

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection



Bay Area Branch
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Vallejo, CA 94592-1133
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Contract #: 04-0120E4
Cty SF Rte 80 PM 13.4/13.8
File # 1.25 B

QUALITY ASSURANCE - NONCONFORMANCE REPORT

Location: SFOBB E2/T1 Foundations JOBSITE NCR [X] Date: 09-14-2007

Prime Contractor: Keiwit/FCI/Mason (KFM)-Joint Venture NCR #200

Submitting Contractor: KFM

Type of problem: Loss of Preheat

Welding [ ] Concrete [ ] Other [ ]
Welding: [X] Curing: [ ] Procedural: [ ] Bridge No. 34-0006
Joint fit-up: [ ] Coating: [ ] Other: [ ] Component: T1 Foundation
Procedural: [X] Procedural: [ ] Loss of Preheat at Pile Sleeve 10-C3 and C4

Description of Non-Conformance: The Contractor (KFM) failed to maintain preheat temperature prior to starting the filler weld passes operation at pile head connector plate (PHCP) welds designated 10C3 and 10C4. It was observed that the preheat temperature of 250°F was not maintained on the pile starting from the bottom radius to a measured cumulative length of 1 meter on both sides of the plate. Random measurements were taken to verify the extent of the preheating temperature loss utilizing an infrared thermometer and temperature indicating markers. These measurements indicated the temperature at the bottom radius at 150°F and a temperature range between 210°F to 218°F for a cumulative length of 1 meter on the pile side for both welds designated 10-C3 and 10-C4.

Applicable reference: Caltrans Special Provisions, Section 10-1-1.31, Field Welding of the Pile/Sleeve Connection Plates, Line F

Who discovered the problem: QA Inspector, Mike Garcia

Name of individual from Contractor notified: KFM Welding Supervisor Jim Belcher

Name of Caltrans Engineer notified: Mark Baker, Assistant Structure Representative

Time and method of notification: Sept 14, 2007 verbal notification

QC Inspector's Name: Dan Smith

Was the QC Inspector aware of problem: Yes

Contractor's proposal to correct the problem: The Contractor elected to bring the material back up the required minimum preheat temperature of 250° F utilizing a rosebud (torch) and perform a magnetic particle test to verify material soundness.

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: Mike Garcia Quality Assurance Inspector

Reviewed By: Albert Carreon Lead QA Reviewer

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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 20, 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. 05.003.01-003483

Subject: NCR - Kiewit-FCI-Manson, 9/14/07 (Failure to Maintain Preheat)

Dear Rich,

The Department issued a Non-conformance Report (NCR) at the SAS T1/E2 Foundations project site on September 14, 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 10, welds C3 and 4. QA verbally notified Mr. Jim Belcher, KFM Welding Supervisor, of this non-conformance on September 14, 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