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 # 20.25B

QUALITY ASSURANCE - NONCONFORMANCE REPORT

Location: Trans Bay Steel (TBS)-1025 Kaiser Road Napa, CA **Date:** 08-09-2006

Prime Contractor: Keiwit, FCI, Manson, (KFM)- Joint Venture **NCR #110**

Submitting Contractor: Trans Bay Steel (TBS)

Type of problem:

Welding	☒	**Concrete**	☐	**Other**	☐	
Welding:	☐	**Curing:**	☐	**Procedural:**	☐	**Bridge No.** 34-0006
Joint fit-up:	☐	**Coating:**	☐	**Other:**	☐	**Component:** T1 Permanent Steel Shell Casing
Procedural:	☒	**Procedural:**	☐			

Description of Non-Conformance: The Trans Bay Steel Quality Control Inspector, Glenn Couch, allowed the welding operator Uthit Suwanwiang (UG-7757) to weld without achieving the required minimum preheat and interpass temperature of 110 degrees C (225 degrees F) while welding the inside long seam of D-11 (95mm thick). This weld was a welder qualification test for Mr. Suwanwiang.

Applicable reference: AWS D1.1 – 2002; paragraphs 6.1.5, 6.5.4.

Who discovered the problem: OSM Quality Assurance (QA) inspector Mike Garcia

Name of individual from Contractor notified: Quality Control (QC) inspector Glen Couch

Time and method of notification: 2000 hours, verbally

Name of Caltrans Engineer notified: Mark Vilcheck, Structure Representative

Time and method of notification: August 10, 2006 at approximately 1400 hours via verbal notification

QC Inspector's Name: Glen Couch

Was the QC Inspector aware of problem: No

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Contractor's proposal to correct the problem: Area Lead QA Inspector Bert Madison informed TBS Quality Control Manager Mr. Bill Kroplin in the presence of TBS General Manager Mr. Bill Kavicky at 0925 hours on 08-10-2006. No corrective action was proposed at this time.

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: James Cochran Lead QA Reviewer

Hardcopy Routing Instructions:
1. Resident Engineer *2. Inspecting Branch Contract File* *3. Responsible Branch Contract File (with supporting documentation)*

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

Attn: Mr. Lee Zink
Project Director

November 13, 2006

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

Letter No. 05.003.01-002242

Subject: Response to Submittal No. 992, Revision No. 00 (Trans Bay Steel Response to NCR Issued by State Letter 1703)

Dear Lee,

The Department has reviewed Kiewit-FCI-Manson (KFM) Submittal No. 992, Revision No. 00, dated October 16, 2006, which responded to the Department's Letter No. 1703 dated August 15, 2006, which notified KFM of a Non-conformance Report (NCR) for Trans Bay Steel (TBS) dated on August 9, 2006. The Department hereby approves Submittal No. 992, Revision No. 00, pursuant to Section 8-3.01, "Welding," of the Special Provisions. The NCR for TBS dated on August 9, 2006, is considered to be resolved. However, please note that welders or welding operators who fail a production qualification test shall be retested in accordance with AWS D1.1:2002, Section 4.32.

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, 55.0992

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

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Flex your power!
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To: MARK VILCHECK
Structure Representative
333 Burma Road
Oakland, CA 94607

Date: November 8, 2006

File: 04-0120E4
E2/T1 Foundations

From: RYAN T. SMITH
Structural Materials Representative
Quality Assurance and Source Inspection Branch
Office of Structural Materials

KFM SUBMITTALS FOR TRANS BAY STEEL (TBS) RESPONSE TO NCRs

The Materials Engineering and Testing Service (METS) has reviewed the following submittals requesting to close Nonconformance Reports (NCRs) regarding the fabrication of the E2 and T1 Steel Piling in Napa, CA. Please find the following comments regarding NCRs:

Submittal Number	Date Submitted	Description	Approved/ Rejected	Notes
932-00	09/27/06	TBS Response to NCR 039	Rejected	1
933-00	09/27/06	TBS Response to NCR 006	Approved	2
934-00	09/27/06	TBS Response to NCR 003	Approved	3
992-00	10/17/06	TBS Response to NCR 110	Approved	4
983-00	10/16/06	TBS Response to NCR 108	Rejected	5
984-00	10/16/06	TBS Response to NCR 111	Approved	6
985-00	10/14/06	TBS Response to NCR 054	Approved	7
987-00	10/16/06	TBS Response to NCR 095	Approved	8

Notes:

1. The Department issued NCR 039 on January 1, 2006, in order to document the Contractor's use of an unapproved welder working under supervision on

the steel piling for the E2/T1 Foundations Project. Although, the welder has since qualified in accordance with the contract Special Provisions (March 8, 2006) and the Contractor has provided the NDT reports for the grout beads deposited by the unapproved welder; the issue of using welders who have not passed the required qualification testing still stands without recourse by the Contractor.

After numerous meetings between the Contractor and the Department regarding this issue, including involvement from the Fabrication, Action, and Solution Team (FAST), OSM understands that Contract Change Order (CCO) 039 has been drafted to address the use of a welder training program at TBS. OSM also understands that this CCO is still being negotiated with the Contractor as of the date of this memorandum. Thus, it is OSM's recommendation that this NCR remain open until the Department and the Contractor can come to an agreement regarding CCO 039. Should the CCO be agreed to by both parties, OSM recommends the closure of this NCR, and others documenting the same issue, be readdressed for closure. OSM will consider this issue to remain open until that time.

2. The Department issued NCR 006 on November 18, 2004, in order to document the Contractor's use of an unapproved welder attaching run-off tabs on pile section T-2. In accordance with the TBS letter dated September 22, 2006, the Nondestructive Testing Reports for the girth seams of this pile section appear to show the welds to be clear of rejectable indications in the areas where the runoff tabs were welded. Additionally, METS understands that the Contractor has not had systemic problems with allowing unqualified welders to perform welds on temporary members. METS considers this NCR to be resolved at this time.

3. METS takes no exception to the Contractor's response to State Letter 05.003.01-000890 (NCR 003) as the welder's continuity for the Flux Core Welding process (FCAW) was verified in the letter from TBS dated March 1, 2006 and approved in KFM Submittal 162-02.

4. The Department issued NCR 110 on August 9, 2006 in order to document Submerged Arc Welding (SAW) being performed without sufficient preheat on the long seam of pile can section D11. The welding being performed was also the production qualification for the welding operator involved. In accordance with the TBS letter dated October 16, 2006, the welders continue

to receive training regarding the use of proper preheat before welding the steel piling. As of the date of this memorandum, METS understands that the Contractor has addressed the issue as no recent issues have been documented regarding improper preheat.

Additionally, the Contractor mechanically tested the runoff tabs (which were extended in length per the agreement between the Department and the Contractor to allow production qualification testing to the include mechanical testing requirement in the Special Provisions) which provided additional information to validate the soundness of the weld. METS considers this NCR to be resolved at this time; however, the Contractor should be advised that welders or welding operators who fail a production qualification test shall be retested in accordance with AWS D1.1-2002, Section 4.32.

5. The Department issued NCR 108 on July 24, 2006 in order to document the Contractor's use of an unapproved welder using Shielded Metal Arc Welding (SMAW) without an approved WPS on the backing ring of the stabbing guide on pile E2-8T. Although the SMAW welder was approved by the Department on September 25, 2006, contrary to the statements made in the TBS letter dated October 10, 2006, the WPS P-318-B-U4a 45mm was not submitted or approved on May 8, 2006. The Department initially received this WPS on July 31, 2006 as KFM Submittal 763-00 (TBS WQCP Addendum 48) and was rejected by State Letter 05.003.01-002047 on October 4, 2006. The same WPS was resubmitted as KFM Submittal 982-00 (TBS WQCP Addendum 032) on October 16, 2006 and was rejected by the Department as it was identical to Submittal 763-00. METS will consider this NCR resolved when WPS P-318-B-U4a 45mm has been resubmitted and is approved by the Department.

6. The Department issued NCR 111 on August 14, 2006 in order to document an NDT technician's failure to record rejectable indications. In accordance with the final nondestructive testing reports, the girth seam weld GS-18 on Pile E216T was reexamined by an approved Ultrasonic Testing (UT) Technician with an approved UT procedure. The documentation for this reexamination has been verified by METS in the Certificate of Compliance for the E2-16T. Additionally, TBS has indicated (both verbally and through the letter dated July 21, 2006 and October 16, 2006) they have counseled Mr. Berchel White regarding the proper methods for performing UT inspection on the long seam and girth seams of the piles. METS understands that Mr. White will no

longer work on the long seams and considers this NCR to be closed at this time. However, METS reserves the right to readdress this issue should Mr. White has similar issues in the future.

7. The Department issued NCR 054 on August 14, 2006 in order to document an NDT technician's failure to record rejectable indications on girth seam GS-8 of Pile E2-7T. In accordance with the final nondestructive testing reports, the girth seam weld was reexamined by an different Ultrasonic Testing (UT) Technician. The documentation for this reexamination has been verified by METS in the Certificate of Compliance for the E2-7T.

   Additionally, TBS has indicated in their letter dated October 10, 2006 they have counseled Mr. Steve Pacheco about this issue and METS agrees that no further issues have occurred regarding this technician. METS considers this NCR to be resolved at this time.

8. The Department issued NCR 095 on June 5, 2006, in order to document a welder who was welding out of position on the girth seam joint pile can sections D-11 to E-11. As stated by the TBS letter dated October 10, 2006, welding in the overhead position is not a part of the production plan and this instance should be an isolated occurrence. TBS also notified their welding personnel of this issue an METS agrees that this has not become a systemic issue. METS considers this NCR to be resolved at this time; however, METS reserves the right to readdress this issue should it become a problem again in the future.

If you have any questions, or would like to discuss the issues, please call me at (858) 232-6799.

cc: Rafael Bolon
Tom Shimada
Jim Cochran