

**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 #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015640**Date Inspected:** 14-Jul-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**CWI Name:** Bernard Docena**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 E5/E6 – E2, inside the OBG section: ABF welding personnel Hung Jin Quan (#9340) and Songtao Huang (# 3794) were performing Flux Cored Arc Welding (FCAW). QC Inspector Bernard Docena was present and monitoring the work.

2) At weld joint E3/E4 – D1 and D2, outside the OBG section: ABF welding personnel Rick Clayborn (#2773) was performing repair welding (R-2's) using the Shielded Metal Arc Welding (SMAW) process. QC Inspector Tony Sherwood was present and monitoring the work.

At weld joint E5/E6 – E2, inside the OBG section this QA Inspector observed ABF welding personnel Hung Jin Quan (#9340) and Songtao Huang (# 3794) performing various tasks. ABF welding personnel Songtao Huang (#3794) was using the FCAW and SMAW processes to complete the section of weld at the top of weld joint E1 adjacent to weld joint F. This QA Inspector observed QC Inspector Bernard Docena verify the FCAW parameters as follows: 235 amperes and 23.3 volts at a travel speed of 250 mm per minute. After the FCAW was completed ABF welding personnel Songtao Huang (#3794) switched to the SMAW process to complete the last few centimeters of welding. This QA Inspector observed QC Inspector Bernard Docena verify the SMAW parameters

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as follows: 135 amperes using a 3.2 mm E7018H4R electrode. ABF welding personnel Hung Jin Quan (#9340) was setting up the Bug-O track system to begin welding on weld joint E2. Prior to using the Bug-O track system ABF welding personnel Songtao Huang (#3794) used the FCAW process to weld the root pass between several wedges/pins (dogs) welded to the lower section of the weld joint for fit up purposes. Upon completion of this welding but prior to using the Bug-O track system this QA Inspector observed QC Inspector Bernard Docena inspect the fit up to verify the planar alignment of the plates were still within tolerance. QC Inspector Bernard Docena informed this QA Inspector all areas were within 1 mm. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15- 3040A-3 for the FCAW process and ABF-WPS-D15-1020A Rev-1 for the SMAW process. Please note production welding with the Bug-O track system was not observed by this QA Inspector this shift.

At weld joint E3/E4 – D1 and D2, outside the OBG section this QA Inspector observed ABF welding personnel Rick Clayborn (#2773) was performing repair welding using the Shielded Metal Arc Welding (SMAW) process. QC Inspector Tony Sherwood was present and monitoring the work. This QA Inspector verified the welding parameters as follows: 135 amperes using a 3.2 mm E7018H4R electrode. This QA Inspector observed the welding was being performed on second time repair excavation (R-2) at weld joint D1 and that a second time repair (R-2) area had been excavated at weld D2. The excavation was approximately 180 mm long, 28 mm wide and 18 mm deep. QC Inspector Tony Sherwood informed this QA Inspector he had previous performed and accepted a visual and MT inspection of the excavation. The welding observed appeared to comply with ABF-WPS-D15- Repair.

In general the work observed this date appeared to comply with the contract requirements.

### **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 Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

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

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