QAI Verification)
- 4). OBG Field Splice 4E/5E Weld ID: C1 & C2 - (QAI Verification)
- 5). OBG Field Splice 4E/5E Weld ID: E1 & E2 - (QAI Verification)
- 6). OBG Field Splice 5E/6E Weld ID: E1 & E2 - (QAI Verification)
- 7). PP13 Shear Plate Insert ABF-SUB-001503R00 – (QAI Verification)

- 1). PP13 ABF-SUB-001503R00 – (QC UT)

The QAI periodically observed QC Inspector Tom Pasqualone performing Ultrasonic Testing (UT) of the R-1 repair area in the OBG Field Splice of the Shear Plate Insert at PP13 (west line) Prior to observing the testing the QAI observed QC Mr. Pasqualone performing the required calibration check of the GE USM 35 UT Instrument and the 70° Search Unit. The QAI observed Mr. Pasqualone perform a calibration check of the transducer index point, the transducer sound path angle, the horizontal sweep distance and the sensitivity. The calibration check appeared to be in compliance with contract documents and the QAI observed that Mr. Pasqualone set the reference level at 50% full screen height with a zero reference level sensitivity of 51dB. The QAI observed Mr. Pasqualone utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld.

The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63

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x .75 rectangular transducer. The UT examination was completed from face A and Face B during the QA Inspectors shift and the work at this location appeared to be in general compliance with contract documents.

2). OBG Field Splice 1W/2W Weld ID: A LS1 and A LS5 - (SMAW)

The QAI periodically observed AB/F approved welders Wai Kitlai (ID 2953) and Yao Xin Liang (ID 7238) performing welding per the SMAW process in the 3G (vertical) position. Mr. Wai Kitlai was welding fill passes at A LS3 with ceramic backing and Mr. Yao Xin Liang was welding fill passes at the splice with ceramic backing at A LS4. See photos below. QC Inspector Tom Pasqualone was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1012-3. The QAI also periodically observed that AB/F approved welder Kenneth Chappell was present and that Mr. Chappell periodically supplied 9018 electrodes to the welders at this location and returned their unused electrodes to a drying oven located in the Eastbound line. The QAI observed that the work at this location was in process for the duration of the shift and appeared to be in general compliance with contract documents.

3). OBG Field Splice 4W/5W Weld ID: B1, Face B - (QAI Verification)

The QAI performed verification Visual Testing (VT), and Ultrasonic Testing (UT) of 25% of the length of OBG Field Splice 4W/5W Weld ID: B1. The 4W/5W Weld ID: B1 verified by the QAI from Y = 500mm to Y = 850mm appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

4). OBG Field Splice 4E/5E Weld ID: C1 & C2 - (QAI Verification)

The QAI performed verification Visual Testing (VT), and Ultrasonic Testing (UT) of 15% of the length of OBG Field Splice 4E/5E Weld ID: C1 & C2. The 4E/5E Weld ID: C1 verified by the QAI from Y = 4275mm to Y = 4610mm and the 4E/5E Weld ID: C2 verified by the QAI from Y = 240mm to Y = 1000mm appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

5). OBG Field Splice 4E/5E Weld ID: E1 & E2 - (QAI Verification)

The QAI performed verification Ultrasonic Testing (UT) of 15% of the length of OBG Field Splice 4E/5E Weld ID: E1 & E2. The 4E/5E Weld ID: E1 verified by the QAI from Y = 4278mm to Y = 5078mm and the 4E/5E Weld ID: E2 verified by the QAI from Y = 200mm to Y = 1000mm appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

6). OBG Field Splice 5E/6E Weld ID: E1 & E2 - (QAI Verification)

The QAI performed verification Ultrasonic Testing (UT) of 15% of the length of OBG Field Splice 5E/6E Weld ID: E1 & E2. The 5E/6E Weld ID: E1 verified by the QAI from Y = 4278mm to Y = 5078mm and the 5E/6E Weld ID: E2 verified by the QAI from Y = 200mm to Y = 1000mm appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

7). PP13 Shear Plate Insert ABF-SUB-001503R00 – (QAI Verification)

The QAI performed verification Visual Testing (VT), Ultrasonic Testing (UT) of 40% and Magnetic Particle Testing (MT) of 25% of the length of the OBG Field Splice of the Shear Plate Insert at PP13 (west line). The Splice of the Shear Plate Insert at PP13 MT verified by the QAI for a distance of 300mm on the vertical weld and

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UT verified by the QAI for a distance of 500mm on the horizontal weld appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 and Magnetic Particle Testing Report Form TL-6028 generated by the QAI on this date.

After the QAI completed the Verification Testing on this date the QAI spoke with QC Inspector Mr. Leonard Cross. See Summary of Conversations below.



Summary of Conversations:

At the beginning of the shift the QAI observed the QC NDE status board in the QC Conex office and spoke with QC Inspector Bonafacio Daquinag Jr. Mr. Daquinag updated the status board and identified the locations ready for QAI Verification.

From Item 6).

The QAI in conversation with QC Mr. Leonard Cross informed Mr. Cross of the locations verified and the acceptance/rejection status.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammed Fatemi (916) 813 3677, who represents the Office of Structural Materials for your project.

Inspected By: Madison, Bert

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer