

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



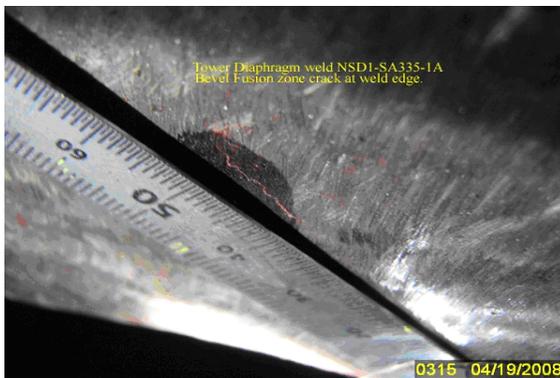
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, PRC**Report No:** NCR-000122**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Apr-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0118**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Skin Plate weld#NSD1-SA335-1
Procedural	Procedural	Descriptor: QC failure to identify weld crack	

Reference Description: AWS D1.5 (2002) Section 6.26.2**Description of Non-Conformance:**

ABF has allowed ZPMC QC to accept a Complete Joint Penetration weld with a crack on weld # NSD1-SA335-1, plate SA335 to P459. ZPMC QC Inspector MR. Botin Rui accepted the weld on April 18, 2008. Caltrans QA Inspector Viars retested the weld by MT and found a 15 mm crack on the weld groove bevel in the base metal near the weld metal. Applicable reference which has been violated includes American Welding Society AWS D1.5 (2002) section 6.26.2 which states "Welds that are subject to RT or MT in addition to visual inspection shall have no cracks and shall be unacceptable if the RT or MT shows any types of discontinuities described in 6.26.2.1, 6.26.2.2, 6.26.2.3, or 6.26.2.4"

**Applicable reference:**

American Welding Society AWS D1.5 (2002) section 6.26.2 which states "Welds that are subject to RT or MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Larry Viars, METS Inspector**Name of individual from Contractor notified:** Steve Lawton, ABF FQCM

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: Verbal, 04/21/08, 1000 hours

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: Verbal, 04/21/08, 0900 hours

QC Inspector's Name: Shen Xue Jun

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

None at this time.

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, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: McReynolds,Robert

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: American Bridge/Fluor Enterprises, a JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 22-Apr-2008

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Dave Williams Consultant

Document No: 05.03.06-000099

Subject: NCR No. ZPMC-0118

Reference Description: AWS D1.5 (2002) Section 6.26.2

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 - No Response Required.

Material Location: Tower **Lift:** 01

Remarks:

ABF has allowed ZPMC QC to accept a complete joint penetration weld with a crack on weld #NSD1-SA335-1, plate SA335 to P459. Caltrans QA inspector retested the weld by MT and found a 15mm crack on the weld groove bevel in the base metal near the weld metal. Please also see the attached NCR #ZPMC-0118 for details.

Action Required and/or Action Taken:

- Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.
- Submit a critical weld repair for the crack found for engineer's approval prior to the repair.

Transmitted by: Ching Chao

Attachments: ZPMC-0118

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Mark Woods, Doug Coe, Jason Tom, Ching Chao, Scott Kennedy

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000099

Subject: NCR No. ZPMC-0118

Dated: 10-Sep-2008

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000122 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ABF JV and ZPMC realize the code does not allow cracks. If a crack is missed due to delayed cracking or improper inspection technique ABF can provide preventive action.

ABF JV takes exception to this NCR as it states: "ABF has allowed ZPMC QC to accept a CJP weld with a crack in no way shape or form would ABF JV allow ZPMC to accept a crack without engineers approval. ABF JV and ZPMC realize the code does not allow cracks. If a crack is missed due to delayed cracking or improper inspection technique ABF can provide preventive action."

Submitted by:

Attachment(s): ABF-NPR-000122R00

Caltrans' comments:

Status: A&P

Date: 29-Sep-2008

The response is acceptable, but the Non-Conformance is not closed.

Please provide documentation that the Magnetic Particle testing (MT) of the weld in question has been accepted. Also, comment on what, if any, training the MT technician who missed the indication has received. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0118 at that time.

Submitted by: Wright, Doug

Date: 29-Sep-2008

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000099

Subject: NCR No. ZPMC-0118

Dated: 15-Dec-2008

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000122 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC requests closure of this NCR based on attached documentation.

