



P.O. BOX 23223 Oakland, CA 94623  
 Phone (510) 419-0120 Fax (510) 839-0666

**LETTER OF SUBMITTAL**  
**KFM Skyway Project # 04-012024**

Run Date 25-Feb-05  
 Time 3:17 PM

Dated: 25-Feb-2005

SUBMITTAL No: KFM-SUB-003940

Rev: 00

To: Doug Coe  
 Caltrans-Skyway Project  
 345 Burma Road  
 Oakland CA 94607  
 Phone: Fax:

Co/Job # 364-3726  
 Contract # 04-012024  
 Sub/Supplier: **USI**  
 Sub/Supplier No:

Subject: **USI - Documents Clearing USI KFM NCR #72 (METS 58)**

Special Provis. (SP) REF: 08-3.01

Standard Spec. (SS) REF:

RESUBMITTAUSUPPLEMENTAL REF:

We are sending the following attached items:  Attached

Via Fax

- |                                       |   |   |
|---------------------------------------|---|---|
| <input type="checkbox"/> Drawing      | <input type="checkbox"/> Plans                      | <input type="checkbox"/> Prog. Pmt      |
| <input type="checkbox"/> Samples      | <input type="checkbox"/> Certificates of Compliance | <input type="checkbox"/> Calculations   |
| <input type="checkbox"/> Payroll      | <input type="checkbox"/> Specs                      | <input type="checkbox"/> Copy of Letter |
| <input type="checkbox"/> Change Order | <input type="checkbox"/> Schedule                   | <input type="checkbox"/> Invoice        |

Item	Date	Copies	Description	Drawing No	Rev	Status	Pages
01	25-Feb-05	1	Letter of Transmittal #365		0	Pending	1
02	25-Feb-05	1	USI - Documents Clearing USI KFM NCR #72 (METS 58)		0	Pending	5

These are transmitted as checked below:

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> For Approval | <input type="checkbox"/> For Review/comment | <input type="checkbox"/> Return For Correction |
| <input type="checkbox"/> For Your Use            | <input type="checkbox"/> As Requested       | <input type="checkbox"/> For Information       |

Remarks:

CC:

Please review / approve by : 04-Mar-2005

Submitted By: Rich Bienek  
 (KFM Staff Member - Originator of Transmittal)

Checked & Sent By:   
 Contract Admin/DCS Staff

# Universal Structural, Inc.

a subsidiary of

HARDER MECHANICAL CONTRACTORS, INC.

604 S.E. Victory Avenue, Vancouver, WA. 98661

P.O. Box 1030, Vancouver, WA. 98666

Phone: Vancouver (360) 695-1261 - Portland (503) 227-2419

Fax: (360) 696-3590

## LETTER OF TRANSMITTAL

NO: 365

DATE: February 24, 2005

PROJECT: SFOBB Skyway Structure

JOB NO: 23932

ATTENTION: Paul Hegarty / Rich Bienek

TO: KFM

220 Burma Road  
Oakland, CA 94607

WE ARE SENDING YOU

- |   |                                       |                                       |   |   |
|---|---------------------------------------|---------------------------------------|---|---|
| <input type="checkbox"/> Shop Drawings  | <input type="checkbox"/> ATTACHED     | <input type="checkbox"/> Prints       | <input type="checkbox"/> Prints         | <input checked="" type="checkbox"/> NCR Responses |
| <input type="checkbox"/> Copy of letter | <input type="checkbox"/> Change order | <input type="checkbox"/> Change order | <input type="checkbox"/> Samples        | <input type="checkbox"/> Plans                    |
|   |                                       |                                       | <input type="checkbox"/> Specifications |   |

COPIES	ITEM	DESCRIPTION / REMARKS																
1 Original	NCR Response	Caltrans State Letter # 5.03.01-006169, USI Letter # 72.022405, KFM NCR #72																
1 Original	NCR Response	Caltrans State Letter # 5.03.01-006746 USI Letter # 86.022305, KFM NCR #86																
<table border="1"> <tr> <th colspan="2">SKYWAY-BAY BRIDGE PROJECT</th> </tr> <tr> <td colspan="2">KIEWIT / FCI / MANSON, A JV</td> </tr> <tr> <td>DATE: 2-25-05</td> <td>CO/JOB: 364-3726</td> </tr> <tr> <td>ROUTED BY:</td> <td>NO: 04-012074</td> </tr> <tr> <td>TO: RICH BIENEK</td> <td>SPECIAL NOTES</td> </tr> <tr> <td colspan="2">INTERNAL KFM COPIES TO:</td> </tr> <tr> <td colspan="2">EXTERNAL COPIES TO:</td> </tr> <tr> <td colspan="2">SCANNED: Y N FILED TO:</td> </tr> </table>			SKYWAY-BAY BRIDGE PROJECT		KIEWIT / FCI / MANSON, A JV		DATE: 2-25-05	CO/JOB: 364-3726	ROUTED BY:	NO: 04-012074	TO: RICH BIENEK	SPECIAL NOTES	INTERNAL KFM COPIES TO:		EXTERNAL COPIES TO:		SCANNED: Y N FILED TO:	
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TO: RICH BIENEK	SPECIAL NOTES																	
INTERNAL KFM COPIES TO:																		
EXTERNAL COPIES TO:																		
SCANNED: Y N FILED TO:																		

THESE ARE TRANSMITTED AS CHECKED BELOW

- For Approval   
 For your use   
 As Requested   
 FOR BIDS DUE

REMARKS: Mr. Hegarty & Mr. Bienek,  
Universal Structural, Inc. (USI) is in receipt of the above-mentioned Caltrans State Letter and the following attachments; with the individual cover letter is USI's record of subsequent action taken.

Copy To: \_\_\_\_\_

Signed: \_\_\_\_\_

Brad Murphy

If enclosures are not as noted, kindly notify us at once.



# UNIVERSAL STRUCTURAL, INC.

604 S E Victory Ave  
Vancouver, WA 98661

PO. Box 1030  
Vancouver, WA 98666

Vancouver (360) 695-1261  
Portland (503) 227-2419  
FAX (360) 696-3590

February 23, 2005

Kiewit / FCI / Manson, JV (KFM)  
220 Burma Road  
Oakland, CA 94607  
Phone: (510) 419-0120  
Fax: (510) 839-0666

Attention: Paul Hegarty / Rich Bienek

Reference: SFOBB Skyway Project  
USI #23932 (NCR LTR# 72.022405)

Subject: Responseto Caltrans State Letter # 5.03.1-006169, DTD 11/29/04  
KFM NCR # 72

Mr. Hegarty & Mr. Bienek,

Universal Structural, Inc. received Caltrans State Letter # 5.03.1-006169, dated November 29, 2004, Caltrans stated that:

*"The State QA inspector observed a USI welder using a FCAW electrode that had exceeded the 24-hour exposure requirements for fracture critical members. Welds affected by the expired wire include the upper halves of weld joint 2, weld joint 3 and weld joint 4 of P165E/P36E of Assembly 4A. AWS D1.5 (1996), Section 12.6.7.4 states, "Electrodes not consumed within 24 hours of accumulated exposure outside sealed or heated storage shall be redried by baking as described in 12.6.7.6."*

Please see the attached letter from Mr. Dean C. Phillips, Manager of Welding Engineering for Hobart Brothers. Mr. Phillips went into great detail in the matter of "Extended Atmospheric Exposure Data Concerning Tri-Mark TM-771" product.

If you have any questions or need further clarification, please contact me at your earliest possible convenience.

Sincerely,  
Universal Structural, Inc.

Brad Murphy  
Sales Manager

cc: Brad Young - USI  
file



Category III

A Subsidiary of  
HARDER MECHANICAL CONTRACTORS



DYH  
12/1/04

**DEPARTMENT OF TRANSPORTATION**

SFOBB - Skyway Project  
345 Burma Road  
Oakland, CA 94607  
Facsimile Number: (510) 622-5165



Flex Your Power  
Be Energy Efficient!

