

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-000355**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Jul-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0329**Type of problem:**

Welding	Concrete	Other
Welding	Curing	Procedural
Joint fit-up	Coating	Other
Procedural	Procedural	Description:

Bridge No: 34-0006**Component:** CA098-002 of OBG Segment 1BE**Reference Description:** Missed UT Indications**Description of Non-Conformance:**

During random 10% verification Ultrasonic Testing (UT) on Deck Panel to Edge Panel corner weld (CA098-002) of Segment 1BE, Caltrans Quality Assurance (QA) Inspector discovered a class "A" non conforming indication measuring approximately 10mm to 15mm in length. ZPMC QC had previously accepted the weld joint mentioned above, but the subassembly was never signed by the ZPMC technician.

**Applicable reference:**

AWS D1.5-2002, Section 6, Table 6.3

Who discovered the problem: Shrikant Utekar**Name of individual from Contractor notified:** Waiy Zhong Yuan**Time and method of notification:** 21:30, Verbal**Name of Caltrans Engineer notified:** Bill Howe**Time and method of notification:** 0800 hours, Verbal**QC Inspector's Name:** Chen Bo

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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

Inspected By:	Simonis,Jim	QA Inspector
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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: 05-Aug-2009

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: 05.03.06-000328

Subject: NCR No. ZPMC-0329

Reference Description: Missed UT Indications

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:** 01

Remarks:

During random 10% verification Ultrasonic Testing (UT) on Deck Panel to Edge Panel corner weld (CA098-002) of Segment 1BE, Caltrans Quality Assurance (QA) Inspector discovered a class "A" non conforming indication measuring approximately 10mm to 15mm in length. ZPMC QC had previously accepted the weld joint mentioned above, but the subassembly was never signed by the ZPMC technician.

Action Required and/or Action Taken:

Submit repair procedure for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0329

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, Jason Tom, 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: 05.03.06-000328

Subject: NCR No. ZPMC-0329

Dated: 24-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000327 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ABF has notified ZPMC of this nonconformance and instructed the same UT operator to recheck this weld.

ABF has notified ZPMC of this nonconformance and instructed the same UT operator to recheck this weld. The UT operator verified the indication was an unacceptable Class "A" indication and has since marked the part for repair. ABF has discussed UT technique issues as well as the code required inspection results to be marked on the part with ZPMC to prevent further nonconformances. ZPMC will submit repair reports at a later date to close this NCR.

Submitted by:

Attachment(s): ABF-NPR-000327R00

Caltrans' comments:

Status: AAP

Date: 28-Aug-2009

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

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0329 at that time.

Submitted by: Wright, Doug

Date: 28-Aug-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000328

Subject: NCR No. ZPMC-0329

Dated: 27-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000327 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has attached the repair and inspection documents needed for closure of this NCR. Also ZPMC generated an internal NCR to document corrective and preventive actions.

ZPMC has attached the repair and inspection documents needed for closure of this NCR. Also ZPMC generated an internal NCR to document corrective and preventive actions. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000327R01;

Caltrans' comments:

Status: CLO

Date: 31-Aug-2009

The proposed resolution is acceptable. The welding repair report is included, and the weld in question has been accepted by UT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0329 is closed.

Submitted by: Wright, Doug

Date: 31-Aug-2009

Attachment(s):



No. B-459

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-8-25

REGARDING: NCR-000355 (ZPMC-329)

With this letter of response, ZPMC requests closure for Caltrans **NCR-000355 (ZPMC-329)**. We agree what describe in the non-conformance report, and have trained the corresponding NDT operator that should control the inspect speed and move the transducer more carefully, if find any suspected indication then will repeat the action until make issue that the internal indication is within the tolerance of the specification or not.

By the way we have re-check for the point by UT and performed the weld repair, and then complete with the UT inspection at final, we provide the weld repair report and NDT acceptable report to support the good quality of the CA098-002.

so base on the above explanation and attached documentations, ZPMC applies to close the caltrans's report **NCR-000355 (ZPMC-329)**.

Please reference attached document for acceptance and closure the **NCR-000355 (ZPMC-329)**.

ATTACHMENT:

ZPMC internal NCR

NCR-000355 (ZPMC-329)

The weld repair report

The complete UT report

Zhao Shuangbao

2009. 8. 25



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B 项目名称: 美国加州海湾大桥		NCR Number: NCR 编号: NCR-B-225 (ZPMC-0329)
Item: Missed UT indications 名称描述: UT 漏检	Item Number: 件号: OBG 1BE	Drawing: 图号: OBG 1BE CA098
Location: OBG 1BE 位置:		Date: 日期: 2009-8-12

Description of Nonconformance:
不符合项状态描述:

During random 10% verification Ultrasonic Testing (UT) on Deck Panel to Edge Panel corner weld (CA098-002) of Segment 1BE, Caltrans Quality Assurance (QA) Inspector discovered a class "A" non conforming indication measuring approximately 10mm to 15mm in length. ZPMC QC had previously accepted the weld joint mentioned above, but the subassembly was never signed by the ZPMC technician.