Please see attached.

Submitted by:

Attachment(s): ABF-NPR-000122R01; docs to close this NCR

Caltrans' comments:

Status: CLO

Date: 21-Dec-2008

The proposed resolution is acceptable. The welds in question have been accepted by MT and UT as shown in the attached documents, and the MT technician received a verbal warning regarding this issue. The Department concurs that Non-Conformance ZPMC-0118 is closed.

Submitted by: Wright, Doug

Date: 22-Dec-2008

Attachment(s):

	<h2 style="margin: 0;">TRANSMITTAL LETTER</h2>
---	--

PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 12/12/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: CALTRANS NCR FOR CLOSURE

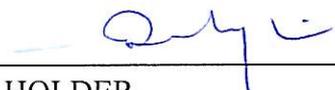
SUBMITTED FOR YOUR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

- (1) COPY OF LETTER OF RESPONSE WITH NO.T-022 FOR CLOSURE.
- (2) COPY OF NCR WITH NUMBER NCR-000122(ZPMC-0118).
- (3) COPY OF ABF-NPR-000122
- (4) COPY OF UT REPORTS AND MT REPORTS.

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:



PLAN HOLDER

RECEIVED 12 DEC 2008
1410

DATE



COMPANY

PHONE NO.

PLAN NUMBER: N/A
#R787-QCP-102



No. T-022

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2008-12-12

REGARDING: NCR-122 ZPMC-118

ZPMC received NCR-122(ZPMC-118), it mentioned that ZPMC QC accepted a complete joint penetration weld with a crack on weld: NSD1-SA335-1, plate SA335 to P459. Caltrans QA inspector retested the weld by MT and found a 15mm crack on the weld groove bevel in the base metal near the weld metal.

ZPMC acknowledged this problem and did the MT again. The ZPMC inspector found the linear indication was on the surface of the butt weld edge, so the defect was removed after a little bit grinding. UT report T787-UT-463 and MT report T787-MT-833 showed this weld had been accepted, and this double diaphragm has been finally tagged after CT's inspection. ZPMC had also given a verbal warning that the NDT technician must keep a close eye against losing the small defect when he did the MT.

So here ZPMC attached AB/F NCR proposed solution ABF-NPR-000122 and the NDT reports, hoped Caltrans can take a review and close this NCR.

ATTACHMENT:

NCR-000122 (ZPMC-0118)

ABF-NPR-000122

T787-UT-463

T787-MT-833

2008-12-12

ABF QCM
15 DEC. 08



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: American Bridge/Fluor Enterprises, a JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 22-Apr-2008

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Dave Williams Consultant
Subject: NCR No. ZPMC-0118

Job Name: SAS Superstructure
Document No: 05.03.06-000099

Reference Description: AWS D1.5 (2002) Section 6.26.2

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 - No Response Required.

Material Location: Tower Lift: 01

Remarks:

ABF has allowed ZPMC QC to accept a complete joint penetration weld with a crack on weld #NSD1-SA335-1, plate SA335 to P459. Caltrans QA inspector retested the weld by MT and found a 15mm crack on the weld groove bevel in the base metal near the weld metal. Please also see the attached NCR #ZPMC-0118 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.
Submit a critical weld repair for the crack found for engineer's approval prior to the repair.

Transmitted by: Ching Chao
Attachments: ZPMC-0118

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Mark Woods, Doug Coe, Jason Tom, Ching Chao, Scott Kennedy
File: 05.03.06

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 #: 04-0120F4
 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-000122

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Apr-2008

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0118

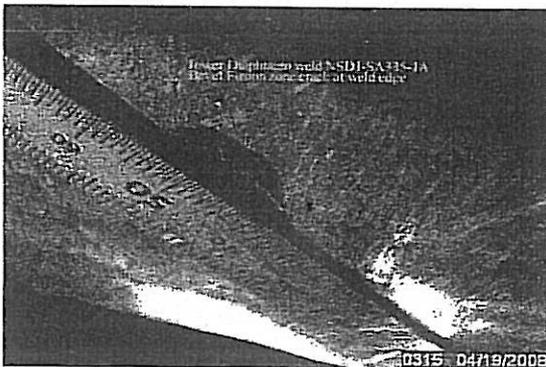
Type of problem:

Welding **Concrete** **Other**
Welding **Curing** **Procedural** **Bridge No:** 34-0006
Joint fit-up **Coating** **Other** **Component:** Skin Plate weld#NSD1-SA335-1
Procedural **Procedural** **Descriptor:** QC failure to identify weld crack

Reference Description: AWS D1.5 (2002) Section 6.26.2

Description of Non-Conformance:

ABF has allowed ZPMC QC to accept a Complete Joint Penetration weld with a crack on weld # NSD1-SA335-1, plate SA335 to P459. ZPMC QC Inspector MR. Botin Rui accepted the weld on April 18, 2008. Caltrans QA Inspector Viars retested the weld by MT and found a 15 mm crack on the weld groove bevel in the base metal near the weld metal. Applicable reference which has been violated includes American Welding Society AWS D1.5 (2002) section 6.26.2 which states "Welds that are subject to RT or MT in addition to visual inspection shall have no cracks and shall be unacceptable if the RT or MT shows any types of discontinuities described in 6.26.2.1, 6.26.2.2, 6.26.2.3, or 6.26.2.4"



Applicable reference:

American Welding Society AWS D1.5 (2002) section 6.26.2 which states "Welds that are subject to RT or MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Larry Viars, METS Inspector

Name of individual from Contractor notified: Steve Lawton, ABF FQCM

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: Verbal, 04/21/08, 1000 hours

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: Verbal, 04/21/08, 0900 hours

QC Inspector's Name: Shen Xue Jun

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

None at this time.

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, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: McReynolds,Robert

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer



American
Bridge

FLUOR

AMERICAN BRIDGE/FLUOR ENTERPRISES, INC.

P.O. BOX 23223 Oakland, CA 94623

Phone (510) 419-0120 / Fax (510) 859-0511

NCR PROPOSED RESOLUTION

To: CALTRANS - SAS Superstruc.
333 Burma Road
Oakland, CA 94612

Dated: 10-Sep-2008

Contract No.: 04-0120

04-SF-80-13.2 / 13.3

Attention: Pursell, Jeff
Resident Engineer

Job Name: SAS Superstructure

Ref: 05.03.06-00009

Document No.: ABF-NPR-000122 Rev: 00

Subject: NCR No. ZPMC-0118

Contractor's Proposed Resolution:

Reference Resolution: ABFJV and ZPMC realize the code does not allow cracks. If a crack is missed due to delayed cracking or improper inspection technique ABF can provide preventive action.

ABFJV takes exception to this NCR as it states "ABF has allowed ZPMC QC to accept a CJP weld with a crack" in no way shape or form would ABFJV allow ZPMC to accept a crack without engineers approval. ABFJV and ZPMC realize the code does not allow cracks. If a crack is missed due to delayed cracking or improper inspection technique ABF can provide preventive action.

Submitted by:

Attachment(s): ABF-NPR-000122.R3

Caltrans' comment:

Status: AAP

Date: 29-Sep-2008

The response is acceptable, but the Non-Conformance is not closed.

Please provide documentation that the Magnetic Particle testing (MT) of the weld in question has been accepted. Also, comment on what, if any, training the MT technician who missed the indication has received. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0118 at that time.

Submitted by: Wright, Doug

Date: 29-Sep-2008

Attachment(s):



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-463

DATE 2008.09.24

PAGE 1 OF 1

Revision No: 0

PROJECT NO.: 工程编号 ZP06-787

CONTRACTOR: CALTRANS

ITEMS NAME: 43M LOWER DIAPHRAGM

DRAWING NO.: SA335(S), P459(S)

CALTRANS CONTRACT NO.: 04-0120F4

部件名称

图号

加州工程编号

REFERENCING CODE 参考规范

ACCEPTANCE STANDARD 接受标准

PROCEDURE NO. 程序编号

AWS D1.5-2002

AWS D1.5-2002 (Table 6.3)

