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
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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, PRC **Report No:** NCR-000180
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 25-Aug-2008
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0163

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐		
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:**	34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**	DP026-002, DP028-001
Procedural	☑	**Procedural**	☐	**Descripton:**	OBG Deck Panels		

Reference Description: Diaphragm Manual Cutting

Description of Non-Conformance:

The Contractor's workmanship was not in conformance to contract documents. The Contractor performed freehand thermal cutting of OBG diaphragm plates without Engineer approval. This occurred on the OBG diaphragm plate on deck panels DP028-001 and DP026-002 at panel point PP25 at the floorbeam FB-015A connection on segment SEG 4AW.

Applicable reference:

AWS D1.5, Sec. 3.2.2: "Freehand thermal cutting shall be done only where approved by the Engineer."

Who discovered the problem: Caltrans Quality Assurance Robert H. Vatcher
Name of individual from Contractor notified: ABFJV QC Inspector Art Peterson
Time and method of notification: Verbal notification at 1330 hrs.
Name of Caltrans Engineer notified: Kannu Balan
Time and method of notification: Verbal notification at 1345 hrs.
QC Inspector's Name: ZPMC QC Mr. Wang Lu
Was QC Inspector aware of the problem: ☐ **Yes** ☑ **No**
Contractor's proposal to correct the problem:

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 Abifhiram Velasco, who represents the Office of Structural Materials for your project.

Inspected By:	Velasco,Abifhiram	SMR
Reviewed By:	Velasco,Abifhiram	SMR

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: 510-622-5151 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	**Date:**	04-Sep-2008
		Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Dear:	Mr. Charles Kanapicki	**Job Name:**	SAS Superstructure
Attention:	Mr. Charles Kanapicki Quality Control Manager	**Document No:**	05.03.06-000153
Subject:	NCR No. ZPMC-0163		
Reference Description:	Diaphragm Manual Cutting		

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:** 04

Remarks:

The Contractor's workmanship was not in conformance to contract documents. The Contractor performed freehand thermal cutting of OBG diaphragm plates without Engineer approval. This occurred on the OBG diaphragm plate on deck panels DP028-001 and DP026-002 at panel point PP25 at the floorbeam FB-015A connection on segment SEG 4AW.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance and steps to be taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Kannu Balan Sr. Engineer

Attachments: ZPMC-0163

cc: Rick Morrow, Gary Pursell, Doug Coe, Jason Tom, Kannu Balan, Ching Chao

File: 05.03.06

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000153

Subject: NCR No. ZPMC-0163

Dated: **11-Sep-2008**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000151 Rev: 00**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is drafting an RFI requesting the use of free hand cutting in areas not accessible for mechanical cutting.

ZPMC performed free hand cutting on as it was not practical to set up mechanical devices to cut these pieces. ABF reminded ZPMC that free hand cutting is not unacceptable, however, free hand cutting must be approved by the Engineer. ZPMC is drafting an RFI requesting the use of free hand cutting in areas not accessible for mechanical cutting as long as the profile of cut is acceptable and the CT inspector is notified verbally prior to cutting.

Submitted by:

Attachment(s): ABF-NPR-000151R00

Caltrans' comments:

Status: REJ

Date: 01-Oct-2008

The proposed resolution is not acceptable. The Request for Information (RFI) mentioned in this proposed resolution has not been received. Please re-submit the proposed resolution when the RFI to request the use of free hand thermal cutting has been resolved. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0163 at that time.

Submitted by: Wright, Doug

Date: 01-Oct-2008

Attachment(s):

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000153

Subject: NCR No. ZPMC-0163

Dated: **19-Dec-2008**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000151 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is drafting an RFI requesting the use of free hand cutting in areas not accessible for mechanical cutting.

ZPMC performed free hand cutting on as it was not practical to set up mechanical devices to cut these pieces. ABF reminded ZPMC that free hand cutting is not unacceptable, however, free hand cutting must be approved by the Engineer. ZPMC is drafting an RFI requesting the use of free hand cutting in areas not accessible for mechanical cutting as long as the profile of cut is acceptable and the CT inspector is notified verbally prior to cutting.

Submitted by:

Attachment(s): ABF-NPR-000151R01;

Caltrans' comments:

Status: REJ

Date: 22-Dec-2008

The proposed resolution is not acceptable. Freehand thermal cutting shall only be done where the Engineer has given prior approval in writing.

The freehand flame cutting procedure attached to this NPR was submitted in ABF-SUB-000872, and returned for correction as detailed in State letter 5.03.01-2934. Revisions to fabrication procedures should be addressed through a formal submittal, and not through a proposed resolution to an NCR.

Submitted by: Wright, Doug

Date: 23-Dec-2008

Attachment(s):

上海振华港机(集团)股份有限公司 ZPMC
SHANGHAI ZHENHUA PORT MACHINERY CO., LTD.
地址：中华人民共和国上海浦东南路 3470 号 ADDRESS: 3470 PUDONG NAN-LU, SHANGHAI 200125, P.R.CHINA
Postcode (邮编): 200125 Telephone(电话): +86 21 58396666 Fax (传真): +86 21 58399555 E-mail(电子邮件): mail@zpmc.com

Freehand Flame Cutting.

Freehand flame cutting procedure:

Freehand flame cutting procedure may be performed in areas where it is impractical to use machine flame cutting or a mechanical guide. Freehand flame cutting should follow this procedure unless otherwise approved by Engineer.

1. Mark the cutting line on steel plate.
2. Carefully freehand flame cut to approximately 3mm above the cutting line.
3. Grind the remaining 3mm to the cutting line.
4. Occasional notches or gouges deeper than the cutting line, which are not subsequently welded, should be removed by fairing to the material edge with a slope not steep than 1:10 and with grinding marks parallel to the material surfaces. The repair should not remove more than 2% of the nominal section.
5. Maximum roughness for the flame cut surface should meet the requirements in AWS D1.5.
6. Sharp corners that are not to be incorporated into a weld shall be removed by chamfering the edge.

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000153

Subject: NCR No. ZPMC-0163

Dated: **02-Feb-2009**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000151 Rev: 02**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will notify the onsite engineers prior to freehand flame cutting materials over 25mm.

ZPMC will notify the onsite engineers prior to freehand flame cutting materials over 25mm. Materials less than or equal to 25mm will be performed on a pre-approved basis in accordance with the attached procedure. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ; ABF-NPR-000151R02

Caltrans' comments:

Status: CLO

Date: 17-Feb-2009

The proposed resolution is acceptable. The freehand flame cutting procedure was submitted as part of ABF submittal 872R01, and was approved as noted in State letter 3475. The Department concurs that Non-Conformance ZPMC-0163 is closed.

Flame cutting of materials greater than 25mm in thickness requires Engineer approval prior to cutting.

Submitted by: Wright, Doug

Date: 17-Feb-2009

Attachment(s):

American Bridge / FLUOR
A JOINT VENTURE

Subject: Free Hand Flame Cutting Procedure

1.0 Purpose

1.1 The purpose of this procedure is to request Engineer's approval for flame cutting when mechanically guided flame cutting is not practical due to accessibility, cross sectional geometry and or position.

2.0 Scope

2.1 This procedure outlines the technique and process for flame cutting of materials 25mm and less when mechanical guides are not available.

2.2 Flame cutting of materials greater than 25mm shall require notification of the Engineer prior to cutting.

3.0 Procedure

3.1 Mark a cutting line on the item to be cut.

3.2 Protect surrounding materials with cover plates or suitable nonflammable material. Or remove surrounding material that may be damaged.

3.3 Carefully cut to approximately 3mm above the cutting line. If possible, the use of a cutting guide such as a piece of angle iron, flat bar or other template shall be used to guide the torch tip in a straight line while cutting.

3.4 Grind the remaining 3mm to the cutting line. Ground edges shall be inspected for discontinuities per AWS D1.5 Section 3.2.3. All repairs shall be per AWS D1.5 Section 3.2.3.

3.5 Occasional notches of gouges deeper than the cutting line in the material edges, which are not subsequently welded, should be removed by fairing to the material edge with a slope not steeper than 1 : 10 and with grinding marks parallel to the material surfaces. The repair should not remove more than 2% of the nominal section.

3.6 Maximum roughness for the flame cut surface should meet the requirements in AWS D1.5 Section 3.2.3.

3.7 Sharp corners that are not to be incorporated into a weld shall be removed by chamfering the edge.

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Changxing Island, Shanghai, PRC **Report No:** NCS-000199
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 27-Feb-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0163

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**
Procedural	☑	**Procedural**	☐	**Descripton:**		

Date the Non-Conformance Report was written: 25-Aug-2008

Description of Non-Conformance:

The Contractor's workmanship was not in conformance to contract documents. The Contractor performed freehand thermal cutting of OBG diaphragm plates without Engineer approval. This occurred on the OBG diaphragm plate on deck panels DP028-001 and DP026-002 at panel point PP25 at the floorbeam FB-015A connection on segment SEG 4AW.

Contractor's proposal to correct the problem:

ZPMC will notify the onsite engineers prior to freehand flame cutting materials over 25mm. ZPMC will work according to the approved as noted submittal ABF-SUB-000872R01 “Freehand Flame Cutting Shop Procedure - ZPMC Fabrication Procedure,” dated January 27, 2009.

Corrective action taken:

The proposed resolution is acceptable. The freehand flame cutting procedure was submitted as part of the ABF submittal 872R01, and was approved as noted in State letter 3475. ZPMC will work according to this approved as noted submittal. Also, ZPMC/ABF will notify CT and obtain Engineer's approval prior to flame cutting of materials greater than 25mm thick.

Did corrective action require Engineer's approval? ☐ **Yes** ☑ **No**

If so, name of Engineer providing approval: **Date:**

Is Engineer's approval attached? ☐ **Yes** ☑ **No**

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 Eric Tsang, +(86) 150.0042.2372, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang,Eric	Quality Assurance Inspector
Reviewed By:	Wahbeh,Mazen	QA Reviewer