

STONE & ROOSTER ENGINEERING CORPORATION  
ENGINEERING & DESIGN COORDINATION REPORT

ID. F-46109C  
JOB NO. 111100

CLIENT

SHOREHAM NUCLEAR POWER STATION UNIT 1  
LONG ISLAND LIGHTING COMPANY

REFERENCES

SHI-089 EDCR F-46109C F-46109G

PROBLEM DESCRIPTION

E&DCR F-46109C specified QC inspection of shot peening at TDI chop for crankshafts for ENG 102 and 103. This shot peening was supplemented in accordance with E&DCR F-46109G by Metal Improvements Co.

Please clarify requirements for shot peening of remaining crankshaft ENG 101.

RECEIVED  
DOCUMENT CONTROL

SEP 28 1983

TELETYPE UNIT  
(REQUIRING ACTION)

Sent:  
Rec'd:

Requested By:

R. J. Najuch

Project or Instruction Reference  
SHOREHAM PROJECT

Date  
9/25/83

Needed By:

PROBLEM SOLUTION

Shot peening per E&DCR F-46109C by TDI is deleted for ENG 101. Shot peening shall be performed in accordance with E&DCR F-46109G by Metal Improvements Co. with OQA/TDI/QC inspection as delineated in E&DCR F-46109G. (Shot peening will be performed on-site.)

This E&DCR supersedes E&DCR F-46109C in part for the 101 engine and supplements E&DCR F-46109G.

AFFECTS WORK UNDER SPECIFICATION SHI-089

IMPLEMENTATION VERIFICATION ☐ IS REQUIRED ☒ IS NOT

VERIFIED BY  
*[Signature]*

TELETYPE UNIT  
(RESPONDING PARTY)

Sent:  
Rec'd:

Furnished By:

*[Signature]*

Date  
9/26/83

Responsible Lead Engr.  
*[Signature]*

- ☐ INFORMATION ONLY
- ☒ SPECIFICATION CHANGE SHI-089
- ☐ PROCEDURE CHANGE
- ☐ ENG. SERV. SCOPE OF WORK CHANGE
- Change will ☒ be incorporated in the following documents:  
R43/Volume II

Project Design Engr. *[Signature]* Date *[Signature]*  
Equipment Specialist *[Signature]* Date *[Signature]*  
QA/SA Div. or Eng. Assur. Div. *[Signature]* Date *[Signature]*  
Materials Engr. *[Signature]* Date *[Signature]*

DESIGN CHANGE ☐ YES ☒ NO  
CLIENT APPROVAL:  
☐ Required ☐ Not Required  
Obtained Date: 9/26/83  
Reference: *[Signature]*

- ☒ Nuclear Safety Related (QA Cat I)
- ☐ Not Nuclear Safety Related (☐ QA Cat II ☐ QA Cat III)

Project Engineer Approval & Date  
*[Signature]* 9/27/83

CLIENT DISTRIBUTION - CLIENT HEADQUARTERS  
☐ Engineering  
☐ Project Manager  
☐

HEADQUARTERS  
☒ Proj. Engr. ☐ Chief Engr.  
☐ Des. Engr. ☐ Chief Des. Engr.  
☐ Insp. Engr. ☐ Supl. Const. Serv.  
☐ Equip. Spec. ☐ Ch Engr.-EA Div.  
☒ Mat'l's Engr. ☒ J. Pizzi  
☐ QA-Qual. Sys. D. ☐ L. Fusegn  
☒ QA-POC Div. ☐  
☐ QA-FQC Div. ☐

FIELD DISTRIBUTION  
☐ Originator ☒ M. Harsh  
☐ Client QA Mgr. ☒ O. A. C. [Signature]  
☐ Client Const. Insp. ☒ M. Miller  
☒ SECW FQC ☒ [Signature]  
☒ SECW Res. Engr. ☒ [Signature]  
☐ File Des. Engr. ☐ [Signature]  
☒ Head-File Est. Q. ☒ [Signature]  
☒ T. R. [Signature]

CONST. SUPERVISORS  
☐ Structural ☐  
☐ Mechanical ☐  
☐ Electrical ☐  
☐ Piping ☐  
☐ Welding ☐  
☐ Instrument ☐  
☐ Planning ☐

February 15, 1991  
Revision 13  
Catalytic  
Shoreham Nuclear Power Plant - Unit 1

REPAIR/REWORK REQUEST

NOTED OCT 15 1993

1. Request: 431099 Initiated By: T. Brown R/1/83  
Test Engineer/Date

Work performed under jurisdiction of: ( ) Unico Construction (X) LILCO Startup

Work to be performed by: ( ) Unico Construction (X) LILCO Startup

Quality Assurance function to be performed by: (X) QA ( ) F20 ( ) Work Supervisor

System or Subsystem Description: 2 DG101

QA Category: I Completion Date Required: 10/30/93

Perform the following work: Provide support to start-up  
per Clarkshaft, per NDE as required  
Reason for Work: Engineer T. Brown R/1/83

2. Work to be performed in accordance with the following applicable code, standard, or maintenance procedure: SHI-CF7

3. Notify T. Brown SQA 83-307 prior to performing work.  
Startup Engineer

4. Request Approved: T. Brown R/1/83  
Lead Startup Engineer / Date

5. This form must be signed and returned to the initiator, representing the work is completed.

The above work has been completed. A work summary and test results documentation is attached.

Greg Smith 11-2-85 R. Labov 11-1-85  
Supervisor/Date

6. The following retest(s) are required and completed: N/L Required

T. Brown R/1/83 Mark Abney 11/1/83  
LILCO Operational QA Engineer/Date Startup Engineer/Date

DISTRIBUTION Original to: Organization Performing Work ( ) Unico Construction  
Superintendent (via Project Coordinator), or Startup.  
Copies To: Organization Not Performing Work (X) LILCO  
Superintendent (via Project Coordinator), or Startup  
Operation QA  
11/1/83

W/CD 1098  
HAM I  
REAR POWER STATION  
RRR # R43-486  
REVIEW  
STANDARD FORM 7-6  
PAGE 2

REQUIRE SUPERVISOR SIGNATURE

BRIEF DESCRIPTION OF WORK:

crankshaft gear and oil plugs  
installed by TDI under R/R-R43-1098

REQUIRE SIGNATURE OF APPLICANT:

REQUIRE SIGNATURE OF WITNESSES:

*George Scott* 11-2-85

C-36-4

# 1731

DREHAM I

NUCLEAR POWER STATION

RR-243-109B

September 4, 1978  
REVISION

STARTUP FORM 7.6

PAGE 2

REWORK SUPERVISOR WORK SUMMARY


BRIEF DESCRIPTION OF WORK:

COMPONENTS REPLACED (IF APPLICABLE):

TESTS, CALIBRATED TOOLS UTILIZED:

ADDITIONAL COMMENTS:

Performed a visual inspection of New 101 shaft verifying that peening was properly performed. All fillet areas of shaft were <sup>(craters)</sup> peened. ~~One~~ <sup>3</sup> areas of webs had a slight peened area outside of fillet area (an LDR is to be issued). E. H. H. O. Q. A. 10/27/78

 10/27/83  
Rework Supervisor Signature/Date

# SHOREHAM NUCLEAR POWER STATION START-UP FORM 7.6 SUPPLEMENT

## REPAIR/REWORK REQUEST SUPPLEMENT SHEET

1. RRR# 143-	2. SUPPLEMENT # Original	3. ISSUED TO ( ) UNIT ( ) PS (X) SUS ( ) LSU	4. (X) INITIAL ISSUE ( ) REVISED SCOPE ( )	5. QA CAT. ---
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### 7. SUPPLEMENTAL INFORMATION :

6. QA REVIEW

to install oil plugs and glass.

Shut down to be performed by  
Metal Improvement Co.

Bear and oil plug installation  
to be performed by T.D.F. person.

8. PREPARED BY/DATE TEST ENGINEER	9. APPROVED BY/DATE LEAD START-UP ENG.	10. APPROVED BY/DATE START-UP ASSISTANT TEAM
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#101



WREHAM 1  
NUCLEAR POWER STATION  
STARTUP FORM 7.6

September 4, 1979  
REVISION 10

PAGE 2

REWORK SUPERVISOR WORK SUMMARY

BRIEF DESCRIPTION OF WORK:

TAPED 101 EDG CRANKSHAFT FOR PEENING. TAPING WAS INSPECTED BY ALL REQUIRED PERSONS AND FOUND ACCEPTABLE. FAA (D. JOHNSON) INFORMED TE (W LARK) THAT ALL LEQUIRED PICTURES HAVE BEEN TAKEN.

FAA D. Johnson  
TBI QC  
A. Z. Lark 10-25-83  
AP Lark 10/25/83  
OQA

COMPONENTS REPLACED (IF APPLICABLE):

MSTE, CALIBRATED TOOLS UTILIZED:

ADDITIONAL COMMENTS:

APPLIED FLUORESCENT DYE TO FILLET AREAS. INSPECTED TO ENSURE 100% COVERAGE.

AP Lark 10/25/83  
OQA

WE Lark 10-25-83  
Rework Supervisor Signature/Date





## Station Operational Quality Assurance

## VERIFICATION REPORT

File: LALL.920-

Activity Verified: RRR 243-1032	Responsible Group: LSU	Syst/Struct/Comp: <sup>NEW</sup> CRANKSHAFT 1243*EQA 101
Reference Procedure/No. ISH-224 (SU#5)		
Reference Spec/No./Addendum/Date N/A		
Reference Drawing/Revision N/A		

## Verification Description:

✓ VERIFIED CLEANLINESS OF NEW CRANKSHAFT 101  
INCLUDING L.O. PASSAGES.

DATE: 10-28-83

<i>[Signature]</i> Preparer/OQA	3-2-84 Date	<i>[Signature]</i> OQAE	<i>[Signature]</i> Date
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Transamerica  
Delaval



Transamerica Delaval Inc.  
Engine and Compressor Division  
550 85th Avenue  
P O Box 2181  
Oakland, California 94621

Date: MAY 5, 84  
To: Mike Heclitz - MARK Abramovitz  
From: Mike Morahan  
Subject: Tape inspection of crank journals

T.D.I. witnessed the taping of the  
crank journals. The work was found to be  
acceptable prior to the shot peen process  
on D.G. (#101, 74010) (#102, 74011) (#103, 74012)

*Mike Morahan*

- D.I. Service Representative

Memo



<b>LILCO</b> DEFICIENCY REPORT		<input checked="" type="checkbox"/> FIELD <input type="checkbox"/> OTHER	LOR RESPONSIBILITY  M. Herlihy LSU	LOR NUMBER  340
SYSTEM/COMPONENT Eng. Diesel Gen.	SYSTEM DESIGNATOR 1000	MARK NO. 101, 102, 103	DATE 4/27/84	CLASS 1
MFG. CONTRACTOR TDI	P.O. N/A	MATERIAL LOCATION EDG 101, 102, 103	REJECT TAG NO N/A	YES NO
SPEC. VIOLATED SHI-089	DRAWING VIOLATED N/A	PROCEDURE VIOLATED ESDCR F-6109G	CODE STANDARD VIOLATED N/A	
CONDITION DETAILS Short peening was performed on crankshafts EDG 101, 102 & 103. No work summary sheets for 102 & 103 and OPA was not notified to perform inspection of taping and for 100% coverage per ESDCR F-6109G. No documentation that TDI inspected taping prior to shot peen per ESDCR F-6109G. Metal improvement company submitted documentation on shot peening of only 2 replacement crankshafts. Note: The above conditions were transmitted to LSU. LPR was requested by LSU.				
ORIGINATOR M. Herlihy Signature		DATE 4/27/84	OGA M. Herlihy Signature DATE 4/27/84	
RESPONSIBILITY <input checked="" type="checkbox"/> LSU <input type="checkbox"/> S & W ENG.		SIGNATURE/LEAD SU M. Herlihy DATE 5/7/84		
ACTION <input checked="" type="checkbox"/> ACCEPT AS IS <input type="checkbox"/> SCRAP		<input type="checkbox"/> Rework <input type="checkbox"/> Repair <input type="checkbox"/> Manual <input type="checkbox"/> Procedure <input type="checkbox"/> SAM <input checked="" type="checkbox"/> Other: Order Documentation		
DISPOSITION DETAILS SHEET 2 HAND See attached documentation.				
APPROVALS M. Herlihy S & W LEAD ENG/LSU TEST ENG/DATE		PROJECT ENGINEER M. Herlihy DATE 5/7/84		
LILCO SU ENG. DATE		LILCO SITE OGA DATE		REPAIR/REWORK REQUEST NO. N/A
ENG. COMPLETE/DATE N/A	RRI COMPLETE N/A		REWORK INSPECTION UNSAT. R. Herlihy LILCO SITE OGA/DATE	
LOR REPORT M. Herlihy LILCO SITE OGA/DATE		NEW LOR REPORT NO. ISSUED N/A		REMARKS Item taken from LOR 2282

LDR - 2340

Item #1 (taping crankshaft and 100% coverage) - accept as is. There is a lack of work supervisor summary sheets showing taping and OQA inspection of the shot peening process. Attached is a copy of an audit report from FQA on crankshafts 102 and 103 which audits the inspection, taping, and shot peening process. Also attached is an OQA verification report on shot peening coverage of the 101 crankshaft. The audit and verification reports provide sufficient documentation that shot peening was performed satisfactorily. ~~Additionally, Metal Improvements Company provided documentation showing that the work performed as specified.~~

ALONG WITH  
OQA REPORT  
FILED BY METAL  
IMPROVEMENTS CO.

Item #2 (TDI taping inspection). Attached is a copy of a memo from TDI stating they inspected crankshaft taping prior to shot peening.

Item #3 (Metal Improvement Company documentation). Attached is the documentation from Metal Improvements Company verifying that ~~three~~ crankshafts ~~was~~ shot peened.



Station Operational Quality Assurance

VERIFICATION REPORT

File: IALL.920-

Activity Verified: <b>R/R# R43-1098</b>	Responsible Group: <b>LSU</b>	Syst/Struct/Comp: <b>New Crank Shaft R43*EDG-101</b>
Reference Procedure/No. <b>E+DCR # F-46109 M+G</b>		
Reference Spec/No./Addendum/Date <b>SHI-089</b>		
Reference Drawing/Revision <b>N/A</b>		

Verification Description:

Verified shot peening was performed per F46109 cr.  
All fillet areas of shaft were 100% peened. There  
were 3 areas on webs that were slightly peened  
LDR # 1781 was generated to cover this condition

<i>Carl H. Hall</i> Preparer/OQA	<i>10/27/83</i> Date	<i>STW for AEM</i> OQA	<i>11/18/83</i> Date
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NUCLEAR REGULATORY COMMISSION

Docket No. 50-322-DL Official Exh. No. C-37  
 In the matter of HKCO - Shawham  
 Staff ✓ IDENTIFIED ✓  
 Applicant ✓ RECEIVED ✓  
 Intervenor \_\_\_\_\_ REJECTED \_\_\_\_\_  
 Cont'g Off'r \_\_\_\_\_  
 Contractor \_\_\_\_\_ DATE 9-20-85  
 Other \_\_\_\_\_ Witness Panel  
 Reporter ACE