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 .25 B**

QUALITY ASSURANCE - NONCONFORMANCE REPORT

Location: **Trans Bay Steel (TBS) - 1025 Kaiser Road Napa, CA** Date: **Tues. 05/09/2006**

Prime Contractor**: Kiewit, FCI, Manson, (KFM) Joint Venture** **NCR # 086**

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:** Permanent Steel Casing E2
Procedural:	☒	**Procedural:**	☐	_____		

Description of Non-Conformance: TBS Quality Control allowed welding operator, Thongkham Promjarden, ID TN 9032, to perform submerged arc welding (SAW) on the inside of the girth seam (GS) of Permanent Steel Casing E2 top, between segments E5 (85mm wall) and F1 (85mm wall) while the preheat temperature of the base material did not meet the minimum preheat temperature of 225° F.

Additionally, TBS Quality Control allowed welding operator, Jaran Chaopa, ID JA 7756, to perform SAW on the inside of the GS of Permanent Steel Casing E2 top, between segments B14 (85mm wall) and C11 (85mm wall) while the preheat temperature was observed to be less than 225° F.

Applicable reference: AWS D1.1-2002 Structural Welding Code and the Contract Special Provisions

Who discovered the problem: OSM Quality Assurance Inspector James S. Bowers

Name of individual from Contractor notified: John Page – QC Inspector and Glen Couch – Shop Foreman

Time and method of notification: Glen Couch – Verbally on Tuesday 05/09/2006 at 1745 hours

John Page – Verbally on Tuesday 05/09/2006 at 1805 hours

Name of Caltrans Engineer notified: Mark Vilcheck, Structure Representative

Time and method of notification: May 11, 2006 at approximately 0635 hours via email

QC Inspector's Name: John Page

Was the QC Inspector aware of problem: Not at the time of QA's discovery.

Contractor's proposal to correct the problem: None 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: James S. Bowers Quality Assurance Inspector

Reviewed By: Robert Mertz Lead QA Inspector

TL-15, Nonconformance Report (10/27/05)

Hardcopy Routing Instructions:

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

"Ryan Smith" <rsmithlaw@worldnet.att.net>

05/17/2006 02:10 PM

To: "'Mark Vilcheck'" <mark_vilcheck@dot.ca.gov>
cc: "'Tom Shimada'" <tom_shimada@dot.ca.gov>, "'Rafael Bolon'" <rafael_bolon@dot.ca.gov>, "'SFOBB-E2-T1 Contract Dist04'" <SFOBB-E2-T1_Contract_Dist04@dot.ca.gov>, "'Reba Torres'" <reba_torres@dot.ca.gov>, "'Laraine Woo'" <laraine_woo@dot.ca.gov>, "Pedro Sanchez " <pedro_sanchez@dot.ca.gov>, "'Robert Mertz'" <rmertzlaw@worldnet.att.net>, "'Michael Foerder'" <mike2dj@sbcglobal.net>
Subject: E2.T1 NCR 086 TBS Preheat

Mark,

Apparently I didn't resend this one after we made some revisions. However, please find the attached NCR documenting TBS' lack of preheat while welding. Let me know if you have any questions.

RYAN T. SMITH
Structural Materials Representative
Caltrans Office of Structural Materials
Mobile: 858-232-6799
Fax: 707-552-7758/ 916-227-7117
rsmithlaw@worldnet.att.com

04-0120E4_TL15_B73_05_09_06_TBS_NCR 086.

RECEIVED
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QUALITY ASSURANCE - NONCONFORMANCE REPORT

(Continued, Page 2 of 2)

Reviewed By: Robert Mertz Lead QA Inspector

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State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: MARK VILCHECK
Structure Representative
333 Burma Road
Oakland, CA 94607

Date: June 30, 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
789-00	08/11/06	TBS Response to NCR 93	Approved	1
790-00	08/11/06	TBS Response to NCR 56	Approved	2
808-00	08/18/06	TBS Response to NCR 88	Approved	3
809-00	08/18/06	TBS Response to NCR 86	Approved	4
810-00	08/18/06	TBS Response to NCR 84	Approved	5
811-00	08/18/06	TBS Response to NCR 82	Approved	6
812-00	08/18/06	TBS Response to NCR 64	Approved	7
813-00	08/18/06	TBS Response to NCR 73	Approved	8
815-00	08/18/06	TBS Response to NCR 85	Rejected	9

Notes:

1. In accordance with the TBS letter dated July 21, 2006, all long seam welds in pile sections D11 and E8 examined by Mr. Berchel White were 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 E2-5T. Additionally, TBS has indicated (both verbally and through the letter mentioned above) they have counseled Mr. White regarding the proper methods for performing UT inspection on the long seams of the piles. METS considers this NCR to be closed at this time.
2. The TBS letter dated August 11, 2006 documents TBS' removal of the area in question on pile section P-11 and the repair made by the approved welder. Furthermore, the area was examined by UT and Magnetic Particle Testing (MT) when the adjacent girth seam was inspected on a later date. Additionally, the repair of this area has been documented through TBS Critical Weld Repair (CWR) 001 which was approved by METS. METS finds this resolution to be acceptable and considers the NCR to be closed at this time. It should also be noted that the comments above were verbally issued to the Contractor on August 11, 2006 by METS personnel.
3. In accordance with the TBS letter dated August 17, 2006, the welder burned through the ST-5 stabbing guide while depositing the initial weld and did not understand that a CWR would be necessary to repair the area. It should be noted that METS has advised the Contractor that a CWR will be necessary to make similar repairs in the future. METS considers this NCR to be resolved at this time.
4. In accordance with the TBS letter dated August 17, 2006, the welders have received 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 further issues have been documented regarding improper preheat. METS considers this NCR to be resolved at this time
5. As stated in the TBS letter dated August 17, 2006, the correct Welding Procedure Specification for the grout beads on the 85-mm material was not

posted at the time the grout beads were being welded on May 9, 2006. Although TBS indicates that a "corrected" WPS was posted during the production welding, it should be noted that the WPS referenced by TBS was not approved by the Department at the time of its use. The WPS (WPS-A-145 85mm 12mm Grout Beads) was not submitted for review until July 25, 2006 and approved by METS on July 31, 2006. However, METS understands that the approved preheat temperature was utilized during production welding even though the WPS was not approved by the Department. METS reminds the Contractor that Section 8-3.01 of the Special Provisions requires that WPS's shall be approved by the Engineer prior to their use and that future violations of this specification may constitute rejection of the work affected. METS considers this issue to be resolved at this time.

6. As indicated in the TBS letter date August 17, 2006, the Contractor ground the fillet weld of the stabbing guide on pile section P-14 down to the approximate depth of the root pass and performed MT examination of the weld. The report of the MT examination was included as part of KFM Submittal 811-00. METS understands this will not be an issue in the future as this weld will no longer be performed in multiple passes. METS considers this issue to be resolved.

7. METS understands that this issue was resolved per KFM Submittal 640-00 which was approved by METS on July 24, 2006. Submittal 812-00 was not reviewed by METS personnel.

8. The letter issued by TBS indicates that WPS P-321-B-U2-GF ½" Plate Rev. 02 was submitted and approved by the Department. However, it should be noted that welding with this WPS began on April 9, 2006 but the WPS was not approved by METS until August 4, 2006 (KFM Submittal 473-03). METS reminds the Contractor that Section 8-3.01 of the Special Provisions requires that WPS's shall be approved by the Engineer prior to their use and that future violations of this specification may constitute rejection of the work affected. METS considers this issue to be resolved at this time.

9. The Department issued NCR 085 on May 9, 2006, in order to document the Contractor's use of an unapproved welder working on the steel piling. Although, the welder has since qualified in accordance with the contract Special Provisions and the Contractor has provided the NDT reports for the girth seam deposited (D13 to E5) 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.

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