

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 # **45.25 B**

QUALITY ASSURANCE - NONCONFORMANCE REPORT

Location: **Ingleside, Texas**

Date: 6-7-06

Prime Contractor: **Kiewit/FCI/Manson (KFM) – Joint Venture**

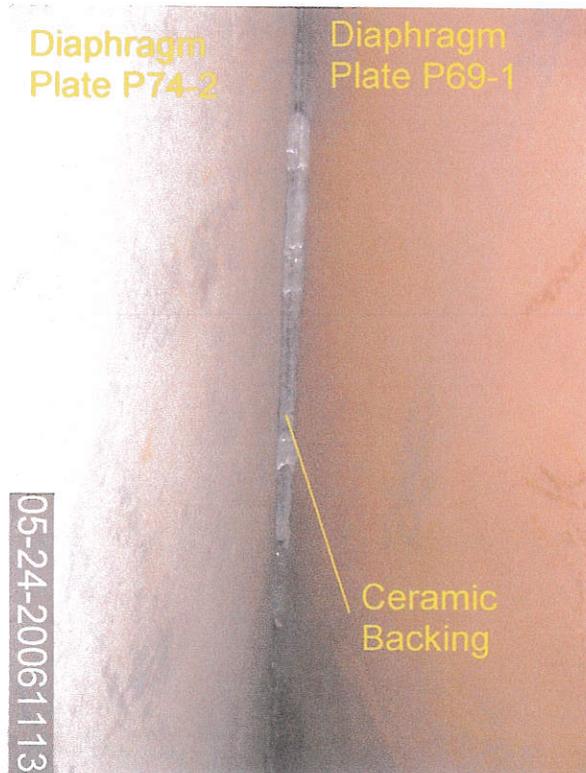
NCR #096

Submitting Contractor: **Kiewit Offshore Services (KOS)**

Type of problem:

- | | | | | | | |
|----------------------|-------------------------------------|--------------------|--------------------------|--------------------|--------------------------|--|
| Welding | <input checked="" type="checkbox"/> | Concrete | <input type="checkbox"/> | Other | <input type="checkbox"/> | |
| Welding: | <input type="checkbox"/> | Curing: | <input type="checkbox"/> | Procedural: | <input type="checkbox"/> | Bridge No.: #34-0006L/R |
| Joint fit-up: | <input checked="" type="checkbox"/> | Coating: | <input type="checkbox"/> | Other: | <input type="checkbox"/> | Component: #T1 Foundation Footing |
| Procedural: | <input type="checkbox"/> | Procedural: | <input type="checkbox"/> | | | |

Description of Non-Conformance: KOS Quality Control (QC) allowed KOS welders to use a ceramic backing bar without an approved welding procedure specifications (WPS). A 12mm diameter ceramic backing was used for a complete joint penetration (CJP) weld that joins diaphragm plates (P74-2 and P69-1).



QUALITY ASSURANCE - NONCONFORMANCE REPORT

(Continued, Page 2 of 2)

Applicable reference: AWS D1.5 2002 section 3.13.6. "Welds made against backing other than base metal or approved low-hydrogen weld metal shall be subject to WPS qualification testing under the provisions of 5.13 and approval by the Engineer."

Who discovered the problem: Caltrans Quality Assurance Inspector Gregory Bertlesman.

Name of individual from Contractor notified: KOS Quality Control Representative (QC) Mr. George Barnhill

Time and method of notification: Verbal with Mr. Barnhill at approximately 1000 hours on June 7, 2006

Name of Caltrans Engineer notified: Mark Vilcheck, Structural Representative

Time and method of notification: June 07, 2006, 13:30 via conversation

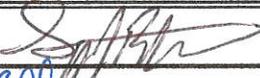
QC Inspector's Name: George Barnhill

Was the QC Inspector aware of problem: Yes

Contractor's proposal to correct the problem: Unknown

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, Patryk Pich (858-699-0514), who represents the Office of Structural Materials for your project.

Inspected By: Gregory Bertlesman



Quality Assurance Inspector

Reviewed By: Robert Cuellar



Lead QA Inspector

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 Cty **SF** Rte **80** PM **13.4/13.8.**
 File # **45.25 B**

QUALITY ASSURANCE - NONCONFORMANCE REPORT

Location: **Ingleside, Texas**

Date: 6-7-06

Prime Contractor: **Kiewit/FCI/Manson (KFM) – Joint Venture**

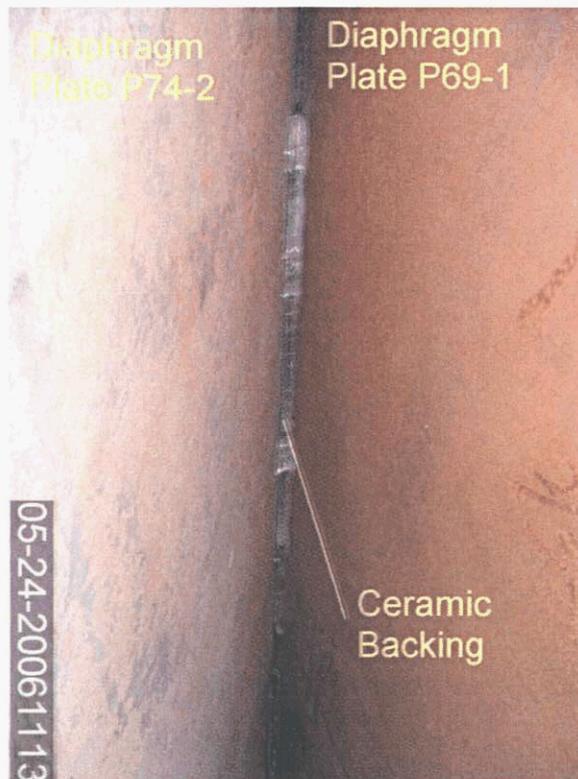
NCR #096

Submitting Contractor: **Kiewit Offshore Services (KOS)**

Type of problem:

Welding	<input checked="" type="checkbox"/>	Concrete	<input type="checkbox"/>	Other	<input type="checkbox"/>	
Welding:	<input type="checkbox"/>	Curing:	<input type="checkbox"/>	Procedural:	<input checked="" type="checkbox"/>	Bridge No.: #34-0006L/R
Joint fit-up:	<input checked="" type="checkbox"/>	Coating:	<input type="checkbox"/>	Other:	<input type="checkbox"/>	Component: #T1 Foundation Footing
Procedural:	<input type="checkbox"/>	Procedural:	<input type="checkbox"/>			

Description of Non-Conformance: KOS Quality Control (QC) allowed KOS welders to use a ceramic backing bar without an approved welding procedure specifications (WPS). A 12mm diameter ceramic backing was used for a complete joint penetration (CJP) weld that joins diaphragm plates (P74-2 and P69-1).



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QUALITY ASSURANCE - NONCONFORMANCE REPORT

(Continued, Page 2 of 2)

Applicable reference: AWS D1.5 2002 section 3.13.6. "Welds made against backing other than base metal or approved low-hydrogen weld metal shall be subject to WPS qualification testing under the provisions of 5.13 and approval by the Engineer."

Who discovered the problem: Caltrans Quality Assurance Inspector Gregory Bertlesman.

Name of individual from Contractor notified: KOS Quality Control Representative (QC) Mr. George Barnhill

Time and method of notification: Verbal with Mr. Barnhill at approximately 1000 hours on June 7, 2006

Name of Caltrans Engineer notified: Mark Vilcheck, Structural Representative

Time and method of notification: June 07, 2006, 13:30 via conversation

QC Inspector's Name: George Barnhill

Was the QC Inspector aware of problem: Yes

Contractor's proposal to correct the problem: Unknown

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, Patryk Pich (858-699-0514), who represents the Office of Structural Materials for your project.

