



**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 # 13.25B

**QUALITY ASSURANCE - NONCONFORMANCE REPORT**

Location: Vancouver, WA.  
 Prime Contractor: Kiewit, FCI & Manson (KFM) Joint Venture  
 Submitting Contractor: Oregon Iron Works (OIW)

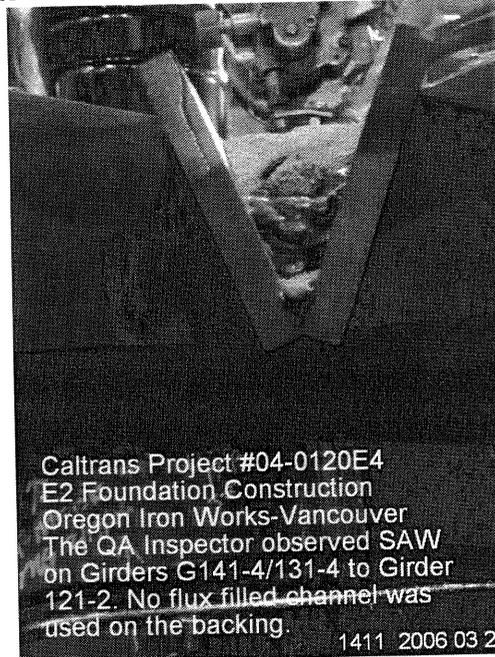
Date: 3/27/2006  
 NCR #065

**Type of problem:**

- |                      |                                     |                    |                          |                    |                          |
|----------------------|-------------------------------------|--------------------|--------------------------|--------------------|--------------------------|
| <b>Welding</b>       | <input checked="" type="checkbox"/> | <b>Concrete</b>    | <input type="checkbox"/> | <b>Other</b>       | <input type="checkbox"/> |
| <b>Welding:</b>      | <input checked="" 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 type="checkbox"/> |
| <b>Procedural:</b>   | <input type="checkbox"/>            | <b>Procedural:</b> | <input type="checkbox"/> |                    |                          |

**Bridge No.:** #34-0006  
**Component:** # E2

**Description of Non-Conformance:** Oregon Iron Works Welder Shannon Doolittle (welder identification D-18) was performing welding outside the parameters listed in Oregon Iron Works' Welding Procedure Specification 4226. The welding was being performed without a flux filled channel along with submerged arc welding the root as described in WPS 4226. The welding was performed with flux core arc welding for the root passes and submerged arc welding process, using a semi-automatic OTC SW-101 self-traveling tractor, for the filler passes. The work was performed on the South Pod Assembly (SA1) – Girder 141-4 / 131-4 to Girder 121-2. *Attached picture from this observation.*



Caltrans Project #04-0120E4  
 E2 Foundation Construction  
 Oregon Iron Works-Vancouver  
 The QA Inspector observed SAW  
 on Girders G141-4/131-4 to Girder  
 121-2. No flux filled channel was  
 used on the backing. 1411 2006 03 27

**Applicable reference:** AWS D1.5-2002, Sec.5.21.2, 04-012024 Special Provisions Section 8-3.01, OIW WPS 4226

**Who discovered the problem:** Joe Adame, Quality Assurance Inspector

**Name of individual from Contractor notified:** Russell Lynch, Quality Control Inspector

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## QUALITY ASSURANCE - NONCONFORMANCE REPORT

(Continued, Page 2 of 2)

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**Time and method of notification:** In person at 1400.

**Name of Caltrans Engineer notified:** Mark Vilcheck, Structure Representative

**Time and method of notification:** March 29, 2006 at approximately 1300 hours via email

**QC Inspector's Name:** Quality Control Inspector Russ Lynch

**Was the QC Inspector aware of problem:** No

**Contractor's proposal to correct the problem:** No corrective proposal has been submitted 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.

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Inspected By: Joe Adame

Quality Assurance Inspector

Reviewed By: Dave McClary

Lead QA Inspector

**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

August 23, 2006

Attn: Mr. Christopher Villa  
Deputy Project Director

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

Letter No. 05.003.01-001761

Subject: Response to Submittal No. 722, Revision No. 00 (OIW Response to NCR Issued by State Letter 960)

Dear Christopher,

The Department has reviewed Kiewit-FCI-Manson Submittal No. 722, Revision No. 00, dated July 17, 2006. This Submittal responded to the Department's Letter No. 960 dated March 30, 2006, which notified KFM of a Non-conformance Report (NCR) dated March 27, 2006, for welding outside the parameters listed in WPS 4226, at Oregon Iron Works (OIW). The Department hereby approves Submittal No. 722, Revision Nos. 01, pursuant to Section 8-3.01, "Welding," of the Special Provisions. The NCR for OIW dated March 27, 2006, is considered to be resolved.

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

Sincerely,

**<<< ORIGINAL SIGNED >>>**

Mark Vilcheck  
Structure Representative

For: Pedro J. Sanchez  
Resident Engineer

cc: P. Sanchez  
M. Woods  
R. Smith

file: 05.003.01, 09.006.03, 55.722

## Memorandum

*Flex your power!  
Be energy efficient!*

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

**Date:** August 21, 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 SUBMITTAL 722-00 – OREGON IRON WORKS (OIW) RESPONSE TO CALTRANS NONCONFORMANCE REPORT (NCR) NO. 065

The Department issued State Letter 05.003.01-0000960, dated March 30, 2006, requesting the Contractor's proposal to resolve this NCR and to avoid performing welding outside the parameters listed in OIW's approved Welding Procedure Specifications (WPS).

The Materials Engineering Testing Service (METS) has reviewed KFM Submittal 722-00 (response to OSM NCR 065) dated July 17, 2006. As stated in the OIW letter dated July 6, 2006, KFM, OIW, and the Department agreed to complete a test plate under the same conditions as the existing top flange welds that connect girders G141-4, G131-4, and G121-2 (six welds total). Additionally, this test plate would be destructively tested to assess whether the mechanical properties of the welds were fit-for-purpose. As stated in OIW's letter dated July 11, 2006, METS understands that the following mechanical tests were run and an independent testing laboratory:

1. Reduced Section Tensile
2. Guided Side Bends
3. Charpy V-Notch Impact Test
4. Macro etch
5. Radiography

METS finds the response to NCR 065 to be acceptable and takes no exception to the test results presented in Submittal 722-00. METS considers the NCR to be resolved at this time.

If you have any questions or concerns regarding this issue, please call me at (858) 232-6799.

cc: Rafael Bolon  
Tom Shimada  
David McClary