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 #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012767
Date Inspected: 22-Mar-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 600
OSM Departure Time: 1500
Location: Job Site

CWI Name: Bernard Docena, Jesse Cayabyab, Will Cressingham

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 2E/3E-A 1W/2W

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 2E/3E-A, 1W/2W and the following observations were made:

2E/3E-A

Upon the arrival of the QA Inspector, it was observed 10 total ultrasonic testing (UT) rejections had been located and indicated by the Smith Emery (SE) Quality Control (QC) Inspectors. The SE QC Inspector Steve McConnell and the QC Inspector Tom Pasqualone, informed the QA Inspector only 50% of A1 and 100% A2 had been officially tested up to this morning. The QA Inspector randomly observed and noted the rejected areas of weld had been indicated with a distinguishing marking directly on the weld. The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder identified as Mitch Sittinger was setting up to begin excavating the previously rejected areas of weld. The QA Inspector randomly observed the ABF welder excavate and repair 3 total rejected areas on the QA Inspectors shift (listed below).

A2

1.) The QA Inspector randomly observed the ABF welder begin excavating the UT rejection in A2 beginning at y=3614mm with a length of 55mm and 13mm deep. After the exaction was complete the QA Inspector randomly observed the SE QC Inspector Steve McConnell perform magnetic particle testing of the excavation prior to the repair welding. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector randomly observed the QC Inspector perform the MT and the QA Inspector concurred, no relevant indications appeared to be present at the time of the testing. The QA Inspector noted the excavation was ground to

a weldable profile prior to the repair welding. The QA Inspector observed an ABF apprentice welder preheat the isolated area to be welded to the minimum required preheat of 150°F. After the minimum required preheat was achieved, the QA Inspector randomly observed the ABF welder begin the weld repair utilizing the shielded metal arc welding (SMAW) process. The QA Inspector randomly observed the ABF welder utilizing 1/8" E7018 low hydrogen electrodes with 135 Amps. The QA Inspector noted the SMAW parameters and minimum required preheat appeared to be in general compliance with ABF-WPS-D1.5-1000-repair. After the weld repair was completed the QA Inspector randomly observed the QC Inspector perform visual testing of the completed repair. The QA Inspector was informed the weld repair was acceptable by the QC Inspector. The QA Inspector performed a random visual inspection and noted it appeared to be in general compliance with the contract requirements. After the weld repair was accepted visually, the QA Inspector noted the weld reinforcement was ground flush with the adjacent base material.

2.) The second excavation and repair was located in A2 at y=2750mm. The QA Inspector noted rejected area was identified with a distinguishing marking like the previous completed repair. The QA Inspector randomly observed the ABF welder excavate the rejected area utilizing a burr bit grinding bit as done previously on the first repair described above. The QA Inspector performed dimensional measurements of the excavation prior to production welding they were 114mm x 38mm x 14mm deep (pictured below). The QA Inspector randomly observed the same process and procedure as described above was performed on the first repair. The QA Inspector randomly observed the repair through completion.

3.) The third excavation and repair had dimensions of 90mm x 38mm x 14mm deep (pictured below). The QA Inspector noted rejected area was identified with a distinguishing marking like the previous completed repair. The QA Inspector randomly observed the ABF welder excavate the rejected area utilizing a burr bit grinding bit as done previously on the first repair described above. The QA Inspector randomly observed the same process and procedure as described above was performed on the second repair. The QA Inspector randomly observed the repair through completion.

1W/2W

Upon the arrival of the QA Inspector in the AM it was observed the orthotropic box girder identified as 2W was set and slid down the trestle nearly in the final resting position. The QA Inspector randomly observed ABF erecting personnel performing grinding tasks of the bevel faces prior to the OBG's being pushed the final few inches. The QA Inspector randomly observed the ABF welder Rick Clayborn and helper insert the steel backing bar into the CJP groove to identified as 1W/2W-A prior to the 2W segment pushed into the final position. After all of the grinding and paint removal was completed on the bevel faces of the complete joint penetration (CJP) grooves, the QA Inspector randomly observed the OBG 2W was pushed into position and ready for temporary bolting to commence. The QA Inspector noted the ABF erecting personnel started the bolting sequence and continued to perform bolting and pinning for the remainder of the QA Inspector's shift.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

The QA Inspector asked the ABF Engineer John Callaghan if he was aware of the requirements to correct the misalignment of the previously located areas of the second field splice prior to moving on to to the next splice. Mr. Callaghan informed the QA Inspector he was aware of the requirement, but went on to inform the QA Inspector the RFI and procedure to perform the repairs had not yet been approved. Mr. Callaghan reiterated he was aware of the repairs and they would be performed.

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.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer