

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-018912**Date Inspected:** 29-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Fred Von Hoff		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joint 5E-PP31-E3, holes 3 and 4, outside the OBG section: ABF welding personnel Salvador Sandoval (#2202) was using the Shielded Metal Arc Welding (SMAW) process to perform repair welding. QC Inspector Steve McConnell was monitoring the work.
- 2) At weld joint 8E/9E-E2, inside the OBG section: ABF welding personnel Song Tao Huang (#3794) was in the process of repairing equipment while water was being removed from area in preparation of performing production welding using the Flux Cored Arc Welding (FCAW) using the track system. QC Inspector Fred Von Hoff was monitoring the work.
- 3) At weld joint 6E/7E-A1, outside the OBG section: QC Inspectors Lenard Cross and Mike Johnson were performing Ultrasonic Testing.
- 4) This QA Inspector observed OBG section 10E had been lifted onto the temporary platform, aligned with OBG section 9E and the various bolted connection plates were being bolted together.

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At weld joint 5E-PP31-E3, holes 3 and 4, outside the OBG section this QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) using the SMAW process to perform repair welding. QC Inspector Steve McConnell was periodically monitoring the work. This QA Inspector performed a verification of the welding parameters observed the following: 175 amperes using a 4.0 diameter E7018H4R electrode. This QA Inspector observed welding was being performed on approximately 65% of the circumference of hole # 3 and 75% of the circumference of hole # 4. The work observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1040A-CU.

At weld joint 8E/9E-E2, inside the OBG section this QA Inspector observed ABF welding personnel Song Tao Huang (#3794) was in the process of repairing equipment while water was being removed from the area in preparation of performing FCAW production welding. This QA Inspector observed that due to the past weather conditions (heavy rain) the open deck access hole adjacent to this location allowed water to collect behind the wide flanges at the Panel Point (PP) West to this location. This QA Inspector observed water several inches deep on the slopped side of the sidewall at this location. This QA Inspector observed that plywood had been placed in the weld access holes adjacent to the weld joint, but that water was still leaking through and running onto the weld joint. The weld joint was approximately 50% filled at this time. This QA Inspector observed ABF personnel using a Wet- Vacuum to pick up and remove the water from this location. This QA Inspector observed QC Inspector Fred Von Hoff periodically stop by this location to and was informed he would continue to monitor the situation to verify welding was not started until the water has been removed. Welding was not observed at this location by this QA Inspector this date.

At weld joint 6E/7E-A1, outside the OBG section this QA Inspector observed QC Lead Inspector Lenard Cross and QC Inspector Mike Johnson performing Ultrasonic Testing at location Y-580. This location has had multiple repairs and QC Lead Inspector Lenard Cross informed this QA Inspector that as of this date an Ultrasonic Testing (UT) report has not been submitted by QC inspection personnel indicating the status of the weld (accept/reject). QC Inspector Lenard Cross stated he had performed the UT and the indication he observed appeared to be the backing bar therefore non-relevant. QC Inspector Lenard Cross also informed this QA Inspector that QC Inspector Pat Swain had performed UT on the area and indicated the weld was rejected in a preliminary UT report. This QA Inspector asked if QC personnel had ultrasonically measure the thickness of the deck plate on both sides of the weld, taken measurements to determine the location of the backing bar and weld access hole on the bottom side, map out the weld joint configuration and then use this sketch with the sound beam angles to determine the location of the indication. This QA Inspector was informed the UT indication had not been "mapped" out at this time but that QC personnel would be working on it.

This QA Inspector observed OBG section 10E had been lifted onto the temporary platform, aligned with OBG section 9E and the various bolted connection plates were being bolted together.

### **Summary of Conversations:**

As noted above.

### **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 Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hager, Craig	Quality Assurance Inspector
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<b>Reviewed By:</b>	Mertz, Robert	QA Reviewer
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