November 29, 2004

KFM, a JV  
220 Burma Road  
Oakland, CA 94607

*KFM NCR 7B*

Contract: 04-012024  
04-SF, Ala-80-13.9/14.3, 0.0/1.6  
SFOBB Skyway Project  
State Letter # 5.03.1-006169

**Subject: USI NCR No, 58: Exceeding Maximum Exposure Requirements During Use of FCAW Electrode**

~~Dear~~ Mr. Skoro,  
Attention: Mr. Rich Bienek,

This Non-Conformance Report (NCR) is issued by the State to KFM as a result of your supplier, USI, for the following reason:

1. Caltrans QA Inspector observed a USI welder using an **FCAW** electrode **that** had exceeded the 24 hour exposure requirement for fracture critical members. Welds affected by the expired wire include the upper halves of weld joint **2**, weld joint **3** and weld joint **4** of **P165E/P36E** of Assembly **4A**. AWS **D1.5** (1996), Section **12.6.7.4** states, "Electrodes not consumed within 24 hours of accumulated exposure outside sealed or heated storage shall be redried by baking as described in **12.6.7.6**."

**This** NCR will be tracked as USI NCR No. **58**. USI was verbally notified of this NCR by Caltrans' **METS** on **11/09/04**. Please review and address how you plan to resolve this NCR and bring your **work** back into compliance with our contract.

Should you have any questions, please contact David Wu at **(510) 622-5104**.

Sincerely,

David Wu  
Senior Bridge Engineer

For: Mr. Douglas Coe  
Resident Engineer

cc: D. Coe, I. Khinsann, V. Iyer, D. Wu, S. Abbas, B. Chew, H. El-Natur, P. Lowry, I. Kwong

file: 5.03.1, 9.07.8

**DEPARTMENT OF TRANSPORTATION**

SFOBB – Skyway Project  
345 Burma Road  
Oakland, CA 94607  
Facsimile Number: (510) 622-5165



*Flex Your Power  
Be Energy Efficient!*

January 21, 2005

KFM, a **JV**  
220 Burma Road  
Oakland, CA 94607

Contract: 04-012024  
04-SF, Ala-80-13.9/14.3, 0.0/1.6  
SFOBB Skyway Project  
State Letter # 5.03.I-006697

*Subject: Clarification to State Letter No. 4741 (Response to KFM-SUB-2198R00)*

Dear Mr. **Skoro**,  
Attention: Paul Hegarty,

Please refer to State Letter No. 4741 regarding the resolution to USI NCR No. 17. The Engineer agrees the Contractor has sufficiently addressed this NCR due to the additional control procedures implemented. These new procedures should ensure the maximum exposure time allowed for FCAW electrodes used for fracture critical welding does not exceed 24 hours in accordance with Section 12.6.7.4 of AWS D1.5.

Should you have any questions, please contact David Wu at (510) 622-5104 or Patrick Lowry at (858) 344-2712.

Sincerely,

<<< ORIGINAL SIGNED >>>

David Wu  
Senior Bridge Engineer

For: **Mr. Douglas Coe**  
Resident Engineer

cc: **D. Coe**, I. Khinsann, V. Iyer, **D. Wu**, S. Abbas, B. **Chew**, H. El-Natur, **P. Lowry**, I. Kwong  
file: **5.03.1**, 9.06.8



2-21-0s

**Subject:** Bridge Code, D1.5, FCAW Electrode Time Limit Extension for Exposure per 12.6.7.5 for Tri Mark TM-771

To Whom It May Concern:

The provisions of the D1.5, 12.6.7.5, "Time Limit Extension for Electrode Exposure", is a test where an electrode is exposed to elevated humidity and temperature for a n extended period of time beyond the 24 hour requirement of 12.6.7.4. The test is to provide diffusible hydrogen data of an electrode to insure that the electrode has maintained the applicable hydrogen level. Upon acceptable test results, the exposure time is then acceptable to extend to the maximum time used in the testing of the electrode.

The Tri Mark TM-771 was tested in accordance with (IAW) D1.5-2002, 12.6.7.5, to extend the atmospheric exposure time to 168 hours instead of the 24 hours addressed in 12.6.7.4.

