DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028285
Date Inspected: 15-Aug-2012

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

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Job Site

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: OBG and Tower

Summary of Items Observed:

At the start of the shift this Quality Assurance Lead Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) Quality Control (QC) personnel. The observations and inspections were performed as noted below:

A). This Quality Assurance Lead Inspector (QALI) assigned the QA Inspectors to the following, but not limited to the work station(s) listed, to observe the welding and the QC inspection of the following:

Joselito Lizardo-OBG W13/W14 Drop-In Panels (Observation of welding, QC inspection and testing of edge plate, longitudinal stiffeners deck stiffener flanges), OBG W13 Drop-In Panels (Observation of welding of vertical WT @ LD and floor beams and QA/VT, MPT verifications.

Rodney Patterson-OBG E13 (Observation of excavations, repair welding, QC inspection and testing of deck field splices). Also, there were two (2) issues noted. See Summary of Conversations.

Fritz Belford-OBG W12 Drop-In Assembly (Observation of welding, QC inspection and testing of floor beams and deck splices), OBG W12/W13 Drop-In Panel (Observation of welding, QC inspection and testing of deck stiffener flanges), OBG W13 Drop-In Panel (Observation welding, QC inspection and testing of floor beams0 and QA/VT, MPT verification.

Matt Daggett-OBG W13/W14 Drop-In Panel (Observation of welding, QC inspection and testing of G1 edge plate) and OBG W12 (Observation of welding, QC inspection and testing of deck access hole) and OBG E12

(Observation of back gouging of deck access hole).

William Clifford-Tower Shear Plates/ESW "N" & "W" (Performed QA/QC joint UT).

Doug Frey-OBG E12 Corner Drop-In Ass'y (Observation of welding, QC inspection and testing of longitudinal stiffeners), OBG E13, Drop-In Panel (Observation of QC inspection and testing of floor beams) and observation of QC/MPT, UT of edge plate located at E12/E13 field splice.

Rob DeArmand-OBG W13/W14 (Observation of welding, QC inspection and testing of floor beams, longitudinal stiffeners and repairs welding of floor beams) and Tower/ESW Shear Plates "T" & "G" (Observation of repair welding and QC inspection).

NOTE: See QA daily Weld Inspection Reports (WIR) and NDE reports for additional information and details.

Quality Assurance Lead Inspector (QALI) Summary

This QA Lead Inspector (QALI) observed the QA Inspector's Joselito Lizardo, William Clifford, Rob DeArmand, Rodney Patterson, Fritz Belford, Doug Frey and Matt Daggett monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures for compliance with the contract specifications. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift, this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications and there were two (2) issues noted during this shift. See Summary of Conversations.

Tower/ Shear Plate "T"

This QALI observed the repair welding of the Electro Slag Weld (ESW) joint identified as "T" with the designated weld number S-043. The repair welding was performed by ABF personnel Wen Han Yu ID-6317 utilizing the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-1000-Repair, Rev. 2 as per the Request for Weld Repair (RWR) identified as 201208-10. The WPS was also used by the Quality Control (QC) Inspector Andrew Keech to verify the welding parameters and to monitor the welding. This QALI observed the QC inspector verifying the welding parameters which appeared to comply with the contract specifications. The minimum preheat temperature of 140 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The E7018-H4R electrode was utilized with the welding performed in the vertical (3G) position. The QA inspector also observed the QAI Rob DeArmand verifying the welding and QC inspection at random intervals.

OBG E12, Corner Drop-In Ass'y.

Later in the shift , this QALI observed the repair welding of the longitudinal stiffener identified as 12E-PP111.

1-LS1, R1 located at the west end of the corner drop-in ass'y. The QC inspection was performed by Fred Michels utilizing the Welding Specification Procedure (WPS) identified as ABF-WPS-D1.5-1002-Repair, Rev. 0. The welding was performed by Jin Quan Huang ID-9340 utilizing the E9018-H4R electrode as per the WPS. The QAI Doug Frey was observed verifying the work performed by the QC inspector at this time. The welding, QC inspection appeared to comply with the contract documents.

This QA Lead Inspector commence the review of NDT reports, tracking of welding and developing and generating weld maps for W13 drop-in panels, E12 and W12 corner drop-in assemblies. This QA Lead Inspector also reviewed RWR documents for tracking purposes. Also, this QALI received, via e-mail, for field use and information the following documents SAS Submittal Log, RWR-201208045 and Incident Reports 155, 156 and 157.

Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

There were also, other pertinent conversations with QA Supervisor, William Levell, throughout the course of this shift in regards to scheduling of QA personnel, work progress and related structural steel and weld issues. There were two (2) significant issues noted as described below:

Issue 1

QAI Rodney Patterson informed this QALI at the K-Plate Extension there was a planar misalignment of the vertical web splice. Mr. Patterson indicated that there were two (2) areas of misalignment which were measured at 7 mm at the top and 10 mm at the bottom of the web splice. For additional information see Mr. Patterson's daily Weld Inspection Report (WIR) generated on this date. At the conclusion of this discussion, this QALI directed Mr. Patterson to generate and submit an Incident Report (IR) to the QA Task Leader, William Levell, for his review and disposition.

Issue 2

This QALI was also notified by the QA inspector, Mr. Patterson, that there was second issue regarding weld repair. It appears that the weld identified as 13E-E2.1, repair cycle #2 will require a contractor's Request for Weld Repair (RWR). This item is noted as a second time repair cycle. The contractor was notified of this issue and elected to commence the excavation and repair welding prior to the engineer's approval. At the conclusion of this discussion, this QALI decided that this action by the contractor would warrant an Incident Report and directed Mr. Patterson to generate and submit an IR to the QA Task Leader, William Levell, for his review and disposition.

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 SMR Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer