

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING 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
FAX: (707) 649-5493

Contract #: 04-0120E4
Cty SF Rte 80 PM 13.4/13.8
File # 1.25 B

QUALITY ASSURANCE - NONCONFORMANCE REPORT

Location: E2E (PHCP), pile 6, plate D, weld-2 & pile 2, plate E, weld-1 Date: 01-20-07 Sat

Prime Contractor: Kiewit/FCI/Manson-KFM-JV NCR #143

Submitting Contractor: Kiewit/FCI/Manson-KFM-JV

Type of problem:

- Welding [X] Concrete [ ] Other [ ]
Welding: [X] Curing: [ ] Procedural: [ ] Bridge No. 34-0006 L / R
Joint fit-up: [ ] Coating: [ ] Other: [ ] Component: E2E foundation footing
Procedural: [X] Procedural: [ ] Loss of preheat temperature

Description of Non-Conformance: The Contractor failed to maintain the preheat temperature during the welding of E2 pile head connector plates (PHCP) as required by the Caltrans Special Provisions, Section 10-1.31, Field Welding of Pile/Sleeve Connector Plates, Line F. The loss in preheat occurred on pile head connector plate (PHCP) pile 6, plate D, weld-2 and pile 2, plate E weld 1. On weld 6D2, several subsequent weld passes had been deposited prior to the loss of heat. The contractor elected to leave weld in place and perform magnetic particle testing, bring the weld up to the required minimum preheat and commence welding. On pile 2 plate E, weld 1, only the root weld pass had been deposited and the Contractor elected to remove the root weld pass.

Applicable reference: Caltrans Special Provisions

Who discovered the problem: QA Inspector Sherri Brannon (6D2) QA Inspector Jim Cochran (2E1)

Name of individual from Contractor notified: KFM Weld Superintendent, Dennis Winter

Time and method of notification: 6:30 verbal / 11:37 via phone

Name of Caltrans Engineer notified: Mark Vilcheck, Caltrans Structures Representative

Time and method of notification: January 20, 2007 via verbal notification

QC Inspector's Name: Dave Aultman / Greg Martinez

Was the QC Inspector aware of problem: No

Contractor's proposal to correct the problem: Unknown

Comments: This report is for the purpose of determining general 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 Ryan Smith, (858) 232-6799,, who represents the Office of Structural Materials for your project.

Inspected By: Sherri Brannon [Signature] Quality Assurance Inspector

Reviewed By: Bill Levell [Signature] Lead QA Reviewer

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Contract #: 04-0120E4  
City SF Rte 80 PM 13.4/13.8  
File # 1.25A**QUALITY ASSURANCE - NONCONFORMANCE RESOLUTION****Location:** SFOBB Jobsite**Date:** February 26, 2007**Prime Contractor:** Kiewit/FCI/Manson (KFM) – Joint Venture**NCR #** 143**Submitting Contractor:** Kiewit/FCI/Manson (KFM) – Joint Venture**Type of problem:**

<b>Welding</b>	<input checked="" type="checkbox"/>	<b>Concrete</b>	<input type="checkbox"/>	<b>Other</b>	<input checked="" type="checkbox"/>
<b>Welding:</b>	<input type="checkbox"/>	<b>Curing:</b>	<input type="checkbox"/>	<b>Procedural:</b>	<input type="checkbox"/>
<b>Joint fit-up:</b>	<input type="checkbox"/>	<b>Coating:</b>	<input type="checkbox"/>	<b>Other:</b>	<input checked="" type="checkbox"/> Loss of preheat temperature
<b>Procedural:</b>	<input checked="" type="checkbox"/>	<b>Procedural:</b>	<input type="checkbox"/>		

**Bridge No.** 34-0006L/R**Component** E2 Foundation Footing**Date nonconformance report was written:** January 20, 2007

**Description of Non-Conformance:** The Contractor failed to maintain the preheat temperature during the welding of E2E pile head connection plates (PHCP) as required by Caltrans Special Provisions, Section 10-1.31, Field Welding of Pile/Sleeve Connector Plates, Line F. The loss of preheat occurred in the root pass at the location identified as Pile 2, Plate E, Weld Number One, and the Contractor elected to remove this weld. The loss of preheat also occurred at the location identified as Pile 6, Plate D, Weld 2 and the Contractor elected to perform Magnetic Particle (MT) Testing prior to commencing welding.

**Contractor's proposal to correct the problem:** The Contractor has implemented additional measures to prevent future occurrences of loss of preheat, such as elevation of the issue to the supplier of the heating equipment, periodic monitoring of the preheat consoles and monitoring by the night shift tug operators, and increased verification by the welders and Quality Control (QC) personnel during welding operations.

**Corrective action taken:** The Contractor removed the root pass on Pile 2, Plate E, Weld 1. The Contractor performed MT after the weld was brought back up to the minimum required preheat temperature at location 6D2.

**Did corrective action require Engineer's approval?**  Yes  No

**If so, name of the Engineer providing approval:** Structural Materials Representative (SMR) **Date:** 2-26-07  
Ryan Smith, in accordance with response to KFM Letter.

**Is Engineer's approval attached:**  Yes  No

**Comments:** This report is for the purpose of determining general 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 Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

Inspected By: Bill Levell

Quality Assurance Inspector

Reviewed By: Ryan Smith

Structural Materials Representative (SMR)

**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program**

333 Burma Rd.  
Oakland, CA 94607  
(510) 286-0538, (510) 286-0550 fax



Kiewit-FCI-Manson, JV  
220 Burma Rd.  
Oakland, CA 94607

February 26, 2007

Attn: Mr. Kevin Carpenter  
Welding Quality Control Manager

Contract No. 04-0120E4  
04-SF-80-13.4, 13.8  
SAS T1 & E2 Foundations  
SFOBB-ESSSP

Letter No. 05.003.01-002901

Subject: Response to Kiewit-FCI-Manson Letter Nos. 229, 230, 234, 238, 239, 240, 241, and 242

Dear Kevin,

The Department has reviewed Kiewit-FCI-Manson (KFM) Letter Nos. 229, 230, 234, 238, 239, 240, 241, and 242, which respond to the Department's Letter Nos. 2542, 2543, 2544, 2569, 2654, 2655, 2836, 2795, 2804, 2806, and 2807. These Department's letters notified KFM of the Non Conformance Reports (NCRs) at the SAS T1/E2 Foundations project site concerning the loss of preheat during the welding of the Pier E2 pile/sleeve connection plates. Regarding the above-mentioned KFM's letters, the Department takes no exception to the preventive measures and corrective actions taken by the Contractor. However, the Department will continue to monitor the preheat temperatures and future instances of preheat nonconformance will result in NCRs. The Department expects that the Contractor will take necessary action to further maintain the preheat temperatures as required by Section 10-1.31, "Steel Structures," of the Special Provisions.

The Department considers the NCRs generated by the Department's Letter Nos. 2542, 2543, 2544, 2569, 2654, 2655, 2836, 2795, 2804, 2806, and 2807 closed.

If you have any questions or need additional information, please contact Mark Vilcheck at (510) 286-0526.

Sincerely,

Mark Woods  
Senior Bridge Engineer

For: Pedro J. Sanchez  
Resident Engineer

cc: M. Vilcheck  
P. Sanchez  
R. Smith

file: 05.003.01, 09.006.03