The diffusible hydrogen testing was IAW AWS A4.3 as specified by Code in 12.6.7.5. Two (2) diffusible hydrogen tests were carried out and analyzed accordingly; one in the as-received condition; the second test used the as-received TM-771 electrode and exposed it in an atmospheric controlled chamber, where the humidity was 80% at a temperature of 80 degrees F for 168 hours, and then rested in IAW AWS A4.3. When the electrode is exposed in the atmospheric chamber, the electrode is totally exposed to the 80/80 condition without any protection to the electrode. This is to expose the electrode to a worst-case condition to insure the electrode maintains the acceptable diffusible hydrogen requirement per the Code.

The extended exposure in the 80/80 conditions is not to be misconstrued as a recommended storage condition for the electrode as some have thought.

**EXTENDED ATMOSPHERIC EXPOSURE DATA CONCERNING Tri-Mark TM-771**

Product	Dia.	As Rec'd*	168 Hours (1 Week)*	Current	Voltage	ESO, in	WFS LPM
TM-771	1/16"	4.5	5.0	275	27	3/4"	254

**A5** the data shows above, *the* TM-771 is well within the electrode and Bridge Code requirements ~~for~~ diffusible hydrogen after the 168 hours of 80/80 exposure conditions. By Code, the TM-771 may be allowed a maximum exposure of 168 hours in the welding operations, superseding the original requirement in 12.6.7.4 of 24 hours.

If the fabricator removes the electrode from *the* equipment to preserve exposure time, the electrode may be returned to its original undamaged plastic bag, with the bag opening securely closed by any appropriate means, i.e. string, wire, plastic tie, rubber band, and etc. Compete thermally sealing or sealing by other by other methods of the bag is unnecessary. The manufacturer's recommendation is in compliance with the Code requirements as stated in 12.6.7.4 and 12.6.7.6 "or as recommended by the manufacturer". The TM-771 FCAW electrode is not recommended to be stored at elevated temperatures or dried in accordance 12.6.7.6, as these elevated temperatures may change the electrode properties i.e. of feedability and composition.

TM-771 can be stored in its original, essentially intact, packaging for at least one year. If the storage temperature is between 40°F (4°C) and 95°F (35°C), and the temperature of the product is acclimated to the welding environment within 10°F (6°C), the product condition will stay near the original condition as when shipped. Acclimation is particularly important when the product is stored at temperatures well below the welding environment temperature. Condensation can form directly on *the* product if it is opened while cold. Cold product must be allowed to stabilize thermally at the temperature in the welding environment. Moisture must not be allowed to come in contact with the packages for the warranty to remain valid.

If there are questions or concerns regarding the above, please contact me at 937-332-5084 or email at [dean.phillips@hobartbrothers.com](mailto:dean.phillips@hobartbrothers.com).

Regards,



---

Dean C. Phillips  
Mgr. of Welding Engineering

CC: File  
G. Sabel

**DEPARTMENT OF TRANSPORTATION**

SFOBB – Skyway Project  
345 Burma Road  
Oakland, CA 94607  
Facsimile Number: (510) 622-5165



*Flex Your Power  
Be Energy Efficient!*

March 17, 2005

KFM, a JV  
220 Burma Road  
Oakland, CA 94607

Contract: 04-012024  
04-SF, Ala-80-13.9/14.3, 0.0/1.6  
SFOBB Skyway Project  
*State Letter # 5.03.1-007177*

*Subject: Response to KFM-SUB-003940R00: USI Documents Clearing USI KFM NCR #72 (METS #58)*

Dear Mr. Skoro,  
Attention: Mr. Rich Bienek,

The Engineer has reviewed KFM-SUB-003940R00: USI Documents Clearing USI KFM NCR #72 (METS #58) and agrees the Contractor has sufficiently addressed this NCR due to the additional control procedures implemented. The Engineer understands these new procedures will ensure the maximum exposure time allowed for FCAW electrodes used for fracture critical welding does not exceed 24 hours in accordance with Section 12.6.7.4 of AWS D1.5. USI NCR No. 58 is resolved.

Should you have any questions, please contact David Wu at (510) 622-5104 or Patrick Lowry at (858) 344-2712.

Sincerely,

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

David Wu  
Senior Bridge Engineer

For: Mr. Douglas Coe  
Resident Engineer

cc: D. Coe, I. Khinsann, V. Iyer, D. Wu, S. Abbas, B. Chew, H. El-Natur, P. Lowry, I. Kwong

file: 5.03.1, 9.06.8