ZPQC-UT-01

WELDING PROCESS 焊接方法

JOINT TYPE 焊缝类型

CALIBRATION DUE DATE 仪器校正有效期

SAW

BUTT

DEC. 28ST, 2008

EQUIPMENT 设备

MANUFACTURER, 制造商

MODEL NO. 样式编号

SERIAL NO. 序列编号

UT SCOPE

PANAMETRICS

EPOCH-4B

071565311, 061488510,

061495811, 070152011,

CALIBRATION BLOCK 试块

COUPLANT 耦合剂

MATERIAL/THICKNESS 材料厚度

AWS IIV BLOCK TYPE II

C.M.C

A709M-HPS-485WT2-Z

75mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	0°	2.5 MHz	20 mm	Changchao	45°	2.5 MHz	18*18 mm
Changchao	70°	2.5 MHz	18*18 mm				
Reference Level 参考灵敏度				20dB			

Base metal inspected per AWS D1.5-2002 Section 6.19.5

0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注		
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY								
									不连续位置(mm)								
a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y									
NSD1-SA335-1A1B		70				32											
		45				32											
BLANK																	

EXAMINED BY 主探

REVIEWED BY 审核:

LEVEL - II SIGN / DATE

LEVEL - II SIGN / DATE

质量经理 / QCM

用户 CUSTOMER

签字 SIGN / 日期 DATE

签字 SIGN / 日期 DATE



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-833 DATE日期 2008.09.26 PAGE OF页码 1/1 Revision No: 0

PROJECT NO. 工程编号: ZP06-787 CONTRACTOR: 用户: CALTRANS

DRAWING NO. 图号: SA27(N),P546(N) TOWER(N) 43M LOWER DIAPHRAGM CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4

REFERENCING CODE 参考规范编码: AWS D1.5-2002 ACCEPTANCE STANDARD 接受标准: AWS D1.5-2002 PROCEDURE NO. 程序编号: ZPQC-MT-01 CALIBRATION DUE DATE 仪器校正有效期: Dec. 28ST, 2008

EQUIPMENT 设备: MT YOKE MANUFACTURER 制造商: PARKER MODEL NO. 样式编号: B310S SERIAL NO. 连续编号: 5620 5395 5617

MAGNETIZING METHOD 磁化方法: Continuous magnetic yoke 磁轭式连续法 CURRENT 电流: AC

PARTICLE TYPE 磁粉类型: Dry magnet powder 干磁粉 YOKE SPACING 磁轭间距: 70~150mm

MATERIAL TO BE EXAMINED 检测材料: WELDING 焊接件 CASTING 铸件 FORGING 锻造 Material & thickness 母材,厚度: A709M-HPS-485WT2-Z 75mm

WELDING PROCESS 焊接方法: SAW TYPE OF JOINT 焊缝类型: BUTT

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
NSD1-SA335-1A				ACC.		
NSD1-SA335-1B				ACC.		
BLANK						

EXAMINED BY 主操: Zhan Dajun REVIEWED BY 审核: Wang Wei

LEVEL - II SIGN 签名 / DATE日期: 08-9-26 LEVEL-II SIGN / DATE日期: 08-09-26

质量经理 / QCM: Hu Gang 用户CUSTOMER: _____

签字 SIGN / 日期 DATE: 2008-10-1 签字 SIGN / 日期 DATE: _____

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 #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, PRC**Report No:** NCS-000088**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Sep-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0118**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Descriptor:	

Date the Non-Conformance Report was written: 18-Apr-2008**Description of Non-Conformance:**

ABF has allowed ZPMC QC to accept a Complete Joint Penetration weld with a crack on weld # NSD1-SA335-1, plate SA335 to P459. ZPMC QC Inspector MR. Botin Rui accepted the weld on April 18, 2008. Caltrans QA Inspector Viars retested the weld by MT and found a 15 mm crack on the weld groove bevel in the base metal near the weld metal. Applicable reference which has been violated includes American Welding Society AWS D1.5 (2002) section 6.26.2 which states "Welds that are subject to RT or MT in addition to visual inspection shall have no cracks and shall be unacceptable if the RT or MT shows any types of discontinuities described in 6.26.2.1, 6.26.2.2, 6.26.2.3, or 6.26.2.4"

Contractor's proposal to correct the problem:

METS-OSM will track this issue as a Quality Management Issue and does not request a response from the Contractor at this time. If this issue becomes systemic, METS will elevate this issue to second-tier and request a response from the Contractor.

Corrective action taken:

N/A.

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 Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

Inspected By: Ishibashi, Josh

Quality Assurance Inspector

Reviewed By: Smith, Ryan

QA Reviewer