

**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-018130**Date Inspected:** 11-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**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). OBG Field Welding of East Line Lifting Rod Access Penetration Inserts (SMAW)
- 2). OBG East Line Lifting Rod Access Penetration Insert Welds (QC UT)
- 3). OBG East Line Lifting Rod Access Penetration Insert Welds (QA verification)
- 4). OBG Field Splice 7E/8E Weld ID: A1-A5, Face A – (QA verification)
- 5). OBG Field Splice of Ventilation Access Insert Weld at 3E-PP23.5-E5-NE – (SMAW)
- 6). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)
- 7). OBG Field Splice 6W/7W Weld ID: B1, Face B – (SMAW R-1 Repairs)
- 8). OBG Field Splice 6W/7W Weld ID: F1, Face B – (Excavation of R-1 Repairs)
- 9). Bent Cap W2 Pipe Supports (SMAW)

- 1). OBG Field Welding of East Line Lifting Rod Access Penetration Insert (SMAW)

Interior: OBG 3E-PP20-E4-weld 2 weld 4

The QAI periodically observed AB/F approved welder Darcell Jackson (ID 9967) performing back welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position of E4-weld 4. QC Inspector John Pagliero was periodically 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-D1.5-1110B rev. 1. Welding was completed from the interior at E4-weld 4 and the QAI observed Mr. Jackson back welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position of E4-weld 2. The QAI observed

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

---

---

that the work was completed at this location and appeared to be in general compliance with contract documents.

### 2). OBG East Line Lifting Rod Access Penetration Insert Welds (QC UT)

The QAI periodically observed QC Inspector Patrick Swain performing Ultrasonic Testing (UT) from Face A of OBG East Line Lifting Rod Access Penetration Insert Welds.

The QAI periodically observed Mr. Swain performing QC UT at the following locations with the following results:

Location:	QC UT Results:
2E-PP15-E3 weld 1	10 Rejectable Indications
2E-PP15-E3 weld 2	10 Rejectable Indications

See photo below.

The QAI observed that Mr. Swain utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the repair welds. The QAI observed as the QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The UT examination appeared to be in general compliance with contract documents. QC UT was in process at 1E-PP15-E3 weld 3.

### 3). OBG East Line Lifting Rod Access Penetration Insert Welds (QAI Verification)

The QAI performed verification Visual Testing (VT) and Magnetic Particle Testing (MT) of 25% of the lengths of OBG East Line Lifting Rod Access Penetration Insert Welds at the following locations:

PP8.5-E4 welds 1-4, PP9.5-E3 weld 1 and PP9.5-E4 weld 1-4.

The PP8.5-E4 welds 1-4, PP9.5-E3 weld 1 and PP9.5-E4 weld 1-4 verified by the QAI appeared to be in general compliance with contract documents. See Magnetic Particle Testing Report Form TL-6028 generated by the QAI on this date.

### 4). OBG Field Splice 7E/8E Weld ID: A1-A5, Face A – (QA verification)

The QAI performed verification Visual Testing (VT), Magnetic Particle Testing (MT) and Ultrasonic Testing (UT) of 10% of the lengths of OBG Field Splice 7E/8E Weld ID: A1-A5. The OBG Field Splice 7E/8E Weld ID:

A1-A5 verified by the QAI appeared to be in general compliance with contract documents. See Magnetic Particle Testing Report Form TL-6028 and Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

### 5). OBG Field Splice of Ventilation Access Insert Weld at 3E-PP23.5-E5-NE – (SMAW)

The QAI periodically observed welding of the Ventilation Access Insert at 3E-PP23.5-E5-NE. The QAI periodically observed AB/F approved welder Mick Chan (ID 9265) performing welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Patrick Swain was periodically 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-D1.5-1010 rev 1. The QAI observed that welding of fill and cover passes was completed at this location and the work appeared to be in general compliance with contract documents.

### 6). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)

The QAI periodically observed back welding of the Ventilation Access Insert at 5E-PP29.5-E2-S. The QAI periodically observed that AB/F approved welder Jin Pei Wang (ID 7299) performed welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. QC Inspector John Pagliero was periodically 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-D1.5-1010 rev 1. The QAI observed

---

---

# WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

---

---

that back welding was in process at this location and the work at this location appeared to be in general compliance with contract documents.

7). OBG Field Splice 6W/7W Weld ID: B1, Face B – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing air carbon arc gouging to excavate and grinding to prepare R-1 Ultrasonic Testing (UT) repair locations in OBG Field Splice 6W/7W Weld ID: B from the interior of the OBG. The QAI periodically observed Mr. Kaddu performing welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. QC Inspector Steve McConnell 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-D1.5-1000 Repair. Mr. McConnell also performed Magnetic Particle Testing (MT) of the excavated areas prior to the repair welding. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The QAI observed that welding was in process and work at this location appeared to be in general compliance with contract documents.

8). OBG Field Splice 6W/7W Weld ID: F1, Face B – (Excavation of R-1 Repairs)

The QAI periodically observed AB/F approved welder Jorge Lopez (ID6149) performing air carbon arc gouging to excavate and grinding to prepare R-1 Ultrasonic Testing (UT) repair locations in OBG Field Splice 6W/7W Weld ID: F from the interior of the OBG. The QAI observed that work at this location appeared to be in general compliance with contract documents.

9). Bent Cap W2 Pipe Supports (SMAW)

The QAI periodically observed the field welding of pipe supports identified with the Weld Numbers 101111-01 through 101111-16 to the embeds of the bent cap located at the W2 line. The field welding was performed by F. W. Spencer approved welder David Garcia (ID 8789) utilizing a 3.2 mm electrode as per the Welding Procedure Specification (WPS) identified as Fillet Murex. See photo below. The fillet welding was performed in the 3F (vertical) and 4F (overhead) position with the work placed so that weld metal was deposited on the underside of the horizontal surface and against the vertical surface. The QC Inspector Mike Johnson was periodically 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 Fillet Murex. Work at this location had not yet been accepted by QC but appeared to be in general compliance with contract documents.



## Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

---

---

# WELDING INSPECTION REPORT

( Continued Page 4 of 4 )

---

---

## 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.

---

<b>Inspected By:</b>	Madison,Bert	Quality Assurance Inspector
----------------------	--------------	-----------------------------

---

<b>Reviewed By:</b>	Levell,Bill	QA Reviewer
---------------------	-------------	-------------