

**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 13.4/13.80  
 File # 01 .25 B

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**QUALITY ASSURANCE - NONCONFORMANCE REPORT**


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Location: SFOBB Jobsite

JOBSITE NCR 

Date: 09/20/2007

Prime Contractor: Kiewit/FCI/Manson (KFM)

NCR #201

Submitting Contractor: KFM

**Type of problem:**

**Welding**  **Concrete**  **Other**   
**Welding:**  **Curing:**  **Procedural:**  **Bridge No.** 34-0006 L/R  
**Joint fit-up:**  **Coating:**  **Other:**  **Component:** T1 Foundation pile 11 welds 1F & 2F  
**Procedural:**  **Procedural:**

**Description of Non-Conformance:** The Contractor failed to maintain the pre-heat temperature during the welding of T1 pile head connection plate (PHCP) as required by Caltrans Special Provisions, Section 10-1.31, Field Welding of Pile/Sleeve Connection Plates, Line F. The loss in preheat occurred on PHCP pile 11, plate F, welds 1 and 2. The loss of preheat occurred at the bottom termination for a distance of approximately 50mm. Temperature measurements were performed utilizing Tempilstik heat indicators and observing the pre-heat temperature inside the bevel and the adjacent base metal to be between approximately 200 and 225 degrees Fahrenheit.

**Applicable reference:** Caltrans Special Provisions, Section 10-1.31, Field Welding of Pile/Sleeve Connection Plates, Line F

**Who discovered the problem:** Inspection Services Inc. Quality Control Inspector Mr. Andrew Coffman

**Name of individual from Contractor notified:** KFM General Welding Foreman, Scott McCoy

**Time and method of notification:** 2000hrs-09/20/2007 – Verbal

**Name of Caltrans Engineer notified:** Caltrans Assistant Structure Rep. Art Pannu

**Time and method of notification:** 1400hrs-09/20/2007 – Verbal

**QC Inspector's Name:** Andrew Coffman

**Was the QC Inspector aware of problem:** Yes

**Contractor's proposal to correct the problem:** KFM used a torch to re-establish the base material preheat and QC personnel performed magnetic particle inspections on the lower 50 mm portion of the weld. No reportable indications were observed. KFM identified the electrical cord supplying power to the electric heaters had malfunctioned and a new cord has now been installed and preheat was re-established.

**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: Daniel L. Reyes

Quality Assurance Inspector

Reviewed By: Albert Carreon

Lead QA Reviewer

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Welding [X] Concrete [ ] Other [ ]

Welding: [X] Curing: [ ] Procedural: [ ] Bridge No. 34-0006 L/R

Joint fit-up: [ ] Coating: [ ] Other: [ ] Component: T1 Foundation pile 11 welds 1F & 2F

Procedural: [X] Procedural: [ ]

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**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

September 25, 2007

Attn: Mr. Rich Bienek  
Welding Quality Control Manager

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

Letter No. 05.003.01-003504

Subject: NCR - Kiewit-FCI-Manson, 9/20/07 (Failure to Maintain Preheat)

Dear Rich,

The Department issued a Non-conformance Report (NCR) at the SAS T1/E2 Foundations project site on September 20, 2007. The NCR was generated when the Contractor failed to maintain the preheat temperature as required by the Special Provisions, Section 10-1.31, Subsection "Field Welding of Pile/Sleeve Connector Plates," Line F, during welding of Pier T1 Pile Head Connection Plate (PHCP) at pile 11, welds F1 and 2. QA verbally notified Mr. Scott McCoy, KFM General Welding Foreman, of this non-conformance on September 20, 2007.

The Department understands that the Contractor returned the weld to the minimum preheat temperature and that MT was performed on the in-place welds prior to resuming welding at these locations. The Department considers this NCR to be closed. However future instances of loss of preheat will be documented as necessary.

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

Sincerely,

Mark Vilcheck  
Structure Representative

For: Pedro J. Sanchez  
Resident Engineer

cc: P. Sanchez  
M. Woods  
R. Smith

file: 05.003.01, 09.006.03