Inspected By: Gregory Bertlesman

Quality Assurance Inspector

Reviewed By: Robert Cuellar

Lead QA Inspector

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005330 JUN-8 99

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Contract # : 04-0120E4

Cty SF Rte 80 PM 13.8

File # 45.25A

QUALITY ASSURANCE - NONCONFORMANCE RESOLUTION**Location:** Ingleside, Texas**Date:** August 23, 2006**Prime Contractor:** Kiewit/FCI/Manson (KFM) – Joint Venture**NCR#96****Submitting Contractor:** Kiewit Offshore Services (KOS)**Type of problem:**

Welding	<input checked="" type="checkbox"/>	Concrete	<input type="checkbox"/>	Other	<input type="checkbox"/>
Welding:	<input checked="" type="checkbox"/>	Curing:	<input type="checkbox"/>	Procedural:	<input type="checkbox"/>
Joint fit-up:	<input type="checkbox"/>	Coating:	<input type="checkbox"/>	Other:	<input type="checkbox"/>
Procedural:	<input checked="" type="checkbox"/>	Procedural:	<input type="checkbox"/>		

Bridge No. 34-0006L/R**Component** T1 Foundation Footing**Date nonconformance report was written:** June 7, 2006**Description of Non-Conformance:** KOS Quality Control (QC) Inspectors allowed KOS welders to use ceramic backing material without an approved welding procedure specification (WPS). KOS used 12-millimeter diameter ceramic backing for a complete joint penetration (CJP) weld that joins diaphragm plate P74-2 and P69-1.**Contractor's proposal to correct the problem:** KOS Submittal 682, Revision 00 states that the ceramic backing was used to minimize melt through. In addition, the welded joint will be examined by ultrasonic testing.**Corrective action taken:** None**Did corrective action require Engineer's approval?** Yes No**If so, name of the Engineer providing approval:** Mark Vilcheck, per Caltrans state letter **Date:** 7-17-06
05.003.01-001762**Is Engineer's approval attached:** Yes No**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:** Mary Madere

Quality Assurance Inspector

Reviewed By: Robert Cuellar & Keith Hoffman

QA Reviewer and Branch Senior

Memorandum

*Flex your power!
Be energy efficient!*

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

COMPLETED

Date: June 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 682-00 –KIEWIT OFFSHORE SERVICES (KOS) RESPONSE TO NCR 096

The Materials Engineering and Testing Service (METS) has reviewed the KFM Sub 682-00, dated June 27, 2006. In this submittal, the Contractor is requesting to close the Nonconformance Report (NCR) issued by State Letter 05.003.01-0001359, regarding KOS' welding of the joint between diaphragm plates P74-2 and P69-1 without an approved Welding Procedure Specification (WPS).

In the Contractor's response to METS NCR 096, KOS letter (KOSJ-21103-L-024), dated June 23, 2006, states in order to "minimize melt through" ceramic backing was used and the single bevel weld was back gouged and back welded; thus resulting in a double sided weld which complies with the joint details of AWS D1.5-2002, Section 2.4.

OSM does not agree with the Contractor's interpretation and provides the following clarifications:

1. The approved shop drawings show an AWS D1.5-2002 single bevel T-joint with backing bar (TC-U4c-GF) to be used to weld plates P74-2 and P69-1. It was METS understanding that this backing bar would not be removed after the joint was welded (See KFM RFI 090).
2. METS understands that the weld was not back gouged before the welding of the acute side of the joint occurred.

Mark Vilcheck
August 21, 2006
Page 2

3. The joint detail in question is a skewed T-joint that where the acute side of the connecting plates is less than 45 degrees, making it out of compliance with AWS D1.5-2002, Figure 2.4, Note 12 for a standard joint that is welded on the acute side.

However, in accordance with the on-going discussions on this issue between the Contractor and METS personnel, if steel backing is used on the acute side of the skewed angle, and the geometry for TC-U4c-GF is maintained on the welded side (obtuse side), METS agreed that the joint may be considered a standard joint detail, and need not be qualified by test plate C. Additionally, METS understands that the Contractor has agreed to not use ceramic backing on any joints without performing the required qualifications as specified in AWS D1.5-2002.

Provided that the weld in question is 100% examined by Ultrasonic Testing (UT), all rejectable indications in the weld are repaired, and the above agreement is followed on the remaining skewed T-joints near Pile Sleeve 13, METS considers this NCR to be resolved at this 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
Patryk Pich
Robert Cuellar