

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING 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  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000634**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0607**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> OBG Segment 8CW
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Weld Repair on 2 linear cracks performed without CWR on Segment 8CW Floor Beam to Longitudinal Diaphragm

**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of Segment 8CW, this QA inspector discovered the following issue:

- ZPMC performed two (2) weld repairs of linear cracks (verified by Magnetic Particle Testing (MT) on January 13, 2010) without the prior approval of the engineer.
- This fillet weld is identified as: SSD10-PP68-101.
- This fillet weld joins the Side Plate (SP158A) to Floor Beam (FB11C).
- This fillet weld is located at panel point 68 (PP68) on the Counter Weight side.
- This weld is designated as Seismic Performance Critical Member (SPCM).
- The Side Plate is identified as plate number PL548A (SPCM).
- The Floor Beam is Identified as plate number X46B (Non SPCM).
  
- This complete joint penetration weld (CJP) is identified as: SEG047D-001
- This CJP weld joins the Longitudinal Diaphragm (LD13A) to Floor Beam (FB11C).
- The CJP is located at PP68 on the Counter Weight side.
- This weld is designated as Seismic Performance Critical Member (SPCM).
- The Longitudinal Diaphragm is identified as plate number X43N (Non SPCM).
- The Floor Beam is Identified as plate number X47C (SPCM).
- OBG segment 8CW is located outside on the west side of the Blast Shop.

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 3 )



## Applicable reference:

AWS D1.5-2002 Section 12.17.1 WPS Requirements; "Repair welding shall be done in conformance with an approved WPS."

AWS D1.5-2002 Section 12.17.4 Approval; "All critical repairs to base metal and welds shall be approved by the Engineer prior to beginning the repair and shall be documented giving details of the type of discontinuity and extent of repair."

Special Provisions Section 8-3; The Engineer shall be notified in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered and also of the proposal repair procedures to correct them.

AWS D1.5-2002 Section 3.7.4; Prior approval of the Engineer shall be obtained for repairs to base metal, repairs of major or delayed cracks.

AWS D1.5-2002 Section 6.3.1; The inspector shall make certain that all WPS's are qualified in conformance with Section 5 of this code The inspector shall make certain that each welding operation is covered by a written WPS and that such WPS's are available to the welders and inspectors for reference.

**Who discovered the problem:** Subhasis Bera

**Name of individual from Contractor notified:** Wang Chao

**Time and method of notification:** 1310 hours, 01/15/10, Verbal

**Name of Caltrans Engineer notified:** Bill Howe

**Time and method of notification:** 1800 hours, 01/15/10, E-mail

**QC Inspector's Name:** Wang Wei Ming

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

**Contractor's proposal to correct the problem:**

N/A

## Comments:

This report is for the purpose of determining 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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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**Inspected By:** Simonis,Jim

QA Inspector

**Reviewed By:** Wahbeh,Mazen

SMR

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**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**

333 Burma Road  
Oakland CA 94607  
Tel: Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

**To:** AMERICAN BRIDGE/FLUOR, A JV  
375 BURMA ROAD  
OAKLAND CA 95607

**Date:** 20-Jan-2010

**Contract No:** 04-0120F4  
04-SF-80-13.2 / 13.9

**Dear:** Mr. Charles Kanapicki

**Job Name:** SAS Superstructure

**Attention:** Mr. Thomas Nilsson Project/Fabrication Manager

**Document No:** 05.03.06-000601

**Subject:** NCR No. ZPMC-0607

**Reference Description:** Weld Repair on 2 linear cracks performed without CWR on Segment 8CW Floor Beam to Longitudinal Diaphragm

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

**Material Location:** OBG **Lift:** 08

**Remarks:**

During the Quality Assurance (QA) random in-process visual inspection of Segment 8CW, this QA inspector discovered the following issue:

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- The Floor Beam is Identified as plate number X47C (SPCM).
- OBG segment 8CW is located outside on the west side of the Blast Shop.

**Action Required and/or Action Taken:**

Do not initiate weld repair without prior approval of the engineer. Submit NDT records indicating these two welds are sound. A response for the resolution of this issue is expected within 7 days.

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# NCT

( Continued Page 2 of 2 )

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**Transmitted by:** Bill Howe      Sr. Transportation Engineer

**Attachments:**    ZPMC-0607

**cc:**    Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

**To:** CALTRANS - SAS Superstructure  
333 Burma Road  
Oakland CA 94607

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000601

**Subject:** NCR No. ZPMC-0607

**Dated:** 09-Jun-2010

**Contract No.:** 04-0120F4  
04-SF-80-13.2 / 13.9

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000678 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC has repaired the welds in question and performed NDT to show that the welds are acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has repaired the welds in question and performed NDT to show that the welds are acceptable. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000678R00;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 13-Jun-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0607 is closed.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 13-Jun-2010



No. B-779

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-6-4**

**REGARDING: NCR-000634(ZPMC-0607)**

ZPMC acknowledged this problem and has written an internal NCR. ZPMC QA personnel have emphasized the requirement of the present of WRR & CWR prior to start welding repair. ZPMC QC/CWI will pay more attention on such preparation. ZPMC is providing the NDT records show these welds are acceptable after repair and is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000634(ZPMC-0607)

B787-MT-22774 R1

B787-MT-23722

A handwritten signature in black ink, appearing to be "Jing" followed by a flourish.

6/4/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge  
333 Burma Road  
Oakland CA 94607  
Tel: Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

**To:** AMERICAN BRIDGE/FLUOR, A JV  
375 BURMA ROAD  
OAKLAND CA 95607  
**Date:** 20-Jan-2010  
**Contract No:** 04-0120F4  
04-SF-80-13.2 / 13.9  
**Dear:** Mr. Charles Kanapicki  
**Job Name:** SAS Superstructure  
**Attention:** Mr. Thomas Nilsson Project/Fabrication Manager  
**Document No:** 05.03.06-000601  
**Subject:** NCR No. ZPMC-0607

**Reference Description:** Weld Repair on 2 linear cracks performed without CWR on Segment 8CW Floor Beam to Longitudinal Diaphragm

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

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- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

**Material Location:** OBG

**Lift:** 08

### Remarks:

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-OBG segment 8CW is located outside on the west side of the Blast Shop.

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**NCT**

*( Continued Page 2 of 2 )*

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**Transmitted by:** Bill Howe      Sr. Transportation Engineer

**Attachments:**    ZPMC-0607

**cc:**    Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao

**File:**    05.03.06

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B

**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000634**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0607**Type of problem:**Welding  Concrete  Other Welding  Curing  Procedural  Bridge No: 34-0006Joint fit-up  Coating  Other  Component: OBG Segment 8CWProcedural  Procedural  Description:**Reference Description:** Weld Repair on 2 linear cracks performed without CWR on Segment 8CW Floor Beam to Longitudinal Diaphragm**Description of Non-Conformance:**

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



### Applicable reference:

AWS D1.5-2002 Section 12.17.1 WPS Requirements; "Repair welding shall be done in conformance with an approved WPS."

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**Name of individual from Contractor notified:** Wang Chao

**Time and method of notification:** 1310 hours, 01/15/10, Verbal

**Name of Caltrans Engineer notified:** Bill Howe

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**QC Inspector's Name:** Wang Wei Ming

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

**Contractor's proposal to correct the problem:**

N/A

### Comments:

This report is for the purpose of determining 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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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**Inspected By:** Simonis,Jim

QA Inspector

**Reviewed By:** Wahbeh,Mazen

SMR





**DEPARTMENT OF TRANSPORTATION**

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(707) 649-5453  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000684**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Jul-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0607**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b>
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Date the Non-Conformance Report was written:** 15-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of Segment 8CW, this QA inspector discovered the following issue:

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- The Longitudinal Diaphragm is identified as plate number X43N (Non SPCM).
- The Floor Beam is Identified as plate number X47C (SPCM).
- OBG segment 8CW is located outside on the west side of the Blast Shop.

**Contractor's proposal to correct the problem:**

Provide NDT documentation to verify weld quality and issue an internal NCR in regards to the quality management issue.

**Corrective action taken:**

Contractor submitted NDT documentation verifying repairs meet Contract weld quality requirements and issued an internal NCR in regards to this issue.

