

**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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026988**Date Inspected:** 03-Jan-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite

<b>CWI Name:</b>	As noted below		
<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
<b>Component:</b>	SAS OBG		

**Bridge No:** 34-0006**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. FW Spencer Pipe Welding South Shaft Tower (Exterior)
2. 11E/PP104/E3/W1 Lifting Lug Hole Repair (Exterior)
3. 12E/PP114/E4/W1 Lifting Lug Hole (Interior)

1. FW Spencer Pipe Welding South Shaft Tower (Exterior)

This QA Inspector observed F.W. Spencer welder Damian LLanos ID# 6645 performing Shielded Metal Arc Welding (SMAW) in the 2G horizontal position on 2 inch schedule 80 pipe located at the 13 m level of the south shaft of the tower. This QA Inspector verified the fit up of the joints and found it to be satisfactory. This QA Inspector observed QC Inspector Steve Jensen monitoring the welding to ensure the welding parameters were in compliance pertaining to WPS-1-12-1 Revision 2 (1.12). The welder was observed implementing E6010 electrodes in the root pass with the balance using E7018 electrodes. The QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work listed below was completed on this date and appeared to be in general conformance with the contract documents.

20/2/T/55

21/2/T/54

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### 2. 11E/PP104/E3/W1 Lifting Lug Hole Repair (Exterior)

This QA Inspector randomly observed ABF welder Salvador Sandoval performing the back-gouge operation an ultrasonic rejectable indication on “A” deck Lifting Lug Hole 11E/PP104/E3/W1 located at "Y" 15 mm: (20 mm wide; 110 mm length; and 9 mm in depth). This QA Inspector observed QC Inspector Fred Von Hoff perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector verified that no rejectable indications were present.

This QA Inspector randomly observed ABF welder Salvador Sandoval (Welder ID 2202) performing the repair welding operation of an ultrasonic indication as per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on “A” deck Lifting Lug Hole 11E/PP104/E3/W1. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Fred Von Hoff verify that the preheat temperature was at the minimum of 10 degrees C and that the welding parameters (Amps=135) were in accordance with WPS D1.5–1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

### 3. 12E/PP114/E4/W1 Lifting Lug Hole (Interior)

This QA Inspector randomly observed ABF welders Jorge Lopez perform back-gouge operations on face “B” on the interior of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff perform MT testing to ensure the soundness of the metal. This QA Inspector randomly observed the welder perform SMAW in the (4G) overhead position with the QC Inspector monitoring the welding to insure the parameters were in accordance with ABF-WPS-D15-1110A-Revision 1. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work is in progress and appeared to be in general accordance with the contract documents.

#### 12E/PP114/E4/W3 Final MT Inspection (Interior)

This QA Inspector randomly observed QC Inspector Fred Von Hoff perform a final Magnetic Particle (MT) inspection of the completed weld area on OBG “A” deck vent hole section 12E/PP114/E4/W3. This QA Inspector observed that Mr. Von Hoff found no rejectable indications and the work appeared to be in general conformance with the contract specifications.

#### 12E/13E/A4 (Interior) 13E/14E/E (Exterior)

This QA Inspector at random intervals observed the partial removal of backing bar on “A” deck section 4 on the interior of the OBG. This QA Inspector observed ABF welding personnel utilizing the Plasma Arc Cutting (PAC) process utilizing a “Bug-O” motorized rail system with a magnetic base attached in the (4G) overhead position. This QA Inspector also observed ABF welding personnel operating the “Bug-O” motorized rail system on 13E/14E/E on the exterior of the OBG. The ABF welding personnel were observed performing the PAC process to remove backing bar from side plate E and this QA Inspector noted that the work was in progress.

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this

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report. The issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

### Summary of Conversations:

The were no pertinent conversations to report.



### 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>	Frey,Doug	Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill	QA Reviewer
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