加洲检验员在对 1BE 箱体内, 顶板与腹板之间的角焊缝 CA098-002 做 10%UT 抽检时发现一长度约 10~15 毫米的 "A" 类缺陷。此焊缝之前已经由 ZPMC 检验员验收合格, 但未在钢板上签字。

Work By: LZindy Prepared by: Shen Xuejun Reviewed by QCE: Lai Jianhua
 施工方: 2009.08.13 准备: 2009.8.13 质量工程师批准: 8/13/09

Drawing Error Material Defect Fabrication Error Other
 图纸错误 材料缺陷 制作错误 其他原因

Disposition: Use as is Repair Reject
 处理措施: 回用 返修 拒收

Recommendation:
建议: 确认返修. Repair

Prepared by: LZindy Approved by QCA: _____
 准备: 2009.08.13 质量经理批准

Reason for Nonconformance:
不符合原因: 缺陷漏检. Discover class A defects.

Prevention of Re-occurrence:
预防措施: Improve inspection ability and inspection
提高现场检验能力, 加强巡检.

Approved by/批准: Li Li
2009.08.09

Technical Justification for Use-As-Is/Repair: Attachment Non-attachment
回用或返修的技术依据: 附件 无附件

Reviewed /批准: _____

Verification: Acceptable Unacceptable
确认: 可接受 不可接受

Verified by QCI/质检确认: _____ Reviewed by QCA/质检主任审核: _____

#R787-QCP-1300



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: 05-Aug-2009
 Contract No: 04-0120F4
 04-SF-80-13.2 / 13.9

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager
 Subject: NCR No. ZPMC-0329

Job Name: SAS Superstructure
 Document No: 05.03.06-000328

Reference Description: Missed UT Indications

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: 01

Remarks:

During random 10% verification Ultrasonic Testing (UT) on Deck Panel to Edge Panel corner weld (CA098-002) of Segment 1BE, Caltrans Quality Assurance (QA) Inspector discovered a class "A" non conforming indication measuring approximately 10mm to 15mm in length. ZPMC QC had previously accepted the weld joint mentioned above, but the subassembly was never signed by the ZPMC technician.

Action Required and/or Action Taken:

Submit repair procedure for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0329

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, Jason Tom, Ching Chao
 File: 05.03.06

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
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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-000355

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 15-Jul-2009

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

NCR #: ZPMC-0329

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

Bridge No: 34-0006

Component: CA098-002 of OBG Segment 1BE

Reference Description: Missed UT Indications

Description of Non-Conformance:

During random 10% verification Ultrasonic Testing (UT) on Deck Panel to Edge Panel corner weld (CA098-002) of Segment 1BE, Caltrans Quality Assurance (QA) Inspector discovered a class "A" non conforming indication measuring approximately 10mm to 15mm in length. ZPMC QC had previously accepted the weld joint mentioned above, but the subassembly was never signed by the ZPMC technician.



Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3

Who discovered the problem: Shrikant Utekar

Name of individual from Contractor notified: Waiy Zhong Yuan

Time and method of notification: 21:30, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 0800 hours, Verbal

QC Inspector's Name: Chen Bo

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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

Inspected By: Simonis, Jim

QA Inspector

Reviewed By: Wahbeh, Mazen

SMR



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	OBE1	报告编号 Report No.	B-WR6857
合同号 Contract No.:	04-0120F4	部件名称 Items Name	1BE PLATE PANEL SPLICE	NDT报告编号 Report No.of NDT	B787-UT-7998
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

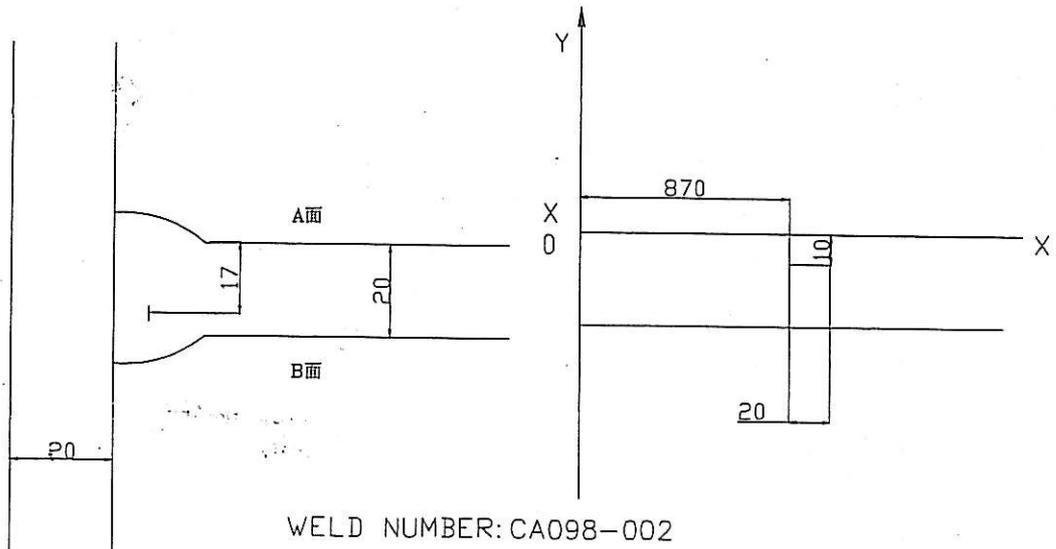
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) CA098-002

检验员 (Inspector): Han feng 日期(Date): 09.08.05

焊缝返修位置示意图:

Draft of welding discontinuity:



产生原因:

Caused:

- 1、焊道未及时处理干净。
1. Did not clear the weld pass completely in time.

车间负责人(Foreman): *Gao Jun* 日期(Date): *07-08-07*

处理意见

Disposition :

1. 从缺陷距离端面较近一侧 ($D \leq 0.65T$, D为缺陷深度, T为板厚) 采用碳刨或打磨的方法去除焊缝缺陷;
2. 参照返修焊接工艺规程 (WPS) 准备正确的接头型式, 预热和焊接;
3. 焊前对修补区域进行VT检测保证缺陷完全被清除;
4. 将修补区域打磨到与母材或邻近焊缝平齐;
5. 根据批准的车间图纸检查焊缝.

1. Gouge or grind from nearer side from metal edge ($D \leq 0.65T$, "D" is depth of defects, "T" is thickness of metal) to remove all defects;
2. Follow repair WPS for joint preparation, preheat, and weld deposit;
3. Verify with VT no defects remain in the weld joint prior to welding;
4. Grind the repaired area flush with base metal or the adjacent weld;
5. Check the welds according to the working drawings.

工艺: *Niu Tiejun*
Technical engineer

07-08-07

审核:
Approved by

日期
Date



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	OBE1	报告编号 Report No.	B-WR6857
合同号 Contract No.:	04-0120F4	部件名称 Items Name	1BE PLATE PANEL	NDT报告编号 Report No.of NDT	B787-UT-7998
项目编号 Project No.:	ZP06-787		SPLICE		

纠正措施:

Correction action to prevent re occurrence:

1. 加强焊接监控和道间清理。

1. Improve monitoring of welding and interpass cleaning.

车间负责人(Foreman): Gao Jun 日期(Date): 07.08.07

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-4 G(4F)-Repair WPS-345-SMAW-4 G(4F)-FCM-Repair	工艺员 technologist	Niu Te feng 07.08.07
返修(碳刨)前预热温度 Preheat temperature before gouging	86°C	返修的缺陷 Description of discontinuity	N/A
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	102°C
最大碳刨深度 Max. depth of gouging	8mm	碳刨总长 Total length of gouging	125mm
焊工 welder 045246	焊接类型 welding type SMAW	焊接位置 position 46	
焊接电流 Current 180	焊接电压 Voltage 25	焊接速度 Speed 140	
返修后检查 Inspection After repairing:			
外观检查 VT result Acc	检验员 Inspector zhang hai tao	日期 Date 8.15	
NDT复检 NDT result Acc	探伤员 NDT person Xuellabany	日期 Date 09.08.19	
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-7998R1 DATE 2009.08.19 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: OBG PLATE PANEL DRAWING NO.: OBE1 CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 SPLICE 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
 SMAW T JOINT Dec. 28ST, 2009

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-345 20/22mm

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	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	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		
CA098-002	1R1	70				34								ACC.	100%

AFTER B-WR6857

BLANK

EXAMINED BY 主探 Xue hai rong <i>Xue Hai rong</i> 09-28-09	REVIEWED BY 审核 ZS hui in <i>ZS hui in</i> 09-28-09
LEVEL - II SIGN / DATE 质量经理 / QCM	LEVEL - II SIGN / DATE 用户 CUSTOMER
签字 SIGN / 日期 DATE	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
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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-000254**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0329**Type of problem:**

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

Date the Non-Conformance Report was written: 15-Jul-2009**Description of Non-Conformance:**

During random 10% verification Ultrasonic Testing (UT) on Deck Panel to Edge Panel corner weld (CA098-002) of Segment 1BE, Caltrans Quality Assurance (QA) Inspector discovered a class "A" non conforming indication measuring approximately 10mm to 15mm in length. ZPMC QC had previously accepted the weld joint mentioned above, but the subassembly was never signed by the ZPMC technician.

Contractor's proposal to correct the problem:

Contractor has acknowledged that this item must be addressed, and the item was added to the Master Punchlist.

Corrective action taken:

Completion of work being tracked on Master Punchlist. Submittal of documentation by Contractor being tracked on Documentation Punchlist.

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 Jim Simonis, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim **Quality Assurance Inspector****Reviewed By:** Wahbeh, Mazen **QA Reviewer**