

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-019158**Date Inspected:** 06-Jan-2011**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**CWI Name:** Fred Von Hoff**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:** 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 8E/9E-C1 and C2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolan (#5042) were observed removing the weld joint backing bar.
- 2) At weld joint 7E/8E-F, inside the OBG section: ABF welding personnel Fred Kaddu (#2188) was observed using the carbon arc process to excavate a defect in the weld for repair purposes.
- 3) At weld joint 9E/10E-LS-1 thru 6, inside the OBG section: ABF welding personnel Hua Qiang Hwang (#2930) was setting up equipment in preparation to begin welding at LS-1,2 and 3. ABF welding personnel Xiao Jian Wan (#9677) was setting up equipment in preparation to begin welding as LS-4,5 and 6.
- 4) At weld joint 5EPP31E4-hole# 2, outside the OBG section: ABF welding personnel Salvador Sandoval (#2202) was using the Shielded Metal Arc Welding process for production welding. QC Inspector Steve McConnell was monitoring the work.
- 5) At weld joint 5EPP29.5E2-Assess Plate, inside the OBG section: ABF welding personnel Jin Pei Wang (#7299)

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was using the SMAW process during repair welding. QC Inspector Fred Von Hoff was monitoring the work.

At weld joint 8E/9E-C1 and C2, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolan (#5042) were in the process of removing the weld joint backing bar using a plasma torch.

At weld joint 7E/8E-F, inside the OBG section this QA Inspector observed ABF welding personnel Fred Kaddu (#2188) using the carbon arc process to excavate a defect in the weld for repair purposes.

At weld joint 9E/10E-LS-1 thru 6, inside the OBG section this QA Inspector observed ABF welding personnel Hua Qiang Hwang (#2930) setting up ventilation, preheating and welding equipment in preparation to begin welding at LS-1,2 and 3. This QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) was setting up ventilation, preheating and welding equipment in preparation to begin welding as LS-4,5 and 6.

At weld joint 5EPP31E4-hole# 2, outside the OBG section this QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) using the SMAW process for production welding. This QA Inspector verified the following welding parameters: 155 amperes using a 4.0 mm diameter E7018H4R electrode. This QA Inspector observed QC Inspector Steve McConnell was monitoring the work.

At weld joint 5EPP29.5E2-Assess Plate, inside the OBG section this QA Inspector observed ABF welding personnel Jin Pei Wang (#7299) had laid out and excavated 3 areas for repair welding. This QA Inspector randomly observed as QC Inspector Fred Von Hoff performed a visual inspection and Magnetic Particle Testing (MT) of the excavations. QC Inspector Fred Von Hoff informed this QA Inspector that 2 of the 3 excavations were accepted but that 1 required additional grinding. This QA Inspector randomly observed as the grinding was performed by ABF welding personnel Jin Pei Wang (#7299) and re-inspected (visual and MT) by QC Inspector Fred Von Hoff, who informed this QA Inspector the last excavation was accepted. This QA Inspector performed a visual verification of all 3 excavations and observed the work appeared to comply with the contract requirements. Prior to the start of welding this QA Inspector randomly observed ABF welding personnel Jin Pei Wang (#7299) using a gas torch to preheat the weld and base material. QC Inspector Fred Von Hoff verified the preheat using an electric temperature gauge and informed this QA Inspector the temperature was greater than 150°F but less than 450°F. Prior to the start of production welding the QA Inspector observed QC Inspector Fred Von Hoff verify the following welding parameters in the overhead (4G) position on a piece of scrap material: 135 amperes using a 3.2 mm diameter E7018H4R electrode. The work observed by this QA Inspector appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1002 Repair. During the observations made above this QA Inspector verified the location of the excavations as follows: Y-715 (90 mm long, 30 mm wide and 6 mm deep), Y-165 (80 mm long, 22 mm wide and 8 mm deep) and Y-4045 (145 mm long, 20 mm wide and 8 mm deep). The welding observed above was located the excavation Y-4045.

### **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

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your project.

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**Inspected By:** Hager,Craig

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer